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REASON AND COMMON SENSE

REASON AND COMMON SENSE

AN INQUIRY INTO SOME PROBLEMS OF PHILOSOPHY

by

R. G. MAYOR

with a Preface by

SIR DESMOND MACCARTHY, L.L.D.

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NOTE

ROBERT GROTE MAYOR died in 1947, leaving *Reason and Common Sense* in typescript. It is here printed in an abridged form, which has been prepared and edited by J. P. Corbett, Fellow and Jowett Lecturer in Philosophy, Balliol College, Oxford, and E. Gilman, Assistant Lecturer in Philosophy, Manchester University.

PREFACE

ROBERT MAYOR

ROBERT JOHN GROTE MAYOR, 'Robin' to all his friends, was born in 1869. Both his parents belonged to gifted families. His father was the Rev. J. B. Mayor, Professor at King's College, London, and the author of a first-rate book on Greek philosophy. Two of his Mayor uncles were also Fellows of St. John's, Cambridge; one was a mathematician, the other that eminent scholar J. E. B. Mayor, who edited Juvenal, became Regius Professor of Latin at Cambridge and according to the *Dictionary of National Biography*, 'revelled in classical literature from the age of six'. His mother was the niece of George Grote, the author of that *History of Greece* which for many years remained superior to all others; he was also a banker, an important M.P., and an original founder of the first London University, and he was duly buried in Westminster Abbey. His brother, John Grote, won a considerable reputation as a Benthamite, and became Professor of Moral Philosophy at Cambridge. Francis Galton, who collected evidence of ability running in families, would have been interested in Robin Mayor's descent.

He entered Eton as a K.S. in 1882 and before he left he had won 'The Newcastle', the prime classical award, and also a scholarship at King's. To Cambridge he went in 1888. He had been, as might have been expected, happy at Eton, for he was born friendly, modest and cheerful, and he was also athletic. I cannot, however, imagine him glorying much either in retrospect or at the time, over his school successes. I picture him at Eton as an even-tempered, independent boy, conscientious, but uncensorious, privately fastidious, not very talkative, laughing a good deal with other boys, reading much, working hard and sometimes craving for more rational conversation than was often available; the sort of boy with whom other boys occasionally take

council, though they never pour out to him their grievances, ambitions, and troubles.

It must have always been a great pleasure to teach him—with his alert, clear mind and accurate, retentive memory, and that innate modesty which was characteristic of him. He seldom talked about his school-days. Indeed, he was one of those who, if the present is tolerable, seldom live much in the past, although I am inclined to make an exception of those years he spent at Cambridge; they, I think, were never far from his mind.

His university years—as often happens with men of intellect who are responsive to friendship—seemed to him to have held if not the richest portion of life, what, at any rate, is almost better, the richest promise. He was in the first class in both parts of the Classical Tripos, won both the Bell and the Craven scholarships and was *proxime accessit* for the Chancellor's Medal. Incidentally, he also captained the University Hare and Hounds, and won in 1891 the Inter-University Cross Country Championship. Yet it is safe to say that these gratifying successes, academic and athletic, were of less importance to him than his friendships, and what he learned from talk with his friends.

In 1894 he obtained a Research Fellowship on the strength of a dissertation on 'The Oligarchical Revolutions in Athens at the Close of the Fifth Century'. With his family tradition and education it might have been expected that his first original work should be on a classical and historical theme, yet the reader of this book may be slightly surprised that the author of it did not choose a philosophical one—especially at that time of life when the pursuit of truth is apt to be most ardent: he probably thought he had not studied philosophy systematically enough. But when he retired from the Education Office in 1926, those deeper interests re-asserted themselves and he devoted his leisure to the ultimate problems discussed in *Reason and Common Sense*, completing the manuscript for typing only the day before he died, June 19th, 1947.

At Cambridge his closest friends had been philosophers or men addicted to discussion. Among his senior friends were McTaggart, G. Lowes Dickinson, Roger Fry, and among his juniors Bertrand Russell and, a little later, G. E. Moore. These friends he got to know through the same channel. He had been elected to that small Cambridge discussion society known as 'The Apostles' which possesses a long tradition, and is referred to either obscurely, as in E. M. Forster's *Life of Lowes Dickinson* and in the latter's

McTaggart, or openly in the biographies of not a few other remarkable men as having been of importance to their development. It is referred to in Carlyle's *Sterling* and hinted at in that section (LXXXVII) of *In Memoriam* where Tennyson describes revisiting Hallam's rooms in Trinity:

Where once we held debate, a band
Of youthful friends, on mind and art,
And labour, and the changing mart,
And all the framework of the land;

When one would aim an arrow fair,
But send it slackly from the string;
And one would pierce an outer ring,
And one an inner, here and there;

And last the master-bowman, he,
Would cleave the mark . . .

It is mentioned in the lives of such diverse men as F. D. Maurice, Tennyson, Fitzjames Stephen, Sir William Harcourt, F. J. A. Hort, Clark Maxwell, Henry Sidgwick; and in the autobiographical fragment contained in Mrs. Sidgwick's *Memoir* of her husband the nature of its influence on generation after generation of young Cambridge men is brought out:

'I can only describe it', Sidgwick wrote, 'as the spirit of the pursuit of truth with absolute devotion and unreserve by a group of intimate friends, who were perfectly frank with each other, and indulged in any amount of humorous sarcasm and playful banter, and yet each respects the other, and when he discourses tries to learn from him and see what he sees. Absolute candour was the only duty that the tradition of the society enforced. No consistency was demanded with opinions previously held—truth as we saw it then and there was what we had to embrace and maintain, and there were no propositions so well established that an Apostle had not the right to deny or question, if he did so sincerely and not from mere love of paradox. The gravest subjects were continually debated but gravity of treatment, as I have said, was not imposed, though sincerity was. In fact it was rather a point of the apostolic mind to understand how much suggestion and instruction may be derived from what is in form a jest—even in dealing with the gravest matters.

'. . . After I had gradually apprehended the spirit as I have described it, it came to seem to me that no part of my life at

Cambridge was so real to me as the Saturday evenings on which the apostolic debates were held; and the tie of attachment to the society is much the strongest corporate bond which I have known in life. I think, then, that my admission into this society and the enthusiastic way in which I came to idealize it really determined or revealed that the deepest bent of my nature was towards the life of thought—thought exercised on the central problems of human life.'

Robin Mayor was a man who valued very highly the affectionate contact of mind with mind; his membership of this 'Society' had a lasting influence upon him. I have before me a paper 'Can we forgive Nature?' which he read to it. In this there is a hint of the position that he developed and defended in *Reason and Common Sense.*

In Part I of that book the reader will come across a passage which I quote partly because it is characteristic of his methods of approach, but chiefly because it suggests the importance of those Cambridge years.

'If then we wish to see what the problem would look like when envisaged by an individual mind, our best chance will be to ask how it might present itself to an inquirer not yet entangled in the business of making a living or filling some position in the world. We may choose our imaginary inquirer at an age when the desire for knowledge has begun to flow with full force and has not yet been canalized; let us say a young man who has just completed his three years of study at a university, and has a short lucky interval in which he does not yet feel driven to think about the future. We may picture to ourselves that he is walking through the country and sits down in a field, and as he is sitting there he recurs to a thought which has come to him in the past, but which he has not so far found leisure to follow up; the thought of the desire for knowledge. What does this desire mean, what is it that he wants to know? It seems to rise in him with a demand that has about it something unlimited; it is not this or that particular piece of knowledge that he wants, it is knowledge.'

In 1896 he became a Junior Examiner in the Education Department, not yet 'The Board of Education'. It was, as Lord Schuster reminded us in his obituary notice of Robin Mayor in *The Alpine Journal*, a Department associated with letters; 'the shade of Matthew Arnold haunted its somewhat dingy passages;

J. W. Mackail, Herbert Trench, and Edmund Chambers were among its officials'. When the Education Act of 1902 had been passed and the prodigious energy of Sir Robert Morant began to inform and reform the system of education, Robin became absorbed in that work too. With his cheerful temperament, that staying power which had also made him a first-rate long-distance runner and his quick, methodical intellect, he was an admirable civil servant. In 1907 he became Assistant Secretary, and in 1919 Principal Assistant Secretary, in which year also he was created a Companion of the Bath. Between those dates (in 1912) he married Miss Beatrice Meinertzhagen.

Like not a few other men of intellectual gifts in his own generation and the one before it, up to that date, his principal recreation had been climbing mountains. The list of his ascents in *The Alpine Journal* is impressive. Some of his climbs with Geoffrey Young were formidable, who wrote of him that he had a happy way of making 'every party, plan, pace, length of expedition and degree of difficulty seem to his friends exactly the one which suited him best'. It is easy even for friends who were never with him on such expeditions, to believe that Robin would be the best of companions in danger and endurance, failure and success; one whom fatigue could not make peevish nor difficulties depress. True, in his own contribution to Alpine Club reminiscences he records a moment when he had felt that 'the spark of life was gradually withdrawing inwards', but as Lord Schuster says, no one with him would have guessed that at the time. His self-control was enviable; a blessing to himself as well as others in every relation in life.

I have mentioned his innate modesty, which was as obvious as his self-control. It is a quality embarrassing to praise since we feel we ought to be modest for a modest man: it implied an absence of egotism truly remarkable. Being one of the least competitive of men, the door to the appreciation of others always stood open; and what helped to make him so good a companion, apart from his quick apprehension and gay laughter, was the obvious delight he took in others. He had a shrewd and humorous eye for character, yet I cannot recall his making a disparaging, let alone spiteful, remark, or telling a story against anyone.

He sometimes took you by surprise by excelling in an unexpected direction; one of the wittiest after-dinner speeches I can remember was made by him. I confess I have been surprised, too, by his persistence during the last twenty years of his life in

studying systematically the nature of reality and the means by which we reach conclusions about it.

It is not for me to try to estimate this book, but none can fail to be impressed by and grateful for the clarity with which problems are expounded, and the conflicting theories of various philosophical schools are set before us. Science assumes as ultimate certain premises which philosophers examine, few, however, in a manner so easy to follow as Mayor's. Whether he was right in the part he attributed to emotion in the structure of our knowledge, and in forming those primitive concepts, 'I', 'Now', 'Here', 'You', which we take on trust in thinking, I am not certain. Truth is seldom the reward of those who seek it; but there is comfort in this, that the search itself is worth while: that Robin Mayor most firmly believed.

DESMOND MACCARTHY

EDITORS' NOTE

THE original text of *Reason and Common Sense* was of a length that made its publication economically impracticable; and we were therefore invited to abridge it by about one quarter, and generally, although the text had had some revision from Mr. Mayor, to prepare it for the press. The present text is the result of these operations.

In order to explain how they have been conducted, it is necessary to say something of the aim and structure of the book.

The reader will find, as he follows the argument, that its aim is first to lay bare and then to revise the ultimate assumptions upon which all modern philosophy, whatever its inner diversity, has rested. Mr. Mayor held that philosophers from Descartes on have misconceived the nature of human reason. In the last resort, this misconception consists in supposing that questions of metaphysical belief can and must be separated from questions of value. Once take this separation for granted, and all the troubles of modern philosophy, its rising metaphysical scepticism and discord, are the inevitable outcome. Mr. Mayor held further that philosophers have only continued to acquiesce in this unstable and unprofitable situation just because they have failed, being checked by common sense, to draw the full conclusions which their starting point implies. But it is not enough merely to fall back on common sense, and pretend that the problem does not exist. We must reconcile reason and common sense by eradicating the cause of their disharmony.

The logical structure of the book is therefore the following. With this general aim in view, Mr. Mayor takes a central set of problems, that of perception and of our knowledge of other minds, and leads us for the most part analytically, though with historical indications, through the series of positions into which philosophers

have been forced by their mostly hidden assumption of method, until the conflict with common sense becomes intolerable, and the whole undertaking is shown up as bankrupt. He then sets out to develop the outlines of a new procedure.

Part One, *Philosophic Doubt*, is therefore a kind of prolonged *reductio ad absurdum* of the modern error; Part Two, *Mind and Matter*, drives the point further home by rejecting various compromises into which attempted escapes have been made; and Part Three, *Reason and Common Sense*, expounds and elaborates that revision of our concept of reason which is required if we are really to escape (and not just pretend that we have done so) from the trap in which we have been shown to be caught. Here we are given a sketch of the remedy; but no more than a sketch, for the book is a treatise not of metaphysics, but of method. It does not develop a metaphysical system; but it purports to tell us that and why and how such a system could be developed. The key lies in the reunion of metaphysical with ethical thought.

It will be seen then that Mr. Mayor wrote as a revolutionary; and he wrote a very long book because (so it seems to us) he was convinced that only by going over the ground many times, in many ways, in minute detail, could he uproot all the old and vicious habits, and leave nothing of them behind that could grow again.

At first sight, therefore, abridgement looked easy, for there was so much repetition; later it proved much more difficult, for it became obvious that the repetition had a point—the point of bringing the assumptions of the old procedure clearly, finally, unmistakably into focus, in order that they might be seen for what they are, and rejected. Not only the admirable lucidity of the style, but the immense multiplication of convergent arguments is thus an integral part of the philosophical technique. Even so, we felt that the present Part One (which was originally in two parts) and to a lesser extent Part Two were longer than was really necessary; and in any case, being more persuasive and expository than constructive, they were the obvious victims of abridgement. Much the greater part of the condensation has therefore taken part in them; but we believe that Mr. Mayor's technique in these books is left sufficiently intact to have the desired effect upon most readers; and we hope that although the exposition could not hope to remain as smooth and persuasive as in the original, the reader will detect no serious gaps, and that some roughness will be preferred to much editorial rewriting, of which in fact we have done

very little. Part Three, therefore, in which Mr. Mayor's positive thesis is to be found, remains intact, except for some acceleration of the central chapters, intended to keep them in step with the rest of the book in its new form.

As regards the correction of the text, we have allowed ourselves, beyond obvious alterations of grammar and punctuation, a few others less obvious, on partly philosophical, partly stylistic grounds. These have, however, been checked by others who knew Mr. Mayor.

Only one further question calls for special mention, that of the use of inverted commas. We have extended their use to all instances of a kind for which there was authority in any instance in the original text; and thus we have put throughout 'the word (expression, name, phrase, term, etc.)"X"' in place of 'the word (etc.) X'. There remained, however, cases in which the use of inverted commas seemed to us to be essential for the sake of clarity, even though this had not been recognized by Mr. Mayor; while, just because he had not recognized it, the wording of the text was not very receptive of any attempt to work a consistent convention of quotation into it.

The result is a compromise which is not very satisfactory, but which was perhaps unavoidable. In many cases the decision was easy; in some (and particularly with regard to expressions following the verb 'to call' and the expression 'meaning of') it was hard to decide whether the expressions were being used or mentioned. In Chapter XXIII, especially, the use of such expressions as 'the meaning of truth', short of drastic rephrasing, resists such treatment, and we have left the text as it stood. Elsewhere, we hope that our compromise will be found helpful.

In conclusion we would like to say this about the book itself. Mr. Mayor was not a professional philosopher and did not write primarily for professional philosophers. We suspect, indeed, that he held that one of the things that are wrong with contemporary philosophy is that it has become excessively professional; that it, unlike that of Locke, Berkeley, and Hume, has become readable and read only by those with special training. We agree with him that philosophy cannot flourish unless it keeps in steady contact with the non-professional public, and would add that this requires a constant effort from that public and from the professional. One great service of Mr. Mayor's book, in our opinion, lies in the remarkable literary skill by which he makes accessible to the general reader complex and subtle philosophical theories. But

that is not all. Mr. Mayor would never have achieved this lucidity had he not really lived through the argument that he expounds. Here is no ingenious academic game, but the immediate record of reflective, philosophical life. And finally, this philosophical zest would never have come to any man who was not achieving something of his own.

Mr. Mayor's general thesis is indeed reminiscent of much that has been said at one time or another since Descartes, even by people whom he seems to attack. One is reminded in several places, for instance, of Hume and Kant. Yet he would probably have said that there has never been a sufficient shift of standpoint, that no one, from Descartes on, has fully realized where the sources of the disunity between reason and common sense reside. Faced by this disunity, some philosophers have indulged in flights of speculation which have only made it worse. Others have considered that reason is in some way incapable of repairing the breach, so that one and the same person is a sceptic in his study and a plain man out of it. Others have devoted themselves to a mere clarification of common sense, neglecting the fact that it has no fixed, abiding content needing only to be brought to the surface and set out in order to be accepted. In each case the basic assumptions of method have remained unquestioned, and the true balance of reason and common sense therefore unachieved.

Different schools will perhaps say that they have been misinterpreted, and on points of detail they may have been. Further, Mr. Mayor pays to some extent the penalty of the solitary worker, in that he makes little use of the results of recent analysis, so that his treatment sometimes has an unfashionable look. But on further thought it may perhaps be seen that this fact is not a defect, since he is concerned precisely with that appeal to common sense on which analysis has tended implicitly to rely; and his work is timely just in so far as that reliance is felt to be questionable.

The conclusion is this. Our metaphysical thought must remain at odds with itself and with common sense until it is grounded upon morality; and morality not in the sense of conformity with convention and prudence but in that of grasping and transforming the principles upon which we find ourselves waiting and resting, and then, when we have got ourselves new ones, of starting all over again. This only, Mr. Mayor contends, can be the justification and the norm of philosophical thought. What this demands, we must accept; what it rejects, we must discard. There can be no higher

rule; and by following it we shall find that we have at once re-orientated reason and reunited it with common sense, because we shall have helped them both forward again, in a common motion.

J. P. CORBETT
E. GILMAN

Balliol College,
Oxford, 1951.

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PART ONE

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PHILOSOPHIC DOUBT

CHAPTER I

FIRST QUESTIONS

WHAT is reason, what is common sense, and how do the two stand to one another and both of them to philosophy? These questions will serve to mark out the line of inquiry to be attempted in this book. The terms here proposed as its subject are vague and wide, and everyone, it may be said, uses them in different senses. Yet everyone, it may be answered, needs to use them. Anyone at least who at some time in his life feels a need to put his ideas in order, to ask what he has a right to believe about human life, the world, and man's place in the world, will find it hard to go far without appealing to the words 'reason', 'common sense', 'philosophy', and supposing them to mean something; and he may be led on then to examine more closely these words which are used so generally and so loosely, and to consider what he and other people have in mind when they use them.

It is from the standpoint of such an inquirer that we are proposing to set out, from what we may call provisionally 'the standpoint of common sense'. Let us enlarge a little on what we are assuming it to be, since this will help to explain the line which our discussion is to follow. The point of view then from which this book is undertaken, and at which the reader is asked to place himself, is that of someone who has looked about him during a good many years of life, listened to the ideas of a good many people, picked up a certain amount of what he takes for knowledge, and to whom it occurs one day to ask himself what in the end it comes to, what is the result he carries away from all he has observed, heard, and thought. We are not supposing him to have any claim to speak with special knowledge or authority on the matters into which his inquiry may lead him; we allow him only the right which anyone may have, if he feels the need, to try to think out what are the questions which seem to him most important, to

state them as clearly as he can, and to consider what the answers to them may be. Going on with our picture of him, we may suppose that as he has grown older he will have found his own ideas, or many of them, change with time, and he will have found that the people he meets hold different ideas about all sorts of things and that the most different ideas are held with confidence. He is likely to have found, if his experience has brought him into touch with various circles of opinion, that what to one of them seems plain certainty, to another seems preposterous; if it extends over any length of years, that new theories, new forms of belief, continue to emerge, grow prominent, and disappear, each of which at first seems to make clear something that was obscure before, then begins to reveal difficulties in its turn, then comes to seem no less dubious than the theory which it replaced; and into whatever fields of thought his experience may have led him, he is likely to have found that they are full of controversies, and that when controversies come to an end, this is not so much because the questions which raised them are settled, as because they are forgotten, crowded out by other questions which for the moment seem important and then are forgotten in their turn.

The inquirer whose point of view we are trying to represent will no doubt have his own beliefs on many of these controversial questions. Beliefs of some kind are a necessity, and education and environment will have seen to it that he has them. We need not suppose him to be by nature more sceptical than other people in the ordinary affairs of life. But if he is to help us in the business now before us, we must conceive him as differing from most people in having a kind of persistency which drives him, when he has asked himself a question, to follow it out as far as he can. However well then the beliefs he holds may serve him for the practical work of life, whether he holds them more or less firmly, whether they are fixed or change with time, they will not of themselves answer the questions with which we now suppose him to be most concerned. For at the point he has reached he is asking not so much, What do I believe? as, What have I a right to believe? What are the principles to which I should refer my beliefs, by which I can support them against the beliefs of others, if they are challenged, or against my own doubts, if doubts come to me? 'Reason tells us this', 'common sense tells us that', are answers he is likely to have given to particular questions in the past, and the appeal to these guides may appear for the time being to dispose of the particular matter in hand. But reason and common sense, it becomes plain,

say different things to different people; some further guide then seems needed to show us how these guiding faculties are themselves to be used rightly. And so he will be led back to what a vague general opinion has looked on as the final court of appeal for human thought, to philosophy.

But what is the value of this vague opinion, what is gained by bringing our questions to this final court? For here the conflict begins again. Philosophers too, we find, the men who have been called and who have called themselves 'philosophers', say different and contradictory things. Is there in philosophy anything more than this difference and contradiction, is there any underlying agreement which may help to show the way among these controversies, the controversies of philosophers themselves and all those others for which we are seeking a solution? This would seem to be the form which our question must now take. Here in philosophy is a meeting ground to which inquirers of various times and countries and beliefs have come together to discuss their problems, and in particular those fundamental problems as to the principles of thinking on which all lesser problems should be dealt with. What, if anything, has resulted from this meeting and discussing?

At this point a reflection may present itself which would dismiss our whole inquiry as likely to be fruitless. Every branch of knowledge, we may remind ourselves, develops with time a langauge of its own, builds up a literature of its own; it does this inevitably as it advances and finds first thoughts and everyday language inadequate for its purposes; to master this literature, and to learn how to speak this language, study and training are required. This is true of any of the sciences, or of any of those arts which have built up theories for themselves or, to use a general term, of any special discipline; should we not expect it to be true of philosophy, which is older than most of these and claims to be more comprehensive than any? And if we look at what has happened, we find that philosophy has in fact built up such a special literature and developed such a special language, that this is the form which its growth has taken; and we can see that in this language and literature there is matter enough, and more, to take up the lifetime of a student. Can we expect then that an inquirer such as we are here supposing, who has never mastered this special language and literature, who represents only what we may call 'the lay intelligence' or 'ordinary common sense', will be able to say anything of value about the questions with which philosophy deals,

able even to understand the answers which it gives to them? At the best, we may think, he might hope to understand some kind of simplified rendering of these answers which philosophers might translate for him out of their special language into the language of everyday.

The problem with which we are here faced is one that arises not in philosophy only, but in any field of thought for which a technical language has grown up. We seem to have before us the dilemma that those who have not mastered the language have no right to speak, and those who have mastered it have to state their conclusions in a language which the world at large cannot understand. And this dilemma is in some sense a real one. There is such a division between specialized thought and common experience: it is the price we pay for specialization. We need not, however, suppose the division absolute, for this would make the relation between the two unintelligible. Any science, any branch of special knowledge, must draw from common experience the problems with which it deals, if these are to be real: it must be able to refer back to common experience the solutions which it arrives at, if these are to be of value. It must start from common experience and must return to this, however wide a circuit it may take in the interval through a region into which ordinary thinking cannot follow.

But we may find that many philosophers, including some of those who would rank highest the power of philosophy to reach knowledge of supreme importance, seem to tell us that this knowledge is only to be reached by a long process of reasoning, pushed far beyond such reasoning as is used in common life and differing from this perhaps in its essential nature; and could anyone hope to succeed here unless he has spent a lifetime in mastering this process of reasoning? We may find again that philosophers, perhaps the same ones, perhaps others, will tell us that to reach results of value in philosophy we must be able to bring together the results of the different sciences; and could anyone hope to succeed here unless he has spent a lifetime (or might not a good many lifetimes be needed?) in mastering the discipline of these sciences? The higher we put our estimate as to the results which may be gained from philosophy, the less can we think it likely that these results are to be gained easily or quickly.

Let us try then to limit our aim, to define more closely what we may hope to do. Life brings before us questions to which we need to find some answer, if we can; and in particular there are the

persistent questions which have presented themselves at all times and places as to the true nature of mankind and of the world, questions as to what is man's origin and destiny, whether the world has a purpose, how this purpose, if we can discern one, is related to men's aims and wishes. Turning to examine what philosophers have said, we find no lack of answers to these questions; only the answers differ, and then we ask, Can we find some core of agreement beneath this difference? If so, the best form that our inquiry could take might be to study what has been written and try so far as we can to understand. But such agreement, even in the most important matters, is hard to discover; it is certainly not evident either to outsiders who approach philosophy or to philosophers themselves when they discuss one another. Here then, in this absence of agreement, is one difficulty; and a second is, that when we ask by what arguments these different conclusions are reached, we find them expressed in a language, supported by methods of reasoning, which, so it is claimed, and the claim sounds plausible, only special study and training can understand and estimate. And thus inquiring common sense seems brought to a standstill. If the methods were plain to our comprehension, we might hope to decide where conclusions differ; if the conclusions agreed, we might be ready to accept them without comprehending the methods; but neither of these ways lies open.

Yet any study, however far it may travel into an inner region of its own, must have also an outer region in which it meets with ordinary thought; and in the outer region, in which that meeting takes place, there must be room for discussion of the scope and method of the study. Our questions as to what we most want to know, as to the nature of man and of the world, may find their answers, if there are answers to be found, only in an inner region of thought; they may have then to be set aside as questions which it is beyond the power of common sense to solve. So much we may have to admit; but there must at least remain for common sense a question which in a manner lies behind those others, and which we may thus define: Has philosophy any knowledge to give as to these matters about which we most want to know? This question which remains may be not less difficult than those others which we have had to set aside; it may be, as they may be, in the end insoluble; but at least its difficulty cannot be such as to take it outside the region in which common sense can hope to deal with it. For when we set aside those other questions as beyond the reach of common sense, what we were supposing was that

philosophy, or one of many schools of philosophy, might have discovered some special method by which they could be explored and answered; and when we say that one question remains for common sense to deal with, what we are maintaining is that the question whether such a method has been discovered, or whether it exists at all, or whether the belief in it may not be an illusion, cannot itself be decided in terms of that method, but must be answered somehow before we trust ourselves to it. All special knowledge, however much it may in the end claim authority, must to begin with be able to justify itself to the ignorant; in what sense it can rightly be asked to do this, we shall endeavour to consider as we proceed; but that in some sense it can do it, is what marks off knowledge from illusion.

With these reflections the first step in our inquiry begins to disclose itself. We shall ask what sort of knowledge philosophy claims to reach, and by what sort of methods. We shall try to distinguish the different main conceptions which philosophers of different types have held on this matter, to state them so far as we can in clear and simple terms, and to consider whether, when they are so examined, one of these conceptions seems to justify itself to common sense rather than another. In this undertaking our main concern will be the scope and method of philosophy, not its ultimate results. The first certainly cannot be considered in isolation from the second; in philosophy all questions run together, and when we ask how a philosopher is searching and for what, we may get light on this by considering what he believes himself to have found. We shall not, however, suppose ourselves at this stage to possess any test by which we may decide whether this or that conclusion should be accepted as true, we shall be concerned with conclusions only in so far as they may help us to understand what is to be said about scope and method. We shall maintain ourselves so far as we can in a position of suspense, taking over from common sense only such ordinary beliefs as are needed to make any discussion possible, and holding even these provisionally. We shall regard it as possible that what seems at the outset most certain may be doubtful and what seems most unlikely may be the truth. Such a suspense of judgment will be in place until we have reached, or done our best to reach, an answer to the question at present before us, which is to ask what is the proper method for philosophy. If we can find ground on which to rest a firm answer to this question, we may then hope with the help of that method to attempt a further stage of our inquiry.

CHAPTER II

TYPES OF PHILOSOPHY

WHAT then is the aim of philosophy, and what is its method? Even here, where we are considering not ultimate conclusions but first questions of what philosophy should try to do, and how it should try to do it, everything still seems in dispute. But what concerns us now is less to elaborate the differences of conception which have prevailed, than to group these differences under a few leading types; and among these leading conceptions let us first distinguish three.

We will consider to begin with what we may call the 'traditional' or 'metaphysical' conception; and we may try to sum this up by saying that for it 'philosophy' means central knowledge attained by the reason. Attained, or perhaps we should say, pursued; for the usage of the word 'philosophy' seems to waver between the sense of an activity and that of an achievement, and according as one or other of these senses is preferred, philosophy would be described either as the pursuit of knowledge or as the knowledge itself. But this natural shifting of usage is not confusing and need not detain us. We are looking for the special features which mark this first conception of philosophy, and this may be said to be that it assumes a central way of thinking or knowing which underlies all thought or knowledge about particular things. There is, it holds, a centre or focus for all possible knowledge, to which should be related all that a man believes about himself and the world and his place in the world, about what is and what may be and what ought to be; or, in a different metaphor but with the same idea, there is a framework in which all these beliefs can be comprehended and shown in their right connection and order. Philosophy is that activity of the mind which aims at reaching this central or comprehensive knowledge, and its instrument is a faculty called 'reason'.

As to the nature of this central knowledge and as to the function

of reason in the search for it, there was much divergence among the philosophers who followed this line of thinking, and some uncertainty even in the utterances of individuals. The central knowledge which this philosophy sought was conceived as something in the light of which all other knowledge could be transformed; so much seems essential to the conception. But was it to be pictured as a dazzling light in which particular knowledge would vanish, or as a clear steady light in which particular knowledge would remain visible, but seen in its true outline and proportion? Or could it perhaps (for metaphors are one-sided things) be conceived as both of these at once? How far again should the function of reason be supposed to extend? Was it competent of itself alone to arrive at truth, or did it need to be supplemented by some other faculty or force of the mind? Some philosophers of this way of thinking would seem to have held that the structure of things was so much in harmony with reason, that from this central knowledge all particular knowledge could be deduced. But so extreme a view is not to be thought essential to this conception; for the most part the correspondence of existence with reason was not supposed to be so complete, and it was held that only certain leading truths could be derived directly from the centre, and that reason must be supplemented by other modes of arriving at truth.

Some such belief seems to lie behind what we have called the 'traditional' conception of philosophy. We call it 'traditional', because it is the conception of philosophy which has been most widely held, and which goes back through a history of two thousand years or more to the first appearance of the word in European thought. In that history of thought there have been incessant conflicts and revolutions; but there has persisted through them this fundamental belief, which has maintained itself even among changes so great as those which have separated the philosophy of Greece from the philosophy of the Middle Ages and this again from the philosophy of the last three centuries. The differences in this process may seem to count for more than the resemblances, and looked at from any point of view other than the particular one at which we have here placed ourselves, perhaps they do. The philosophers whom we are now grouping together would often have dissented strongly from one another's conclusions; they would have ranked themselves, or would be ranked by other people, under the most various names or schools; as Realists or Idealists; Monists or Pluralists; Platonists or Aristotelians; Christians, Jews, or Pagans; Theists, Pantheists, Atheists.

But they had one doctrine in common, which if its implications are considered might be held not less important, perhaps not less remarkable, than any of the conclusions about which they differed: the doctrine that there existed somewhere a central knowledge, or as it was sometimes expressed, a knowledge about the ultimate nature of reality, and that this knowledge could be attained by man through the right use of reason.

The outstanding difficulty of this conception of philosophy is that there has been no agreement amongst its exponents as to the nature and content of this central knowledge, and though this difficulty, arising from the conflicts between philosophers, may have become greater with time, it must have been evident in some degree from the first. And thus only a little later than the beginning of philosophy there began scepticism about philosophy and about its claim to central knowledge. But the idea of scepticism does not of itself bring us to the second conception of philosophy which we are now to discuss. It is too wide and too vague. All philosophy begins in some sense with scepticism about ordinary beliefs, with the attempt to get below or beyond these. But scepticism, however complete it may seem, only achieves force and momentum in so far as it reflects some positive belief. Thus scepticism about the possibility of philosophy or of central knowledge only became fruitful, only developed itself into the counter-conception we are looking for, when a positive belief of sufficient magnitude arose to which it could attach itself.

Such a positive belief has arisen in the last three or four centuries with the discovery that there was a particular region within which knowledge could be pursued, and a particular method by which it could be pursued within that region, which could give part at least of what the older philosophy had claimed, and had failed, to give. This method was the method of science; the region within which it operated was the region covered by the various sciences. And the conception of philosophy which we are now to describe has two sides to it: its positive side is the belief that there is a region in which, and a method by which, positive knowledge can be obtained; its negative side is a doubt, hardening into a denial, as to the possibility of obtaining knowledge by any method other than that employed by science, or in any regions other than those in which this method can be employed.

What was new in this method was not reasoning or inference, though these played a large part in it; for these had been used

before, and were indeed the instrument by which the older philosophy had hoped to find the central knowledge it was seeking. Nor was it observation, though this was important, perhaps essential; for this too, though it was used by science more systematically than ever before, was only a refinement of the traditional equipment of the human mind. Nor again was it experiment, though this was employed so much more thoroughly than ever before as to amount to something new in kind; for science did not consider itself limited to those fields in which experiment was possible. All of these had their place in the new method, but none of them was both new and essential to it. We get perhaps nearer to the truth by saying that what the new method did was to bring together these three things, observation, experiment, and inference, and to employ each in the way best suited to the particular subject-matter; and that the essential new thing was the breaking up of the field of knowledge into separate parts, so that each part could be treated by the method appropriate to it. The philosopher of the traditional type took all knowledge for his province, and his creed was that what was fruitful was this wide outlook. The man of science took for his province, not all science, but one of the sciences, and his creed was that what was fruitful was this limitation.

If then the method of science is not one but many, if its essence is to find the particular method or combination of methods appropriate to the particular matter being handled, it will follow that for any full description of scientific method or methods we must look to the workers in the particular sciences. But for our immediate purpose we may go on to add something further, looking at the work of science not from inside, from the point of view of its method, as a scientist might do, but from the point of view of its achievement, as an outside observer may. This method which science uses is a method by which it is found possible to reach agreement. Scientists like other people disagree; but science has developed, what no other form of human thought, neither philosophical nor religious nor political nor ethical thought has developed, a technique for arriving through disagreement at agreement. The establishment of such a technique for reaching agreement may be said, looking again from the standpoint of an external observer, to be the sign of the advance of science. When it has been set up in any field, that field may be said to be won for science; when it has not yet been set up, a science does not yet exist, or its status is doubtful.

Science thus claims and achieves a continuity and progress which

philosophy has not achieved. Can we say anything further as to the means by which it secures agreement and satisfies the world that its results are valid? It does so by two things in particular; first, it can predict, second, it can construct. Or perhaps the two things come in the end to the same; for when science tells an engineer how to construct a bridge, this means that it is able to predict that a bridge constructed in one way will stand certain strains, resist a certain pressure, and that constructed in another way it will not. To predict and construct however is not the whole story, for the region of science extends into the past, where neither is possible. What are we to say of a science which deals with the past, such as geology? We may say, using a vague term, that the achievement of science here is that it correlates what has been observed; the test of a probable hypothesis is that it will bring under the same explanation or description the strata or fossils recorded by an observer in one part of the world and those recorded by another in another part of the world. When we are dealing with the past only, the test of a hypothesis may be harder to apply than when we are dealing with generalizations which concern both the past and the future; but the principle is not in essence different. We seem indeed even with a geological hypothesis to be brought back to something like prediction; for what the framer of the hypothesis is in effect doing is to predict that any further observations made in the field to which his hypothesis relates will be found to agree with that hypothesis. We may say then roughly that the test of science is that it correlates observations; it predicts what will be observed in the future in the light of what has been observed in the past; and the field of science is the field in which this work of correlation and prediction can be carried on.

In what we have said so far we have aimed at presenting the positive achievement of science, and there is so far no contradiction with the first conception of philosophy. Much of it would be, all of it could be, accepted by those who believe in that conception. To complete the second conception we must add to this positive view of science a negative belief; and this negative belief, though it cannot be said to follow logically from the positive side of the conception, may yet be said to present itself as a natural result. Science, at any rate if we limit ourselves for the moment to speaking of the more exact sciences, seems to have achieved what philosophy has not yet been able to achieve, agreement, continuity, and progress: a method by which men of different temperaments

and traditions can combine their experience, by which one generation can build on the work of another. And is not this just what philosophy, though it has never done it, has from the beginning hoped to do? And is it not natural to conclude from this that science is the true philosophy, the true fulfilment of the hopes out of which philosophy arose? If we ask what philosophy has achieved, we are given the history of what great philosophers have said as the best answer, and perhaps the only one; if we ask what any science, say physics, has achieved, we may be given as one answer a history of what particular great scientists have said, but there is another and more important answer, the ordered body of knowledge which ranks as physics today.

How the word 'philosophy' should be used on this way of thinking is a question of words; worth thinking about, as the word has so much history in it, but not material, so long as we keep our language clear. It has in fact been answered in different ways. The word 'philosophy' might be extended to cover the whole field investigated by the sciences, or by the more developed sciences; this has been done sometimes both in England and elsewhere. Or it might be discarded as being too much connected with wrong associations to be of service in the new way of thinking. Or lastly it might be retained in a narrower sense, to mean a conception of knowledge which regards science and the methods of science as the only means of arriving at truth, and which sets itself the task of examining and correlating those methods and their most general results. And it is this last way of using the word that gives what we have seen is the second conception of philosophy. On this conception the relation of philosophy to the sciences would be understood in some such way as this: philosophy began with a vague aim of reaching knowledge as a whole by some method which it never conceived definitely; this vague aim led to nothing, but it was found that by dividing up the quest for knowledge among the separate sciences, and by working out an appropriate method for each of these, fruitful questions could be asked and fruitful answers obtained; and in this way a knowledge about the world has been gained which philosophy in the old sense could never have reached. There remains for philosophy in the narrower sense, on this way of thinking, one task which is real, necessary, and important: this is to examine those fundamental assumptions and concepts which are common to the sciences, and which for this reason it is not the function of any particular science to examine; and as part of this task it is its business to examine and discuss the methods used by

the sciences. But it is useless for philosophy to attempt to arrive by some other method at independent knowledge about reality, for how could it do this? Either by working over again the fields which have been explored by science, or by inquiry into fields which science has not found it possible to explore; and what hope is there of useful results on either of these lines?

This then is the second conception of philosophy, which we may call, to distinguish it from the first, the 'scientific' or the 'critical' or the 'positivist' conception. It is a conception which is held nowadays by many philosophers, and by many who would call themselves 'men of science' and not 'philosophers'; and it is one which, even if it were not so commonly held, would be worth examining, because, as we have said, it seems to arise naturally when we compare the progress and continuity of science with the lack of progress and continuity shown by philosophy. And here is one main question to which we should wish to see the defenders of the traditional philosophy address themselves more closely than they seem yet to have done: How are we to explain this agreement, progress, continuity on the one hand, this lack of it on the other, and in particular the agreement as to method in science, the failure to agree as to method in the traditional philosophy?

The region of exact knowledge has, it is evident, been vastly widened with the growth of science; but can we say that the region of our ignorance has been reduced in anything like the same measure? Let us consider briefly what are the kind of questions about which men wish for knowledge, and ask how far science can give an answer to these. To many of them no doubt it can. Science has immensely increased human knowledge about the visible and tangible world and all its contents, stars, rocks, plants, animals; it has revealed what is distant in space or in time, what is too far or too small to be accessible to our unaided senses. And if all this, as pure knowledge apart from its results, is something which only a few of mankind have ever cared very much to seek for, science has also given us on the practical side knowledge which affects closely the life of everyone: it has given us the electric light instead of the firestick, anaesthetics instead of primitive surgery, cities of seven millions instead of villages, poison gas and the atomic bomb instead of bows and arrows. In short, it has given humanity a thousand things which make it easier for people to attain some of their practical ends; easier too, we must add, for other people to attain other practical ends which may conflict with the first set. The

gifts of science are double-edged; though if they are misused, we have no right to blame science for that.

Here certainly is an immense increase in our knowledge, both in pure knowledge about the nature of the world and in the knowledge we can apply to practical purposes. And if we represent to ourselves primitive man, helpless before the elements and wild beasts, as he is pictured to us either by legend or by science, is not this, we may think, on the whole, and even allowing for its undesired by-products, the kind of knowledge that he would have chosen for himself if he could? To a great extent we must answer that it is. Men must at all times have desired this knowledge about the visible and tangible world which science now has given them in such large measure. And yet, if we are to trust the records of men's thoughts and wishes which have come down to us in myth, poetry, and religion, there are other questions which seem to have concerned them still more, other knowledge which they have thought even more important. The problems of human life, of love, friendship, hate, ambition, happiness; how to conduct themselves towards other people, and how to understand them; these are the problems which have for the most part been in the foreground of men's minds, if we are to trust those records; and behind them problems as to the destiny of man, his relation to the universe, the purpose of human life and the world. When we turn our thoughts to these, we may feel that the growth of our knowledge through science has been disproportionate: on one side, our knowledge of the material world, we know enormously more than primitive man knew or could have thought it possible to know, but about other matters, about which he wanted knowledge as much or more, we know, so far as science is concerned, little more than he did.

But human nature is not always patient. It is not content to leave a gap in its attitude to the world, and its practice is to fill the gap with something which it supposes to be knowledge, and even calls 'philosophy'. If the reader will think of some eminent dramatist or poet or novelist of today or yesterday (and as we do not want to be drawn into a discussion about who should rank as eminent, let us call this eminent writer 'Mr. X'), and if he will take up some volume which seeks to appreciate or to criticize the work of this writer, he is likely to find somewhere a passage setting out the gist of Mr. X's philosophy. Now what is the philosophy that is spoken of here, and what is it not? In the first place, it does not seem to be at all the same kind of thing as either of the types of

philosophy that we have spoken of above. It cannot be said, like the traditional philosophy, to aim at reaching a central knowledge, or if sometimes in a vague way it may be said to attempt this, it certainly does not attempt to do so by reasoning. Nor again, like the scientific philosophy, does it employ the methods of observation and experiment, and of precise reasoning based on these. It will probably not claim to be a system, it will almost certainly not be systematic in its method of exposition, nor will it seek to establish a connection with systems of thought in the past. The epithets by which its admirers praise it will not be 'logical', 'reasoned', 'objective', but 'daring', 'vigorous', 'original'. In so far as it appeals to anything outside itself, it appeals not to anything formulated in the past, but to the unformulated experience of those whom it addresses.

And yet, if the common use of language is to count for anything, this third conception of philosophy, which we shall call the 'impressionist' conception, seems to have as much claim to the name of philosophy as either of the other two. Just as it would seem natural to hear an exponent of the positivist philosophy pronounce it a defect in the philosophers of the past that they were not sufficiently objective, that they introduced too much of themselves into their philosophies; so on the other hand it would seem natural to hear the admirers of Mr. X, interpreting the word 'philosophy' in this impressionist sense, praise him for merits which may be summed up in the thought that his philosophy is individual. Philosophy, which on either of the two conceptions we examined first was something essentially impersonal, now on this third conception appears as something essentially personal. The shifting of usage is so common that we hardly notice the contradiction, and the same writer might perhaps use the word 'philosophy' in its contrasted senses on two succeeding pages without surprising his readers, or even himself.

This difference of usage, however, is not merely a verbal question, but one of substance as to the nature of human knowledge. We have on one side a body of clear precise knowledge about the world given us in science; we have on the other side a body of thought, vague and unsystematized, given us in literature, which seems to give us knowledge about the world at least in the sense that it can make us understand it differently. To those who are interested in the growth of scientific knowledge, or to any of us in the moods in which we are interested in this, scientific knowledge is what ranks as important, and the knowledge or thought about

human activities given in literature will be too vague and insubstantial to deserve the name of knowledge. To those to whom human activities and emotions seem what is most important, or to any of us in the moods in which these seem most important, a way of thinking which can help us to understand them better will be what matters; and the knowledge science can give will in its turn be thought to lack substance, the substance of flesh and blood. But these two kinds of knowledge do not seem important to the same persons, or if they do, then not at the same times; they exist in thought side by side, but we do not bring them together.

That there is in our minds this vague juxtaposition of two worlds of thought, which we half feel to be separate and distinct, half feel to be parts of some larger whole which should unite them, so much is clear; and we may go on to say that this state of half feeling leaves our thought too much in confusion, that for clear thinking we need either to effect a real separation or to find how we can effect a real union, and that we need at least to try to discover what their relation should be. But which way this attempt should tend, whether towards separation or towards union, remains a harder question to answer.

Let us try to envisage more closely the meaning and the mutual relations of the three conceptions of philosophy which we have distinguished. The second and third conceptions seem to have little in common with one another. The second conception is in some sense science; not any particular science, nor even all the sciences together, but the expression of that whole side of human activity which is at work in the sciences, and which sets itself to explore the world precisely and in detail piece by piece. And the third conception of philosophy is in some sense poetry, imagination, literature, art; not any particular art, nor all the arts together, but the expression of that side of human activity which is at work in art or in literature, which looks at the world, trusts to its feelings and sums up its impressions. The connection of the second philosophy with the sciences is clear and definite, since it and they both conceive themselves to be seeking knowledge; but literature and art are not for the most part conceived as seeking knowledge, and the connection of the third philosophy with literature and with art is thus more vague. Yet this connection, vague as it is, is something that we seem compelled to look for, when we find that we turn to poetry and drama for answers to

questions about life which we need to ask and which science leaves unanswered.

And now if we go back to the conception of philosophy which we first spoke of, may we not suppose that this conception, when it held up before mankind the aim of central knowledge, had in view a single way of knowing in which these two contrasted ways might be combined? It would mean then, if this aim could be accomplished, more than a central science or a unification of the sciences; it would mean a unification of our scientific knowledge with that other vast region of our thinking, which seems for strict reason a chaos, but in which we feel that something which deserves the name of knowledge is somehow hidden. Looking at the problem in this way we may feel still more strongly both the reason for desiring such a central philosophy and the difficulty of achieving it. It seems desirable, perhaps essential; for if there are these two ways of knowing, ought they not somehow to be unified and made to meet? It seems difficult, perhaps impossible; for when we have recognized how separate they are, it is hard to see any means of bringing them together.

Further, it is plain that the sciences have progressed by cutting themselves loose from philosophy; and it is hardly less plain that when the general public looks for a philosophy that will answer its questions it turns, not to the traditional philosophy, but to literature. There is a gap, which seems to grow wider with time, between what the traditional philosophy can teach and what the questioning mind wants to learn. What has caused this gap, this doubt as to the value of the traditional philosophy, might be hard to say precisely. We may ascribe it partly to the divergent conclusions reached by different philosophers, and to the distrust to which this divergence gives rise; partly to the increasing mass of the material supplied by the sciences, which philosophy can neither assimilate nor ignore; and partly to the growth of a technical language, which philosophy, following in this respect the example of the sciences, has built up for itself, and which, unlike what may be claimed to be the case with the sciences, seems to become not clearer but more confused as one generation after another adds to it and works upon it. At any rate, whatever may be the cause of the change, the change itself seems evident. The inquiring minds of the last two or three generations have turned for their view of life, for guidance in life, not to systematic philosophers of the traditional type, but elsewhere. They have looked for their philosophy in the writings, not of philosophers in the

strict sense, but of men like Goethe, Blake, Wordsworth, Tolstoi, Ibsen, Hardy, Proust, Bernard Shaw—we might prolong the list indefinitely, but it is already heterogeneous enough. And writers of this kind, differing in their outlook from one another as much as the traditional philosophers do or more, have one thing in common, that their method is opposite to the method of the traditional philosophy, that they have not reached their conclusions by reasoning; they have reached them by looking at life as a whole and telling us what impressions form in their minds as they look.

From these considerations emerges one possible account of the manner in which our three conceptions of philosophy are related to each other. The second or positivist philosophy and the third or impressionist philosophy are two opposing sides or modes of inquiry, which originally lay hidden within the first or traditional philosophy, and which as time went on developed separately in sharper contrast, and broke away to an independent life. But this account of the problem leaves us with a question still to answer: can the impressionist philosophy arrive at knowledge, and if so, how does it do so? When we speak of it as 'philosophy', we seem to imply that we believe it to give us knowledge; is this belief well founded or an illusion? For if it is well founded, then it would seem that after all the traditional philosophy must have had a right aim in view, when it looked for a centre in which these two different and contrasted modes of acquiring knowledge could be brought together. Perhaps it was not able to formulate its aim adequately, or perhaps the aim was lost sight of as time went on. Yet if we accept this aim as being even possibly a right one, we must say that the process which has made us separate these two modes of thinking so completely has meant on one side a loss, even if on another side it has been a gain. And there seems at any rate to be a need for a theory of knowledge, which will bring these two possible modes of knowing within a single survey, and will either show how they can be united or show that one of them does not deserve to be called 'knowing' at all.

If we consider that part of the field of possible knowledge which includes our relations to other people, or what we may call in a loose general way 'the conduct of life'—this being understood in a wide sense as covering conduct viewed from all the different standpoints from which people in fact view it, whether of pleasure, success, fame, virtue, morality, or what not—if we think over what we believe about this wide field of thought and knowledge,

two points seem to stand out as clear. First, that we have in this field very little that we can regard as coming up to the standard of scientific knowledge, and this little for the most part in matters of minor importance; second, that we feel none the less certain that in this field one man's opinion can be better than another's. And if we can say that one opinion is certainly better than another, then in this better opinion we have something that seems to satisfy sufficiently the common-sense idea of what is meant by 'knowledge.' The problem then that we have to consider is how this unsystematized knowledge, which we suppose ourselves to possess without being able to give an account of it, is related to that systematized knowledge which we call 'science'.

If we turn our thoughts first to the physical sciences and the material out of which they have grown, the line of development may seem fairly clear. The knowledge which we call 'science' does not grow out of nothing, nor does it grow merely out of reasoning without material; it grows out of material provided by observation, and this material out of which it grows is just that unsystematized knowledge which common sense supposes to exist when it holds that one man's opinion can be better than another's. In ages when science was not yet born men must have observed the phenomena of the world around them and reflected on them, and some men must have observed and reflected on them better than others, and this would have been shown by the fact that they were better able to direct their activities, so as to get the things that they and other men wanted. Further than these evident facts we do not need to go for the purpose of the present question; one man's observation and reflection was found to work better than another's, it was found that this advantage could be increased by thinking about the results on systematic lines, and this systematic thinking was called 'science', or was the root out of which science grew. Science, to sum up what we have been trying to say in the words of a great man of science, is organized common sense.

But when we turn from the physical to the psychological sciences, we do not find the same simple direct relation by which the systematized knowledge of science grows out of the unsystematized knowledge possessed by the ordinary observer. Just as common sense knew something about the physical world before there was a science of physics, so it knew something about the human mind before there was a science of psychology. But this unformulated knowledge about the human mind does not seem to lend itself in the same way to being taken up and formulated in terms

of a science; it seems to demand, in part at least, some other mode of expression. The pre-scientific interpreters of the human mind, philosophers or religious teachers, dramatists or poets, did in their primitive way, we cannot help feeling, know something about it. About some details no doubt they knew less than psychologists could tell them today; about other aspects of man's life we may be inclined to think they knew as much or more. Let us take as a type of these pre-scientific observers one in whom the question is not complicated by the intrusion of any particular philosophy. Shakespeare understood human nature; this seems as safe a commonplace as any in literary criticism. He had, aside from all his wit and poetry, sense of the stage, and gift for telling a story, an insight into the working of the human mind that we cannot help calling 'knowledge'. But could the researches of modern psychology have done anything to develop and complete this insight, as the discoveries of modern astronomy might, we suppose, have helped a primitive astronomer? Can we conceive, to bring the question to a practical issue, that if Shakespeare had been supplied with the best psychological apparatus and a library of the best psychological textbooks, and if (again a big assumption) he could have been persuaded to use them, they would have helped him to write a better play than *Hamlet*?

But is not the parallel here suggested between Shakespeare and the primitive astronomer irrelevant? The Chaldean astronomer was within his means trying to be a scientist, Shakespeare was practising an art. It is just the irrelevance in the parallel that may serve to make clear the point we are trying to enforce. There is a certain kind of knowledge which throughout human history has been communicated in the form of art, and which it seems impossible to suppose could ever in its fullness be extracted from its artistic embodiment and expressed in the form of scientific statements. What are the limits and conditions of the knowledge we here speak of, how it differs from the knowledge that can be reduced to scientific terms, may be hard to say. It may be that what is here in question is a difference between two regions, the physical world on the one hand and the region of human thought and feeling on the other; it may be that the difference between two modes of knowing, which we have now come upon in its most evident form in the region of human thought and feeling, runs in some degree through other regions as well. This is an inquiry into which we cannot at this point enter. All we are now concerned to bring out is that there is a kind of knowledge which lies outside

the scope of scientific statement, and that much of the knowledge which we suppose ourselves to have about human nature is of this kind. Should it not then be the business of philosophy or part of its business to try to give some account of this knowledge? For if we rule out from our conception of knowledge all that does not come up to a standard of scientific accuracy we should find the sum of what we know in this region shrink to something surprisingly meagre.

If we think of such names as those we have mentioned—Goethe, Wordsworth, Tolstoi, Ibsen, and the rest—we find it hard to avoid the feeling that writers of this kind conceived themselves, and are conceived by those to whom they appeal, as in some sense discoverers; discoverers of new knowledge about the human mind, perhaps in some cases discoverers also in a wider sphere which would include man's relations to the universe, but at least and for certain, discoverers in the sphere of which we are now particularly speaking, the human mind. They may possess and be admired for other qualities, narrative power, vivid imagery, charm of style, wit, eloquence, all those qualities which go to make up what we call aesthetic enjoyment; but if they had these and nothing more, would there be any sense in speaking of them as having a philosophy? This something more in virtue of which we feel a philosophy behind the work of a poet or a dramatist, what can it be but a discovery, an understanding, a knowledge, which we believe that the writer has and that ordinary men do not have, or have in less degree, but can in some measure gain from him?

Here then is a further thought which should be added to our account of the impressionist conception of philosophy. On this conception, we began by saying, anyone can have a philosophy of his own. We must now add: and yet we have to recognize that one man's philosophy can be better than another's. This at least seems implied in the fact that the writers whom we named, and others like them, have been hailed each in turn by their own generation as able not only to entertain but to teach. And is not such a principle of order or degree, in virtue of which one thing can be seen to be better than another, part of what the traditional philosophy was hoping to attain in its central knowledge?

Our attempt at a threefold classification must not be taken as exhaustive. The three conceptions we have distinguished are to be understood not as hard and fast divisions but as types or norms of thought. What we are concerned with are methods of approach

rather than results, and attitudes or tendencies perhaps even more than methods. With this proviso let us sum up briefly the main points of the present chapter.

We distinguished three main types or conceptions of philosophy, and we find that each of them brings us to an important problem, to which it seems hard to find any adequate answer.

The first, which we have called the 'traditional' or 'metaphysical' philosophy, holds that there is a central knowledge attainable by reason, and that all other knowledge, if it is to be rightly understood, must be viewed in its relation to this central knowledge. This conception of philosophy is exposed to such questions as these. What is this central knowledge? Is there any agreement as to its nature? And if after centuries of searching no agreement can be reached about this, is there any reason to suppose that it exists? And how is it that the sciences by breaking off from this aim of pursuing central knowledge, and by going their several ways independently, have been able to attain knowledge which can be agreed about and tested by its results?

The second conception, which may be called the 'critical' or 'scientific' or 'positivist' conception of philosophy, starts from this fact of the achievement of the sciences and goes on to maintain that the field of philosophy is the field of the sciences; or using a slightly different language, that the field of real knowledge is the field of the sciences, and that the name 'philosophy' should be reserved for a central science, which should aim at connecting the particular sciences and ascertaining their implications, but should not suppose itself to have any other independent means of arriving at knowledge. And this conception of philosophy is exposed to such questions as these. Do we really mean that there is no knowledge outside the sciences? Do we really mean that the only beliefs which we have a right to hold as certain or highly probable are beliefs guaranteed by science, and that any other beliefs which seem to us even probable are inchoate scientific beliefs on their way to being reduced to precise scientific statements? And if we do not mean this, what are we to say about those beliefs of ours which relate to the region falling outside the purview of scientific knowledge? Are we to say that in this region no knowledge is possible, and if so does not this imply that one belief is in this region no better than another, and can we really accept such a position?

The third conception of philosophy, which we have called the 'impressionist' conception, has less of unity in it than the other two.

It is not formulated and it has no definite principles; it shows itself rather in a widespread feeling that there are beliefs or opinions which fall outside the limits of the sciences and which are not reached by any reasoning that can be called 'scientific', and yet which have in them something deserving to be called 'knowledge', at least in this sense, that one of them can be seen to be better than another. And if we ask what are the assumptions which lie behind this feeling, we are led back to questions which merge into those formulated above, and in particular we are led to ask, If there is a method of reasoning that is not the method used in the sciences, what is it? And if there is a way of knowledge that does not depend on reasoning at all, again what is this?

We may note further that if we take any two of these main conceptions of philosophy, we shall find that they agree with one another in some leading assumption in respect of which they differ from the third. The metaphysical and the positivist conception would agree in holding as against the impressionist, that there is in some sense a central knowledge, and that reason is in some sense the instrument by means of which this knowledge is reached; though they would differ both as to the nature of the reasoning to which they would trust, and as to the scope of the central knowledge, whether it is to be conceived only as a unification of the sciences or as something wider. The metaphysical and the impressionist conceptions would agree, as against the positivist conception, in holding that there is a possibility of attaining knowledge that falls outside the field of science, though they would differ both as to the nature of this knowledge and as to the part which reasoning could play in reaching it. And finally the positivist and the impressionist conceptions of philosophy, differing about almost everything, and finding no point of contact with one another, would be united against the metaphysical conception in holding it absurd to suppose that there could be a central philosophy which could bring into any kind of union things so different as themselves. They might agree in this one point only, that they would dethrone the traditional philosophy from its supremacy, leaving it to future contests to determine how its inheritance should be divided between them.

With the impressionist conception of philosophy we shall not for the present be much concerned. Our aim is to appeal to reason, if we can find what reason is, and it is just this appeal that the impressionist conception rejects. The metaphysical and the positivist philosophy each in their different way accept it, though they

disagree as to how reason is to be understood, as to what are its postulates, its methods of working and the materials it can use. This disagreement goes deep'down, and we may expect to find it presenting itself as a cleavage, the same essentially though in many forms, in one after another of the main problems of philosophy. On these problems the impressionist philosophy will have little to say that can help us. The cleavage between it and the two other philosophies is as deep as between each of those two, but it presents itself in one form only, in the contention that argument and reason are useless. For us, then, so long as we can hope to retain our trust in reason, it is for the most part irrelevant, except as a reminder that if the limits of reason are drawn too narrowly, human thinking will refuse to remain within them.

CHAPTER III

KNOWLEDGE, REASON, COMMON SENSE

THE questions to which we have now been led appear when we examine them to run together as strands of a single great problem, the problem of knowledge. Here is a problem in which the philosophy of the last two or three centuries has become entangled, almost it might be thought without wanting it, and at any rate without its being wanted by most of those who turn, or would wish to turn, to philosophy for guidance. What they would like to ask of philosophy is not that it should talk to them about knowledge, but that it should talk to them about reality. And such a wish can hardly be dismissed as merely superficial. The older philosophers did on the whole find it possible to approach the problem of reality without first making a long circuit through the problem of knowledge, achieving thus a measure of simplicity and directness which has been lacking in the more modern philosophy, a lack which may have helped to bring about that widespread turning away from philosophy of which we spoke earlier.

The causes of this immersion of philosophy today in the problem of knowledge may well be complex, but we can hardly doubt that one main cause has been the growing divorce between the metaphysical and the positivist conceptions of philosophy. These two types of philosophy, each claiming to state conclusions about the most important knowledge that is possible for men, each claiming to reach them by reliance on reason, have radically different conceptions as to what reason can do and what human knowledge can be. And if they are to come even so near to a mutual understanding as to recognize where and how and why they differ, they must mark off a common field for discussion in which their radical differences may be explored. This common field is given them in the problem of knowledge.

So far the emergence of this problem appears as a result, natural and perhaps inevitable, of the line that the development of thought has followed in the modern age. Nor if that were all should we have a right to complain, however much we might wish it were possible that inquiring common sense could pass on directly to those questions in philosophy which it feels to be of most moment. We want to study the problem, What is reality? and before we can do this we find that we must begin by studying the problem, What is knowledge? And if this were all, we might be ready to accept the position; but there is more than this. For some of the more ambitious systems of philosophy today seem not only to begin with the problem of knowledge, but to end with it; the problem grows so vastly in dimension that it swallows up all other philosophical problems. And that this should be inevitable, common sense will find it hard to believe; or at least it will not want to accept this conclusion except upon strict necessity.

Let us take it then that our purpose in discussing the problem of knowledge is to learn what are the questions to which we may hope to find answers, and how and where these answers are to be looked for; and that for the answers themselves, if they can ever be found, we may have to look to some other department of philosophy, or perhaps outside philosophy altogether; that in short the problem of knowledge is only a prelude to problems more important than itself. If we start with this assumption and recall it to our minds from time to time, we may hope to guard ourselves against the danger of shifting our ground without knowing it, and of supposing that we have established large truths about reality when we have been professing only to talk about knowledge. Yet we must recognize, and the more so as the problem of knowledge grows in bulk and complexity, that it is likely to be a difficult business to keep the problems distinct. We must take it for granted to begin with that we know a number of things without stopping to question them, or we could not say anything; and as we go on we may find that, if our discussion is to progress, we need in a more explicit way to assume, at any rate provisionally, important items of knowledge or belief that may well be doubted. With these sources of confusion ready to hand, it is easy to see how a theory of knowledge may be tempted to pass itself off for a complete philosophy. The best thing we can do to avoid this temptation is to make our assumptions as definite as we can and to keep on reminding ourselves that we are concerned with the problem of knowledge, and not with anything beyond it.

It may help us here if we begin by setting out a few of the main questions which suggest themselves for inquiry under this problem. The questions round which discussion seems chiefly to centre may be stated thus:

First, what do we mean by 'knowledge' or by 'knowing'?
Second, how can we know things?
Third, what can we know?

To which we may add another question which is less often discussed, but which may prove worth discussing:

Fourth, what do we want to know?

In a logical order of exposition we should begin with the first of these questions, about which there is much to be said. We should find that the words 'knowledge' and 'knowing' can be used in various senses, and we might see reason to suspect that there is room for large assumptions to lie hidden behind one or other of these. But this inquiry would take us into a difficult region of abstraction, and it may be well to postpone it until we have first cleared our thoughts by examining some more concrete questions. For the moment it may be enough to say that one thing that we mean by 'knowledge' is 'true belief' or 'justified belief'; these terms themselves will need consideration later, but for the present we may take it that we understand sufficiently what they mean, and we may take it too that when we use the word 'knowledge' in this sense we are using it in the way that matters most for the present discussion.

Accepting this as a provisional account of what we mean by 'knowledge', let us pass on to the second and third questions, How can we know things? and What can we know?, and let us try to find clear instances of what we can regard as knowledge, in the sense of true or justified beliefs, and to inquire how these beliefs are arrived at. If we can discover such instances, we may turn back to consider more precisely in the light of them how our conception of knowledge should be defined.

How can we know things? What can we know? Clearly we must somehow limit or qualify these questions, for as we have stated them they cover a ground far wider than we can attempt to explore. The question, What can we know? if we take it in its full comprehension, is one that could only be answered when philosophy has finished its work; we need to find a narrower significance for it, but what is that to be? Taken as common sense might take it, the question asks for no less an answer than a complete summary

of all that we suppose ourselves to know; taken more strictly, it raises the problem how much of what we suppose ourselves to know reaches a standard that deserves to be called 'knowledge', and if we make the standard strict enough we might find the answer shrink to little or nothing. We must look for an interpretation somewhere between these extremes, if the question is to help us; we must take it as applying to kinds of knowledge rather than to particular items of knowledge, and as asking what are the main kinds of things that we can reasonably suppose ourselves to know. The question, How can we know things? is not on the face of it so hard to answer. However many are the things to be known, it is possible that the ways by which we come to know them are few, or can be grouped under a few main heads. Yet here too, if we think of the growth of the sciences and their subdivisions, the variety and difference of the ways of knowing is what will strike us most, and we shall have to ignore all but the most important of these differences if we are to frame an answer within reasonable compass.

The two questions in short will both need rigorous pruning if they are to help us forward; moreover we shall find that, though we can separate them in thought, they run so much together that we can hardly expect to keep them separate in practice. Perhaps they will be more manageable if we bring them together and reword them so that they run: What are the main kinds of things that we can reasonably suppose ourselves to know? and What are the means by which we can come to know these kinds of things? And at this point, in view of the possible ambiguity that attaches to the word 'knowledge', and also perhaps to the word 'things', we may make the intention of our questions clearer by using our definition of 'knowledge' as 'true belief' or 'justified belief'. Let us ask then: What are the main kinds of beliefs that we can hold to be true or to be justified? What are the means by which we can arrive at these true or justified beliefs? Or more briefly, running our two questions into one, we may ask: What are the conditions which justify belief? premising that we are to look for the answer by considering how we arrive at those beliefs, or those kinds of beliefs, which we hold most certainly to be true and to be justified.

But we must try to limit our questions yet further. There are many questions as to the justification of our beliefs in the fields of the sciences and of history, questions important in themselves and relating to beliefs that we hold to be certainly true, which we do not want to be drawn into discussing. We must therefore focus

our inquiry on something more general, on the fundamental differences with regard to the problem of knowledge and belief that appear to lie at the roots of the different conceptions of philosophy which we have distinguished; and to this end we may set beside our main question two subsidiary questions which may help us in discussing it. First, What is the relation of our reasoned beliefs to our common-sense beliefs? Second, Can we assign any clear meaning to the phrase 'metaphysical belief', and if so can we form any general conclusion as to the conditions under which metaphysical belief arises and as to the grounds which should be held to justify it? Both questions are wide and vague, but they may help us in exploring the still greater width and vagueness of our main question. And let us begin with the relation between reason and common sense.

We have so far used 'reason' and 'common sense' as though they were terms whose meaning we understood; and our excuse must be that, as we said at the outset, we all suppose ourselves to mean something by these words, and without using them it would be hard to speak at all about problems such as those we are attacking. But it will now be time to try and see more clearly what we conceive them to stand for. We distinguished them in our title as though there was some contrast or difference between them that was worth our attention. Let us begin by asking whether this suggestion is justified. At first sight, we may think, perhaps not. If we consider how the words are used in ordinary speech, they seem often to be used to describe much the same thing. What is common sense? It is a reasonable way of looking at things. What is a reasonable way of looking at things? It is the way in which they would be looked at by a man of common sense. Either manner of answering would pass for natural, and the two together seem to take us round in a circle.

But if we look a little further, we can see that these two words suggest to us two different methods of approach towards knowledge, and that for the problem of knowledge this difference is of the first importance. It is a difference between a way of thinking which reaches right conclusions by a process of which it is aware—this we call 'Reason'; and a way of thinking which reaches right conclusions by a process of which it is not aware—and this we call 'Common Sense'. The aim in either case is to reach right conclusions. And so if we look at the matter from the point of view of results, and if we feel satisfied that the conclusions we have reached are right ones, we may be ready to say indifferently that they are

reasonable conclusions or that they are common-sense conclusions, and the two will seem to come to much the same thing. Yet the faculty which we are using, the method or process to which we are appealing in the two cases is very different, and it is this difference that we want to examine. And we must bear well in mind that when we seek to distinguish reason from common sense as different faculties, all we mean to say is that the mind works in various ways, and that what we are trying to do is to distinguish what happens when it works in one of these ways from what happens when it works in another.

We want then to make clear to ourselves what we are doing when we say that this part of what we suppose ourselves to know rests on reason, that other part rests on common sense; and as a first attempt we propose to state the difference something like this. Reason is thought reaching knowledge by a process of which it is aware and can give an account; common sense is thought reaching knowledge by a process of which it is not aware or cannot give an account. This distinction we must now try to make more precise.

Let us begin with reason; and let us take it that reason is thought which is aware of its own processes. Or, if this seems to claim too much, let us say that thought aware of its processes is reason as an ideal, and thought supposing itself to be aware of its processes is reason as we find it in ourselves and in history. The fundamental belief of the traditional philosophy, we said, was belief in a central knowledge attainable by reason. What did this mean? It meant the belief that it was possible for men, if they used this faculty of reason properly, to take their start from first premises which were so evident that they could not be doubted; to construct a chain of reasoning in which again each step was so evident that it could not be doubted; and to arrive in this way at conclusions about the nature of existence as a whole which could be held for certain. But what authority was there that encouraged men to suppose this possible? For there was never any time in the history of philosophy when this could be said to have been achieved; it was never more than an aim and an ambition.

A full answer would be hard to frame, but we shall probably not be wrong if we conjecture that the requisite encouragement was given in large part by the science of mathematics. This science did seem to have achieved, in some measure at least, what philosophy was only promising or attempting. Mathematics itself grew out of men's attempts to put some order into their understanding of the

world about them, by counting things in arithmetic, by measuring them in geometry. And in building up the structure of mathematics men became aware of this faculty of reason, and of its power to bring clarity and agreement instead of confusion and disagreement by making thought become aware of its own processes and proceed in the right manner. Reason in mathematics started from first premises which men did not doubt, and which they were prepared to say it was impossible to doubt, such as 'two and two make four', or 'things which are equal to the same thing are equal to one another'; it constructed upon these foundations its chain of argument, each step in which again it seemed impossible to doubt; and it arrived in this way at conclusions which had a claim to certainty in that they were consistent with one another, and which were found to have a further claim to certainty in that they were consistent with the way in which things happened in nature. And this success of mathematics made it seem plausible to suppose that philosophy by a similar employment of reasoning could achieve in a wider sphere what mathematics had achieved in a narrower.

Nor did the activity of reason appear confined to the field of mathematics, though this was the field in which its success was most complete and conspicuous. In other fields too, as men became more aware of the way in which their minds worked, they seemed to themselves to see this activity of reason operating and helping them to order and sift their beliefs. It could be traced in many spheres: in the observation of natural happenings, in politics, in the law courts; it worked in many ways: by enabling men to predict, to detect fallacies, to choose this opinion or belief as more reliable than that other. And here again it was of the essence of this activity that it could be made to give an account of itself, to show how it worked. To some extent it could be reduced to rule: and these rules or some of them were formulated, built into a system and given the name 'logic'.

This may serve as a summary of what was in the minds of the Greek thinkers who laid the foundations of the traditional philosophy of Europe. There was a faculty, vaguely conceived under the name 'reason', which could be seen as an ordering power in the activities of the human mind; and the working of this faculty or power, vaguely to be discerned in a wide field, could be seen operating more clearly in the definite science of mathematics on the one hand, and in the inchoate study called 'logic' on the other. How these conceptions were related to one another, how this system of rules for reasoning called 'logic' was related to the science

of mathematics on the one hand and to the general activity of reason on the other, all this was left rather uncertain. But enough seemed certain to give ground for hoping that on these lines of reasoning on which so much had been done, immensely more, perhaps everything, could be achieved; that just as from the obvious elementary truths of mathematics men could advance by a sure method of reasoning to truths that were not obvious, but new and unexpected, so and by a similar sure method, starting from obvious elementary truths about the nature of being, they could advance till they reached a central knowledge in the light of which all other knowledge would find its true place. Something like this, though never quite formulated in precise words, seems to have been the hope which guided the traditional conception of philosophy, with its trust in reason.

In all this, it is plain, a great deal was left inexplicit. What is this logic which is to guide us to certainty, to satisfy us that we may on its assurance entertain as certain beliefs which carry no conviction of certainty in themselves? What are its rules and principles? And how is it related on the one hand to that science of mathematics in which reason has gained its most undoubted triumphs, then to the logic used in the other sciences which have some claim to be called exact, and then again to that logic, if we may dare so to call it, which we use in the affairs of every day? There is a logic of mathematics; a logic of the natural sciences, and a logic of ordinary life: are these three the same, or are they branches that spring from a common root, or are they different things that have no connection but their name? And when we speak of logic and of reason, do we mean, or should we mean if we are using words rightly, to speak of the same thing, or of two different things? Are we to include under our conception of reason something more than we include under our conception of logic, and if so what?

To these questions answers were bound to be forthcoming. Reason and logic were ideas so central to the traditional philosophy that the task could not be avoided. There is an extensive literature which undertakes the task of expounding logic, its nature, its rules and principles, its various branches. We shall indeed hardly find in this literature, and perhaps we ought not to expect, clear and ready answers to the rather loosely worded questions which we have formulated above. To one of those questions, the question of the relation of logic to mathematics (which once it is raised must seem one of fundamental importance and which might have been expected to present itself at the outset of any

inquiry into logic), a full answer has only been worked out in recent years. To another, the relation of logic in its pure form to the methods of reasoning used in the sciences, attention has been given for a rather longer period, in the form of an inquiry into the difference between deductive and inductive reasoning. But to the wider question which we have attempted to indicate in such terms as: What is the relation of logic to reason? What is the relation of strict logic to the logic of ordinary life? we shall find it hard to disengage a clear answer, or even several conflicting answers, from the vast mass of literature.

One thing, however, it seems safe to say, that whatever might be the method which logic or reason laid down for itself, its aim was the exclusion of what was irrelevant, personal, and subjective in human thinking, and its hope was that this exclusion could be achieved. And what this hope implied was that, as reasoning in the sphere of mathematics brings us to conclusions which all men, however different their prepossessions, can agree to accept as certain; in the same way reasoning might be able to bring philosophers, if they could follow its guidance faithfully enough, to certainty and agreement about the most important matters of all. The capacity to induce agreement was the test of the validity of reasoning in mathematics; it must be the ultimate test of valid reasoning in philosophy. Faith in reason carried with it faith in the possibility of agreement on the basis of reason. It implied something like this: that however great might be the discrepancies in the actual beliefs of philosophers arising from time, place, temperament, and circumstances, yet supposing that they could meet in some superterrestrial limbo and spend a few quiet centuries in discussion, it should be possible for them, by the help of reason alone, to rise above these discrepancies and to arrive at agreement in a true common philosophy.

But whatever might happen in limbo, philosophers on earth are found to differ. How does this come about? Why does reason not bring the agreement it was hoped to bring? Two main causes for this suggest themselves. First, that reason as we find it in practice is not so much aware of its own processes, not so much able to follow strictly its own rules and to guard itself against the intrusion of the irrelevant, as it may suppose; at this or that point in its path something personal or subjective, some prejudice of the individual thinker will insinuate itself. So far we should have to deal with a failure of reason to satisfy its own ideal, and this, we might hope, is something which in the end with effort and good

faith it might be able to overcome. But secondly, and this is the more important because it seems not incidental but inevitable, there is the point that reason, however strictly it may analyse and criticize, must in the end, or at the beginning, go back beyond analysis and criticism, and start with assumptions it takes from somewhere; and if we ask from where it takes them, the only answer we seem able to find is that it must take them from common sense. We come thus to the second element in the duality from which we started: we have to ask, with what right does common sense hold the beliefs it presents to us, what is the nature of this common sense to which, it seems, we must in the end go back?

Our attempt to define reason has proved a difficult task, partly because we were hampered by the thought of all that has been written about the subject. When we ask: What is common sense? we should not be so much troubled by this particular difficulty. In discussing reason we find the intellect engaged in scrutinizing its own operations, and this task is in its nature one which needs to be carefully reflected on, if it is to be rightly performed. But common sense, as its name seems to imply, is something more widely spread, something which each one of us would like to think he has, and would resent the suggestion that he lacked. And so we find that philosophers, while at least some of them speak a good deal about common sense and appeal to its authority, do not think it necessary to spend time in telling us what it is. There is about the word a suggestion that we all know what it means without being told; that its power and authority reside just in this; and that these would be weakened, not strengthened, if philosophy had to analyse and explain the idea before we could understand it.

Turning then not to books on philosophy, but to general usage, let us ask what people mean when they speak of common sense. It seems to be that sort of understanding of our own nature and of the world about us which forms itself in people of normal development as they grow up, and enables them to find their way about in their environment. It includes such understanding as that fire burns, rain wets, knives cut; that the sun will rise tomorrow, that the days lengthen in spring and grow shorter in autumn; that some things are food for us, and others poison; all that common knowledge of the regular sequences of nature on which the fabric of the physical sciences has been constructed. It includes again understanding of other people and the way they are likely to act;

that this will please or displease, irritate or impress this or that person, or a person of this or that type; all that common knowledge of human behaviour which underlies what we call 'psychology' as it is expressed either in science or in literature. And one thing that we mean in particular when we use the word is that, in so far as a man has common sense, he has this knowledge immediately and directly, at his fingers' ends as we might say, without needing to think it out or to go for it to the authority of other people or of books. Following up this line of thought we might say that the best proof of possessing common sense would be the power to do the right thing in an emergency without needing to reflect or to reason; and common sense in this way of thinking would be something that was possessed by the body almost more than by the mind.

But this side of the word's meaning should not be stressed too much, for if we follow up this line and take common sense to mean the power to do the right thing in an emergency, we come to something that in its highest degree is not by any means common to all or to most people, but is as much the prerogative of a few as reason is, though perhaps of a different few. To understand the word rightly we need, it would seem, to combine two ideas which have in themselves no clear necessary connection with one another, but which appear, so our usage of the word suggests, to be in some way connected in fact. These two ideas, or two sides of one idea, are, first, the mind working without being aware of how it works, second, the mind working successfully. And what we seem to assume, when we speak of common sense, is that there is a connection in the nature of things by which the minds of men, when they work without being aware of how they work, do at the same time on the whole work successfully, that is, in harmony with one another and with the physical world.

We are brought back here to the notion of agreement with which we began our discussion. Reason if it is to deserve the name of reason, common sense if it is to deserve the name of common sense, must each lead to agreement, and their reality must be tested by their leading to agreement. Only the method by which they reach it differs; for reason reaches it by a process of which we feel it ought to be possible to give an account, however difficult the account may be to formulate; while common sense precedes analysis instead of following upon it. About reason then a main question to which we shall want to find an answer is: How is this account to be formulated? About common sense, a main question

we shall want to answer is: How can we explain this fact of agreement? Is it due to some common element in the composition of men's minds, or to common forces acting on them from outside, or to what?

These questions will come before us later for closer examination. In the meantime let us observe one difficulty that will meet us when we attempt to apply in practice this notion of common sense, as tested by agreement. How far does common sense extend? What sort of beliefs can it be said to vouch for? Move inside a narrow enough circle, and you will be able to conclude that common sense, that is to say, an immediate unreflecting certainty, can assure you about almost everything: it will tell you that either Capitalism or Socialism, Communism or Individualism, armament or disarmament, high tariffs or free trade, will save our country or the world, or alternatively will ruin them. It has assured the British that the two world wars were caused by a German plot to grasp the hegemony of Europe, and the Germans that they were caused by a conspiracy for the encirclement of Germany. It assures different nations, classes, or parties today of many things that are no less contradictory. And if we pass from politics to ask questions about religion or morals or marriage or education, we can still find common sense forbidding us in one circle to doubt one thing, and in another to doubt its opposite. And what will strike as strange the observer, who moves from one circle to another and repeats this experience of hearing the conflicting utterances of common sense, will not be that men's opinions differ (it is natural enough that men should differ in their judgments about complicated problems, that they should want conflicting things, and that their different opinions and desires should be strongly contrasted); but that their conflicting beliefs should so often be supposed to arise necessarily and incontrovertibly out of that fundamental ground of agreement which must exist somewhere, if any of our beliefs are to be worth anything, and which we call 'common sense'.

Plainly the task of defining our notion of common sense by reference to the test of agreement is not going to be so easy as we might at first have hoped. On what we have so far said, we might be led, looking to this test alone, to despair of finding any definite content underlying the notion. But here we may revert to that other implication contained in the notion of common sense as being what enables a man to find his way about and maintain himself in his environment. Somehow through all these different

ages with their different beliefs, men have contrived to live, feed themselves, propagate, grow harvests, build cities, practise the arts, to do and to get in some measure the things they want within the limits conceded by natural law; these beliefs then have shown themselves by the result efficient, able to work, or at least have shown that they must contain some element of which this can be said. And this element, if we could isolate it, which enables man to maintain himself in his environment, we might regard as the essential common sense of the human race, as distinguished from the common sense of a particular class or nation or period; and we might conjecture too that this essential or historic common sense would have in it something permanent and universal, however much the words or forms of thought by which men sought to express it might vary from time to time.

Our inquiry so far has led us to conclusions which seem mainly negative, yet which may not be useless if they help us to realize the complexity of our task. The systems of thought which philosophers have constructed have been built up by methods supplied by reason out of materials supplied by common sense; we have to ask then the questions, How far can we trust reason, or what is called 'reason'? How far can we trust common sense, or what is called 'common sense'? And here arises a further question: At what point does the function of common sense end and that of reason begin? If common sense is allowed to go too far in its task of bringing unsifted materials to the construction, there is the risk, it is plain, that what we shall be given is not the essential common sense of humanity, but only the particular common sense of the philosopher's own time, place and surroundings. If reason is allowed to go too far in its task of sifting, criticizing, and rejecting, we may find ourselves with no material left out of which any building can be constructed.

In the light, however, of what has been said, we may try to consider briefly the transition from the first to the second type of philosophy distinguished in our last chapter, from the traditional or metaphysical to the scientific or positivist philosophy. Which of these two philosophies has a better title to speak in the name of reason? Each of them makes the claim, and each perhaps can make out as plausible a case as the other, though on opposite grounds. The traditional philosophy claims to speak for reason, inasmuch as it aims at a picture of the world as a whole which shall be constructed by means of reason and shall exhibit the world

as conforming to reason; whereas a philosophy, which rejects any attempt to add to the results of the sciences, can show us only a world picture built up ultimately out of brute facts. The facts must be connected in some measure by reason, for without some rational connection no system at all could be constructed; they will not however appear related to one another in a complete rational framework, as the traditional philosophy seeks to demonstrate that they are. But the positivist philosophy can claim in a different way to have reason on its side. It does not propose, indeed, to give an account of the world constructed by reason out of material supplied by reason itself, as mathematics may be said to do, and as the traditional philosophy in some sort aimed at doing. It limits itself to building its conclusions out of the materials supplied to it by the sciences, which are themselves derived from the brute facts given in sense experience. But this very limitation, it can say, is dictated to it by reason; for it is reason which teaches us the methods used by the sciences in dealing with their material, and it is reason which, examining the conclusions arrived at by the sciences, finds them to have a claim to certainty of a kind which other beliefs have not. Reason, when it scrutinizes the assumptions on which philosophers in the past have built up their metaphysical systems, finds ground for questioning these as doubtful; when it considers their conclusions it finds ground for rejecting them on the ground of their disagreement with one another. But it justifies the procedure of the sciences because they take as their starting point what common sense can least afford to doubt, the content given in sense experience, they deal with this by methods which aim at excluding irrelevant and distorting influences, and they arrive at conclusions which may be said broadly to command general agreement.

Thus we are driven back again to the question of agreement. The test of reason being applied rightly, we said, must be found in its power to reach agreement, and the aim of the traditional philosophy when it set out in reliance on reason was to arrive through disagreement and discussion at agreement. But this aim it has not attained, and is further off than ever from attaining at present. Science, on the other hand, has succeeded, where philosophy has failed, in developing a technique for reaching agreement through disagreement; it has achieved in this way something that no system of beliefs known to history has perhaps ever achieved in the past, something certainly that no other system of beliefs can rival today. Here is a fact too plain to be denied; and

anyone who seeks to champion any other system of beliefs as having an authority comparable with that of science must reckon with it.

We find thus growing up along with the growth of the scientific spirit new conceptions of reason and of common sense. The new conception of reason is the motive force which has brought about the change from the metaphysical to the positivist type of philosophy. Reason on this new conception limits its activity to the fields that can be explored by the sciences; it no longer conceives itself competent, as the older philosophy supposed it competent, to go beyond these and to reach by its own powers a central knowledge or knowledge of ultimate reality. It accepts this limitation of its function partly because, as it scrutinizes more closely its logical weapons, it seems to see that much of the kind of argument which earlier philosophers found conclusive had not the certitude that was claimed for it; partly, and perhaps even more, because some of the presuppositions which the older philosophy took over from common sense have lost their cogency.

For there has been a change too, though in the nature of the case less deliberate and clearly marked, in the temper of common sense. Common sense today, as always, has as its core and nucleus that practical understanding of the needs of life which we spoke of earlier. But it adds to this today a whole region of belief which did not enter into the common sense of the past, while on the other side it leaves out things that historic common sense supposed to be matters of certainty.

The fabric of common-sense belief today would be generally held to include the knowledge accumulated by the sciences and by history, which is supposed to be for the most part established by approved methods, or on the way to being established; together with a fringe of more loosely formulated beliefs about matters of fact, which are assumed as being common-sense beliefs and no more. Beyond this field of the beliefs which would be held to be beliefs of common sense, whether accepted by science or not, come other fields of belief, which are entertained as strongly by individuals or by bodies of men, often perhaps more strongly, but which would not in the same way be called common-sense beliefs. Among these outlying fields of belief would fall the various doctrines of philosophy, or at least of metaphysics; the beliefs of any particular religion or of religion in general; most beliefs about politics, if not all of them; and beliefs about ethics or morality, with the exception of that part of morality, important in itself,

but small in relation to the whole field of ethics, which may be said to be sanctioned by the law or custom of the thinker's own age and country.

In saying that beliefs of these orders have now come to fall outside the sphere of common-sense belief, we are saying what would certainly have been denied by most people a hundred or two hundred years ago, and would be denied by many today. Common sense, we have recognized, is something relative and varying; it is a matter of narrower and wider circles; and there are wide circles in which one or another of those systems of beliefs, that we are supposing common sense to be doubtful about, maintain their position as certain and unquestionable. Yet beyond these limited circles of class or nation or creed there has today grown up something that we may call a 'common sense of the modern world', and in this common sense of the modern world there is not to be found any single system of metaphysical or religious or political, hardly even of ethical, doctrines that commands general acceptance; there is one system only which commands such acceptance, the system of the sciences. And we may support the truth of what has been said by this reflection: that anyone who should express a doubt about some generally accepted scientific or historical belief would be held to be going against common sense, unless he could at least attempt to justify his belief on grounds that could be related to the generally accepted canons of science or of history; whereas a man might doubt or deny any doctrine or all doctrines of philosophy or religion or (with the exception we have named) of ethics, and whatever hard things people might find to say of him, it could scarcely be said that by such a doubt or denial he was going against common sense.

How is it then, by what process of change in the composition of that general consensus we call 'common sense', that these systems of belief which a century or two ago seemed to fall evidently within the sphere of common sense have now come to fall outside it? The reasons may be many, but the one which stands out as the most important, and which might of itself be enough to account for the change, is the growth of the scientific spirit; or to use a wider term (for history too needs to be taken into account) the growth of the critical spirit. But how is it that the critical spirit has worked so strongly to exclude metaphysics and religion from the sphere of common sense? It is not that the advance of science and history has disproved religious or metaphysical doctrines as a whole, though this may have happened with particular doctrines

either of metaphysics or of religion; for any such conflict and victory of the critical spirit, however much it may be thought to have shaken a particular system, would not touch the main problem as to whether it is possible to reach a knowledge beyond that of natural common sense. The significance of the change is rather this: that science has worked out a technique of agreement which extends over a large and widening field, and which shows no place in this field for beliefs of the kind that metaphysical and religious systems have maintained in the past. The scientific spirit excludes these beliefs not so much by refuting them in this or that particular, as by leaving them as a whole on one side. And if the metaphysical conception of philosophy is to justify itself, the task before it is, it would seem, something of this kind: to show that there is a means by which knowledge can be attained in a region of belief falling outside the limits within which science has so far achieved agreement, and that the nature of this means is such as to make the achievement of agreement in that further region more difficult, yet still not impossible.

One more question which may be in place before we close this chapter is: How does the third or impressionist conception of philosophy stand towards this problem of reason and common sense? Clearly it does not attempt to make any appeal to reason. Does it then appeal to common sense? It would hardly seem so. Yet to one or other of them it must in some form appeal, if it is to persuade at all, and in a measure it may be said to be appealing to common sense; the common sense, if not of the present, then of the future, if not of mankind, then of a select few who alone are held to matter. 'These are the beliefs which I have found from looking at life', a philosopher of this type may be taken to say to his readers; 'I do not suppose they are beliefs which you hold at present, and it is just for that reason that I have taken the trouble to express them. But think again more deeply, and you will see that my beliefs are better than yours; or if you do not, the next generation will or the generation after that; or if no generation of readers like yourselves can see it, at least it will be seen by the few in each generation whose understanding is worth working for.'

And this ambition to mould the common sense of the future is not an extravagant one, for common sense, we have seen, stable as it may seem, is all the time in flux. Just as the chalk cliffs on which we walk are made up of the shells of countless little live creatures

of the past, so what seems the solid common sense of today is built up out of the skeletons of countless little fancies which once skipped or crawled in living minds; and what seem the most fantastic imaginings of today may go to build up the common sense of tomorrow.

CHAPTER IV

WHAT WE WANT TO KNOW

WITHIN the problem of knowledge we distinguished four questions which might help to mark out the field of inquiry. What do we mean by 'knowledge'? How can we know things? What can we know? What do we want to know? The first of these questions, which might seem the most fundamental of all, appeared to us in spite of this, or perhaps on account of this, to be one which we could best hope to deal with after we had made some attempt to answer the others. The second and third, which we found to be so mutually involved that they would need to be considered together, will occupy us for the greater part of our inquiry. But before we consider these more closely, it may be in place to say something about our fourth question, What do we want to know?

We must start however with some assumptions as to what we can know and what 'knowing' means, and the assumptions which we will make for the present will be that we possess a certain amount of knowledge of the kind that most people believe themselves to possess, and that we understand 'knowing' in the way that common sense would understand it. We do not at this stage raise the question whether we can or cannot go beyond this, and we leave open the issue between the metaphysical and the positivist types of philosophy. These assumptions may be too vague to carry us very far, but they will serve us for the purpose of the present chapter.

What then do we want to know? Here is a question which is surely both difficult and important; yet it has been strangely left out of sight by philosophers, who have discussed so many questions that there could, one would have thought, be hardly any left undiscussed. Why then did they say nothing about this one? Was it that the answer seemed to them so obvious as to be not worth

stating, or was it that any answer seemed so hard to find that it was not worth raising the question? One or the other, we must suppose, but which? If they conceived that they had a satisfactory answer, would it not have been worth while for them to spend a little time in telling their readers what it was? And if they felt that no answer was obtainable, would it not have been worth while for them to tell us this? For surely men's whole search for knowledge may be a waste of effort if we do not know what it is that we want to know.

This last conclusion would be so disturbing that we can hardly suppose that the silence here means an admission of ignorance. Some answer must surely be taken to be assumed or implied when nothing is said; and if so, the only answer that it seems easy to reconcile with the silence is the answer that we, understanding by 'we' mankind in general, want to know everything, and that this must be so plain to any intelligent person that it does not need to be stated. Some such answer as this does in fact seem to lie behind much that is said today about the pursuit of knowledge and the growth of knowledge. This main belief that we want to know everything is not so much expressed as taken for granted, but we can find other beliefs more clearly formulated from which it might seem plausibly to follow.

First there is the belief that men have and ought to have a desire for knowledge. 'All men naturally desire knowledge' are the opening words of the first book that was entitled 'Metaphysics', and it is clear from what its author says there and elsewhere that this desire is for him a high attribute of man, perhaps the highest. And this belief not only has an ancient history, but has in some sense persisted continuously, however much ideas may have changed as to the import of the word 'knowledge'; and in the passage from the metaphysical to the scientific conception of philosophy it has not lost force, but if anything has gained it. Perhaps not all men, it would for the most part be said, have this desire for knowledge, but it is true of many of them and particularly of the best. For the scientific spirit, which has doubted so many things in the ethics of the past, has not doubted that the desire for knowledge and the desire for truth are virtues.

Then there is the belief, or we may say the fact, for it is as well supported by evidence as most facts can be, that knowledge, or at least some kind of knowledge, helps men to get what they want. This belief again must in a sense be as old as civilization, perhaps as old as humanity. But it has been confirmed and strengthened

by the way in which things have gone during the last two or three centuries, and by the evidence that the growth of men's knowledge about the physical world has immensely increased men's command over nature, their power to construct and their power to predict.

And along with this goes a further belief or observation which seems to emerge from men's experience of the growth of the sciences. Knowledge which was sought for in the beginning for its own sake, and with no idea of any practical result, has been found, time after time, to serve in the end some useful purpose. One piece of knowledge leads to another, and one question solved throws light on another question, in a process to which there appear no limits. It seems natural to go on to say that there is no conceivable fact, however trivial it may seem, the knowledge of which should be rejected as useless.

From these various materials has been built up a composite belief in what we may call the 'reward' of knowledge. Man according to this belief has in him a desire for knowledge, which leads him on to collect bits of knowledge of every kind for their own sake, without any reason other than the wish to know them. But this search for knowledge is unexpectedly rewarded by some law of nature, or operation of cause and effect, which brings it about that, if enough bits of knowledge are collected, results will somehow come from them which will help men's practical life. Knowledge has thus in it something inherently useful, and the blind desire for collecting it which is born in man as an instinct is justified by its consequences. Men gathered knowledge in the fields of mathematics and physics, often not caring what they should do with it, and nature rewarded them with such gifts as electric power and wireless transmission. Let them go on collecting knowledge without thinking of any ulterior object, and this knowledge will somehow justify itself in the end, however useless it may seem at first.

The theory of the reward of knowledge which we have here summarized is not in so many words expressly formulated, but that something like it underlies the intellectual efforts of the modern world seems a fair inference from the fact that philosophers have not thought it worth while to pause and ask the question, What kind of knowledge do we want, and why? And the theory does derive some support from the beliefs and facts out of which, as we have suggested, it arose, and from our experience of the way

in which physical science and industry have grown side by side. But the beliefs and facts on which it rests have been brought together in too haphazard a manner, we may think, and the theory needs more scrutiny than it has received, before we can regard it as at all answering our problem.

Let us try to see how such a view would work out if we apply it to the case of an individual who asks himself the question, What do I want to know?

If we turn to consider the facts of life with this thought in our minds, we may find it more difficult than we should have supposed to pick out clear instances of the pursuit of knowledge for its own sake. Difficult, that is, to find knowledge pursued for its own sake seriously: for no doubt many people are born with, and some keep, a natural curiosity which leads them to pick up from time to time little bits of information about this or that which strike their fancy. But the serious, effective, sustained pursuit of knowledge, when we come across it, seems for the most part to link itself to and minister to some practical aim. Men in any walk of life are likely to feel that they need knowledge and try to get it, but the knowledge they concern themselves with is what they hope will help them for some purpose of their own. A lawyer or a merchant or a shopkeeper wants the kind of knowledge that will be useful to him for his particular business at a particular moment, and when the moment's need is past he may be glad to dismiss it from his memory. And if we can name professions, as no doubt we can, such as those of the physician, the chemist, or the engineer, where some branch of organized knowledge is studied in a more systematic way, still the case is not so very different; the pursuit of knowledge has a limited practical aim in view, though the practical aim may demand a more thorough study of theory. And even when we turn to those instances, real though not common, of a man engaged in the study of some branch of knowledge which has no evident ulterior aim beyond itself, such as pure mathematics or astronomy or archaeology; even then, if we try to conceive his activity at some particular moment in his intellectual work, when he is observing, calculating, or studying, we should be likely to find that the motive force is not any desire for knowledge in general, but the need to achieve some task set him by life. He may be a teacher and have to think of his pupils, a professor and be preparing a course of lectures, a writer and want to write a book; and even if he has no definite task thus set before him, if we conceive him sitting alone and at liberty and working at some question

which fills his mind by its intrinsic intellectual appeal, yet it will be true that this question appeals to him because it falls within a particular limited range marked out for him by his past; and the more effective his work is, the more he is a constructive thinker and not a dilettante, we may be inclined to add, and experience seems to confirm it, the more certain it will be that his real work will be done within these limitations. He may turn perhaps at times from his special study to consider the bearings it may have on some different field of thought, but when he does so he will not feel himself or be felt by others to be doing for the cause of knowledge what is most worth his while.

All this, it may be said, is natural and right; and certainly it would be absurd to quarrel with these limitations which are forced on us by life, and which may be themselves of value in so far as they direct the search for knowledge on to fruitful lines and keep it from running to waste in wrong directions. But what we are concerned with now is to note the bearing of all this on the question before us, and what this comes to is that the pressure of life seems to leave men little occasion or opportunity to reflect on the problem of knowledge in general, or to consider how their own particular search for knowledge stands with regard to this. It is just because it is natural and inevitable that a man's search for knowledge should develop within the limits marked out for him by outside circumstances and by his own inner growth, that it is so unlikely (and perhaps the more unlikely the greater his intellectual achievement and capacity) for him to put to himself the question, Why is all this knowledge being collected and what is it for? What is it that we really want to know?

If then we wish to see what the problem would look like when envisaged by an individual mind, our best chance will be to ask how it might present itself to an inquirer not yet entangled in the business of making a living or filling some position in the world. We may choose our imaginary inquirer at an age when the desire for knowledge has begun to flow with full force and has not yet been canalized; let us say a young man who has just completed his three years of study at a university, and has a short lucky interval in which he does not yet feel driven to think about the future. We may picture to ourselves that he is walking through the country and sits down in a field, and as he is sitting there he recurs to a thought which has come to him in the past, but which he has not so far found leisure to follow up; the thought of the desire for

knowledge. What does this desire mean, what is it that he wants to know? It seems to rise in him with a demand that has about it something unlimited; it is not this or that particular piece of knowledge that he wants, it is knowledge. This desire for knowledge seems in some way to imply or to have behind it a desire to know everything. Not that a single individual could entertain the fancy of himself knowing everything, but that the desire for knowledge in the individual seems to depend on its being possible to frame a conception of what complete or universal knowledge could be. Such a desire, such a thought, do present themselves sometimes to inquiring minds at this stage of growth; whether they are profound or absurd is the question we are seeking to explore. But then again, what can be meant by knowing everything? He must begin somewhere, and where should he begin? And here the thought may come to him, why not begin with what is nearest, with this field in which he is sitting? What is there that might be known about the field?

Sounds and scents, forms and colours pass before his attention, and his thought as it settles may begin with the question, How is he to interpret these? And here, if he is a student of philosophy, he might be led into the question which will engage us a little later in our inquiry, and from which we shall not easily emerge, How far can these sensations be taken as telling him of a real world beyond themselves? But down this long and intricate path we will not at present suppose him to be tempted. We are supposing him to look on the world with the eye of common sense, whatever exactly that may mean, and to consider from that standpoint what can be known about it. What comes to him through the senses then he will take as telling him of material objects around him. Through one sense or another he will distinguish the shapes and colours of flowers, trees, and grasses, the scent coming from this or that flower, the notes of birds, the noise of insects and their movements, the outlines of hills or woods in the distant scene and the solid firmness of the earth beneath him. And now if he turns his attention to particular objects round him, he may reflect that he can recognize this or that plant or insect as known to him, in the sense that he can name the kind to which it belongs, while this or that other he cannot give a name to. But this ability to give a name does not amount to much: for what does he really know about the thing he is naming; If he set himself to draw or to describe it without the object before him, he would probably make a poor attempt; and even with the object before him, how little he

really understands about the details of its structure, its mode of growth or behaviour.

Some of this ignorance he could no doubt remedy if he had by him a text book of botany or entomology. With these, or with a library of these, he could inform himself as to what other observers have observed and recorded about the shape, structure, habits, life history, and so on of whatever plant or insect he is for the moment watching, or of any other plant or animal that he might care to study. But neither would this way of adding to his knowledge, however much it might be made to include, go very far to satisfying him. This account of what other people have observed seems like a skeleton or abstract of knowledge rather than knowledge itself. To fill out the abstract, to put flesh and blood on the skeleton, he ought himself to have observed what those other observers have seen, or at least a great part of it, enough at any rate to make him able to understand the meaning of the words they use in their descriptions. The knowledge that can be gained from general statements seems to rest on, to need for its understanding, a knowledge of particular facts.

And facts perhaps are what he really wants to satisfy this desire that he feels for knowledge, and this thought if it occurs to him may find confirmation in sayings which he may have heard and found impressive. He is likely to have been told, for instance, in the course of his education that he must get down to the bedrock of facts, or that 'an ounce of fact is worth a ton of theory', or that all facts are valuable and important. But what facts? For every flower and blade of grass and insect in the field is a fact, or rather the state of each one of them at each moment is a fact and its state at the next moment is another fact. It is a fact that this ant is at this moment beginning to climb up this stalk, it is a second fact that at the next moment it has climbed a little higher, and it is a third fact that a moment later it has dropped off and is scurrying along the ground. Nor can he stop here, if he begins to look into things at all closely; for not only each separate object is a fact, but each separate perceptible part of each object, or rather its state at any one moment, is a fact, and so too is the momentary state of any smaller objects or parts of objects which are to ordinary sight imperceptible and which might be brought within the range of sight by instruments of precision. And facts in all these categories have formed the subject of scientific investigation, and any particular fact might be worth special study, at any rate if it should appear to be sufficiently diverse from facts already observed; and

if time cannot be spared to study it, how be sure that it is not worth studying? And all the time that he is sitting here these facts, any one of which might be worth noting, are accumulating round him; the blades of grass and the leaves on the trees change their form and colour from moment to moment as the wind moves them and clouds pass over the sun, the brook at the edge of the field flows on and no portion of its water is in the same place as at the moment before, ants and beetles continue their travels among the grasses, swarms of gnats hum in the air, all of them changing place and position every moment. It would have taken all his attention to follow out the movements of the one particular insect he was looking at a moment ago; and if he had concentrated on this the most he could have done would be to observe and follow up the various facts of its change of position from place to place: the finer details of the movements of its legs and the parts of its body would for the most part escape him unless he concentrated yet more narrowly. And all round him innumerable facts like these are happening and passing unnoticed. In the half hour that he has been sitting here more facts have slipped by than all the scientific observers in the world, if they had been present, could have recorded in their notebooks.

The problem that he set himself to ask seems already growing beyond understanding, but here it may be complicated further by a new thought. By the side of the field stands a cottage with a garden, and now a man crosses the field and passes through a gate in the hedge, and in the garden children can be seen playing. And if he extends his consideration of the field to take in the cottage and the people who live there, a new region of possible knowledge opens out. What are the thoughts, the desires or fears, pleasures or pains, likes and dislikes, going on in the minds of all these people? For what passes in the mind of each of them at any moment is again, if common sense may be allowed to dogmatize on a point which some psychologists might hold doubtful, a fact or a group of facts; and each of these lives has its history, of five or ten or forty years, as the case may be, and each moment of each year of life is a separate fact. The cottage too has its history: to judge by the look of it it may have stood in this place for two or three hundred years, and ancestors of the people who now live there may have lived in it for that period and perhaps lived on this spot for still longer. And so he is drawn backwards in time. And all that while this plot of land will for these people or for people like

them have been the centre of their lives, the place in which they were born and grew up, from which day by day they have gone out and to which they have come back.

Here then is another vast region opening out which he must take account of in planning the search for knowledge; the thoughts, feelings, and experiences of these people and of other such people all over the world. Looked at in one way as material which may help to a general understanding of human nature, they are the stuff of psychology; looked at in another way as material worth recording for its own sake, they are the stuff of history. And here again comes the same problem: to know all is impossible, the facts we want to know are those which stand out or should stand out from the rest, yet how are we to know which should stand out without in some way knowing all?

Psychology is a young science for which some of its spokesmen make great claims, but in its present state it does not seem able to do much to solve this problem. Its field of possible material is immensely great, as great indeed as that of all the other sciences put together—for what piece of knowledge can there be that does not come to us through the mind—but as to the principles of selection in this field there seems as yet to be no kind of agreement. History, on the other hand, is a form of human activity which has itself a long history, and it ought by now, we may think, to have come to some understanding of its aim and method. It must be the business of history, it would seem, to tell us something about the people who have lived in this cottage and the multitudes like them who have lived in other cottages or villages or towns up and down the country, what their manner of living and thinking and feeling has been like at this time or that, and how it has changed for worse or better. Yet the historian cannot even study for himself, still less can he tell his readers about, all these particular lives, or the hundredth or thousandth part of them. What he tells us is something based on the knowledge of a few facts about a few individuals, and yet in some way he presents it to us as satisfying, and we accept it as satisfying, our desire for knowledge about the fortunes of humanity in a country or a century.

But now on the top of this problem comes a further problem. If we ask more closely what it is that history has to tell us, we find that another kind of knowledge stands out as important, the knowledge of unique particular facts. The field, the cottage, the people who may be supposed to have lived there, are for history only the stuff out of which its broad generalizations are built; but

there are facts which have for it a different kind of value. For if there should be in the neighbourhood some piece of ground over which a famous battle was fought, or some house in which a famous statesman was born or a famous poem was written, this place and the fact in time connected with it would stand out in history in their own right. The principles on which these privileged facts are selected will differ with different historians, but all that the world has hitherto called history implies, as an essential part of it, the belief that there are some facts so privileged to stand out above the rest. And thus the problem becomes even more entangled; in the labyrinth of facts it is necessary to hunt, not only for those facts which can be grouped into bundles so as to give us general truths, but also for some facts (to be selected on what principle?) which are to be known for themselves.

Caught up in this whirl, his thought may grow dizzy. He must try to grasp again what was the idea from which he set out. It was the idea of knowing everything. Not certainly the idea that he or any other individual could know everything; this could be felt as impossible from the outset, and all that today's thoughts have done is to make the impossibility a little more vivid. But there was the feeling that knowledge about everything should be possible for humanity, and along with it a feeling that only if this knowledge of everything could be regarded as at least possible to be reached, only if there could be the hope of discovering some framework in which all particular knowledge would find its right place, only then would the pursuit of knowledge by the individual for its own sake appear really worth while. And here may come to his memory a saying he has heard quoted: 'The whole series of human generations during the course of ages should be regarded as one man ever living and ever learning.' The words have a fine ring, but what can they mean for him? For knowledge must be contained in the mind, not of an imaginary man who lives and learns for ever, but of an individual man whose life is short, and only a small part of it can be spent in learning; and how can this individual's mind hold the knowledge amassed by the whole series of human generations?—the knowledge possessed by half a dozen specialists of his own generation would fill it fuller than it can hold. Knowledge grows, but can we say that the capacity of the human mind grows proportionately, or even say confidently that it grows at all? If the growth of knowledge for mankind is to consist in the collection of a larger and larger number of facts (and so far as we have gone it would seem that this is at any rate a main part of what we have in

mind when we think of the growth of knowledge) it is hard to see how knowledge is to grow for the individual. Will not the only result be that as progress continues the individual student will substitute a more detailed knowledge of a narrower field for a less detailed knowledge of a wider field? And is this what we mean by the growth of knowledge for humanity as a whole, and is it a development which we should so clearly count a gain?

But here perhaps another turn may come in his thought. May it not be that in his speculations about the nature of knowledge he has left out something which should give a key to the problem? Is not the key to the problem of knowledge to be found perhaps in its practical applications? This reflection might arise in many ways, and one way would be if he were to turn his thought to other branches of knowledge not so immediately suggested to him by the surroundings of the moment, to sciences such as physics or chemistry. Here the same main problem will present itself as before; the problem as to the infinite number of facts, of which through the limitations of time and human powers only a small fraction can be known. But at the same time the thought may suggest itself that in this region of inquiry man has at least reached knowledge which can give him practical results. Here is knowledge, and rapidly advancing knowledge, which has produced the technical developments of the last hundred and fifty years; and if the price that has to be paid for this advance is some narrowing of the field of knowledge in the individual, may not the result be worth the price? And further, though the justification of knowledge by its practical results stands out most clearly in the case of the sciences just named, it is not altogether limited to them, but can be seen in varying degrees to extend more widely; to the sciences of life; to the social sciences; and to all the regions in which knowledge helps man to predict or to construct or to set in order his experience.

The knowledge then that we have, fragmentary as it is, can be justified by its utility. Once we turn aside from the idea of universal knowledge and think of knowledge piecemeal, it can be seen that most of the particular pieces of knowledge that men acquire are acquired for some practical reason. This was true, it may be supposed, of the birth of the arts and the sciences; men studied the seasons in order to grow their crops, the stars to travel over sea or desert, the properties of the triangle to enable them to measure out land. And the practical impulse which was behind that earliest knowledge is behind its whole growth into the developed science

of today. Is it necessary to look further than this in the inquiry into the aim and purpose of knowledge? And in so far as man's desire for knowledge loses sight of this practical purpose, does it not stray into mere idle curiosity, in which it is useless to look for a unifying aim? And if this is the true account of the matter, that the real object of knowledge is always to achieve some particular practical result, the whole problem will take a different form. It will not be necessary to ask why men seek knowledge as a whole or what such a search would mean; it will be sufficient to say that they seek this or that particular piece of knowledge to achieve this or that particular object.

And should not this reflection have occurred to our student before? He has spent his time at the university to little purpose, we may think, if he has not learnt that the way to study is to limit oneself to some particular subject-matter and to the method suited to that subject-matter. If he wants to study botany, it will no doubt be useful for him to spend some of his time looking about him in a field, but for the serious ground work of the study he must go to the biological laboratory and the departmental library. Physics, chemistry, or whatever else it may be he aims at understanding, has its special literature and apparatus. And if he wants to study philosophy, which is the discipline that seems to come nearest to his vague ideas, here too there are books to be read through and lectures to be listened to. If he wants to get anywhere, he will do it along some such definite line as this, not by sitting in a field and wondering about how it is possible to know everything.

Common-sense reflections of this kind, once they occur to him, will soon resume their power over his thinking; the more so as he may already have at the back of his mind the awareness that he will himself before long have to face the practical question of how he is to earn his living, and what the particular things are that he will need to know for this purpose. We shall not therefore suppose that if ever he comes again to this field in later life he will come to it with the same vague indeterminate idea about what he wants to know. If he is still engaged professionally in the pursuit of knowledge, he will be a biologist or a chemist or a historian, with the lines on which his intellectual effort is to proceed marked out for him, and the more successful he has been on these lines the less likely to be tempted to roam outside them. Or, it may be, the hopelessness of finding any solution of his question about knowledge as a whole will lead him to turn his back on the pursuit of knowledge altogether; and if chance or memory ever brings him

back to the field in later life he will revisit it as a stockbroker or a tea planter home from the East; and whatever he is, the problems with which he has busied himself this afternoon will long have ceased to trouble him.

Yet before he quits this point in space and time we may suppose him to cast an eye over these problems once again, for easy as it may be to forget them later on, it does not seem so easy to answer them adequately when they are before the mind. There seems in particular no escape from the thought that the material for knowledge, the number of facts that might be known, is infinite; not perhaps infinite in the strict mathematical sense, for as to this he would seem to have no right to say either one thing or the other; but infinite in the sense that it is beyond any conceivable power of a single individual or of humanity as a whole to enumerate these facts or to grasp them. Even if he confines himself within the limits of the mass of facts accumulated in this field in two or three hours, the mass seems infinite; and to think of the whole material for knowledge he would have to add to this the thought of two other infinities, one passing out from the field in all directions to the limits of space, the other passing out backwards from this moment to the beginning of time.

In this infinite multiplicity of facts we select, or something selects for us, that tiny fraction of the possible material of knowledge which is to constitute our actual knowledge. How is it that we make, or what is it that makes for us, this selection? Somehow it would seem we have been able to choose passably well: the little portion of knowledge called 'common sense' that men have had since we begin to know their history has been enough to show them how to find their way about in the world, the little further portion that they have added to it and called 'science' has again justified itself by its results in practice. But is this success of common sense and science anything more than a fortunate accident, something of which all that we can say is that it has happened? Or can we discover in the growth of our knowledge some directing force, and if so is this force merely the pressure of circumstances, acting in a simple manner on man the animal and the savage, and in a more complex manner on man the civilized and the scientist, or is it a force which man himself can control? Does the principle by which we select the matter of our knowledge come from that part of our nature of which we are aware, from our reason? Or does it come from something which works in us, and which may on the whole

or for some purposes work successfully, but the working of which we can no more consciously control than we can the processes of digestion?

Here are questions which must surely be of large importance for all our thinking about knowledge, yet which seem to have been strangely little explored. For can we say that any principles telling us what we want to know, how we should select the material for our knowledge, have been clearly formulated in any science or philosophy yet written? Our knowledge then, it would seem, is a fortunate accident; or perhaps we might say with as good or better right, our ignorance is a fortunate accident, for our ignorance of that vast mass of possible knowledge which would be useless to us seems a necessary condition of our knowing that little which can be useful. The impulse given to our thinking by nature, we may conjecture, leads us on the whole to a right balance between knowledge and ignorance; but can we be sure that this balance will continue to be maintained if, as seems to be happening, our power of adding to knowledge, at least in the sense of acquiring additional facts, continually increases, and yet we find ourselves unable to replace the balance given by nature by a new balance to be given through the reason?

It would certainly be hard to find anywhere clearly formulated any general principles which should show us what knowledge is worth having. But can we perhaps find an answer to our problem in the thought that particular sciences are guided by their own principles, which direct their working successfully, though they are implied and not expressed? To some extent we may conjecture that this is the case. Mathematics seems to be controlled in its growth by some remarkable inner law of its own which ensures that all its developments are connected with one another, and not only this, but that they have or may have practical utility. The physical sciences are controlled by their connection with our practical needs on the one hand, by their connection with mathematics on the other. Of both mathematics and the physical sciences it may be said in some sense that they seem to know where they are going. But can this be said of other branches of study which have no such principle of development imposed upon them by an inner law of their own or by their connection with man's practical needs? Can it be said, for instance, of psychology or of history, that they know where they are going to, understand on what principles they are amassing their material? Would it not be worth while for them to consider what it is they want to know?

And above all, ought not philosophy to set itself to answer this question, for itself, for the sciences, and for human knowledge in general?

Perhaps the way those who can speak for the sciences would answer, if they gave their minds to the problem, would be something like this. There can be no general answer formulated to the question, What do we want to know? It has to be answered separately for each particular study by an instinct which will show what knowledge is relevant to that study. Certainly there are a vast number of facts which are insignificant and trivial and useless for the pursuit of knowledge, and considerations such as those we have had before us may be useful in reminding us of this. And what we have to do in the pursuit of any science or of any branch of knowledge is to disregard what is trivial and to keep our attention fixed on what is significant.

Significant: the word is like the beginning of a clue which might lead us out of our entanglement. But it is an ambiguous word, and what are we to understand by it? There are various meanings which we could assign to it, and they would lead us in different directions.

If we ask what we are to understand by the notion of a significant piece of knowledge, or of a fact which is significant for knowledge, the first answer which suggests itself is one which we have already touched on. Significant knowledge is knowledge which is useful, which helps the knower to get what he wants. It is the first answer, because it is the plainest and least doubtful; it is certainly to be held part of our account of the matter, and it may be the whole of it. And on this line there are two things to be said. First that our understanding of what we want to know will in that case centre on our understanding of what we want to get, what we aim at or should aim at in life. All these are vague conceptions, but let us provisionally take the word 'ethics' as covering this whole field of what we want to get, what we should aim at. The possibility of our constructing a philosophy, of forming a conception of what knowledge can be, at any rate of what it can be for men with limited faculties like ourselves, depends then upon our being able to formulate a theory of Ethics, of what we want, what we are aiming at. And then comes the question, Is a science of ethics or a philosophy of ethics possible, or is all that we can say on the matter, 'This is what I personally want, this is my personal aim, though the wants and aims of others may be

fundamentally different'? If this is all the account we can give of the matter, it may be that in fact men can be seen to have a few common wants, as for food, clothing, and shelter, and that we can distinguish knowledge as worth having in so far as it helps to satisfy them, but beyond this all seems left to chance.

A second answer that might be given to the question, What knowledge is significant? is, that it is that knowledge which interests us. The word 'interests' is itself ambiguous: we might be interested in a piece of knowledge either as we might be interested in the prospects of a company in whose shares we have invested, or as we might be interested in the fate of the persons in a drama. The first meaning leads us back to the practical world, to that whole region of our wants and activities which we have grouped under the word 'ethics'; the second leads us into another region, the region of immediate liking or taste, of what we may loosely call 'aesthetics'. We may seem to be stretching the word 'aesthetics' too widely when we use it in this sense, yet it is hard to find another so suitable. For this spontaneous taste for knowledge, this disinterested interest in knowing, if we may so term it to distinguish it from the first kind of interest, seems to have something in common with those other spontaneous tastes or impulses which are commonly called 'aesthetic'. The desire for knowledge for its own sake is for the most part weak, capricious, and accidental; its strength as a motive force in life falls a long way short of the strength of the desire for knowledge for practical reasons; and it is only when it is reinforced by such practical reasons as livelihood, ambition, career, that it becomes with most men an efficient driving power. It seems hard to discover behind it any guiding principle which might help to answer our question as to what it is that we want to know. Yet the impulse to know and the pleasure in knowing are facts, and we may be best able to understand them if we set them alongside of those other impulses and pleasures which are connected with the perception of form in the arts or in literature. The conception of aesthetics then may serve as a pigeonhole in which we can pack away this bundle of problems until we have leisure to take them out for further scrutiny.

We seem then to have in fact two impulses guiding us in the search for knowledge, the desire to know what will be useful and the desire to know what is interesting. But 'useful' and 'interesting' are both terms that have to be understood in relation to the knower, to ourselves; and must we accept this reference to ourselves as constituting the final answer to the problem of what we

want to know? On either of the answers that we have yet considered the aim of our quest for knowledge, the pattern which would make any piece of knowledge significant, would be determined in the end by our wants or tastes, our likes or dislikes. There would be secondary differences, important in their way, according to the interpretation that might be given to these last words. There is a difference first between the two regions which we spoke of as 'ethics' and 'aesthetics', between the region of practical aim and activity on the one hand and the region of immediate liking or taste on the other; and within each of these regions, if we look closer at them, further differences appear, while the two at their borders may seem to merge into one another. Are they indeed better thought of as two contrasted regions, or as more than two, or as one only, as a single region within which room should be found for all the impulses, assumptions, and beliefs that depend upon our likes or dislikes, our approvals or disapprovals, and which might be termed the region of values?

Then again, when we speak of our likes and dislikes, and of our approvals and disapprovals, who are the 'we' that we have in mind? Can we refer only to ourselves as separate individuals, for each of whom 'useful' and 'interesting' may mean something different, or at most to a limited circle of persons, whom we may count on as sharing our main feelings and beliefs? Or can we suppose it possible to construct an ethics or aesthetics, setting out what 'useful' and 'interesting' mean for mankind as a whole? Here are questions enough to exercise us when the time comes to discuss them. For the present let us say only that, however they are to be disposed of, it would seem that, on either of the two lines of answer we have yet considered, the whole shape and content of what we want to know—and thus in the end the shape and content of what we come to know—must be determined by a reference to human nature and to human values.

But there is yet a third meaning which it might be possible to attach to the question, What knowledge is significant? We may say that a particular piece of knowledge is significant, not merely because (our first meaning) it may help us to something which is practically useful, or because (our second meaning) it strikes us as interesting in itself, but because we believe that it is possible to attain central knowledge and rank any particular piece of knowledge as significant in the light of its relation to that. And this belief brings us back to the traditional or metaphysical conception of philosophy. Knowledge, this conception would tell us, is

something which has a system and articulation of its own, and this system is of such a nature that if we get a particular piece of knowledge and can use it rightly, we can pass on from this piece to know more about the system as a whole.

On this supposition, then, we get a view of the relation of our actual knowledge to a world of possible knowledge which is different from what we got on the two suppositions that we considered before. On either of those the centre of our knowledge, that which makes any piece of knowledge significant, will be something relative to mankind, to our wants, tastes, likes, or dislikes; and the shape and contents of our knowledge will be determined, not by the nature of all that is to be known, but by a reference to human nature. But on this last supposition we entertain as possible the idea that we might pass beyond such limitations, and that the plan and structure of our knowledge might be determined by something in the nature of knowledge itself.

And with this supposition it is plain that we are carried beyond the initial assumption of this chapter, under which we proposed to confine ourselves to what was ordinarily accepted as knowledge. We find ourselves, that is, as a result of the inquiry undertaken in this chapter, led by a different road within sight of a cleavage of opinion which seems to correspond to the cleavage which we examined in our earlier chapter on the types of philosophy. Is there, as the traditional philosophy maintains, a central knowledge possible of attainment by man? In that case the question, What do we want to know? would be merged in this wider question and answered by it: the first and wider question will remain hard to answer, but the second question will not arise to present us with a separate difficulty. Is there on the other hand, as the positivist philosophy would tell us, no such central knowledge, or at least no reason to suppose that it exists or that man can reach it? Then the question, What do we want to know? comes into the foreground as one which we must seek to answer by itself. It becomes necessary for us then, it would seem, to construct for ourselves a centre or scheme which is to guide our search for knowledge, since no such centre or scheme can be found in the nature of knowledge itself; and this centre or scheme must be found somewhere in the region of human wants, tastes, likes or dislikes, of what we have called loosely 'ethics' or 'aesthetics'.

CHAPTER V

THE PROBLEM OF SENSE PERCEPTION

We turn back now to the two connected questions which are to be the starting point of the main part of our inquiry: How can we know things? and What can we know? Or, as we restated them in trying to make their terms rather more definite: What are the main kinds of beliefs that we can hold to be true or to be justified? What are the means by which we can arrive at these true or justified beliefs?

And here again we must premise, as we did at the beginning of the last chapter, that we have to start on the basis of certain assumptions as to what we suppose ourselves to know. We must assume, at least provisionally, that we know something, or discussion could not begin; but we must keep our assumptions within as narrow bounds as possible, or we shall have prejudged the answer to our question before we properly ask it. We shall assume then that we possess the kind of knowledge which ordinary people would be agreed in supposing themselves to possess, but no more than that; and let us try to express a little more in detail what this will include and what it will leave out.

It will leave out, to begin with, as matter of dispute, all those questions which are at issue between the three main conceptions of philosophy which we distinguished; all those questions belonging to the studies of ethics, aesthetics, or metaphysics which we were led to in our last chapter as promising an answer to the questions, What do we want to know? and along with these, all that is said by one religion or another on the problem of another world or man's destiny. For on all these matters, however firmly a man may be convinced of the truth of his own belief, a counter-belief, he must admit, may be held by some other man just as strongly. We shall take then as the starting point for our argument only those beliefs which the general voice of common sense today

appears to take as matter of agreement, and to accept as being in some sense certainly knowledge.

And here we may refer to a subsidiary question which we thought earlier might help to give definiteness to our inquiry. Is it possible, we asked, to assign any clear meaning to the phrase 'metaphysical belief', to reach any general conclusions as to the conditions under which metaphysical belief arises and as to the grounds which should be held to justify it? If we are to do this, we must try to discover a class of metaphysical beliefs, or an instance of a metaphysical belief, by studying which we might be helped to form an opinion about the character of the class. Let us consider some general points which may guide us in our search. The kind of belief we are looking for must be a belief about the nature of reality; it need not be perhaps a belief about the nature of ultimate reality, as was claimed for metaphysical belief by the traditional philosophy; but at least it must be a belief of a wide and general order about the nature of reality. We may say further that it will have to be a belief which in the end, after scrutiny, we shall be prepared to accept as true, if we are to draw any true conclusions from it; yet it must not fall, as do most of the beliefs of wide generality which we accept as true, within the accepted conclusions of the sciences, or it could not help us to know whether there is such a thing as a true metaphysical belief that goes beyond those conclusions; and yet again it must not fall in a region altogether beyond the fields explored by the sciences, or by accepting it as true we should prejudge the main question, whether and how far philosophy can give us knowledge about such a region.

These reflections may seem vague and perhaps at first sight hard to reconcile with one another. Yet they can be brought together in a reasonably consistent way, if we say that what we have to do is to try to examine some of the most general presuppositions which lie behind some of our most generally accepted beliefs. And vague as they are they may serve to direct us to two particular fields of inquiry: the field of mathematics and the field of sense perception. On the one hand, I feel sure that two and two make four, whatever precisely I may mean by saying this; on the other hand, I feel sure that this which I see is blue, this which I touch is solid, whatever again precisely I may mean by that. These certainties can be taken to be agreed knowledge, if anything can be; and from one or other of these, it would seem, we shall do well to start.

These two apparent certainties may be said in a broad way to

correspond to the two activities of the mind which we distinguished as reason and common sense. If reason is sure of anything, it is sure of the fundamental truths of mathematics; of the fundamental truths of logic perhaps equally with them, but these latter are less easy to formulate in terms generally understood. If common sense is sure of anything, it is sure that it can in some sense rely on the knowledge given in sense perception. Here then we get two natural starting points, and philosophers have for the most part set out from one or other of them.

What is it that in either case we are certain of, and why are we certain of it? Here are questions which, if we could answer them fully, should lead us to the heart of philosophy. But here too comes a difficulty, for round each of these problems, the problem of mathematical knowledge, and the problem of sense perception, has grown up an entanglement of argument, assertion and counter-assertion. The difficulty is great in either case, but it is in the case of mathematics that it seems most insurmountable; in this region we find the intellect reflecting on its own mode of operation, and only an expert mathematician, who can understand and appraise what other mathematicians have thought about the problem, is likely to have anything to say here that will be of much value. And there is another thought which tells against choosing the mathematical problem as a hopeful starting point for our inquiry. Can we say that mathematical knowledge is knowledge about the nature of reality? It is hard to say that it is not, but hard too to maintain that it is; and great philosophers and mathematicians have held different and conflicting views on this question. The question itself, no doubt, is a philosophical question, rising above the technical difficulties of mathematical thought and independent of them; but it is likely to be inaccessible to an inquirer who cannot find his way through those difficulties.

Let us turn then to the second problem, the problem as to the nature of sense perception. Here, we said, we find ourselves in the region of common sense. What can we understand by this? It means for one thing that, whereas in mathematical knowledge each particular piece of knowledge that we believe ourselves to possess seems to rest on some prior knowledge, and this again on some prior knowledge, and this again on something prior, in sense perception each piece of knowledge comes to us with its own authority; we have, it is true, to ask what the general nature of that authority is and what it can guarantee to us, but each particular piece of knowledge in a manner speaks to us for itself and

does not refer back for its meaning to some prior piece of knowledge on which it follows. And this again means that an inquiry into the meaning of the knowledge gained through the senses, however much it may become engaged in technical language when it seeks to explore the general problem, must yet not be so far imprisoned in this language as to lose touch with the immediate sensations from which this knowledge springs. And to this we must add the further thought, that our beliefs about existence, perhaps all of them, certainly most of them, seem in some way to arise out of or depend upon the knowledge we get through the senses. The problem of sense perception thus promises to have a more direct bearing than the problem of mathematical knowledge on our further problems as to the nature of reality and the conditions of metaphysical belief. We shall take this accordingly as the first subject for examination, and the few remarks that we may find occasion to venture on the problem of mathematical knowledge, in order to indicate its connection with whatever general theory of knowledge may arise out of our inquiry, will come most suitably at a later stage.

Let us begin by setting out a few of the main points that fall to be considered under the problem of sense perception, or more briefly, the problem of perception; for while the word 'perception' may be used at times to cover other forms of awareness, we are not at present concerned with any of these. We take over from common sense the belief that our perceptions can give us knowledge, certain or probable, about a world of material things existing independently of those perceptions. Common sense here gives us the starting point, but it must be reason that follows up the inquiry, that analyses or seeks to analyse what is involved in the common-sense belief from which we start. What is the significance of this belief or this supposed knowledge, and what are the presuppositions that lie behind it? How are we to conceive the nature of this material world, how is it related to the perceptions which seem to give us knowledge of it, and what do we mean by saying that we believe it to exist independently of them? How does the belief in its independent existence arise, and how can this belief be justified, if it should be doubted? These are some of the questions reason may raise, and the inquiry may take us far from common sense before we find a halting place.

We may distinguish at once two different lines along which questioning of our supposed knowledge of a material world might

proceed; first there are questions arising from the conflict of the senses, with which physical science has had to concern itself; secondly, there are more radical doubts which have been raised by philosophers. And the problem is made more difficult by the fact that these two separate strands of inquiry have generally been tangled together; so that we may hope to simplify the problem if we try to disengage them from one another, and to exhibit each in its natural line of growth. In doing so we shall not claim to follow out the historical development of the problem, but we shall seek to show how the various questions which arise might have presented themselves to an inquirer, who begins by accepting what appears to be sense knowledge at its face value and is gradually led further and further from this first attitude. We shall consider him for the present as concerned only with those criticisms of this first attitude which arise when physical science sets itself to ask what the world of which the senses seem to give us knowledge is really like; reserving for later chapters those more radical criticisms which arise from the doubts of philosophers.

And we may start by going back to the student whom sixteen pages back we pictured to ourselves as sitting down in a field and asking the question, What can I know about this field and the objects in it? Sounds and scents, forms and colours, pass before his attention; and all these he will take, if he is still in a primitive unreflective attitude, as showing him qualities of objects which surround him. Through one sense or another (so it seems to him) he will distinguish the shapes and colours of flowers, trees, and grasses, the scent coming from this or that flower, the notes of birds, the noises of insects and their movements as they fly or creep, the outlines of hills or woods in the distant scene, the firmness and pressure of the earth beneath him. And all these, he will think, are part of nature, of the world outside him; the colours, sounds, and scents, or other colours, sounds, and scents differing from them only in respect of the casual changes that happen as the day goes on, were here in this field an hour ago before he came to it, and will be here when he leaves it, even though no other human being may be there to witness them. He himself or any other man who comes to the field is, in respect of this knowledge that the senses give him, an observer and nothing more. This is the way in which all of us as we grew up envisaged the world round about us, until certain considerations were forced upon us which break up the simplicity of this view; it is the attitude in which probably most of us still habitually live, when we are not thinking expressly of those

considerations. We may call it the first or primitive attitude of common sense.

We have to consider in this chapter the process by which our first confidence that perception reveals to us an outer world just as it exists in reality, is gradually eaten away. But before we enter on this inquiry there is a preliminary point to be noted, which has its bearing on the relation between the perceiving mind and the world perceived. This is that the mind of the observer can parallel the outer landscape by other landscapes which it creates or seems to create for itself. The observer can close his eyes for a moment and still see the landscape round him almost as vividly as when his eyes were open; he can call up in memory the picture of a remembered scene or in fancy the picture of an imagined one, perhaps in either case only vaguely, but it may be with a good deal of detail and precision if his power to visualize is strong. And the constructive faculty of the mind can go yet further; he may sleep and dream and find himself in an environment seemingly outside him which so long as the dream lasts he will take for reality. All these happenings must have been evident even to the first outlook of common sense upon the world, and must have been provided for somehow in its implicit philosophy; and they call for a qualification which should not be forgotten if we are tempted to formulate that first outlook in too simple a manner as naively realistic. It must have been apparent from the beginning that the world was in a manner double; and that alongside of the outer world revealed in perception there was an inner world revealed or constructed in memory, fancy, and dream. For historic common sense, as far back as we can trace it and as widely as we can survey it, there were these two worlds, the inner mental world and the outer material world. The terms in which we have expressed this dualism may be over-explicit; the boundaries between the two worlds were vaguely conceived and might be drawn in different ways; but the contrast felt between them underlay the whole outlook of historic common sense, as this took shape in language, literature, myth, and rudimentary science. The contrast finds expression in a series of antitheses, not altogether equivalent, yet going back to the same root in feeling; it is the antithesis between mind and matter, between the mental world and the material world, between the inner and the outer, what is private and what is public, what is personal to each and what is common to many, what is subjective and what is objective. And connected with these, though rather separate from them, was an antithesis, which

philosophy found at once indispensable and perplexing, between appearance and reality; an antithesis not altogether coinciding with the others, for the inner world was felt to have a reality of its own, a reality of paramount importance for sentience; and yet, just because it was inner and subjective, it did not seem to have reality in the same full sense as the outer world of matter.

The inner world thus distinguished could be felt in memory or fancy, and even more strikingly in dream, to contain its own space, things, and persons, matching the outer world in the quality of its appearance and sometimes for a moment in its verisimilitude. The function of the mind in perception was not then an entirely unique phenomenon; there were other modes of the mind's action which could in a manner parallel and resemble it. Yet nothing in all of this need be supposed to shake the first confidence in perception as an activity of the mind which was essentially different from those other activities, and which could reveal as they could not a world independent of any particular perceiving mind, common to a number of observers, and persisting through time. The world thus revealed as independent, public, and persistent was the world which common sense thought of as material, and which it distinguished from the private and fleeting contents of the mental world that in dream or fancy or memory might seem to simulate it. Nor again was there anything in all this which need throw doubt on the belief that perception can reveal the material world in its intrinsic nature as it is.

But the simplicity of this primitive attitude could not last unimpaired in anyone who has even a loose popular idea of the results of physical science. It was from this side, from the thought of what science has to say, that the disturbing considerations have forced themselves most strongly upon the modern world; but they did not have to wait for the growth of modern science to present themselves. The ordinary experience of doubt or error as to what it is that the senses in some moment seem to tell us might of itself be enough to suggest that, in perception itself, the inner world was present and played its part; and that it was present there not merely as a transparent window, through which the objects of the outer world could be viewed in their intrinsic quality, but that it could distort as well as reveal. For the most part no doubt the feeling thus arising of a divergence between the two worlds expressed itself only in meeting the practical need from which it arose, in solving the doubt or correcting the error; it was acted on,

but hardly realized, still less did it remain as a standing realization. Yet the suggestion called up by such occasional moments might lead to the thought that the divergence might in fact be present, not in these moments only, but also in the more normal moments of perception which to primitive common sense appeared simply veridical.

For if our supposed observer looking out on the world should begin to question his first general assumption that things are just as he sees them and that he sees them just as they are; if he should entertain the thought that the divergence between the way in which things appear in the inner world and the way in which they exist in the outer world may show itself not only in doubt or error but in the whole fabric of perception; he would find this divergence growing steadily wider as he studied the problem. If he reflects on what he can himself observe, the thought will come to him that much that is in the object he fails to see, and much that he sees is not in the object. The senses present us with an appearance of multiplicity in the world around us which they are quite unable to inform us of in all its detail. The eye in its first glance at a landscape takes in vaguely and quickly a wide sweep of forms and colours; looking at any part of this whole scene far more detail is to be discerned than was evident at the first glance; we know that by the use of a field-glass or a telescope still more would be revealed; and we believe that the smallest part which the eye aided or unaided could distinguish contains a number, perhaps infinite, of still smaller parts. The ear of the untrained or inattentive hearer listening to an orchestra takes in a single movement of sound, where a more attentive or better trained ear could distinguish the parts contributed by the various instruments. And this fact, that sense impressions come to us as a unity in which we can by attention and by trained effort distinguish more and more separate details, and yet that there always remains behind still more detail that eludes our effort, stands out, once we have realized it, as fundamental for any study of perception, either on its physical or its psychological side. Yet this fact alone, that the senses cannot take in completely all the detail of the physical world, would not of itself, and apart from other considerations, be a reason for denying that the information which they give us about it is correct as far as it goes. This first conclusion which is forced on the observer, that much that is in the object he fails to see, is not in itself fatal to the primitive view that what he sees is really there.

But it leads on to the further reflection that much which he sees

is not in any simple and unquestionable way present in the object. He may look across the valley to a hillside on which he stood yesterday, and see all the detail of form and colour that he believes to be part of it merged in a blue-grey patch. Yet this patch of colour is not something that he can believe to be actually present on the hillside itself. For when he stood on the opposite side of the valley the slope on which he is now sitting seemed a similar blue-grey patch; and yet the blue colour which he then saw is not now to be seen anywhere round him. And here we are brought to the first main battleground on which the primitive view of common sense about perception is open to attack. Colour, which to the primitive view is an inherent quality of the physical world and of the objects in that world, every object having its own colour and its colour being an essential quality of the object, appears on reflection to be no permanent part of the object but to depend on the conditions under which the object is seen. It is natural for an observer to think that the plants and flowers round him have as their intrinsic property just those colours which they appear to have, that the red rose is really red, and the white rose white. And in some sense it is evident that the colours do belong to the object; he will not find tomorrow that the red rose has turned into a white one. Yet it is evident too that the colours do not belong to the object in an unconditioned way; they take on one aspect for the observer when he looks at them with the sun behind him, another when he looks at them while facing the sun, and they would take on yet another aspect after sunset and yet another at midnight. Colour, we have to recognize, is dependent on the conditions under which it is perceived, and these conditions may be of various kinds or orders; the percipient will see the object differently coloured according to the conditions of light under which he views it, according to what he has been looking at just before, whether he looks through coloured glasses or without them, whether he is of normal vision or colour blind.

And this dependence on the conditions of perception applies to other sensible qualities. The hand that has just been dipped in hot water will feel as cold what the hand that has been dipped in cold water will feel as hot. The taste or odour that seems sweet to one percipient will seem bitter or harsh to another, or to the same percipient at another time. The oar that looks bent where it touches the surface of the river is straight to the touch. The image seen in the mirror looks as though it were located at a point in space behind the mirror, but touch cannot find it there. A

multitude of such instances can be cited to show that there is a conflict between the evidence given by the senses of different observers at the same time, or of the same observer at different times, or by different senses of the same observer at the same time; there are, that is, differences in the sensible qualities as perceived which cannot be supposed to correspond to differences actually present in the object at any one time or to changes actually taking place in the object between one time and another. And thus we are led to the reflection that what we directly see when we look at an object, or what we directly perceive through the other senses, cannot simply be identified with what we suppose to be the real object which we are looking at or perceiving.

The belief of primitive common sense that perception reveals the nature of the physical world just as it is was thus from the outset exposed to doubts and questionings. Something in perception, it was felt, must be subjective, but how much was hard to say; and even philosophers, when they discussed the problem and laid stress in a general way on the subjectivity of the senses, did not set themselves to ask in detail how the nature of this subjectivity should be understood. It was only with the growth of physical science that a fresh turn was given to the inquiry, and that these vague doubts and questionings were formed into a definite counter-conception, into what might be considered a new common sense. Science, carrying out its analysis of the sensible qualities possessed by physical objects, was led to draw a distinction between two categories of these qualities, according to whether physics did, or did not, find it necessary to take them into account in its description of the mode in which these objects interacted. To the first class, the class of those qualities which had to be taken into account by physics, were assigned the qualities of shape, size, position, and movement. To the second, the qualities which physics could ignore, were assigned such qualities as colour, sound, taste, scent, warmth, or coldness; the qualities, that is, which seemed in their nature to be subjective and relative to a percipient. Science thus appeared to define and to clarify the vague impression of common sense as to the subjectivity of perception, justifying this impression up to a certain point, but up to that point only. And thus there came to be drawn a distinction between the primary qualities, which were conceived to belong to the object independently of an observer and to be part of its real nature; and the secondary qualities, which were conceived to belong to it only in relation to an observer. The

primary qualities then might in a sense be called 'objective', and the secondary qualities 'subjective'. Yet in another sense the secondary qualities too could be called 'objective', in that they were held to be related in a definite way to the primary qualities of the object, and to arise out of the interaction of these with the sense organs of the percipient. Nor could it be said without qualification that science ignored them. Science in its most searching and general inquiry into the nature of reality found no need to take account of them; but in its more particular inquiries, as in chemistry or botany, it could still find it useful to take account of this or that colour or taste or odour, as a compendious mode of reference to a group of primary qualities.

This theory of primary and secondary qualities commends itself on two grounds, first as accounting for the apparent conflict which arises between the perceptions of different observers or of the same observer at different times; secondly, as being consistent with the conclusions which science, through its study of this conflict and of other phenomena, has arrived at as to the constituents of the physical world and as to the mode in which these affect the human senses. And it is the second ground for the view that does most to drive it home. The recognition that the secondary qualities depend on the conditions under which they are perceived would not of itself carry the conclusion that these qualities can have no place in the physical world. This conclusion, in so far as it has become part of the view natural to common sense today, is accepted mainly on the ground that science in its description of the physical world does not need to take them into account. It might be argued indeed that neither is this second ground conclusive; the unreality of secondary qualities cannot be said to be shown by the fact that physical science can for certain purposes ignore them. But science goes further than this; it presents a picture of the physical world that seems to leave no place for them at all. Physics and physiology account for our sensations of light, heat, and sound on the theory that each of them is caused by the action on the human organism of the movements of small constituents of matter themselves imperceptible to our senses. Can it be reasonable, if we accept this account, to ask whether these imperceptible constituents of matter or the waves that they set in motion are themselves red or white, silent or noisy, hot or cold? It will remain true that the result of the whole process is that the secondary qualities are presented to perception; but if they are not to be supposed to have a place anywhere in the processes described by science, and if it is

processes of this nature that go to make up the physical world, ought we not to say that the secondary qualities exist, not in the physical world, but only in the perceptions of the observer?

If now we run our thought again over the theory we have just sketched out, we shall see that it, or at least the statement of it that we have given, is not so consistent with itself as we had hoped. The theory draws a sharp distinction between the primary qualities, which it holds to be present both in our perceptions and in the world outside, and the secondary qualities, which it holds to be present in our perceptions only. But if we look more closely, can this distinction be maintained? For the primary qualities of which we are aware in perception seem always to show themselves accompanied by secondary qualities and linked up with these. According to the theory, colour was to be banished from the physical world; yet in the world as we see it colour seems no less real than shape, in fact our awareness of shape and line seems to depend on our awareness of colour; and if we consider the implications of this dependence, we find that the primary qualities of which we are aware in perception, the form, size, and position of objects, do not appear to us in the identical manner in which we suppose them to be present in the physical objects, hardly more so than the secondary qualities which our theory has on the ground of want of identity extruded from the physical world. Our previous instances were perhaps too loosely stated to bring out this difficulty. Let us then envisage the problem more precisely by considering some definite object, such as a half-crown, a box, or a table. How far is it true to say that this object possesses the primary qualities, the shape, size, and so on, which perception seems to show it as possessing?

It is evident first that we do not see the actual shape of any of these objects as we suppose it to exist in nature, that we see at the most one side of it or one section, and further that it is only in special cases that we see the supposed actual shape of this side or this section. We might be able by placing ourselves with care in just the right position to see one side of a half-crown or of a box as the circle or rectangle that we believe it to be. But for the most part the various shapes of particular objects that various observers see each from his own angle, or that the same observer sees from one angle after another as he moves about, are all different from the shape which he or they would judge to be the shape of the object and would call the 'real' shape. And if we turn from shape

to consider size, while we may find it less easy to say what is the real size of an object than it was to say what is the real shape, we shall at least have to recognize that various observers will see it as of varying sizes according to their distance from it, and presumably, if there is anything that can be called the 'real' size, only a few observers placed at just the right distance will see it as of this real size. So again with those other primary qualities, position and movement; we may see two objects apparently close together which yet we believe to be separated from one another by a much greater distance than two others which appear to the eye to be further apart; we may see objects moving which we believe to be at rest, or at rest which we believe to be moving.

It seems then that our statement of the second position of common sense with regard to the problem of perception failed to take account of all the conditions of the problem. The primary qualities, we said, are present both in our perceptions and in the world outside; the secondary qualities are present only in our perceptions, though they are caused by something in the world outside and have to this something a definite relation. This statement, we now see, was wanting in precision, and in view of the considerations last set out we should amend it so as to run thus. The secondary qualities which we perceive, and also most of the primary qualities, are present only in our perceptions, though they are caused as specified above; these we class as subjective, while admitting that they may from another point of view be held to have something objective about them. Some of the primary qualities, however, that we perceive are present both in our perceptions and in the world outside; these alone we class as in the full sense objective. The main line of distinction then that we have to draw between the two classes of qualities given in perception, will no longer be a simple distinction between the secondary qualities, to be classed as subjective, and the primary qualities, to be classed as objective. On one side of the line we have now to place the subjective qualities, including all the secondary qualities and most of the primary, which are present only in the world of perception; and on the other side the objective qualities, a certain residue of the primary, which are present in the outside world as well; and a full statement of the principles on which the distinction between subjective and objective is to be drawn looks like being a complicated matter. Yet these principles, complicated as they may be to state, are applied by us in practice so successfully and instinctively, that for the usual business of life we seldom have to think about the

distinction, though the physicist, the psychologist, or the philosopher may for their particular purposes need to examine it more closely.

While then our first attempt to deal with the difficulties arising from the conflict of the senses on the basis of the distinction between primary and secondary qualities has proved too summary, we may hope now to have arrived at a restatement of the theory which can deal successfully with those difficulties. But before we can rest content with this restatement there is a further problem we must examine. In considering the question whether primary qualities exist as we see them we took as our example some particular object, such as a table, a box, or a half-crown; and we found that the primary qualities (let us take as the simplest example the shapes which different observers, or the same observer from different positions, seem to see the object as possessing) are for the most part different from the shape which we believe the object in fact to possess; and in looking for the principles on which to distinguish between the real and the apparent shapes we found ourselves led on to take into account the relation of the object to the eye of the observer and to the segment of space that is marked out by the position of the observer and by what he is observing. And from this it seems natural to pass to a further conclusion, that when we consider problems of vision, the true visual object is the whole field of space which the observer is contemplating, not that particular portion of this field which he may happen to single out for attention as representing to his thought a table, a half-crown, or a box.

But with this way of looking at the matter our point of view seems to have got shifted. When we set ourselves to consider the problem of the object and its primary qualities, we started with the idea of a particular object and various observers all looking at it in a single space; but now in seeking to understand how the object appears of different sizes and shapes to different observers, we are led to invert this view, and to think of each observer as seeing the object differently because of its position in his own total field of vision. But if we take as our centre, not the object, but the observer of the object, each observer will be the centre of a different space; no one observer sees the same space, or at any rate the same field of space, as any other. Are we led then to this conclusion, that there are as many different spaces or fields of space as there are observers?

With this shift of the point of view we pass rather away from the aspect of the matter with which physics is concerned; but we shall find psychology ready with an answer. Certainly, it will tell us, each observer has his own space. There are as many separate spaces as there are separate observers, in fact there are many more. For each individual observer has as many spaces as he has senses, and in infancy these spaces are distinct and not correlated with one another. It is only as experience grows that we learn how to correlate the space of sight with the space of touch, and thus construct a single space common to all our senses; and then as a further step we learn later how to construct out of the various spaces which belong to each of us as individuals a public space common to mankind at large.

With this we reach a view which we may say is the third position of common sense. Each of us, according to this view, lives in two or more spaces: first in his own private space (itself compounded of the various spaces contributed by his various senses) in which all that he perceives is just as he perceives it; secondly, in a public space, which contains the objects or entities dealt with by physical science, objects which are somehow related to the perceptions of individuals in such a way that through the perceptions a knowledge of the objects can be obtained. We may perhaps at first hesitate whether we ought to call this view a view of common sense. The thought that each of us is at each moment living in two different spaces, two different worlds, may seem surprising: most people probably have never brought this into their thoughts as an express realization, and those who have realized it do so rarely. Yet each of the two sides of the thought seems natural and familiar if taken by itself; it is an evident fact that we see, hear, feel, and so on the various colours, sounds, or other sensible qualities, which are the furniture of the private or personal world or space of each of us, and if this evident fact needed any reinforcement beyond its own evidence we should find it reinforced by the generally accepted findings of psychology. It is again a matter of general acceptance that we live in such a world as physical science describes to us; and this is a world, we realize if we reflect, in which there are no colours, sounds, or tastes, and in which, though there are objects with shapes and sizes, the shapes and sizes are for the most part not such as direct perception shows them to us. And bearing these two sides in mind, we may perhaps say that we have got to a view which is more consistent and more natural, and which in some ways is more like the primitive view with which we started, when

we formulate our main distinction, not as a distinction between secondary and primary qualities, but as a distinction between our personal worlds and the public world, and conceive of both the colours and the shapes that we see as having a place in our personal worlds.

But we must now try to be more clear about what we mean by such terms as 'world' and 'object'. We began our study of sense perception with a world outside us containing various objects, and (confining ourselves to perception and leaving other mental activities out of account) both the term 'world' and the term 'object' appeared at first to have a single clear meaning. But as we proceeded, each of these terms began to divide itself into two; the world into what we may call the 'physical' or 'material' world on the one hand, and the 'perceptual' world on the other hand; the object into what we may call the 'physical' or 'material' object on the one hand and the 'perceptual' or 'sensible' object on the other. And once this division is recognized, the perceptual world will have to be contrasted, as in some sense private and personal, with the physical or material world, which is in the full sense public and common to all observers. We seem, in some way difficult to grasp, to view both these worlds at once, to view, as it were, the material world through the perceptual world; but what exactly the connection between the two worlds may be is so far obscure. What is meant by the two 'worlds' and their 'objects' seems, however, fairly clear. By 'perceptual object' is meant such things as colours, shapes, sounds, tastes, smells, heat and cold, hardness and softness; it does not seem possible to doubt the existence of these, for they are what we are immediately aware of in sensation. The material object is, in the instances we have taken, a thing such as a table, a box, or a half-crown; to doubt the existence of these is not impossible, and we shall consider later what such a doubt might mean; but all common sense and all science as commonly understood assume their existence, whatever may be said by philosophy or by modern physics through the voice of some of its more speculative exponents. We have then at the point we have now reached, when we may still consider ourselves to be within the territory of common sense, though nearing its frontier, these two worlds in face of one another; and our problem is how to relate them.

The physical world and the objects with which it is furnished are, we are assuming, in some sense real; yet this is an assumption

involving many grave difficulties. For according to this picture the act of seeing is built up on its physical side out of something that happens in the brain, which depends on something that happens in the optic nerve, which in turn depends on something that happens in the eye, which in turn depends on something that happens in the space intervening between the eye and the physical object, which in turn depends in some way on the nature of that object. The fact that the act of seeing which comes at one end of this long and complicated process should be able to give us minute information about the nature of the object at the other end of the process may seem strange when we think of it; but we must take it as established, so long as we keep ourselves at all within the bounds of common sense, that the senses do in some way tell us about physical objects, and we must further take it as established that the processes of nature are immensely complicated. This fact then, though it may seem strange, we see so far no sufficient ground for doubting. But it would be very much stranger if we had to suppose the nature of the process to be such that the perceptual object of which we are immediately aware in vision is identical with the physical object in which the process has its origin, or with some part or quality of that object; that while we are immediately aware of none of the intervening stages, we are yet immediately aware of the physical object at the further end of them. This supposition seems in the first place hard to believe, and in the second place, even if we could believe it, it would not help us, since physical science finds no place in the object which is the origin of the process for the usual forms and colours which are the means by which we know it.

Are we then in error when we say that we see the sun or see a table? It would be a needless breach with ordinary ways of speaking to take this line. All we need do is to recognize that when we speak of seeing a thing one phrase may have two different meanings; the thing in question may be either the visual percept in our private world of which we are immediately aware, or the physical object in the public world of which we suppose ourselves to know the existence; and the seeing may be equally of two corresponding different kinds. The two worlds, the perceptual and the physical world, cohere together so well and easily in our everyday experience that all of us most of the time, and most of us all the time, are unaware of them as two; and in our ordinary talk we are seldom confused by the fact that we use the words 'seeing' and 'thing' or 'object' in different senses as applying to the one or

other of these worlds. Ordinary language in using the same words in these different senses testifies to a very important fact, the fact that the two worlds do in this manner coincide; and it does not seem reasonable to expect ordinary language to have devised different words for the two senses of 'seeing' and 'thing', or to find fault with it, as some precise philosophers seem inclined to do, for not having done so, or even to suppose that we should be better off if we in fact had a double vocabulary at our disposal. Only when we begin to try to speak precisely and analytically, we must bear in mind that we have to follow up one of these lines at a time, or if we have both in view at once we must take pains to keep them separate.

And now can we say that this third position to which we have been brought is free from any inner inconsistencies and is one we can rest in? For the moment it may seem so, but we shall find here again that the explanation which answers one set of questions gives rise to others yet more searching. For we have now to give an account of the way in which these perceptual worlds are related to the physical world; and here fresh difficulties arise.

While we were still holding the view of primitive common sense, the problem seemed simple: it seemed to us that we knew by perception the qualities of the world around us and of the objects in it just as they are. When we passed to the second view, we had in part to give up this simplicity, but we kept something that seemed logically clear and intelligible; we divided what is presented to us in perception into two categories, the primary qualities, which we believed to be actually present in material objects, and the secondary qualities, which we now believed to be present in our perception only, but to be caused by the material objects in virtue of their primary qualities, and thus to give us indirectly knowledge of them. But when we pass on to the third view the whole content of our perception seems to be brought back from the world outside into the private space or world of each one of us, or, if we seek to be more precise, into those separate private spaces of the various senses which we by habit fuse into one. What then is there in the world outside us, what in themselves are those material objects which we believe to exist in it? They have not those qualities which we perceive as colour, sound, scent, and taste, heat or cold; nor have they, it seems, most and perhaps not any of those qualities which we perceive as shape, size, and position. Yet there must be something we can know about them,

or both physical science and common sense would fall to pieces. What is it we can know? What is the relation of the physical world to our perceptual worlds?

We have on the one hand our several perceptual worlds containing colours, sounds, tastes, scents, warmth, or coolness, and also the shapes and sizes of objects, different shapes and sizes for the world of each observer; and we have on the other hand the one physical world, in which there are neither colours nor sounds nor tastes but only the causes of these, and in which there is at any given time only one shape and size for any object, what we call its 'real' shape and size as contrasted with the apparent shapes and sizes given in our perceptual worlds. Between these perceptual worlds and the physical world there is, if not a contradiction, at least a gap. There ought not to be a contradiction; for our conceptions of both worlds are derived from the same source, from that confused mixture of the two, that blend of sensation, inference, and imagination, which seems presented to us in what we have called 'primitive' common sense. Yet there is a gap; for psychology, working on this blend from one side, separates out of it that picture of our immediate perceptions which we call the 'perceptual' world, while physics, carrying out a yet more searching analysis on the other side, presents us with that picture of a supposed reality outside us which we call the 'physical' world. And when we look at the two completed pictures, there is a gap between them, and a gap which widens as either picture is developed. How is this gap to be bridged?

And here it may be well to try to make more precise a term which we have been using vaguely: the word 'outside'. It is clear that by this word in its literal or natural sense we mean some spatial relation, whether the space be visual, tactual, physical, and so on. Thus the room in which I am now sitting is outside my body, my body inside this room, with respect to any of these spaces; and if I am considering any one of these spaces my body and the room will have the same kind of reality with respect to it. But it is also clear that when we ask the questions, Is there a world outside us? Is there an external world? we are not using the word in this literal sense; we do not mean to ask, Is there a world outside us which if it exists would be real in the same sense as we are real (as we might say, is there a car outside the door?—meaning that if there is a car outside the door it is real in just the same sense that the door is). Nevertheless, it seems clear that the question which we have in mind in using these words is a significant

question, and is one which it has seemed natural to one philosopher after another to express in these words. It is not then a simple question as to spatial relations, it is a question of the relation that holds between two worlds: the world which we refer to when we say 'us', meaning our personal or perceptual worlds; and a world existing, or supposed to exist, which we conceive as public, as shared by all possible observers and not specially connected with any one of them. And we may say that the word 'outside' seems to be applied to this relation by a natural metaphor; for the perceptual world of any one observer must be limited by the senses of that observer, and the public world must in a manner include all the perceptual worlds, or something that we may call the framework of all the perceptual worlds, with more besides. To express this relation of the public world to the perceptual worlds we seem to need some word that has been shifted from its first literal sense to a second metaphorical sense, and the words 'outside' and 'external' seem as suitable as any others.

We may then state our problem as follows: Is there, outside the different perceptual worlds which are private or personal to different observers, something which we may call the 'public' or 'physical' or 'material' world? And if there is, what is its nature and how is it related to the various perceptual worlds? From the standpoint of common sense, which is the one from which we started in this chapter and from which we at present propose to depart only so far as we are compelled by the criticisms of science, we shall take it for granted that the answer to the first of these questions must be, Yes. What kind of answer can be given to the second question, we must now proceed to consider.

To this question an answer may be given along two different lines, according to the side from which we approach it.

First, let us approach it from the side of the physical world, taking this to be the permanent reality of which our perceptual worlds give us temporary and shifting views. What can we say as to the nature of this physical world, and as to the relation in which it stands to our perceptual worlds and to the perceptions which appear in them? We have said earlier that our perceptions are caused by material objects. This on reflection we can see to be an inadequate way of stating the position. A particular material object taken by itself cannot be said to cause our perceptions: to understand any act of perception we have to take into account as part causes the position of the object in public space and the position

of the observer; and if we reflect, we have to take into account many more conditions, the sensory organs of the observer, the nature of the medium, the movement which passes through the medium to affect some particular sense organ and the laws which govern that movement, and so on. Thus we cannot say with accuracy that this particular visual perception is caused by this particular object; we have rather to say that the whole content of our visual perception at any one moment is caused by the whole content of our environment and the nature of our bodily organization.

We come now to the question as to how we are to conceive of the physical world. And here an answer of the most brief and general kind must suffice and should for our present purpose be enough; for the question is one which, if we should attempt to answer it in the light of what present-day science tells us, would raise complex difficulties different from those we are concerned with here. For the moment we will content ourselves with the conclusions reached by the science of the nineteenth century; these cannot be very misleading for our present purpose, since the conclusions of present-day science were arrived at through them, and may in a sense be said to be dependent on them. Science then, we shall be content to say, describes to us a physical world containing material objects which have qualities of form, size, position, and motion; these qualities are not for the most part the actual qualities which are given in perception, but the knowledge of them is somehow arrived at through the qualities so given. Science goes on to say that these material objects may themselves be resolved into other more minute entities: and again the knowledge of these other entities must ultimately be derived from the qualities given in perception. The material objects which science describes as existing in the physical world produce on one another various effects in virtue of their movements and of the movements which proceed from them; and in particular they produce certain specific effects on that particular class of material objects which we call human bodies. These effects can be predicted if we assume material objects to have the nature which science describes them as having (and in so far as changes are introduced from time to time in the description which science gives of material objects, this is for the purpose of making the predictions more accurate). And among other effects, the description given by science enables us to predict, provided that certain reasonable assumptions are made, those peculiar effects on the sense organs and the brains of human bodies which are known to us through perception, and

which make up the content of what we have called our 'perceptual worlds'. In this sense, which seems a quite intelligible one, we can say that the perceptual world of each observer is caused by the physical world, or if we like by the physical world acting on the particular organism of the observer, which is itself a part of the physical world.

We see then how, starting from the side of the physical world, it might be possible to pass from that to the perceptual worlds of observers. It remains to ask how, if we approach the question from the other side, we can pass from our perceptual worlds to the physical world. And here it does not seem a full answer to say that, assuming the existence of a physical world such as science describes, we can see how this world might cause or might account for the perceptual worlds or could enable us to predict them. The physical world as described by science might cause our perceptual worlds; but is it the single conceivable cause, or is it only one among many possible causes? For at the point we have now reached it seems that we do not know it, nor any object in it, directly; we know it only as the assumed cause of our perceptual worlds, with which it contains nothing in common, but to which in some way difficult to describe it corresponds.

For guidance in answering this question we must turn not to the physicist speaking for his science, but to the philosopher or the psychologist, or to the physicist if we can catch him in a philosophical mood. We shall not then expect to find here a systematic answer summing up the conclusions of physical science such as, after making all necessary allowances for changing theories and new hypotheses, we seemed to find, or supposed that it would be possible somewhere to find, when we asked, How does the physical world, assuming it to exist, give rise to the perceptual worlds? We shall find here only individual voices giving different answers; but one thought seems to be implied in one answer after another, and to become more dominant the more the problem is explored: the thought that starting from our private perceptual worlds we somehow construct a public physical world.

'Construct': an ominous word, which strikes chilly on the confidence we felt just now. When we say that an engineer constructs a bridge, or a playwright constructs a play, what we mean is that something is brought into existence which was not there before. Doubtless we suppose that the construction was not independent of pre-existing conditions: the material used was there before, the

stones or bricks out of which the bridge was built, or the words which were put together to make the play; and so too were various limiting conditions which determined that the bridge or play, if either was to be successful, must be of such and such a kind. Yet the pre-existing conditions, material and other, do not make up the bridge or the play; this we conceive as something new which was not there before, and something new which might have been constructed on any number of different lines, but which was constructed in the particular way it was because this way seemed to the engineer or the playwright the most practically convenient or the most aesthetically desirable. But when we set out on our inquiry, what we had in view was not to construct reality but to discover it; not to make up a world according to our idea of what might be convenient for our habits of thinking or aesthetically pleasing, but to discover a real world which was there before our search began, and the nature of which was independent of our likes and dislikes. For surely when we use the word 'discovery', we mean, not the construction of something new, but the finding of something that was there before. We do not say that Columbus 'constructed' America.

Perhaps however we are making too much of a word. It may well be that in an operation so vast and complex as the attempt to understand reality, both sides must be present, the side represented by the word 'construction', and the side represented by the word 'discovery'. Let us consider another analogy. Newton, we say, discovered the Law of Gravitation, and in saying this we mean that before he made his discovery there was something there which we designate by this phrase. Yet if he discovered something, he certainly also constructed something: he constructed the formula which expresses the law. (We are not concerned at the moment with the point that for present-day science neither the discovery nor the construction would pass as finally correct.) Here the discovery and the construction, it is evident, both refer to the same event, of which they are, so to speak, different aspects; and even as two different aspects it is hard to see how they are to be distinguished, for how are we to describe the fact which is discovered except by the formula which is constructed? Yet still it seems that the construction of the law (in the sense of 'formula') is something different from the construction of a bridge or a play; and what makes it different is that behind the construction of the law (in the sense of 'formula') lies the discovery of the law (in the sense of 'a regular sequence of facts'), whereas behind the

construction of the bridge or the play lies no such discovery. The law as fact thus existed before the law as formula was discovered and would exist if the law as formula had never been discovered; it is wider than the formula, in the sense that various formulas might be constructed which might be said to express it correctly, and yet the variety of the possible formulas is limited by the requirement that they must express the fact correctly; it is not enough that they should be practically convenient, like the bridge, or aesthetically pleasing, like the play. This at least seems the view which common sense would wish to find tenable, if it can.

And following out this distinction between the discovery of the fact and the construction of the law or statement which expresses the fact, we may go on to distinguish two questions which arise for consideration when we ask how we can pass from the perceptual worlds of various observers to the physical world. The first question is: How are we to construct a statement or picture of a physical world which will correlate the various perceptual worlds and enable us to relate the observations of one observer to those made by another? The second is: Supposing that we have constructed such a statement or picture, can we hold that our construction is at the same time a discovery; are we discovering a physical world which existed before we set to work, or are we merely constructing something which is practically convenient in that it can correlate our various observations, but of which we can say no more than that it is able to do this?

The first of these questions, it is evident, is one of great importance, as it concerns the basis on which physical science is built up out of the material given by the senses. It is one too of much delicacy and complexity, since the material which different observers receive from their senses, while it may fit together of itself sufficiently for the ordinary purposes of life, will not, of itself and without labour, fit together closely enough for the purpose of exact science. It is very natural then that for philosophers or for men of science, concerned either with the particular problems of the sciences or with their philosophical bearing, the first question should bulk so large that the second drops out of sight. And yet the second question still lies behind, and however successfully and completely the first may have been answered, the second remains none the less unanswered.

We may help ourselves to appreciate the distinction between the two questions if we go back to the thought we touched on a

moment ago of what it means to discover a new country. Let us suppose that a party of explorers have come upon a country unknown before and are setting themselves to observe and map it; they break up into groups, divide between them the area to be studied, climb mountains and cross passes, take observations, photographs, and measurements from this point or that. In the end they return to their starting point with their maps and records of various kinds, and find that all these observations taken by different observers from different points in the main agree. Here and there will be slight inconsistencies between the records of one observer and that of another, here and there there will be something which one observer only has recorded, but the result of it all is that the various observations fit together and confirm one another, so as to enable a consistent map of the country to be drawn.

The observations of the various observers agree together; this we are supposing may be taken as a fact. But now let us suppose that when they have all come home again one of the explorers, in a fit of scepticism, asks, Did we really visit the country we have been talking about, does it exist in fact, or has it existed only in our dreams and imaginations? It is plain at least that he is asking a question which is quite different from the question whether the observations of the various observers agree. Yet the one question seems to depend on the other. For the agreement of the observations is a fact which has to be accounted for, and if they all sprang from dreams or imagination, it would seem strange that the dreams and imagination should all say the same thing, and perhaps even stranger that they should say things which were in each case a little different and yet were so consistent that they could be fitted together into a consistent whole. And with this kind of argument the rest of the party would demonstrate to the doubter that the new country they have visited is as real as the room at home in which they are now sitting.

But just here comes the gulf, a wide one, between the illustration we have used and the main problem we wish to consider. The group of explorers we have spoken of know by present experience what it is to be together in a place, in a certain part of the earth's surface; and thus when they have to explain the agreement of their past observations, it is natural to explain it by supposing that they were, when they made those observations, together in another part of the earth's surface, resembling in its essential nature, though differing in details from, that part of the earth's surface in

which they now find themselves. But we, that is the whole body of human observers, who are seeking first to correlate our various observations and then to account for the possibility of making this correlation, have no such analogy to fall back on; if we doubt whether there is a public physical world behind our observations, we cannot appeal to any second public world with which we are more familiar, as making it likely that the world about which we are speculating exists. It is perhaps true that this is just what we are tempted to do and to confuse ourselves by doing: when we ask ourselves how we are to think about the reality of the physical world, which science describes to us, it is natural to have vaguely in our minds the idea that we know all along that we are in the world as it appears to primitive feeling, in a world that is at once private and public, that is both shared by different observers and is known directly by sight and touch; and through the analogy of this supposed world with which we seem familiar we convince ourselves of the reality of the unfamiliar world described by science. But if we seek to eliminate this confusion; if we remind ourselves that this first assurance of the reality of the material world as it appeared to primitive common sense is something that we have had to abandon; if we make it clear that all we have now before us is, on the one hand the various perceptual worlds of the several observers, and on the other hand a supposed physical world, which does it is true serve to correlate the various perceptual worlds, but which in itself is different from and so far as we can see unlike anything in their contents; the question must then return upon us with renewed force: Is this physical world really an existing thing, or is it merely something that we construct as a meeting point for our various observations?

Our inquiry into the conclusions to be drawn from the conflict of the senses appears to have led us to the result that no sensible qualities, nothing which the senses present to us, can be relied on to be something which actually exists in a public world outside us. The most that we seem able to say is that we presume that there is some common external cause of which our various perceptual worlds and their contents are the effects. But as to the nature of this common cause, whether it has any resemblance to the sensible objects which we suppose to be its effects; whether it should itself be regarded as material or physical, or what can be meant by calling it 'material' or 'physical' if we have no knowledge and can form no conception of its nature; or even whether we have any sufficient reason for supposing it to exist, whether the presumption

that our perceptual worlds must have some cause of a kind different from themselves can be shown to rest on any adequate ground: as to all these questions we seem left in complete uncertainty. May not then all that we are entitled to feel sure of come down to this: that each of us receives from his sensations a picture of the world peculiar to himself, and that by comparing these pictures we can construct a supposed common physical world, unlike the worlds revealed to us by sensation, but yet corresponding to these in such a way that the assumption of its existence enables us to correlate what appears and to predict what will appear in the worlds revealed by sensation to various observers?

Our task, in this chapter, has been to follow the line of criticism which science opens out when, starting from the assumption that the senses reveal to us a physical world existing independently of our perceptions, it attempts to order the information which the senses give us about that world; and following this line we have reached a point at which the conclusions to which the criticisms of science point merge into those which arise from the doubts of philosophers. To these latter we must accordingly pass; but before we do this there are certain considerations, germane to the subject of the present chapter, but so far left out of our account, to which it may be worth while to give some attention.

CHAPTER VI

THE SENSE OF RESISTANCE

We have travelled by now a long way from the primitive outlook on the world around us with which we started, and we shall need to go further yet before we reach the end of our road. But somewhere hereabouts we may be called upon to halt by a peremptory voice challenging us in the name of common sense.

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

The words and gesture of Johnson here recorded have achieved some fame, and it may be worth while at this point to pause a little and take account of what they have to say to us. True they are usually referred to, not as an instance of philosophic acumen, but as evidence of how wrong even an able man may go if he meddles with questions too subtle for him. And yet perhaps some students of philosophy may remember that when they first heard this remark quoted, and before it had been impressed on them that there was in it a complete missing of the point, it struck them naturally as a sensible one. Let us ask then whether this natural impulse was altogether wrong.

What Johnson means to tell us is plainly this: that the senses taken as evidences for the existence of a world outside us are not all on a level; that the sense of touch, the sense in which we are aware of contact or resistance, is more to be relied on than the others. Now in the line of argument we followed in the last

chapter we made the assumption that the senses in this matter are all on a level; some may give us more information, others less, and the sense of sight may give more than all the others together, but all are on a level as regards their trustworthiness. With this assumption in our minds we found it natural to speak mainly of sight, and we took it for granted that what seemed to hold good for sight would hold good for the other senses as well; and our excuse for this practice must be that it is the practice most writers have followed in treating of this question. But now we find Johnson suggesting that it was perhaps not the right practice after all. Let us go over the ground again with this caution in our minds, and see whether any fresh light is to be gained by looking at the senses separately.

We must ask first how many different senses or modes of perception ought to be distinguished. Historic common sense divided the field of sensation into the so-called five senses; a division which more careful study has shown to be too summary. Yet here, as in other matters, what historic common sense says may be taken as a good starting point, though not conclusive. The point which it brings before us is that there are four modes of perception associated with special sense organs, sight, hearing, smell, and taste; and that besides these the organism has a capacity of sensation which is associated not with any special sense organ, but with the whole outer surface of the body. This unspecialized capacity of sensation or general external sense is what the traditional way of speaking meant by its term, 'the sense of touch'. But modern psychology, examining the problem more closely, finds that under this general term several different modes of sense are included. As to the number and description of these, psychologists seem not fully agreed, and perhaps we should not expect too precise a statement. What is evident is that the general external sense, the traditional sense of touch, must be taken to cover modes of sense which are different in their nature, such as the sense of heat and cold, the sense of contact or resistance, the sense of movement, and perhaps others.

The question as to the relation of our private perceptual worlds to the public physical world may now be put in some such form as this. We distinguish various modes of perception, some connected with special sense organs, others being modes of the general external sense; each of these presents to us its own set of sensible qualities, which we are aware of as constituents of our private

world; can any of these sensible qualities, and if so, which, be supposed to have a place in the public physical world and to be qualities of objects in that world? In our last chapter we traced a line of thought which seemed to remove the visual qualities of colour and of form (which we then took as typical of all sensible qualities) from the physical world in which we first supposed them present, and to leave them as constituents of the perceptual world only. We have now to inquire more closely whether the same kind of argument holds with the other modes of sense.

For this purpose we will again place ourselves in the position of an observer looking at the world from the standpoint of primitive common sense, but we will vary the surroundings so as to bring into the account other senses besides sight. Let us suppose him then to be sitting at a table on which are a jug of claret and a glass. Considering first the sense of sight, his natural impulse will be, as before, to take all that he sees as real qualities of objects; the shape of the table, the brownness of its surface and the lights and shades in it, the reflections in the jug and glass, the colour of the claret, all these will seem to be things present in the world outside him, which would be there whether he or anyone were there to see them or not. There is, of course, at the same time an awareness that the qualities supposed to belong to the thing change according to the position of the observer; an awareness which, when it is brought up into consciousness and scrutinized, will lead to the line of inquiry followed out in the last chapter; but in the primitive stage of common sense which we are now assuming, this awareness remains so much in the background as not to impair the confidence that the world outside us and the objects in it exist just as we see them. And as with sight, so with touch; the hardness and smoothness of the table and of the jug appear in the same way as qualities of the objects.

But if our observer sets himself to consider how matters appear to his other senses, he will find the case not so clear. If he pours out a glass of the wine and lifts it towards him, the aroma of which he becomes aware will perhaps still appear as a quality of the wine, but in a less definite sense than its colour; and the taste of the wine as it reaches his palate will be still further from being a mere quality of the wine: it will appear rather as something which is not in the outside world but in him, and this not only in the sense that the wine is physically inside him as it passes between his lips and down his throat, but in the sense that the taste is something in a private world peculiar to him and shared by no one

else. The colour of the wine, he will in his common-sense mood suppose, is certainly a quality of the wine, whether he sees it or not; the aroma seems to be, though less certainly, a quality of the wine, whether he smells it or not; but the taste is surely not a quality present in the wine if he is not tasting it. And if he passes from taste to hearing, the case is different again. The sound which comes from the jug as he sets it down on the table or from the wine as he pours it out, do not appear to be qualities of the jug or the wine, in the way in which the colour and shape are qualities of these: and yet they appear to exist in the outside world in a way in which tastes do not. Our observer drinking his claret will find it natural to think that the sound which he hears is the same identical sound which might be heard by other people; he will feel that the taste of which he is aware is a taste peculiar to himself and separate from the taste which other persons sitting round the same table and sharing the same vintage may be enjoying, though no doubt he will suppose that his taste and theirs are similar. Sounds, that is, present themselves as constituents of the outside world, yet not as qualities of objects, but as events or happenings coming from objects. Tastes present themselves as constituents, not of the outer world, but of an inner personal world.

The interpretation of our perceptions seems then to be a more complicated business than we began by supposing. It is not just that we first believe all our senses to reveal to us qualities in the outside world, and then are forced from this position to another in which we believe that what the senses show us exists in a private world of our own. What happens, when we look at it more closely, is that the senses from the beginning seem to make different claims in this regard; some of them presenting themselves as giving direct information about the qualities of objects in an external world, some of them as connected in a different way with these objects. And as the whole basis of our belief that the senses tell us about an external world is that they seem to claim to do so, it will be worth while to consider what precisely the claim seems to be in the case of each particular sense.

To begin with taste, we seem able to say at least that the natural interpretation here suggested is that what we are aware of in taste is something in a private world. This may be obscured at first by the fact that taste necessarily comes to us along with touch, and that when we taste the wine we are aware of it as touching the lips or the palate and thus causing the taste. But if we take away

from the experience of eating or drinking all that can be said to be given by the sense of touch, and ask what over and above this is given by the sense of taste, the answer seems to be that this something additional is something which has its place in a private world and which we do not imagine, even in our first unreflecting view, as existing outside it. It is true that we call food or drink sweet or bitter, but the question is, What do we mean by using these words? And the answer surely is that when we call sugar sweet we do so because we believe that it has the quality of producing the sensation of sweetness in our private world when we taste it; just as, on the view to which we have been led by reflection, we must believe when we call snow white that it has the quality of producing a sensation of whiteness in our private world when we look at it. The sense of taste, that is, inclines us to a natural idealism; before ever Berkeley or Hegel had written, it preached the doctrine that experience was a unity in which subject and object were inseparable. And this comes out in the fact that, in English at any rate, there is for this sense only a single word to express both the sensation and the sensible object. We see a colour, we see or feel a shape, we hear a sound, we smell a scent or an odour, but we taste a taste. Do not let us ignore these accidents of language as too trivial to mention; they at least sum up the judgment of the race, or of a part of it, as to what seems to it true, and how things seem to us is just the question with which we are now concerned. For what reason can we have, when we push our inquiry to its furthest point, for believing that any of our senses give us knowledge of a world outside us, except that they seem to give it?

When we turn to the sense of smell, the answer is not so clear. Probably to the first instinctive outlook it would seem natural to regard scents as something existing in a world outside us. We acquiesce when a poet speaks of a flower wasting its sweetness on the desert air; we should find it odd to speak of an ungathered strawberry as wasting its sweetness on the garden beds. The flower, that is, is conceived as being sweet when nobody is by to smell it; the strawberry would only be conceived as sweet if somebody was eating it. The sense of smell then is to our first impression a realist sense, but not certainly or stubbornly so, for if we begin to reflect we may soon find ourselves doubtful where the object of this sense is. Is the scent of the rose in the flower, or in the air, or in the mind? It is hard to say, and once our thought has begun to roam from one of these answers to the other, it becomes easy to suppose that

the scent is not anywhere in the physical world, but exists, like taste, in a private world only. Such an uncertainty may the more affect us because the sense of smell can carry unexpected emotional influences with it; at times it comes to us like an echo of something in the past having about it a primitive quality, as though it were a survival of something that had once been more powerful. It seems thus to stand on the border line between the mental and the physical, and we may feel this in particular with scents that are both faint and pervasive, like that of gorse on a hot day or of the air after rain on a sunny morning; these appear hardly more part of anything outside us than are those vague feelings of general well- or ill-being which visit us, and which we put down, without knowing in detail how they arise, to changes perhaps in the weather, perhaps in our own physical state, or perhaps just in our tempers. And from this we may be led on to the further thought that even those scents which claim, as the scent of the rose does, a definite origin in some particular part of the physical world, have there their origin only, and have their own existence in the private perceptual world, as tastes do. Our inquiry then as to what it is that the sense of smell presents to us finds no certain answer, but it seems plausible to guess that this sense by itself without sight or touch would fail to give us any definite notion of a world outside us.

With sound we advance a step further in the direction of realism. The sense of hearing seems to speak to us clearly of an outside world; a sound commonly presents itself as having a definite external cause, though in marginal cases it may be so faint that we are doubtful whether we heard it or not. But the world of which it tells us is a world not of objects, but of happenings or events. Taste, and on the whole, though less positively, smell, seem to speak to us of objects with permanent qualities, qualities that may vary with the individual percipient, that may perhaps only display themselves in relation to an individual percipient, but that yet belong to the objects rather than merely happen to them. But the sense of hearing tells us of a world that is unstable, of happenings, and in so far as it tells us of objects it tells us not of their qualities but of their interaction, and this seems to mean movement in some form. The difference is one of emphasis, rather than something absolute; the motion or the event may be regarded as a short-lived quality, a quality may be regarded as a persisting mode of motion. But a difference of emphasis there is: while taste and smell, in so far as we locate their origins in a world outside us, seem to tell us of a world with qualities and objects; hearing on

the other hand, while it tells us of a world outside us more definitely than those do, yet presents this world to us as a world not of objects and their qualities, but of chains of events. The sound of the bell is not a quality of the bell, but an event that begins to happen if the bell is pulled or struck; and even when we come on an instance where sound is incessant, as in a waterfall or waves on the shore, we interpret it not as the quality of a single object, but as something that arises from the impact of separate objects on one another. If the difference between the two interpretations is not absolute, we can at least see here the natural starting point for two different philosophies of nature.

Next we may note that the sense of hearing seems to give us, though vaguely, a notion of distance and direction; with this sense alone, and with no other to help us, we should probably form a conception of space outside us, though we might so far see no clear reason for filling this space with permanent objects. The sense of hearing is two-sided, in a way in which the sense of taste, and even the sense of smell, are not; it claims to tell us not only of something happening in our private world, but of something happening in a physical world outside. But here comes in a new problem, when we ask just what this happening in the physical world is; for science, examining the physical side of sound, the physical concomitant of what happens when, for instance, we hear music, finds this to be wave movements in the air. But now if we ask (as we asked with scent), Is the sound of the waves present on a lonely shore when no one is there?, what answer are we to give? At first it seems paradoxical to deny that the sound is there, or to say that a waterfall in an undiscovered country was soundless until it was discovered. But when we reflect that sound does not really seem to be a quality of the object, that it appears to us, not as a quality of some object, but as the result of movement, of the meeting and conflict of objects, it need not seem to us on reflection very strange or paradoxical that the movement which produces sound should be not simply the movement of waves on the shore, but the movement in the air resulting from this which ends on the human ear; nor again strange to think that in a world in which no sentient beings existed, or all were deaf, there would be no sound, only the movement which might, if possible hearers were present, produce sound.

We are the less inclined to resist this line of argument which would transfer tastes, scents, and sounds into our personal world, because the transfer seems to leave the important qualities of

objects in the physical world intact. It seems not inconsistent with common sense to say that the taste which I taste, the scent which I smell, even the sound which I hear are themselves objects in my personal world only, so long as I can continue to hold that they have their cause or origin in objects or events which seem in their nature, certainly, to be quite unlike the tastes, scents, or sounds which they cause, but of which nevertheless I seem able to form a clear conception because I still suppose their real nature to be revealed to me by sight and touch.

When we pass from the three senses we have so far considered to these other two, some new considerations arise. In the first place neither taste, smell, nor hearing, important as each of them is as a means to pleasure, are of primary importance as giving us information about the physical world. The sense of smell may be of primary importance as a means to knowledge for the animal, perhaps even for the savage, but in the civilized world its importance in this regard has dwindled. With the sense of hearing something of the converse holds; it is of special importance for man as the simplest means by which one man communicates knowledge to another; but its importance for this purpose has something adventitious about it. It might have been possible, we may suppose, for language to have developed along the line not of spoken words but of written signs; if the human tongue and the palate were less capable of expressing, or the human ear of detecting, subtle differentiations of sound, the voice in man might have continued, as presumably it does in the animals, to express not definite ideas, but only vague general states of feeling, pleasure or pain, emotion, warning, surprise; and language as an expression of definite ideas, as a means of reference to particular objects, might have been written only and not spoken. This possibility, even if it is no more than a fancy, will serve to remind us that hearing, however important a contribution it makes in fact to our knowledge, does this at second hand by giving us access to other people's thoughts; it gives us little direct information about the nature of the physical world.

Turning then first to the sense of sight, we find that when we seek to interpret it, the vague and uncertain view of the relation of the physical world to sensation which was suggested by the other senses, breaks apart, and that instead of it we have two or three alternative views, more definite but inconsistent with one another. We described these in the last chapter. There is, first,

the view held by primitive common sense that the colour and shape of which I am aware when (as I say) I am looking at a tree are present in the physical world as real qualities of the tree; a view from which common sense is led, reluctantly but by arguments which seem irresistible, to depart. There is, second, the view that the colour which I see is in my perceptual world only, but that the shape which I see is present in the physical world as a real quality of the tree; a view which we must include in our discussion of the problem, because it is implied by the language often used about primary qualities being real and secondary unreal, but which could hardly be maintained in thought for more than a brief transitional period, because it is as inconsistent with reflection as the first and yet is not, as that was, supported by instinct. And there is the third view, that both colour and the shape which I see are in my perceptual world only, but that there is some physical object in the public world of which they are in some way effects or manifestations.

It was to this third view that we found ourselves led as the one most consistent with common sense on the one hand and with the generally accepted results of physical science on the other. Certainly this view does not allow common sense to keep as much of its primitive view as it would like. It is startling to realize for the first time that, when I look at a cathedral or at a mountain, the colours and the forms which I see are qualities present in my perceptual world only and not in the physical world. The shifting of view, it is true, does not mean that anything is lost; they are still there in my perceptual world. Yet the new view remains paradoxical; it is only achieved by a special effort, and when we are not thinking about it we drop back into the older way of looking at the world or into a confused blend of the two.

It may be because this shift of apprehension is only achieved by so much effort with the sense of sight that it is natural to suppose that, if accepted there, it must apply to all the other senses as well (as in fact it seems to apply to taste, smell, and hearing). The world of form and colour which we apprehend through sight seems so far to surpass, in its range and extent and in its power to give us knowledge, anything which we receive through any of the other senses or through all of them together, that we conclude that, if this visual world is to be held to be no part of the physical world, to exist only as, or in, a perceptual world of the observer, the same must be true of the world apprehended through the other senses. And in particular, if we compare with the visual world the world

revealed by touch, the world of touch is so limited in its range, and the knowledge given by touch is so much less delicate and detailed than the knowledge given by sight, that it may seem that little would be gained by trying to claim for the world of touch any greater reality.

Then too, if we seek to make out such a claim, could we substantiate it? It seems evident that some of the sensations included under the general name of touch are as subjective as the sensations given by any of the special senses. There is in particular no room in the physical world for the sensations of heat and cold as we feel them. The subjectivity of our sensations of heat and cold is cited in discussions of this problem as one of the most evident instances to prove the subjectivity of sensation. Our feeling of heat and cold is related to that mode of movement known to the physicist as heat, in the same kind of way as our sensations of colour or sound are related to those modes of movement known to the physicist as light waves or sound waves; in neither case is the sensation identical with the movement or similar in quality.

But the position seems to be different when we come to the simple experience which Johnson had in mind when he kicked the stone; the experience in which we become aware of resistance, and which as we follow it out appears to give us information about the shape, size, position, and movement of objects. We found with the other senses that there are evident discrepancies between the observations of the same observer at different times and the observations of different observers at the same time, which we cannot hold to be due to changes in the nature of the physical objects. Here we find no such conflict. Touch, as the sense of resistance, tells us only of those qualities which physical science takes into account as entities in the physical world, the primary qualities, size, shape, position, movement; it leaves out of account, as physical science leaves out of account, the secondary qualities such as taste, odour, colour, sound. And what it tells us about the primary qualities it tells us correctly without distortion. The real shape and the real size of an object, known to us through the sense of sight only as a theoretical limit, which the visual objects perceived from various angles and positions tend to reach, but which they seldom or never reach in practice, appear to us as directly known by touch when we feel or grasp the object. The change in the colour of an object as the light falls differently, or in its visual shape as the observer moves, has no parallel in our experience of touch. My poker looks different if I look at it in full daylight, in

the dark, or with the firelight on it: the shape of it feels the same in all three cases. Where touch and sight conflict I trust touch. Is the oar straight or bent where it touches the water? Is the image which I see in the mirror really in the mirror, or is it at a point behind the surface of the mirror, as it seems to be in the world disclosed by sight? In both cases I believe touch to reveal the truth, and I call the objects revealed by sight 'illusions': yet in the visual world they seem as real as any other visual objects, they only rank for me as illusions because they do not have the normal relation to the corresponding objects in the world revealed by touch. Sight again and hearing too, in so far as they can be traced back to an origin in the physical world and give us information about the nature of objects in that world, tell us often not of the state of the physical object at the moment when the visual or auditory object is apprehended, but of its state at a time earlier, perhaps much earlier, perhaps even of an object which at the moment of apprehension has long ceased to exist; touch, in contrast, tells us of the physical object at the moment when the observer is aware of the sensation, or at a moment only as much earlier as is needed for the nervous process to pass from hand or foot to brain. Here are reasons enough, in these evident differences between touch and the other senses, for asking the question whether the arguments, which have led us to conclude in the case of the other senses that the sensible object cannot be the physical object or a part of it or a quality of it, apply also in the case of touch.

Suppose that a physicist of the present day were to meet Johnson, and to inform him that when he conceived himself to be kicking a stone what really happened was not that he was impelling one solid body against another until they came in contact, but that he was impelling a system composed of minute centres of electric force moving in a void in the direction of another such system, until they, not came in contact, contact being impossible, but came within such a distance of one another as to set up a resistance which prevented them coming nearer; suppose that he were to give this account, or whatever account of the matter on such lines as this a modern physicist might be supposed to give, would it substantially affect the position Johnson had been taking up? Surely not: for what Johnson means to say is in substance something to this effect, that he is aware of a portion of matter, his own foot, which he can control and in which he feels sensations, and of a sense of resistance when he impels it against some other

piece of matter, and about this he feels an assurance that he cannot be mistaken. And this feeling of assurance does not seem at all to depend on the fine detail of the structure of these two pieces of matter; it does not depend on Johnson's having examined minutely the grain of the leather of the shoe he was wearing or the surface of the stone he kicked, nor would it be affected by such still more minute facts about the structure of the shoe and the stone as the microscope or ultra-microscope might be able to reveal to science. The sensation of resistance to which Johnson is appealing is a large-scale massive sensation; and in so far as the appeal is valid at all, it is not weakened by any analysis of the structure of the two pieces of matter concerned which may be made either by common sense, or by physical science so long as it maintains any contact with common sense.

The first line of argument then, which might be held to show that touch no more than sight can be relied on as giving us direct knowledge about a physical world, seems on examination to support no such conclusion. There is a second argument used for the same purpose, which turns on the fact that when the sense of touch is experienced under abnormal circumstances, we sometimes interpret it as giving us information, not of the state of things actually existing in the physical world, but of the state of things which would naturally be supposed to exist if the circumstances were normal. A man whose leg has been amputated, it is said for instance, may by suitable manipulation of the nerves be made to have the same sensation of contact that he would have had, if some physical object had been in actual contact with the foot which he no longer possesses. Other similar instances are cited in textbooks of psychology; but interesting as they may be for the psychologist or physiologist, we need not dwell on them here. It seems evident that what has to be considered in such cases is a mistaken inference; we infer naturally but wrongly when some condition in our environment is abnormal, what we should infer naturally and rightly, if the rest of our environment were the same and this condition were normal. If such rare instances of wrong inference in exceptional circumstances were all that could be brought as evidence for the unreliability of the other senses, it is safe to say that, however much their truthfulness might have been questioned on the philosophic grounds we have yet to discuss, no one would ever have thought it worth while to question it along the line of argument we have been considering in this chapter and the last.

We find then no reason, if we come to the sense of touch without preconceptions derived from our examination of the other senses, for doubting its claim to give us direct information about the nature of the physical world. The information it gives us is far from complete, for it is a clumsy instrument which is no kind of match for the complexity of nature; and in certain cases, not very numerous or important, it may betray us into wrong inferences; but for the most part we may say that as far as it goes it gives us real knowledge of the physical world; that it presents to us entities which we can conceive as really existing in that world, since they are entities such as those for which science finds a place there; and that in this it differs from the other senses, which present to us entities such as colours, sounds, scents, tastes, for which no place is to be found in the scientific picture of the world. Touch, it is true, without the aid of the other senses, and in particular without the aid of sight, could tell us but little about the world; no more than what a man could learn if he had been blind and deaf from birth and had only met others like himself. But this limitation does not take away its importance as being the one sense which has direct access to the nature of the material world; it gives us, what we were looking for at the end of our last chapter and were not able to find, a source and origin for the rest of our perceptions, so that we are not left, as we seemed to be, with our separate perceptual worlds all hanging somehow in a void.

And we are brought up immediately against a second distinction which marks off the sense of touch from the other senses; a distinction not less important for our present purpose than the distinction arising from the fact that touch does not present such inconsistencies as the other senses do. This second distinction is that the sense of touch brings us directly, as the other senses do not, into a public world in which things happen. With the other senses, and this is particularly true of the senses with which science is most concerned, and which give us most of our detailed knowledge, sight and hearing, we are in the position of spectators or audience. We are observers, each aware of the contents of his private or personal world, and able by exchanging thoughts to compare the contents of one of these worlds with those of another and to build up a picture of a public world which will combine and harmonize them. But so far as these senses go, we do not need to think of ourselves as being together in a world already existing; or rather (for the whole tissue of our thoughts on this problem is immensely tangled and difficult to unravel) we at once do and do not; on the

one hand we think of the visible universe as something which existed much in its present form millions of years before life began on this planet, on the other hand we can think of it as something which has to be constructed afresh whenever the minds of two scientific observers begin to exchange their observations. It is only when we realize, as we do in the sense of contact, that we are not observers only, but participants active or passive in a material world in which things happen, that we realize also that these two conceptions of the world must in some way or other be made to coalesce.

Looking then at the problem of perception as a whole, we find that the different senses can be placed in a scale ranging from idealism to realism in respect of what they claim to tell us, and that in this scale we can distinguish several different views, or we might say different philosophical attitudes, as to the relation of perceptual objects to physical objects. At the idealist end of the scale comes the sense of taste, which presents to us its objects, significantly called tastes, as entities that exist in the private world of the observer and in that only. With the senses of hearing and of smell we find ourselves wavering between idealism and realism. Sound seems to come to us from a physical world, but to tell us, not of permanent objects in that world and their qualities, but of happenings; and to pass from this to supposing that it is something which is caused by happenings in the physical world, but which itself happens in the perceptual world only, is no very wide step. Of the sense of smell it may be hard to say whether its scents or fragrances seem to be in the physical object or in the air or in the mind. But sight and touch are in a more definite and positive way realist senses, with a realism not merely of events but of substances; between them they present to us the colours and shapes out of which the permanent objects of the physical world appear to be built up; and if these senses can be shown not to be trustworthy in the information they claim to give us about the physical world and its objects, the belief of common sense in a physical world must seem to be dangerously shaken.

The realist position, then, is certainly well worth defending, for if it can be held, common sense can maintain an effective command over all the ground which it looked like having to abandon; and we seem now to have found a way out of the deadlock which we reached at the end of our last chapter. Our difficulty was that our inquiry into the conclusions to be drawn from the conflict of

the senses seemed to lead to this: that no sensible qualities, nothing which the senses present to us, could be relied on to be something which actually existed in a common world outside us. All that it seemed left to us to say was that there must be outside us some common cause of which the various perceptual worlds and their contents were the effects; but as to the nature of this common cause, whether it had any resemblance to the sensible objects which we supposed to be its effects, whether it should itself be regarded as material or physical, or what could be meant by calling it either 'material' or 'physical' if we had no knowledge and could form no conception of its nature; or whether even we had any adequate reason for supposing it to exist, whether this assumption that our perceptual worlds must have some cause of a kind different from themselves could be shown to rest on any adequate ground: as to all these questions we seemed left in complete uncertainty.

But now, as a result of this distinction which Johnson bids us draw between the sensation of contact or resistance and all our other sensations—those other sensations giving us, as we seemed compelled to admit in one instance after another, only knowledge of something in our personal or private worlds; and the sensation of resistance on the other hand showing itself able to hold out under cross-examination and vindicate its claim to give us knowledge of a public world outside us—as a result of this distinction we may hope that the sense of resistance is able to vindicate, not only directly its own trustworthiness, but also indirectly the trustworthiness of all the other senses as well. For here we find a foundation, which if it were all we had would not lift our knowledge to any great height, but which provides a platform firm enough to support the superstructure supplied by the other senses. This something in a public world outside us of which we believe ourselves to have direct knowledge, little as that direct knowledge can tell us about its qualities, has just those primary qualities of form, size, position, and change of position, which are needed, according to the picture of the physical world given by science, to enable it to be the source or cause of all those secondary qualities which make up the content of our perceptual worlds.

Johnson's gesture in fact (this is what our argument is leading us to) is significant because it expresses in a simple form the strongest natural foundation for that moderate materialism, which has been implicit in all the common sense, in most of the philosophy, and until quite recently in all the science of Europe. We qualify the

term 'materialism' in this way to note that a distinction is to be drawn between the moderate common-sense materialism, which says only, 'There is a material world, whatever else there may or may not be' (and this was certainly all that Johnson meant to say), and the negative or aggressive materialism which says, 'There is a material world, and there is nothing else.' And if since Berkeley's time philosophy, and perhaps in quite recent days physical science too, have attempted on this or that line of argument to dispense with matter and construct their picture of the universe without it, it yet remains to be seen whether any such attempts have been successful. Here is a question which we shall need to explore later: we are only concerned at present to say that this common-sense materialism is a way of thinking which philosophers ought not to dismiss as crude until they are sure that they are able to construct a better one; and to add that our discussion seems to show that, if it is to be maintained, it can best be supported on the ground that the sense of touch makes reality directly accessible to us in a way that the other senses do not. This common-sense materialism, resting on trust in the sense of touch, deserves a name, and as it seems so far not to have received one, we shall speak of it as 'Johnsonian Realism'. Other writers, more concerned with the study of philosophy, ought, it may be thought, to have worked out its possibilities, and perhaps some of them have; but in the history of philosophy as it is usually written there is to be found no name so nearly connected with it as that of Johnson. It might seem going too far on the strength of this to rank him as the greatest English philosopher of the eighteenth century, even when we remember that Berkeley was an Irishman and Hume a Scot; but let us at least allow him due credit for having summed up in brief a philosophic attitude of permanent importance.

An illustration may help to bring out the nature of the distinction between the senses on which we are insisting. Let us suppose that the earth is the only place in the universe on which exist beings with senses like our own, as according to the present teachings of science may very well be the case. Let us suppose also that somewhere in the universe there exist other beings with faculties different from ours, not possessing any of our senses, but able by some direct power of apprehension to be aware of anything happening on the earth that might be the subject-matter either of physics or psychology. One of these beings contemplating our earth would be aware that there existed there such entities as

colours, sounds, tastes, and odours, whether these should be conceived as existing in the physical world or in the human mind or somehow in the meeting of these two. We will now suppose that all sentient life on the earth is suddenly to be destroyed, the state of the earth otherwise continuing as before. Our imaginary observer would become aware that the colours, sounds, and tastes which had existed on the earth no longer existed there, and if the earth were the only place in the universe where they had existed, they would no longer exist anywhere in the universe. Yet if the laws of the physical world were unchanged, our observer endowed with the powers we have ascribed to him would be aware that many things on the earth's surface would continue to happen as before; rain would fall, rivers flow downwards, waves beat on the shore; and if we suppose the earth continuing to exist during long periods of time, mountains would rise, coast lines disappear beneath the sea. And if we ask, what elements are there in these various happenings that would still exist, if colours, sounds, tastes were abolished, we must answer: the primary qualities, shape, size, position, movement, in so far as these manifest themselves not to sight but in the contact of one body or portion of matter with another. Contact and what depends on it, resistance, absorption, penetration, would continue in a lifeless world without thought or sentience to be just such events as they are now. The sense of contact is the sense by which we are aware of ourselves as pieces of matter in a world made up of pieces of matter.

The distinction may again be illustrated, if we consider the case of a man looking down at a lake from the bank above it. He will see a stretch of blue colour, varied with lights and shadows and reflections, and if he tries to state what he sees in terms consistent with the results of science, he will say that all this that he sees is something that exists only in his own perceptual world, it is not something which can be supposed to exist in a material world independently of him or of any other observer. But it is still open to him to believe that corresponding to the region in his perceptual world which is occupied by the stretch of blue colour, there is a region in the material world which is occupied by an assemblage of molecules of water; that these molecules possess properties of such a nature that they produce in him under certain conditions the sensation of blue colour; and that they would produce in him under certain other conditions—if, that is, he were to dive from the bank into the lake—the sensation of a particular blend of resistance and yieldingness. And this last quality, the blend of

resistance and yieldingness, differs from the light and colour in that it belongs to the molecules of water in themselves, independently of any human observer. It exhibits itself no doubt in relation to other objects (can we conceive any quality that does not so exhibit itself?) but it exhibits itself in relation to them as material objects; it does not exhibit itself, as the blue colour does, only in relation to those particular material objects which possess the sense organs and minds of human beings, or of sentient beings. It would exhibit itself in the same way whether a human body dived into the lake, or a stone or a branch from a tree fell into it. This distinction between those qualities of material objects which exhibit themselves in relation to other material objects whether sentient or not, and those which exhibit themselves only in relation to sentient beings, is the essential element in the doctrine which we have called 'Johnsonian Realism'. And the problem is not seriously modified nor is this doctrine shown untenable if science pushes its analysis further, and to its statement that the lake is made up of molecules of water adds the further statements that the molecules are made up of atoms, and the atoms of electrons. Certainly we are not made aware by touch of these smaller bodies one by one as units, but we seem to be saying something quite intelligible when we say that in touch we become directly aware of their aggregate effect on us; or to phrase it a little more fully, of an event that takes place in the material world when the aggregate of small bodies which composes a particular portion of the lake comes in contact with that other aggregate of small bodies which composes the arms and head and trunk of the diver.

And on this way of thinking the blue colour of the lake, and the contents of our perceptual worlds generally, take their place in our general conception of the material world under that category of cause and effect under which the mind naturally seeks to order its furniture. The blue colour, the lights, shadows, reflections which appear in the perceptual world of the bather looking at the lake are produced in him by the nature and arrangement of the molecules composing the lake; or, as we should say to make our statement more complete, by these as particular causes acting in conjunction with those more constant and general causes, light and its waves, the intervening medium, air or ether, the visual organs and nervous system and brain of the observer, and that other singular thing or quality in him, whatever it may be, in virtue of which his sense organs, nervous system, and brain have the power of causing or qualifying a moment of awareness.

The conception of cause and effect here employed, as that in which the cause produces the effect, we must admit to be a crude conception taken over without criticism from common sense. We shall attempt some criticism of it later on. For the present it will be sufficient to remark that the conception in this form is natural to common sense and seems indeed indispensable to it. Any thorough-going criticism of it would carry us further along the road to scepticism than we have been carried already, and must be deferred to a later stage.

It looks then as though in our last chapter we had gone further than we need towards scepticism, for by accepting the distinction between the sense of contact and the other senses we seem able to find a sufficient ground for asserting the reality of the primary qualities of matter. For the primary qualities are just those of which the sense of contact informs us; and though no doubt in the ordinary business of life we get our knowledge about the size, shape, and position of objects through the eye far more than through touch, yet for the most part if we are in doubt we mistrust the eye and turn to touch to decide the issue. So certain do we feel that, if sight and touch seem to differ, touch gives us the true shape and size, that in daily life we do not even notice the difference, but automatically translate the shape and size given us by sight into what we judge to be the shape and size that would be given us by touch. And it seems natural to bring this unconscious constant adjustment into connection with the conception of the different spaces revealed to us by the different senses, which we mentioned in the last chapter. We spoke then, following a common doctrine of psychology, as though each separate sense should be conceived as having a separate space of its own. But does not such a conception complicate things more than is needed? There does not seem much to be gained by supposing that there are separate spaces for taste or for smell or even for hearing; all that need be said is that it may occasionally be difficult to relate the data given by these senses to the data given by sight and touch. But that for each of us the space directly given in sight is different from the space directly given in touch seems clear: it seems clear too that the space directly given in sight is different for each of us. But is it clear that the space directly given in touch is also different for each of us? Would it not be sufficient to say, as it certainly seems more natural, that the space of which we are directly aware in touch is a portion of the space common to all observers, and that the

task of adjusting our visual space to our tactual space is part of the whole problem of adjusting our personal world to the public world?

Sight is so much the most informative of the senses, the data with which it supplies us as to the qualities of objects so far outrange in fullness and precision the data supplied by any other sense, that we are tempted to suppose this fullness and precision everything, and to treat the knowledge which it gives us as the sufficient foundation for our picture of the physical world. Thus when we speak of the perceptual field or of perceptual space, the thought which these phrases naturally call up is the thought of a visual field or a visual space, and the question as to how we should conceive the physical characteristics of some object under observation presents itself as a question as to how we are to correlate the different aspects and positions of the object in the visual fields of different observers. And a philosopher approaching the problem from this side is likely to find that the readiest way to envisage it will be to conceive a group of observers stationed at various points in his own visual field, observing an object placed somewhere in that field, and noting the manner in which the different sensible qualities that the object appears to them to possess are conditioned by the distance and the angle from which they severally view it. Starting from these various data he will be able to construct for each of the supposed observers a secondary visual field, the centre of which he can superimpose at the appropriate point of his own visual field; and he will conclude that the differences in the data can be sufficiently accounted for in terms of his own visual field and of the supposed secondary visual fields, which will be related to it in what may be called a geometrical manner.

But the task of correlating the visual fields supposed to be apprehended at one moment by different observers is a task that depends on language and reflection, arises at a late stage of development, and must be deliberately performed; and it can only arise then because it has been preceded by a long process, in which each observer has continually and unreflectingly correlated the aspects and positions of objects appearing in his own visual field at one moment with the different aspects and positions of objects as he remembers them in his visual field at earlier moments, and has further correlated these seen changes of aspect and position with changing positions of his own body. And when the problem of correlation is approached in this way, the clue which serves to order it is the thought that the seen changes have as their determining cause changes of bodily position; and these changes

of bodily position cannot be adequately accounted for by the observer as changes of position in his own visual field. They may take place when no visual field is present, for he can make them in the dark or with his eyes shut; and even in daylight when his eyes are open, he does not for the most part observe what he feels to be the movements of his body as taking place in his visual field; these movements are felt as going on in a field which has a reality independent of vision.

Our account of perception then, if it is to maintain any touch with common sense, has to assume something like this: that the observer is aware of a field or space in which he can really change his position, that these real changes of position depend on movements of his body, and that the changes in his visual field which are most significant for his whole world picture are determined by his bodily movements and changes of position. And the discovery of these changes of bodily position has to be effected, not by visual sensation, but by sensations of touch and movement. The visual field as a whole can be seen to change, but not to move; particular parts of it or objects in it may appear to move, and it is possible that all parts of it may appear as moving simultaneously; but even if the whole field is in this sense seen to move, it is not seen to move as a whole, for there is no second visual field outside it in which such a total movement could be observed. And among the movements that may be seen taking place in the visual field are movements of the observer's body; but these movements are not for the most part, and it is doubtful whether they can ever be, identical or precisely correspondent with the felt bodily movements on which the seen changes depend. When on the other hand we consider the tactual field, the field of which we are aware in our sensations of touch and movement, we must recognize that the range of it disclosed at any one moment is small compared to the field disclosed at any moment by sight; yet it seems not impossible that this small tactual field, which is all that we can at any moment be aware of, is part of a larger field in which the bodily movements that condition our changing sensations actually take place, and in which the visual fields of different observers move as wholes and change their position with reference to one another. We can say only that this is possible, not that it is certain. We shall find, when we come to the philosophical case against the reality of matter, that there are strong arguments which would persuade us that the world of touch and movement, like the world of sight, is private and peculiar to each individual. Yet it

seems at least possible that the world revealed by touch is the very world which common sense supposes itself to know as public and material, or that it corresponds to that material world simply and directly. But we cannot hold it possible that the world revealed by sight is identical with the public material world, or that it corresponds to it in any simple and direct way; though on such a theory as Johnsonian Realism we can see how it may be sufficiently correlated with that world by its correlation with the world we know through touch.

It is true that the shapes, sizes, and positions of distant objects, and that means of most of the physical world explored by science, are discovered by sight only without the help of touch. Yet our understanding of them seems to be based on our understanding of the shapes, sizes, and positions revealed to us by touch. A mountaineer studying from the valley a peak which he wants to climb believes that the real shape and size of the physical object, of the snow-field which he (in one sense) sees, is not the shape and size of the small white patch which he (in another sense) sees, but the shape and size of the snow-field as he expects to know it by moving over it. And in the same way, it would seem, the astronomer must believe that the shape and size of a distant star is not the speck of light which he sees, but the area which he if transported thither would in some hypothetical way apprehend by contact; however impossible it may be that he should be transported to the star or apprehend its area by contact if he were. Further, the discoveries of physical science as to magnitude and distance, terrestrial and celestial, are effected not by touch but by sight. The eye is not merely the source of our knowledge of the secondary qualities of colour and of light and shade, it is also the instrument by which science builds up its knowledge of the primary qualities of the objects, near or far, of the material world, of their dimensions, positions, and movements. In all this achievement touch seems hardly to play a part. It is worth while then to observe that recent science, faced with the problem of interpreting observations made by sight about phenomena of an astronomical order which in some of their minute and delicate details seemed hard to reconcile with one another, found itself forced back to ask itself what precisely happens when a measuring rod is applied to a material object. But measuring rods are applied to material objects by touch, and the measuring rods with which all measurement begins are the hand and the foot.

Finally, to complete our account of the modes of sensation, we

must add to the four special senses and to the external sense with its subdivisions, what may be called a general internal sense. This is something which the traditional account of the senses omitted to mention, for the reason presumably that this mode of sensation neither claims to give us nor can give us any knowledge of an external world, if we mean by that a world external to our bodies. And yet if the phrase 'external world' is used, as it often is, to designate what is intended by the phrase 'material world', as we defined that above (that is, to designate a world of objects which we believe to cause our sensations and to have a permanent existence not depending on our experience) the internal sense certainly gives each of us information about that part of the external or material world which is most important for him, his own body. The sensible qualities of which we are immediately aware in this mode of sensation are not anything for which there is room in the physical world as conceived by science. They themselves are not constituents of that world, but we suppose them to be caused by events taking place in a part of that world, and to be capable of giving us information about those events if they are rightly interpreted, though the interpretation may often be difficult.

The position to which we are led seems then to be this. The world which the senses present to us is not, as at first we take it to be, a public world common to all; it is, if we consider it as a whole, a world personal to each of us, and so are most of the elements which compose it; but there is something from the public world, that element in it of which we become aware in our sense of contact and of bodily movement, which enters into and is a part of our personal worlds, and in being directly aware of this we are directly aware of the public world. And having gone as far as this, we can go farther. By observing the contents of our various personal worlds and comparing them one with another, we can see that the other sensible contents of these personal worlds are related in a uniform manner to that fundamental part of them which is also part of the public world. And thus those other sensible contents, colours, sounds, and so on, turn out on reflection to give us knowledge about the public world, not precisely, as we supposed before reflection, because they are themselves part of it, but because they are channels through which the public world normally and uniformly manifests itself to us. And this way of looking at the problem, while it is no doubt more complicated than the way in which we envisaged the problem before reflection, is yet so far similar in its outcome to that primitive outlook that it can

leave us feeling that nothing of importance for the structure of our knowledge has been lost.

For the present therefore let us say that the perceptual world contains certain entities, that is, the primary qualities as these are revealed to us by touch, which are in some respects exactly like entities that we believe to be present in the physical world. We have to make this qualification 'in some respects', and it has to be a large one. If I revert to Johnson's example, the qualities which I seem to be aware of as belonging to the stone which I kick must be different from any qualities which I can conceive as belonging to the stone as it would exist independently of my awareness, or from any description of the stone which could be supposed to represent its nature as analysed by physical science. Yet there are certain relations between my foot and the stone in respect of position in space and movement which I become aware of in the act of kicking, and which it seems true to say are exactly like the relations in respect of position and movement which science would conceive to hold between my foot and the stone, or between the corresponding groups of atoms, or whatever it is that should be conceived as their more precise description in the physical world. And what our theory of Johnsonian Realism seeks to maintain is that these relations are directly revealed to us by the sense of touch; that it is by the sense of touch that we are aware of ourselves as pieces of matter in relation with other pieces of matter.

But having said this there are one or two further questions that we must go on to ask. First, why has Johnson's dictum been looked on only as the rather freakish utterance of an amateur, and not as a suggestion for a possible philosophy of the material world? And secondly, even if it might perhaps in the past have been accepted as the starting point for such a philosophy, has not the time for that gone by, now that physical science seems to have moved so far away from that simple outlook on the material world which was possible for Johnson?

The answer to the first question would seem to be that Johnson's appeal was addressed from the outset rather to natural common sense than to philosophy or to science. Our knowledge of the shapes and magnitudes which common sense is concerned with, and which physical science takes as its starting point, might be supposed to be reached along either of two lines; either as something directly given in the sense of touch, or as an average or mean or limit arrived at by comparing the visual sensations of

many different observers. For common sense it is natural to take the first line. Touch is for it the decisive test of reality, and objects such as ghosts, mirror images, and visual illusions, which can be seen but cannot be touched, are judged to be unreal. Common sense again feels itself not merely an observer of its environment, but a participant engaged actively or passively in life's happenings. Science on the other hand is not a participant, but an observer; and for the observer sight, owing to its range and subtlety, is so much the most important of the senses that touch and all the others fall into the background. In the observations of astronomy touch has no share, and even in the experiments of physics all observation that is at all delicate is the work of sight. And thus for the scientist it would be natural to regard the shapes and dimensions with which physical science deals, not as something that is given or might be given in sensations of touch, but as the mean or limit of the shapes and dimensions given in sight to different observers.

These considerations may in some measure explain why the science of the eighteenth and nineteenth centuries, while holding that the qualities called 'primary' and these only could be known to be constituents of the physical world, yet held that these are known through sight rather than through touch, and thus found Johnson's protest irrelevant. But this is past history, and a question more important for the future is our second: Has the doctrine of Johnsonian Realism any significance for the problems presented to philosophy by the scientific thought of the present time?, or are we attempting to rehabilitate it just when it has become finally out of date? Science, we are now constantly being told, by some who are men of science and by many who are not, has moved far away from the crude materialism of the nineteenth century; how can the particularly crude form of that materialism which we are presenting under the name 'Johnsonian Realism' be supposed to have any relevance either for science or for philosophy today?

If we ask what are the main doctrines of modern physics which have made the older and simpler views of the material world untenable, they seem to be these two. First it is said that when physics carries its analysis of the minute constituents of matter as far as it can, it finds them to be, not solid atoms as was supposed by the science of the nineteenth century, not even regions of space marked out by planetary electrons moving round a central nucleus, as was conjectured by the science of the early twentieth, but something that can best be described as waves of probability.

And again it is said that when the conditions under which distant objects can be observed are studied as closely as they can be by physics and astronomy, it is found that the physical world can only be adequately described by saying that it is a space-time continuum, in which the most searching analysis cannot distinguish how much is space and how much is time.

How are these two doctrines, which we have here summed up briefly and imperfectly, to be understood? They are stated in different ways by different authorities, and in the case of each doctrine there seem two main lines of interpretation open. It is possible that either doctrine might be interpreted, not as a statement about the nature of reality, but as a statement about the limits of scientific knowledge telling us that in certain regions, the region of what is exceedingly small or exceedingly distant, a point is reached beyond which precise observation cannot be carried. In that case, while the doctrines will be important for philosophy in so far as it is concerned to understand and scrutinize the main conclusions of the sciences, they need have no special significance for its speculations, when it seeks to explore the problems we have set before ourselves in this inquiry as to the relation of our reasoned knowledge to our common-sense knowledge and as to the possibility of a metaphysic.

But they seem to be presented by some of those best qualified to speak as something more than this, as a discovery by science of the nature of reality; a discovery perhaps of something which that nature is, or at any rate and more positively, a discovery of something which it is not; and in that case their significance for philosophy in its wider speculations too must be great, perhaps revolutionary. And for our present problem in particular it seems clear that, if the physical world is to be conceived not as spatial in its nature and persisting through time, but as a space-time continuum in which space and time are indistinguishable; and if again the ultimate constituents of the physical world are not any entities that might be thought of as substantial, but can only be described as waves of probability; if both or either of these doctrines is correct, the physical world must be held so different from the perceptual worlds that no element in one could reasonably be supposed identical or closely correspondent with any element in the other. We should then have to abandon our theory of Johnsonian Realism and the conjecture that the sense of touch can give us direct information about the physical world. Our attempt to vindicate for touch a privileged position among the modes of perception

would have broken down, and we should have to repeat for perception as a whole the conclusion that we came to after considering the case of visual perception at the end of our last chapter.

We should still be able to say that the perceptual worlds of various observers correspond to one another, in a way which can best be accounted for by reference to a public or physical world conceived as science conceives it. But we should be unable to discover any point of direct contact between the perceptual worlds and the physical world. And here will return on us those questions which we had to face at the end of our last chapter and to which we then found no answer. This physical world which we find it necessary or helpful to conceive as correlating our various perceptual worlds) is it as we supposed when we began our inquiry, a material world with a substantial existence independent of being perceived or thought about? Or is the conception of a material world one which we cannot justify and which we must learn to do without? And if so, what is to take its place?

At this point then we can no longer delay passing on to that second line of inquiry as to the interpretation of perception, which we distinguished as philosophic. There is a line of thought, or as we shall find there are two rather separate lines, which would lead to a doubt or denial of the existence of the material world, basing this not on particular grounds drawn from the conflict of the senses, but on grounds more general and more radical. And we may look to these lines of philosophic doubt, perhaps to achieve more completely what the scientific line of doubt achieved only in part, the overthrow of our belief in the material world, and also to provide, what it was not the business of the scientific line of doubt to provide, an alternative doctrine about reality to take its place.

But in committing ourselves to this new line of inquiry we must recognize that we are breaking definitely with historic common sense. It is certain, if we can trust the evidence of history and literature, that the common sense of all times and all countries has believed that material objects and the material world have an existence of their own independently of their being perceived or thought about. Reason may be able to persuade us that this break with common sense is necessary, but we must not suppose it to be a light undertaking. Our doctrine of Johnsonian Realism, whatever its weaknesses, was proposed as a last attempt to maintain contact with common sense. And we may retain it still in reserve in case the lines of thought which we are now to follow up should fail to justify themselves.

CHAPTER VII

THE WORLD OF PERCEPTION: PHENOMENALISM

BEFORE passing on to the new questions to be discussed in this chapter, it may be well to recall briefly the main purpose of our inquiry. The problem to which we want an answer is, what part of our supposed knowledge, if any, have we a right to regard as certain, and how is this certain knowledge arrived at? And we hoped that light might be thrown on this problem by an inquiry into the nature and ground of that part of our knowledge which common sense regards as most certain, the knowledge of an external world which we believe ourselves to obtain through the senses.

In beginning this inquiry we distinguished two different lines along which questioning of our supposed knowledge of a world outside us might proceed. The first of these two lines of questioning, the scientific line, takes as its starting point the common-sense belief in the existence of a material world which is revealed to us in perception and is independent of any perceiving mind. It begins with the belief of primitive common sense that this material world has just those attributes of colour, sound, and so on, which our sensations present to us; and it departs from this position little by little, and reluctantly, as a study of the problem of error and the conflict of the senses goes to show that one after another piece of the picture which our sensations present must be assigned, not to a public world common to all observers, but to the private worlds of individual observers. The process is gradual and leads in the end to a state of uncertainty rather than to a positive result; anyone who tries to understand what present-day science has to tell him about the world, and who does not seek to go further, is likely to be left in the position that he must admit complete ignorance as to what the independent material world which

common sense has believed in is really like, yet that he must still take it for granted that it is somehow really there.

But an inquirer who is more concerned to ask how the conclusions of science are to be related to a general view of reality, will find himself driven to go farther, and he will come at this point to what we have called the 'philosophic' line of doubt, or as it might be better to phrase it, the 'philosophic' way of doubting; for we shall find that this way of doubting does not follow a single line, but takes shape in two directions, which diverge widely from one another. The first of these, which we are to examine in the present chapter, appears as a natural extension or consequence of the scientific line of doubting; it reasons that, if the belief in a material world is so dubious, a firmer foundation needs to be supplied for the fabric of the sciences and for our trust in the power of human thought to construct and to predict; and it conceives itself able to offer a hypothesis which will suffice for this purpose, leaving it a question of indifference whether a material world should be supposed to exist or not. The second, which will be dealt with in the chapter following, while it may as a matter of history have arisen in part out of the doubts suggested by science, and while it may find a place for these in its arguments, yet claims to have reached a philosophic standpoint from which it can be seen that any such doubts are of minor importance, and that altogether apart from them the belief in an independent material world is a belief without adequate ground, and is one which should be not merely doubted but denied.

In our examination of the scientific line of doubt we were led to distinguish two kinds of worlds containing two different kinds of objects. On the one hand we have the physical or public world, common to all observers, whose contents are physical objects; on the other hand we have the perceptual or private worlds, peculiar to each separate observer, whose contents are perceptual objects. And when we look at these two worlds side by side, we find the public or physical world becoming more and more shadowy and remote, the private or perceptual world nearer and more distinct. One after another our attempts to form a picture of the physical world as it is in itself have broken down; we find ourselves able to conceive it only as the cause or background, whose nature we do not know, of the perceptual worlds, whose nature we do know. But nothing in this argument has so far shown us any reason for doubting our knowledge of our perceptual worlds. Our knowledge of our perceptual worlds does not appear to depend on our

knowing the physical world, and on the other hand it is only through having a knowledge of our perceptual worlds that we seem able to come to any knowledge of the physical world. Looking up as I write I am aware of a green patch of colour surrounded by blue; I interpret this as a green tree outlined against a blue sky which I see through the window; and in my first instinctive belief I suppose both green tree and blue sky to exist as portions of a real material world and to have the visual qualities which they appear to have independently of my perceiving them. Yet this first belief breaks down under criticism, and so in the end, it may be, does any alternative theory that I can construct as to the physical objects I suppose myself to be aware of. But nothing in this line of questioning forces me to doubt that my belief that I am aware of green and blue patches of colour can be trusted; on the contrary, it seems evident that unless I can trust this belief as my starting point I have no reason for believing in anything further.

If then we ask what it is of which we can be most certain, we find this nearest certainty not in the physical or material world, but in the perceptual world that is private and personal. And does not this mean that what we feel most certain about is not something that is material, but something that is mental? This further step adds something new and startling. The belief or prejudice with which we have grown up is to think of what is material as that of which we are most certain, what is mental as that about which we are or ought to be more doubtful. The material world and the things in it are, we assume, objective and real; the contents of the mental world are subjective and may be illusory. Look outside, we get facts; look inside by introspection, and we get fancy or conjecture. Common sense starts with the belief that there is a material world known to us through the senses, with a substantial existence independent of its being perceived or thought about; this independence is what the conception of a material world essentially means to it. Common sense believes again that the material world and its contents are objective, and we can have certain knowledge of them; and that the contents of the mental world are in comparison subjective and dubious. But now if we are forced by such arguments as we have considered to abandon the belief in an independent material world, what is the position? We must fall back, it seems, on that alternative way of approaching reality, the way that leads through the mental world.

We can still hold, however, that some part of the contents of the mental world, those contents which give rise to the common-sense belief in a material world, have a degree of objectivity which the other contents of the mental world do not possess, and therefore we must not suppose that the view to which we are now led claims to set up the mental world in a sweeping unqualified way as against the material world. The position is rather this: that by the breakdown of the belief in a material world we are forced back on the mental world to look for a foundation for our knowledge, but that within the mental world we shall look first to those mental states which suggested the belief in a material world. When we have supposed ourselves to be observing material objects, we have in fact been observing some of our own mental states; but it is still reasonable to suppose that those particular mental states have a value for knowledge which our other mental states have not. Compared with those our emotions, our desires, our feelings, seem more dubious and more subjective; all of these are vague and fugitive, and we are less likely to be able to observe them rightly; and if we should succeed in observing them rightly we find them coloured with our particular likes or dislikes, pleasant or painful associations.

The doctrine then which we are now to consider seeks to mark out from the whole of our mental world or experience a particular region, which it regards as more primary for knowledge than the rest of our mental world on the one hand or than the material world on the other. This is the region of our sensations or perceptions. It is primary as compared with the rest of the mental world, because out of it grows that part of our thought which is most evidently public and shared with other minds, our store of beliefs about the physical world; and it is primary as compared with the physical world, because our beliefs about the physical world are arrived at by inference from it. And in stating the position in this way, we seem to do justice to one at any rate of the reasons which have led some inquirers to set up the perceptual world or the mode of being of percepts, as a third world or mode of being, different from either the mental or physical. Percepts, as being the basis on which our most evidently objective knowledge rests, have prima facie a kind of objectivity, which the other elements of the mental world cannot in the same degree claim; so much we must admit, and this manner of stating the position allows for it. But it does not follow from this that percepts should be supposed to have a substantial existence of their own apart from either the material

world, if there is one, on the one hand, or the mental world on the other.

What now are we to understand by these terms, 'sensation' and 'perception'? They are used vaguely, sometimes as though they were interchangeable, sometimes as though they meant different things. But we shall probably not depart too far from general usage if we take it that their meaning is different, though connected, and that the difference is something like this. By 'perceptions' are to be understood sensations which come to us as claiming to give knowledge about an outside world; which are believed by us to give such knowledge; and which embody so much of present or past thought as is requisite to enable them to play their part in forming a picture of the outside world.

What then are we to understand by 'sensation'? The term is one of those whose meaning we understand by example rather than by definition. We can expand the term if we like into 'sensory experience', but by doing so we do no more than remind ourselves that we are speaking of something that is in its own nature mental and private, whether it refers to an object outside it or not. The elements or portions of this experience which we have in mind when we use the term are, first, those connected with what are traditionally called the five senses, sensations of colours or shapes, sounds, tastes, or scents, softness or hardness, heat or cold; all of which present themselves as coming from an outside world of which they give us knowledge. But there are other sensations, having as much title to the name in common usage, which do not in the same way have an outside reference; sensations of pleasure or pain, vigour or weariness, well-being or ill-health, which do not claim to tell us of any outside object, but only of our own internal states, of states that may be caused by physical conditions, but that as we know them are mental.

But further, the sensations which claim to give knowledge are only ranked by us as perceptions in so far as this claim seems justified. The sensations of sight or touch experienced in dream or hallucination may seem to the dreamer in his dream or to the man under hallucination as real as what we call perceptions; but the dreamer will not count them as perceptions when he awakes, nor will the visions of the man who suffers from hallucinations be counted as perceptions by other people. There are again other sensations, or elements in our awareness akin to sensations, which are related in a more complex way to present experience, such as

the visual images which arise in memory or imagination. These, however vivid they may be, or however correct we may, in the case of memory, believe them to be, we again should not call perceptions, because we do not believe them to correspond to anything in the environment of the moment. Our perceptions then are those among our sensations which claim to give knowledge of an immediately present outside world, and which are believed by us to make this claim rightly.

There is a third distinction of which something must be said, though it is hard to relate it clearly to the other two of which we have spoken. Perception, as the word is commonly used, seems to imply that the percipient is aware of a world of objects which he distinguishes from one another. Sensation, as the word is at any rate sometimes used, implies a world of colours, shapes, and sounds, not yet built up or differentiated into objects. Sensation, on this way of using the word, is the bare minimum which our awareness may be supposed to receive at any moment from the action of the sense organs; perception includes as well as this all that thought and memory contribute to the building up of the perceptual world, or the picture of the world of which we are in fact aware. Here again is a real and important distinction, but it seems to overlap the two others of which we have spoken in a complicated way. In dreams or hallucinations it is not detached and isolated colours or shapes that present themselves, but these combined into objects; yet it would be an inconvenient use of language to have to say for this reason that our dream images are perceptions. This inclusion of an element contributed by thought seems then to be essential, not for perception only, but for any sensation that can even claim to give knowledge. The sensation that we are aware of when we look from a height on a landscape is a sensation of objects, clearly or vaguely conceived, of space and distance, not merely of patches of colour. When a philosopher or a psychologist speaks of seeing a patch of colour as something isolated, or when a painter for his own purpose breaks up the visual scene into patches of colour, there is a deliberate attempt for special reasons to see the world otherwise than as ordinary sensation presents it to us. And even when the attempt is made, it may be doubted whether it brings us much nearer to seeing as the eye would see, if it could look on the visual scene as something new.

We must make a further distinction then between sensation, as we are in fact aware of it, and bare sensation, as it might be if all that thought and memory contribute could be taken away. For

psychology, as it studies mental growth, the question as to what bare sensation would be, if we could isolate it, is doubtless important and interesting. But for our present line of inquiry, which is concerned with the question how we are to relate the private perceptual worlds that we are aware of to the public physical world that we conceive outside them, it is not relevant. For the purpose of this inquiry we premise that sensations are something which we know by example though we cannot define the term, and that perceptions may be defined as those sensations which claim to give knowledge about an outside world and which are accepted by us as giving such knowledge.

The elements in our experience which we call by the names of sensations or perceptions have then two aspects corresponding to these two names. Looked at as sensations, they tell us about something in our personal or mental life; and looked at thus they all stand on an equal footing and all stand in the front rank of certainty. Looked at as perceptions, they claim to tell us about something outside, whether this is to be conceived as an independently existing material world, or in some other way. And here a distinction has to be made. If they are to justify this claim, they must do so, it would seem, by fitting in with other sensations which we have now, or which we remember ourselves to have had in the past, or which we believe other persons to have had. And not all of them can do this; some of them are found in one or another of various ways, in error, dream, hallucination, or fantasy, to conflict with the great bulk of our own or other people's sensations. But on the whole and for the most part they appear to fit together, if they are rightly interpreted; if for instance our visual perceptions are taken to represent, not objects of the size or shape simply presented, but objects of some other size or shape observed from a particular distance or angle. And thus we come by the conception of a public world, which combines and harmonizes the sensations of different observers; and those sensations which can be combined so as to fit into this public world we call perceptions. We reject as illusory those sensations which do not fit in with the main body of our sensations and those of other persons; we accept as trustworthy those which fit in with this main body, and in particular those which so fit in as to enable us to predict sensations that we or other persons may expect to have in future, and which are verified by the occurrence of the predicted sensations. We observe resemblances and correspondences between our own sensations and those of other people; and we thus construct a scheme or

framework into which we can fit together those sensations which can be harmonized with one another, and this scheme or framework we call the 'public' world. And by means of this conception of a public world we get a standard by which we are able to sift and test our sensations, distinguishing right perception from error, and ruling out sensations, such as those arising in dreams or hallucinations, which do not fit in with the main bulk of our own or of other people's perceptions.

Now let us ask, does not this answer to the problem give us the essential needed for an account of our knowledge which will satisfy both science and common sense? For science, as for the common sense out of which science grew, the definite test of knowledge is that it should enable us to bring our sensations into an ordered scheme and to predict future sensations. And is it not sufficient for this purpose that we should have this conception of a public world in which the private worlds of different observers can be fitted together, so that each observer can distinguish those elements in his private world which may be called objective from those which are merely subjective, those which he can share with other observers from those which are peculiar to himself? Such a conception, it is true, does not give us what we hoped to find when we started, the assurance that there is a material world existing independently of all observers. But as to this we must ask two questions. First, supposing that we want this assurance, have we any right to conclude that we can get it? And second, do we really want it?

Generations of men have watched the sun rise, and the men of each generation have believed as they did so that they witnessed an event happening in a material world outside them. What the nature of this event was they would conceive in different ways. To primitive men the sun might seem a god travelling by his own power across the heavens; to men of a later time it might be perhaps a ball of fire or perhaps a solid body like the earth, moved either by divine will or by natural law; to the earliest observers of the Copernican way of thinking it would seem a motionless central sphere, which came into sight as the earth revolved on its own axis. Then as science advanced, an observer putting to himself the question, What was the true nature of the event that he became aware of when he saw the sun rise? would find the answer grow more and more complex; he would feel he must allow for the sun's motion as well as for the earth's; he would be led into all the problems we have had to consider as to how far the colour and

warmth of the sun were to be assigned to the sun itself or to the intervening medium or to his own psycho-physical organism. Yet throughout this difference of interpretation all men up till recently, and ordinary men up to the present day, would have agreed in supposing that when they saw the sun rise they were witnessing a real event in a material world, and that when they gave these various accounts they were describing as accurately as they could the nature of this real event. Their description, each generation would say, was different from that given by their predecessors, because they had arrived at more precise and accurate knowledge of the material realities involved: the size and distance of the sun, its movement in relation to the earth's movement, the phenomena of light and heat, and so on. This belief, that science was giving us an increasingly true picture of a real event in a material world, remained natural so long as the picture thus given could seem at all intelligible. But now that the account given by science becomes, to put the difficulty at its lowest, something quite unlike our common-sense beliefs, something which transfers nearly all the qualities of the event to the perceptions of the observer, so that it does not provide a picture at all, in the sense of being anything which the imagination can grasp; we are led to ask, Is the work of giving us a more and more perfect knowledge of something, which science is undoubtedly performing, to be thought of as a work of giving us a more perfect knowledge of a real event in a material world? Or is this whole way of thinking about reality perhaps a mistake?

Let us suppose then an ordinary observer of the present day watching the event that we call 'sunrise'. What in this event will he regard as appearance, what as reality? Asked what is the appearance, he would at first think the question an odd one, and would be at a loss to appreciate its purpose; but brought to understand what was meant by it, he might reply that what appears to him, what he seems to see, is a round flat disc of a golden colour and about the size of a soup plate, rising little by little above the horizon and proceeding upwards at a rate just not quick enough for its movement to be distinguished by the eye. Asked what is the reality, he would think the question a natural one and easy to answer, and would begin to search in his memory for an answer drawn from what he has learnt of the conclusions of science. He would certainly suppose himself to know that the real shape of the disc he seems to see is a sphere, that its real size is enormously greater than the apparent size, that its position in space is far more distant than

anything which sight could suggest to us, and as to its motion that it is in reality either stationary or moving in a direction and with a speed entirely different from its apparent movement. But this account of the reality would vary with his knowledge of science; as long as his conception was sufficiently popular to be from the point of view of an expert inaccurate, it might seem intelligible; but the more it approached the standard of scientific accuracy, the more difficult it would become to state it in any terms which could be taken as describing an actual event in the world of matter.

Is it not reasonable to think that, when we assert that the sun rose three thousand years ago, what we mean to assert is, not that an event took place in the material world the nature of which we are quite incapable of describing, but that the men of that epoch had, or would under certain conditions have had, visual perceptions similar to those of which we are aware from our own experience? And is it not again reasonable to think that, when we say that we are sure that the sun will, apart from some unexpected cataclysm, rise tomorrow or a hundred years or ten thousand years hence, or that an eclipse will take place at such or such a date; what we mean to assert is again, not a belief in a material happening of unknown nature, but our belief that normal human beings will under certain conditions have certain visual perceptions? Interpret in this way our certainty that the sun rose in the past or that it will rise in the future, and we can all understand what we mean by it; we understand by it something that is as familiar and intelligible to us as are those sensations and perceptions out of which our sense knowledge grows. But if we try to give to our certainty what may be called a 'purely objective' interpretation, to express it in terms of what we believe will happen, not in the experience of human observers, but in a supposed real material world, what answer can we find? We should have to address ourselves to a professed astronomer if we are to hope for an answer that could be even approximately correct; and we should probably find, if we consulted more than one, that we should receive different answers, which would differ in the way in which the most eminent scientists do differ if they set themselves to describe the ultimate nature of physical reality; and that if we asked what was the agreement behind the differences all we could expect to be given would be a mathematical formula.

We have then radically to revise the notions of Appearance and Reality with which we set out. What we supposed to be reality,

that is, a material world existing independently of our thinking and perceiving, turns out now to be something of which we have no right to assert the existence. What we supposed ourselves to know about the nature of this reality turns out, when we examine it, to be something that we know about our private world and the perceptual objects in that world. The perceptual object was always a reality in its own place, as something present in our private world: but we considered it to be appearance, not reality, when we compared it with the material object in the public world, which we believed to exist and the true nature of which we supposed ourselves to be getting to know, hoped indeed that we might come to know completely if science could bring us a little further. But the belief that science was going to reveal to us the real nature of the material object, though it was a belief which science took over from common sense when it set out on its journey, seems now not to be any essential part of the aim or method of science. For we seem now to see that what we have regarded as the achievements of science and the tests of its success, its power to predict and to correlate, do not need the assumed existence of an independent material world as the sphere of their manifestation; they can be sufficiently exhibited in the private worlds of particular observers. The predictions which science enables us to make are predictions of future perceptions, which we believe will occur in the private worlds of ourselves and other persons under certain conditions. We are here saying nothing new; it was always evident that the statements and predictions of science were statements and predictions about human perceptions, as well as being statements about happenings in a material world; what is new is, as the difficulty of forming a tenable conception of a material world increases, the thought that they are statements and predictions about human perceptions and that they are nothing else.

The public world, on this view is therefore something that we construct out of our several private worlds. How are we to suppose that the work of construction proceeds? We start with our private worlds and our sensations as the primary facts of which we are most certain or, we at least can say, of which we are as certain as we can be of anything. Then our attempt to build up on this basis our conception of a public physical world proceeds as follows. First we distinguish among our sensations two categories; there are some which come to us claiming to give knowledge about a reality beyond the sensation itself, there are others which do not claim to give such knowledge; and we concern ourselves for the purpose in

hand with the first of these categories only. Then within this category we make a further distinction: in the class of our sensations which claim to give knowledge of a reality beyond them there are some which bring evidence in support of this claim by fitting in with other sensations of our own and with the sensations of other persons; there is a second class, the sensations given in dreams or hallucinations, which do not; this second class again we leave out of account for the present, and for the purpose in hand concern ourselves with the first only. And these sensations which claim to give knowledge, and which support this claim by fitting in with other sensations, we call 'perceptions' and use as the stuff out of which we proceed to construct the physical world, or our conception of it. This is not to say that what we here leave out of account for the moment is rejected altogether; when we have constructed our account of the physical world we may return to the ignored elements, to our sensations of pleasure and pain, to our dreams or hallucinations, and seek to connect these with our supposed physical world. But in the first instance the construction must be built up out of our perceptions.

We proceed then with the work of fitting perceptions together with other perceptions. First our own perceptions at one moment can be fitted together with our perceptions at another moment, and in this way we find that we can construct a framework or system, growing with time more and more comprehensive, in which all our perceptions, past or present, can find a place. This framework or system which each of us forms out of his own perceptions we may call the 'private' or 'perceptual' world. But we do not rest in this stage, which would not of itself take us very far in co-ordinating our perceptions; we are carried on by the same impulse to construct on the analogy of our perceptual world a larger system, or a system of systems, which we conceive as made up of the perceptions of all observers, and this larger system we may call the 'public' or 'physical' world. In the construction of this larger system there are again stages to be distinguished. First we rearrange the perceptions included in this larger system, so that we take as the partial systems of which it is composed, not the perceptions grouped under observers, that is, first the perceptions of one observer, then those of a second, then those of a third; but the perceptions grouped in a different manner, that is, first the perceptions of all observers which constitute the observation of what we choose to isolate as a particular phenomenon or thing, then those perceptions of all observers which constitute the

observation of a second phenomenon or thing, and so on. And next, we supplement this by supposing the physical world to include an immensely larger number of perceptions which form no part of the experience of any actual known observer, but which seem to be implied in the known perceptions in such a way that they might form part of the experience of other possible observers. The actual perceptions of reliable or accredited observers, rearranged in the way we have explained, and supplemented by the hypothetical perceptions of possible observers, so as to fill up the gaps between them, compose the physical objects of which the public or physical world is composed.

We must next define more closely the relation between two terms which we have so far been using loosely, 'material' and 'physical'. We have been using them hitherto as though they meant the same thing; but they carry with them rather different implications, and it will be convenient from henceforth to employ them with more precise meanings to express two notions which we have now to distinguish. We shall use the terms 'material world' and 'material objects' when we mean to imply that we conceive the world and the objects in it as they are conceived by historic common sense, that is, as existing independently of any observer and as possessing the qualities, or some of the qualities, revealed in perception independently of their being perceived or thought about. And we shall use the terms 'physical world' and 'physical objects' to express the world and the objects with which physical science is concerned, when we mean to make no implication about the essential nature of this world and the objects in it, and to leave it open whether they are to be conceived as material or as mental or in some yet other way.

The distinction then between the perceptual and the physical object which seemed adequate for our purposes in earlier chapters, while we were still regarding 'physical' and 'material' as equivalent terms, needs now to be supplemented. We have now to say that there are three different, though connected, conceptions of the object of knowledge, which we must do our best to keep distinct. First there is the material object, which common sense supposes to exist independently of anyone's perceiving it or thinking of it, and our idea of which seems to be one of the main roots of our idea of what 'to exist' means; but as to which we are now doubtful whether, as we have conceived it, it can be rightly said to exist at all. Secondly there is the perceptual object, or

phenomenon, which as our discussion has proceeded has been growing more important, as being the basis on which all our knowledge of objects must be founded; about which we can say at any rate that it really appears, and in so far as it does this really exists, even if only for a moment. Thirdly there is the physical object, which may or may not really exist in the simple original sense in which we first understood the word 'existence', for it is doubtful whether we shall be able to say that it exists in that sense unless we can show ground for identifying it in some way with the material object; and which certainly does not in any simple sense appear, for its nature is to consist of many different appearances; but which in some very important sense has being, or in a non-material manner exists, since it is what physical science investigates and comes to know.

Corresponding to these three conceptions of the object of knowledge we may distinguish three different worlds and three different modes of existence.

First there is the material world as it is supposed by common sense to exist. It is conceived as containing material objects of various kinds, among them human and animal bodies, which have sense organs so constituted that the various qualities of material objects can be perceived by means of the various ways in which they affect these sense organs. It is through being thus perceived that the objects come to be known, but their existence does not depend on their being perceived; they continue to exist whether they are perceived and known, or not. This mode of existence, which does not depend on being perceived or thought about, is what common sense has in mind when it speaks of existence simply, without any adjective; but to mark it off from the other modes of existence that we are to consider we may call it 'substantial' existence.

For the present we must leave it an open question whether such a material world exists. Yet any human observer can at least be certain that his perceptual world and the objects contained in it exist for him as an appearance or phenomenon at the moment at which he perceives them; and this second mode of existence we may call 'perceptual' or 'phenomenal' existence.

This perceptual world is for each of us the necessary starting point for knowledge. But must we not conceive ourselves to know something much more than this, if our knowledge is to be anything like what we suppose it is? In trying to answer the question, What more is it that we know? we come on a third conception, the

conception of the physical world which contains the physical objects studied by the sciences. The physical world again must certainly in some sense exist, as the field which science investigates and in which it carries on its work of correlating and predicting. But it exists neither in the phenomenal mode in which the several perceptual worlds exist, nor in the substantial mode in which the material world would exist, if it exists at all. The physical world and the physical objects which compose it exist in a third mode, which we may term 'schematic', meaning that they are constructed by collective human thought, partly out of actual perceptions which have their place in the perceptual worlds of particular observers, and partly out of supplementary perceptions which have no place in any human perceptual world but are conceived as possible. And this statement, that the physical object is constructed by thought and has a schematic existence, might be expressed in another way by saying that the physical object is the set of propositions or judgments which we believe ourselves entitled to affirm about the characteristics of a particular region in space and time. The physical world and the physical objects thus constructed seem to provide adequate objects for knowledge, even if we must remain uncertain whether there is a material world or not.

We may express the distinction between these three worlds by saying that the perceptual world is given; the physical world is constructed; and the material world, if there is one, is something which is neither given nor constructed, but is discovered.

Next we may note here, what has been implicit in our discussion for some time, that the elements out of which our knowledge of the physical world is built up are not permanent, but momentary. All our knowledge of the physical world is built up out of the events which we call 'perceptions', and these events are momentary in a double sense. First in the sense that the object that is being perceived is constantly observed to be changing, and it may be, would always be observed to be changing, if our powers of observation were keen enough. And second, in the sense that the mental state which perceives is constantly changing; even if the object perceived were to continue unchanged, as no doubt it often appears to do, a little experience will convince us that the quality of the attention with which we observe it is changing all the time in respect of its intensity.

For the purpose now before us, which is the construction of a

public physical world out of the private perceptual worlds of various observers, what concerns us is one part of this twofold event of perception. We are concerned not with the complete event, which is a particular observer observing an event in his perceptual world, but only with the event which he observes. We abstract from the particular observer, or rather we want to abstract from him and we do so as far as we can; for we may at any moment be obliged, for a reason to be mentioned shortly, to reintroduce him. But we want if we can to get away from him, for it is only by getting away from him that we can carry out our aim of constructing a world that is public as between different observers.

This step, by which we leave out of account the particular observer, may conveniently be marked by a distinction of terms which in fact seems commonly to be observed, though perhaps not always. It will be convenient to call the smaller event, which is what the observer observes in his perceptual field, a 'percept', and to confine the word 'perception' to the larger event, which is the observer observing this percept. Physical science concerns itself only with the smaller event, with the percept, and not with the larger event, with the observer observing the percept, except in so far as the observer may need to be taken into account as explaining something peculiar in the percept's quality. Physical science assumes, that is, that while the presence of a particular observer may in this or that case need to be considered as a possible cause of error, the presence of the observer can in general be ignored and the percept can be considered in abstraction from him.

By using the term 'percept' we can state our account of the construction of the public world in language which will less lend itself to misunderstanding. The public world, we can now say, is constructed out of percepts, which are brought together from the perceptual worlds of various observers; which are rearranged so that they are grouped, not in terms of the perceptual worlds of which they originally formed part, but in terms of the physical objects which it is desired to study; and which are supplemented by hypothetical percepts of possible observers so as to fill up the gaps in space and time between the percepts of actual observers. Or summing up, we may say that the public world is the system of the percepts of all accredited observers, supplemented by the possible percepts which these imply, as it might be perceived by an ideal percipient.

What now on this way of thinking will be the relation in which actual percipients stand to this ideal percipient? The ideal percipient may be thought of by a natural metaphor as an eye through which the physical world is observed; and each particular percipient may be conceived, so far as his limits allow, to stand in the place of the ideal percipient and to view in this way that assemblage of percepts which makes up the physical world. The extent to which he can be regarded as representing the ideal percipient will be strictly limited. It is limited first by his knowledge; the ideal percipient is conceived as having at his command the whole field of human knowledge so far amassed about the physical world, and any particular human being can command only a small portion of this field. And a further limitation is that each actual percipient must observe from a particular point in space and time, and may be said to be the instrument through which the eye of the ideal percipient is focussed on this point and on its immediate environment. Each actual percipient, in so far as he perceives, is limited to his own perceptual world with its particular centre and circumference. But in so far as he thinks, he is limited, not by his own perception, but by the extent to which his thought can command the collected percepts of human observers.

If however we are to take the notion of construction seriously, we must think of it not merely as a collective work, but as a work of which the different parts are carried out by different particular minds. And if we ask how a particular mind goes to work, we see that the business is not so simple as our general picture suggested. None of us has direct access to any experience or any perceptual world but his own, and what we can get from the perceptual worlds of other observers is not percepts in their original sensuous quality, and for the most part not percepts that anyone is aware of at the moment; but thoughts or ideas of percepts which are not being perceived now but have been perceived at some past time. And each of us again, as he draws material from his own past experience, is using for the most part not first-hand percepts in their freshness, but thoughts or ideas or images of past percepts.

But are we not now in danger of using the word 'percept' in two different senses? If we use the word in its strictest sense, we understand by it an element that is included in a perception as its content or part of its content, and that cannot be separated from the perception which includes it. I know what it is to have a perception at this moment, I can remember what it was to have had such

a perception in the past, I can imagine what it would be like to have such a perception in the future. But the particular percept that is the content of my present perception is with me for a moment only, and once gone it is not to be recaptured in its full particularity either by memory or by imagination. In its strictest sense then the word 'percept' may be taken to describe only the percept in its immediate sensuous freshness, and this sense is the sense in which it is natural to use the word when we are seeking to describe the mental life. But if the word were used only in this strict sense it would help us little in considering how we build up our knowledge. For our belief that we can have knowledge about the physical world depends on our believing that percepts do not lose their value for knowledge when they lose their sensuous freshness, but that they can keep this value, or at any rate a good part of it, when they are preserved and recorded in our memory or in the memories of other people. And thus we come to a wider sense of 'percept', in which the denotation of the term includes, not only percepts in the stricter sense, but percepts as preserved and recorded, that is, images or ideas or thoughts of percepts in the stricter sense.

It is this wider sense which is the more useful when we are asking how our knowledge is built up, and it is only in this wider sense that we can speak of constructing the physical world out of percepts; if the word is limited to its stricter sense, none of us would have any material out of which to make his construction except his own sensuous percepts of the moment. But we must recognize that, if the word is used in this wider sense, it covers a scale of degrees ranging in sensuous quality from the immediate percept through the image to an idea in which the sensuous quality all but disappears. At one end of the scale stands the immediate sensuous percept, bearing a wealth of content in which attention can go on discovering detail after detail, as it seems without limit. Next in the scale comes the memory image, as this rises up in the most vivid moments of memory; here the same richness of content may seem to show itself, but as attention probes it the detail becomes vague and confused; we can discover perhaps in the image as recalled some detail that we did not expressly note in the immediate percept, but our power to do this soon flags and comes to an end. Then we have what are probably the more common cases of memory, in which what is remembered is the idea of this or that particular feature of the original percept, and the memory image though present is ancillary, adding vividness

to the thought but no further knowledge. Next or alongside of these are to be placed those percepts which are received by transmission from another mind. And here the position becomes more complex. It is complex first because we have to remember that the scale we are trying to exhibit is a scale relating to percepts as they are to be found in one particular mind; we are concerned then with these transmitted percepts, not as they appeared in the mind which first recorded them, but as they appear in the mind to which they are transmitted. It is complex again in that the means by which percepts are transmitted from one mind to another are themselves percepts; they are, that is, words or diagrams or pictures, which are taken as signs of other percepts that they represent and which are important as representing these other percepts. How much of the sensuous content of the original percept is transmitted will vary according to the medium chosen; a picture may give more than a diagram or a map, a verbal statement may be more or less full. And as we go down in the scale of sensuous fullness we come to a mode of communicating percepts in which what is transmitted is no longer a particular percept or group of percepts, but what may be called a line of direction from which a set of possible percepts may be constructed, such as the representation of a region in a map or its description in a guide book or a text book of geography. Yet these too, in so far as they are true records, are summaries of actual percepts, the summaries of what was actually seen in the past by various observers; and they are the means by which all of us acquire what we believe to be our knowledge about the physical world.

Following out this train of thought we are led to a point at which the term 'percept' in its more extended sense is used so widely as to denote any data that can help towards the construction of the physical world. The percepts or the data that can be utilized for this purpose present themselves as qualified in two ways; first in that they are drawn immediately or ultimately from the sense experience of some observer; secondly in that they bring with them a mark which assigns them to some point of space and time in the physical world. It is this second quality, their fitting in to a place in the physical world, that is important from the point of view of knowledge, and it is this that distinguishes them from the images presented in dream or in hallucination. The images of dream or hallucination may so far as sensuous quality goes be as vivid as percepts or more vivid, yet for all their vividness we do not count them as giving objective knowledge; and on the other hand,

percepts which fit into a place in the physical world retain their value for knowledge and their function as percepts, even when their sensuous quality has been so attenuated in the process of recording and transmitting that all that is left is a series of numbers or a set of lines on a map. The elements in perception that can be thus recorded, summarized, and abstracted are in fact of more value for knowledge than the richer sensuous elements, which cannot in the same way be transmitted from one mind to another.

The conception of the physical world to which we have been led is derived from our earlier common-sense conception of the material world by retaining only those parts of the common-sense conception which appear requisite for the purpose of ordering percepts, and discarding those parts which assumed the notion, now supposed unwarrantable and unnecessary, of a permanent substance underlying these percepts. Where I in the past supposed the existence of a material object, existing independently of the thoughts and percepts of any observer, I now substitute a physical object, which I conceive as a law or series connecting the thoughts and percepts of myself and other observers. And the same kind of substitution holds with that greatest of physical objects, space, if 'physical object' is here the right term to use. Space has not that continuity of sensible content by which we are led to recognize a physical object as a persisting identity; its visible or tangible content may be completely different at one moment from what it was at another. It appears not so much to be itself a physical object, as to be the framework within which all physical objects present themselves and move and are mutually associated. Yet it is like a physical object in this, that it is known through perception, and that it appears to common sense to have a reality of its own independent of the perceptions through which it is known.

We must not, however, be drawn into the problem of the correct analysis of the notion of space further than is needed for our present purpose. The only point that concerns us here is this. Just as in the older dogmatic view of common sense space appeared a quasi-substance, a quasi-material object, differing from other material objects in that it was a framework which included them all, yet like them in so far as it could include them; so in the view to which we are now led it appears as a quasi-physical object, a framework which includes all other physical objects, and which has the same kind of existence as they have, that is, a schematic existence.

And now let us ask, Does not the physical world give us all that is required for the purpose of predicting or correlating perceptions? Is not this conception of the physical world consistent with itself and sufficient for all the purposes of common sense and of science? When we say that science enables us to predict future events, what can we mean by this except that it enables us to predict that in the future certain perceptions will present themselves and certain observations will be made, given the appropriate conditions? Do we not then give a sufficient account of the aim and achievement of science, when we say that it aims at co-ordinating into a single system the perceptions of different observers in so far as they can be harmonized with one another, and that it seems increasingly to succeed in doing this?

What do we know about the external world? What is the nature of that knowledge of an external world which we suppose ourselves to obtain through the senses? This was the question we set ourselves to answer, and the answer we have reached would seem to be this. We know our several private perceptual worlds as the starting point of our investigation, and we know the public physical world as its conclusion and result. These two appear as necessary elements in any account of our knowledge; but what of that third kind of world, the material world which we began by supposing must exist? In what sense can we say that this is a necessary element in our knowledge, and if it is not necessary, what reason have we for believing in its existence?

We find ourselves here led to consider a principle which holds a high position in philosophical thinking, the principle called 'Occam's Razor': entities are not to be multiplied beyond necessity; and it may help us to refer to the form in which it has been restated by a modern philosopher. Bertrand Russell tells us that he and Whitehead have found it useful to apply the principle in this form: 'Wherever possible, substitute constructions out of known entities for inferences to unknown entities.' The restatement is more limited in its scope than the original maxim; but it puts the general principle in a form that is appropriate to the particular problem now before us. For if we apply the maxim in its revised form to this problem, the result for our inquiry would seem to be this. The perceptual objects with which we start are known entities; the physical objects at which we arrive are constructions out of these known entities; and the material objects which common sense believes in are unknown entities, inasmuch as we have been driven to admit that we do not know in the least

what they are like in their own nature, and that their very existence can only be inferred, if it can be inferred at all, from the perceptual objects which are known entities.

And if we apply the maxim in its wider, original form, and ask, What is the necessity for believing in each of these three kinds of objects? the answer seems to be this. The necessity for believing in perceptual objects is that they are the indispensable starting point for any knowledge of an external world; their necessity is shown by the fact of perception. The necessity for believing in physical objects is that they are the entities with which science deals, and by means of which it builds up that whole scheme of prediction and correlation which we must believe in, because it justifies itself by its results; their necessity then may be said to be shown by thought. But what necessity is there for believing in material objects? All we can appeal to is the habit of ourselves and our ancestors of believing that we live in a material world existing independently of our perceptions, and the hope that we may be able to find some mode of inference from our perceptions that will justify this belief. But should we not make our philosophy too loose and easy, if we allow that habits and hopes are enough to constitute a necessity? Ought we not then to admit that material objects and the material world are something which neither perception nor thought nor both together can show to be necessary?

This Phenomenalist theory of the external world has been put forward by a long line of eminent thinkers, such as Hume, Mill, Huxley, Mach, Poincaré, and Pearson, along with recent upholders of Neutral Monism, and generally by those who incline to the second or positivist conception of philosophy, maintaining it a sufficient account of the work of science to say that it deals with the percepts of observers, and thinking it neither necessary nor practicable to try to justify a belief in an independent material world. And any view which has obtained the adherence of the thinkers we have named cannot lightly be dismissed as inadequate. Whatever difficulties and objections it may be liable to, we shall do well to remember that it has been arrived at by hard and acute thinking along a particular line of reflection, and that it may be taken to represent one of the main natural forms in which human thought is led to express its interpretation of the universe. Yet from our experience hitherto we shall be ready to guess that this theory, whatever difficulties it solves, will raise others, and these we must now proceed to examine.

In the first place, the Phenomenalist way of looking at the world, after all that we have said to bring it home to ourselves, remains strange. It is surprisingly different from the way in which all human beings, before the last century or two, supposed themselves to be looking at the world, and in which most human beings for the whole of their time and all human beings for most of their time still suppose themselves to be looking at it.

Ought we however to regard this as a serious objection to the theory we are examining? We seem bound to admit, at the point we have reached, that whatever our philosophical attitude may be, the conception of the world which physical science asks us to accept calls for a radical translation of our natural beliefs into other terms. This would be true, even if we could maintain the position which we have suggested as being the nearest tenable one to that of historic common sense, that is, the position which we have called 'Johnsonian Realism'. Even in that case we should have to admit that the world of colour and sound, which in our natural way of thinking we believe to exist independently of us, and which is implied by our language so to exist, in fact exists only in our minds or in relation to them, and does not directly manifest to us, but is only caused by, the world of matter and movement which is all that we can conceive to exist independently. In short, our common-sense beliefs must undergo an elaborate translation into other terms to make them accord with the beliefs which we accept on the authority of science, whatever our philosophy is to be. The picture presented by Phenomenalism may be a little farther off from common sense than the picture presented by Johnsonian Realism; but this little farther off is not reason enough for deciding against it.

Yet there does seem to be one difficulty to which Phenomenalism is exposed, and from which Johnsonian Realism, if it could be maintained, would be free. To realize this difficulty, let us return to the problem of construction. We observed that in the scientific philosophy or philosophic science of today there is much said about our constructing the world we know; and in this way of speaking there seemed to be something we felt bound to accept and yet something that presented a difficulty. The difficulty was that the aim with which we had set out was, not to construct the world, but to discover its nature. Yet something in this way of speaking seemed to be necessary and right; for science certainly constructs, or let us say the joint labours of scientific observers have constructed, that picture of the world which we have in mind when

we ask ourselves what the nature of the world is. But where are we to draw the line between the picture we construct and the reality we seek to discover? Or is there no distinction to be drawn? This was the point at which our earlier discussion of the problem halted.

At the point which we have now reached we may be able to carry things a little further. For we can now observe that there are two different senses in which we can suppose ourselves to 'construct' the external world. On the one hand, there is the more obvious sense in which the human race by its collective efforts builds up a common world or a common world picture; efforts in which men of science play the foremost part, but to which all human beings contribute in so far as they study science or accept its results with more or less understanding. But secondly, or it might be more correct to say firstly, for it is prior to the other in time, underlying this work of construction which is carried out by the conscious working of our minds there is, on the Phenomenalist theory, another work of construction carried out by our sensations, or by an unconscious working of our minds.

These two modes of construction, we may note at once, are not in practice so separate from one another as what we have said might seem to imply. Taken in their pure form the world that is presented in sensation and the world that we believe ourselves to know by the help of science and reflection are very different, and they are tending to grow more different as scientific knowledge increases. But the world as we think of it in everyday life is neither the world of pure sensation nor the world of pure thought. A world of pure sensation, that is a world of forms and colours not yet analysed or defined into objects, may possibly be what appeared to us in infancy, but if this was so, it is something we have long since left behind. The world as scientific thought conceives it, or aims at conceiving it, would seem in its complete expression to be a system of mathematical equations, but this is a world in which only a few thinkers could find themselves at home and in which none move habitually. The world in which we suppose ourselves to live is neither the world of pure sensation nor the world of pure thought, but a blend of the two, in which the element of thought and the element of sensation are mixed in proportions that vary from person to person and from moment to moment.

The work of construction thus appears as a continuous process in which sensation passes into perception and perception into thought; but as the process continues its character changes. In the

earlier part of the process we have to do, not perhaps with anything that can be called 'pure sensation', but with something that we might call 'pure perception'. At this stage, that is, memory and imagination work on what is presented in sensation without the intervention of reflective thought; the process is not conscious, but is something that we find ourselves to have done without knowing that we were doing it. Of this stage we can further say that the process is not free or arbitrary, but that it takes place under some compulsion which compels us to construct in the particular way that we do. As to the source or origin of this compulsion we seem, on the Phenomenalist theory we are now considering, to be able to say nothing. All we can say is that we can see no reason to regard it as coming from anything in the world which we construct, because we can see no reason to suppose that this world or anything in it existed before we constructed it.

As the process continues, and the element of perception in it comes to be first reinforced and then replaced by the element of reflective thought, its character changes. It changes first in that from having been unconscious it becomes deliberate and intentional. And it changes too in another way, in that with the introduction of something deliberate there is also an introduction of something arbitrary. But this arbitrariness has its limits; the work which we do deliberately by our thought in the main follows the lines laid down by the work which we have done unconsciously by our perceptions. The fact that the work of thought is done deliberately means that it has a freedom to choose in one way or another which perception does not possess. Yet the aim of its deliberation is to choose rightly, and to choose rightly means to choose the line which will best accord with the lines laid down by perception.

We can say then that we have a series of constructions passing from pure sensation, or something approaching it, at one end of the scale to pure thought, or something approaching that, at the other. But all, from one end of the scale to the other, are alike in this, that in none of them can we find anything which we can assert to exist in an independent world outside our thoughts or perceptions, or even to be a copy or likeness of anything that so exists. And here the doctrine of Phenomenalism which we are examining leads us to a conclusion more startling than any that we have yet envisaged. When we look out on a wide landscape or at the sky covered with stars, all that we see is a construction of our own. We can no longer say that our perceptions are produced in us by

objects in an outside world, for we do not know whether there are any such objects or any such world independent of our perception. The only outside world that we suppose ourselves to know is the public physical world which we construct out of our percepts; but this world which is constructed out of them cannot be what has produced them. It is not our perceptions that are produced by objects in an outside world, but the outside world and its objects that are produced by our perceptions, or by our thoughts using our perceptions as their starting point.

A new aspect of our problem emerges when we observe that the perceptual worlds which different individuals construct are constructed in the same way. Not indeed precisely in the same way; for apart from the obvious differences in them which arise from the fact that the perceptual world of each individual is arranged round its own particular centre, and which might be accounted for as views of an identical scene from different perspectives, there are qualitative differences arising from the different manners in which different individuals perceive, and we do not know how far these differences extend; how far, for instance, such differences in the mode of perceiving colours as become apparent in the phenomena of colour blindness may extend below the level at which they can reveal themselves by differences in behaviour. But after making all allowance for such differences, we remain convinced that there is a general uniformity or core of resemblance, which makes it possible for the contents of the various perceptual worlds of individuals to be brought together and harmonized in the public physical world as conceived by common sense and by science. The force which compels each of us to construct a perceptual world compels us all to construct alike.

This reflection may seem so obvious that it is not worth while to dwell on it; but what is worth observing is that at the point to which our inquiry has led us, the reflection is by no means obvious, but is on the contrary very surprising. For on the theory we are now considering, what explanation can we find for this uniformity? Granted an initial core of resemblance, it is intelligible enough that the various observers when they get together should be able by the work of thought to adjust and harmonize the superficial differences, and so construct the physical world that is common to all of them. But how are we to account for the fact that, before ever getting together, they should agree in constructing this core of resemblance?

Certainly so long as we continued to hold a Realist view about the existence of matter, this likeness of our different perceptual worlds was only what was to be expected. On any such view our perceptions either directly disclose to us the nature of the material world and its objects; or else, they in part disclose its nature directly, and in part are caused by objects in it, the nature of which they disclose indirectly by enabling us to understand the causal relations which hold between themselves and those objects. On either of these alternatives we can readily understand that the material world which supplies the common environment from which the occasions of our sensations arise, and which as part of this environment supplies the bodily organs through which we receive these sensations, should express itself in, or should produce, a general resemblance in our several perceptual worlds. But when we have abandoned the belief in matter, we have given up the ready obvious explanation as to why the perceptions of different observers should coincide; and unless we can either return to this belief, or find some other explanation to put in its place, we are left with the coincidence as a remarkable fact for which we can give no reason. Any philosophy must no doubt be prepared in the end to come to a halt at some ultimate fact for which it can give no reason. But what is here supposed to be the ultimate fact, that is, the coincidence of a number of separate perceiving minds, which all perceive alike yet with no reason for their likeness, must seem a singular point at which to stop.

Pursuing our attempt to make clear to ourselves the implications of our theory, that all we can know is the percepts and thoughts of ourselves and other observers, we find ourselves brought up against a further difficulty. We have in mind, when we speak in terms of this theory, a circle of observers like ourselves, an inner circle of men of science at the centre, and round them a wider circle of men who understand more or less well the language and methods of science; and with such a picture in our minds it seems natural to say that all that can be known about the universe can be stated in terms of the perceptions and thoughts of this circle of observers, and that a belief in a material world existing independently of them is superfluous and adds nothing. But the knowledge which on the authority of science we believe ourselves to possess about the universe does not relate only to what is contemporary with men of science or with observers like ourselves. So far as we know a circle of men with the quality of the scientific observers of today

has only existed for a few hundred years, or if we extend our conception so as to include ancient Greece or Egypt, at most a few thousand; and so far as we can guess, observers with our human perceptions have only existed on the earth for a few more thousand years, or at the very most a few hundred thousand, and may probably have never existed elsewhere in the universe at all. Yet we believe that something which we call 'the universe' existed for many million years before there existed any human thoughts or perceptions, and will in all likelihood continue to exist for an immensely long period after all human thought and perception have ceased. What is it that has so existed or will so exist, if there is nothing we can know outside human thoughts or perceptions?

We must take some pains to conceive this difficulty precisely, or we may suppose that we can get round it by answers which will make it out to be only a verbal one. Plainly any description that we may attempt to give of the universe, as it existed before men began, must be expressed in terms which have grown up in human minds and which did not exist before the origin of language; and any picture which we may attempt to form of the pre-human world will contain in it sensible qualities, such as colour and visual form, which may never have existed before the origin of the human race. There are periods, we are told, before men existed, when an ice age prevailed over England, and if we try to envisage this thought to ourselves we may express it in the phrase that anyone looking out from what is now Hampstead Heath over what is now London would have seen the whole landscape white; and if we speak in this way we are carrying our imagination back to a time when no such conceptions as London or Hampstead Heath had ever been framed, and when, perhaps, no such sensation as whiteness had ever been sensed. Clearly we must, whatever our philosophy may be, carry back our present manner of imagining and thinking in some such way, if we are to speak or think about the pre-human past at all, and this is not the special difficulty that we have spoken of as arising for the Phenomenalist theory. What that special difficulty is may be seen if we compare the Phenomenalist theory in this respect with a Realist theory of matter. To the question, What was it that existed before human thoughts and perceptions began? a Johnsonian Realist could say that what existed was a world of material objects possessing specific qualities of shape, size, position, and movement. He would have to admit that it is not possible for him to imagine this world except by the help of visual and auditory images which may, for all he knows,

be peculiar to human perception; and certainly he would not be able to describe it except in terms of human thought and language, nor perhaps would it be possible for him personally to describe it in any language except English. But he could maintain that it is perfectly possible to believe that a material world so conceived existed before there were any human thoughts or perceptions, just as we all suppose that it existed before there was any English language.

But no definite consistent answer to the question seems forthcoming on the Phenomenalist theory. What that theory tells us is that we have no right to believe that any percepts exist as qualities of material objects independently of human perceptions. The theory is stated in varying forms with varying terminology, but what gives them their unity is the refusal to believe in the existence of independent material objects. We have considered the theory in this chapter in its simplest form, according to which percepts are to be thought of as mental events. But there are other forms of the theory which would make out percepts, or sensibles, or sense data or however they are to be called, as something rather more than mental events, though rather less than material. It may be said, for instance, that percepts, while not themselves mental, depend on mind for their existence; or that while not depending on mind for their existence, they depend on mind for whatever quality they may have; or again that they are neither mental nor material, but neutral entities, out of which either mental or material entities have to be constructed by thought. But when we consider these various forms of the theory in the light of the difficulty now before us, we find that they all come to the same result. None of them can give any coherent account of what it was that existed, or could be conceived to exist, before human thought and perception began.

What then are we to say of the remote past and the remote future, if we take the Phenomenalist standpoint and reject the belief in an independent material world? We can only say that all we know is the percepts and thoughts of human observers, ourselves and other people; that we believe that besides these there may exist something about whose nature, if it does exist, we know nothing except that if it exists it is somehow the cause of our percepts; and that we believe further that this something of whose nature we know nothing has existed (and here presumably we should add, if it exists at all) for an immensely longer time than the percepts which are all we know, and will continue to exist

(again if it exists at all) in the future long after the percepts which are all we can know have ceased to exist. In all this period of time before human thought and perception began we cannot say that anything happened, because we cannot conceive anything as happening unless human thought and perception were present to witness and describe it, but we can say with a good deal of precision what would have happened at this or that time if there had been present in the universe a human observer capable of perceiving it. We can even suppose ourselves to know, if we rely on what astronomers tell us about the probable origin and duration of the stars and the running down of energy, during how many million years in the past it would have been possible for a human observer, if he had been present, to observe changes taking place in this something, and again for how many million years in the future it might be possible for a human observer, if he were present, to observe changes in this something, before the time comes when this something of which we know nothing will assume a form such that no possible observer could observe changes in it any more.

This seems a strange blend of knowledge and ignorance. It may be that if we examine every set of beliefs, scientific, philosophical, or religious, which men have entertained in any age, we should find the boundary between what is held to be known and what is admitted to be unknown drawn at a point which we should not have expected and on principles which it is not easy to understand. But can supposed knowledge and supposed ignorance ever have been combined more strangely than in the view of the world which we have here been considering?

CHAPTER VIII

THE WORLD OF THOUGHT: IDEALISM

The difficulties here outlined seem too serious to let us rest contentedly in that view of the world which we have presented under the name 'Phenomenalism'. But it has happened in our inquiry so far that the considerations which dispose of one view suggest another to take its place, and we shall find it so here. For when we examine the problems which Phenomenalism appeared to solve, together with those which it raised but could not solve, the two together point to another answer to be given by another doctrine, which accepts the main conclusion of Phenomenalism as to the unreality of matter, but claims to go beyond this. If the existence of particular human minds, with their surface differences and their core of resemblance, seems hard to explain, unless we can believe that there is something which has existed before them and will exist after them, which provides them with their content and which might account for the resemblance beneath the differences; and if we are satisfied that this something cannot be what common sense supposes itself to know as matter; the question may then present itself, may not this something be of the nature of what common sense supposes itself to know as mind? This question is asked and is answered in the affirmative by the doctrine called 'Idealism', which we are to examine in the present chapter.

The doctrine of Idealism as it appears in modern philosophy was in historic fact, it would seem, approached along this road. Berkeley conceived his philosophy largely as an answer to Locke; Kant conceived his largely as an answer to Hume, who first stated the Phenomenalist doctrine in its pure form. This line of approach however in itself would not suffice to present Idealism as more than a plausible hypothesis, rendered plausible rather by the weakness of the alternative hypotheses than by its own strength. But

Idealism founds itself also on another line of argument, which does not depend on any of the detailed difficulties we have been considering, but claims to go directly and at once to the centre of the problem both of knowledge and of existence. In our speculations about existence, it says, we must start from that of which we are immediately certain; all that we can be immediately certain of is our experience, and in this experience we find a constant and necessary relation of subject and object, of that which experiences or which knows and that which is experienced or known. This relation of subject and object then should be presumed to be a necessary factor in all existence, and apart from this relation we have no right to suppose that anything exists or could exist. All that exists then, we may conclude, depends for its existence on being known. This seems to be the main Idealist argument, reduced to its simplest form. How far are we to regard it as cogent?

This argument, we may suspect, gains something of its apparent cogency from an ambiguous use of the word 'object'. No doubt if we define 'subject' as 'that which knows an object', and 'object' as 'that which is known by a subject', it will follow that neither subject nor object can be conceived as existing apart from the other. But this merely logical conclusion does not carry us very far, for the argument, if it is to impress common sense, must apply to the terms as they are used in ordinary speech; and in ordinary speech the term 'object', at any rate, has a significance which is not so simply correlative to 'subject' as this special definition would imply. In any relation of knowledge or awareness there must, we shall admit, be these two elements, the knower or the subject, and the known or the object; and we may be ready to admit (for if the question raises difficulties, they need not concern us here) that we cannot conceive the knower or subject as existing without an object to be known. But cannot we conceive the object, or some objects, as existing without a subject to know them? Common sense would reply that certainly we can. Our whole understanding of the world is built up, it would say, on a distinction that we make between objects which depend for their existence on being known and objects which do not. There is one class of objects, such as pleasures and pains, emotions, fancies, dreams, which seem to depend for their existence on being known or experienced by someone, and which we cannot conceive as existing without being experienced or known. There is another class of objects, such as stars, rocks, and trees, of which the opposite is true; they do not seem to depend for their existence on being known, and we can

and do conceive them as existing without being known by anyone. And it is the objects of this second class that our ordinary knowledge is most concerned with, and that seem more naturally to be spoken of as objects when the word is used without qualification. Granted that philosophy or psychology may find it useful for certain purposes to employ the word 'object' in a technical significance in which it is strictly correlated to the word 'subject', this surely gives the Idealist no right to rule out the natural belief that rocks and trees can exist whether there is a subject to be aware of them or not.

No doubt common sense, after a scrutiny of the difficulties in conceiving the nature of the physical world such as we have outlined in the last few chapters, would agree that the distinction between these two classes of objects is not so sharp and clear-cut as at first appeared. It might be brought to admit, as educated and reflective common sense would probably admit today, that there is a third or intermediate class of objects, including objects such as colours, sounds, and visual forms, which appear to primitive thinking not to depend on being known, and which yet do seem to depend on being known, if their nature is more closely scrutinized; and it might go on to admit that it is possible that a complete analysis might show that this class of what we have called 'perceptual objects' must be extended to include all the qualities disclosed to us in perception, so that the material objects which seemed not to depend for their existence on being known might be disintegrated altogether into perceptual objects which do so depend. But at any rate, it would hold, before this conclusion could be accepted, there would be need of a long and careful inquiry, in which it would be necessary to consider each type of object or quality separately and to show that none of them can consistently be thought of as existing independently of a knowing mind. And so we should be taken back to retrace the detailed examination we have already followed.

When therefore the Idealist argument is formulated in the way stated above, when it is asserted as a self-evident truth that the subject-object relation is a necessary factor in all existence, we must rejoin that the assertion, however cogent and convincing it may appear, and evidently does appear to those who approach the problem with a certain attitude, is not in itself convincing to those whose attitude is different. The argument as we have stated it seems to come up against a difference in the use of language, the word 'object' having one meaning for Idealism, another meaning

for common sense. But is there not behind this difference in the use of language a difference in presuppositions? If we can discover this, we may be able to restate the argument in a way which would do fuller justice to the Idealist attitude.

The clue to the problem of knowledge is to be found in a necessary union of subject and object; such seems to be the essence of the new and crucial argument which Idealism puts forward. How are we to estimate it? The terms 'subject' and 'object' in this antithesis are taken as correlative to one another, but they come to it with a different kind of history. 'Subject', in the sense of 'that which knows', has here a technical significance; and the other meanings which the word can bear in general usage or even in philosophy are so clearly different from this one that they need not in the present connection trouble us. But the word 'object' brings with it associations from ordinary language, which confuse while seeming to explain it; its meaning there is partly the same as here, yet with an important difference: 'object' suggests for common sense something that can be known, yet it suggests too for the most part something that does not depend on the act of knowing and that can exist whether it is known or not. And thus in an earlier chapter of our inquiry it was natural to use the word 'object'—in the sense of 'that which forms a part of a material world independent of thought of perception'. But now we find Idealism taking this same word as a foundation stone for its doctrine that reality is not material but mental. How is this shift in the word's implications brought about?

What we are now concerned with is a change in the philosophic atmosphere, which came about alongside of the growth of Phenomenalist thought and was due no doubt partly to that; but which was due perhaps even more to the development of psychology and the theory of knowledge, as these began to detach themselves into studies separate, or partly separate, from philosophy. For if psychology was to be organized as an independent science, its province had to be distinguished from those of the other sciences; and it was natural to define this in some such way as the study of the mind's activity, or the study of the way in which the mind works. The boundaries and content of the field for study were thus marked out: the field was bounded on one side by the subject, the entity, whatever it may be, which knows or experiences; and on the other side by the object, the entity, whatever it may be, which is known or experienced; and the content of the field was the inter-

action and mutual relation of these two. The field was a wide one, for all that could be known or experienced, all questions that could be asked and all answers that could be given, must in some sense be included within it; yet this inclusion of everything was only in some sense and from a certain aspect; and psychology, conceiving itself as a science among other sciences, assumed that there was a sense in which questions as to the true nature of either subject or object must pass beyond these boundaries, to be answered, in so far as they might be answerable, either by one of the other sciences or by metaphysics.

With the recognition of this wide yet limited field there is set up something that we may call the psychological standpoint. From this standpoint all the contents of experience are seen on the same level; the inner region of the mind, with its feelings and activities, is no longer taken, as it had been taken either by common sense or by physical science, to be a medium that is looked through to the outer region of material or perceptual objects which is the true field of observation; the inner region now ranks side by side with the outer region as a field of observation for its own sake. And within this inner region a new class or classes of objects come into view: the mind's feelings or emotions; the mind's activities in thinking, perceiving, willing; events or entities which are very different in their nature from the perceptual objects of the outer region, yet which viewed from the psychological standpoint fall within the same general category, in that they can one after another become objects to be observed, when observation is directed inwards. From this standpoint again object and subject are seen as having a necessary mutual dependence on one another; the object is dependent on the subject, because it is singled out at any moment for observation by the subject's act in directing attention to it and is conditioned by this act of attention; the subject is dependent on the object, because the quality of the knowing activity at any moment is conditioned by what it apprehends. The subject is thus looked on as a shifting entity which apprehends another shifting entity, the object, within a relation in which neither can be conceived as separate from the other. Whether beyond these shifting entities there are enduring substances, beyond the subject a persisting self, beyond the object a persisting material environment, are questions which must find their answer outside the psychological standpoint.

What concerns our present purpose is the psychological standpoint rather than psychology as a science. The science of psychology

as it developed did not find it useful or feasible, did not even attempt, to confine itself within that standpoint. Beyond the union of subject and object in an experience, which the psychologist marked out as his field of study, lay on the one hand a more ultimate subject, the observing psychologist himself, and on the other hand a more ultimate object, the world of reality as the psychologist conceived that to exist. And psychologists for the most part found it sufficient to conceive this world of reality in general as the material world believed in by common sense, and in detail as the world described by the physical sciences; this was the obvious, almost the inevitable, way to proceed if they were to relate their observations to practical needs, to describe the facts of impulse and desire, and most of all perhaps if they were to explore one particular province in which definite results appeared obtainable, the province of the relations holding between percept and physiological stimulus. Psychology thus continued to accept the dualist attitude of common sense, taking for granted both an outer world of material objects and an inner world of thoughts and feelings, and shifting its point of view from one to the other as convenience might suggest. In theory no doubt any of its conclusions which assumed the reality of a material world could have been transposed into Mentalist language and formulated in terms of human perceptions; in practice this would have been a useless complication, which would have impeded the science rather than helped it.

We are thus here not concerned with the development of the science of psychology, or at any rate not with this as it addressed itself to specific inquiries. What we have to do with is a tendency which might be called either a philosophizing psychology or a psychologizing philosophy, and which came to a head in relation to the problem of knowledge. If this problem was to be explored, it seemed requisite that the explorer should seek to place himself within that relation of subject and object, of knower and known, which psychology had taken as its province. Thus it came about that inquiries into psychology and inquiries into the problem of knowledge, when they were first attempted, were combined with one another under such titles as *Essay Concerning Human Understanding* or *Treatise of Human Nature*. The combination of the two was natural, for they had ground in common; yet it could lead to confusion, since their essential purposes were different. For if the problem of knowledge was to be explored to the bottom, the explorer must take up his position within the mental world, not with a feeling that he was free, as the psychologist could feel himself

free, to pass beyond it at any moment and return to the outer world of common sense; but with a resolute determination to persist in it until he had found some answer to his question which he could accept as final. The psychological standpoint, which for the science of psychology was no more than a legitimate alternative to the standpoint of physical science, thus assumed a significance of a more fundamental kind for the problem of knowledge.

This at least was how the situation presented itself at the period in which the modern Idealist movement had its origin. The period was critical, for the growth of science was in more ways than one driving philosophy to re-examine its foundations, two main beliefs of the past being at stake; the belief of common sense in a material world, the belief of the traditional philosophy in a central knowledge. Might it not be necessary, if the questions now raised were to be rightly answered, to go down to depths which earlier philosophers had not explored, and to renounce presuppositions which they had never thought of dispensing with?

The philosopher who had placed himself at the psychological standpoint, and who sought to discover its full implications, seemed to find, as he faced one question after another, that the materials for answering each of them must lie within the unity of subject and object. Could there be conceived any possible object of knowledge, any knowable entity, that did not fall within it? Some of the inquirers who first approached the problem of knowledge in this spirit still kept enough of the presuppositions of common sense to suppose that there must, beyond that unity, be some shadowy supplement of an outside reality; a something, I know not what, called substance; a thing in itself, known or assumed somehow to exist, though in its nature unknown and unknowable. But the impulse that had carried thought so far continued to carry it further, and as speculation pressed closer to the heart of the psychological standpoint, the question whether there might be such an outside supplement came to appear groundless and meaningless. The fundamental truth about knowledge must be that everything that could be known was included within the unity of subject and object; the outstanding questions could only be as to the manner in which this inclusion should be interpreted.

The Idealist position then may be stated in some such way as this. All that we ever find ourselves perceiving or knowing is objects-in-an-experience. We insert hyphens in the phrase to signify that the concept which it expresses must be taken as one and

indissoluble. That objects-in-an-experience is all we ever know is certain, and from the certainty that this is all we ever do know, we go on to conclude that this is all we ever can know and all we can ever have a reason for believing in. If we suppose that there can be objects which are not objects-in-an-experience, we are supposing something which we have not, and cannot have, any reason or justification for believing. Out of that which we know only as a whole we are cutting off a part and we are supposing that the part can exist by itself, and in so doing we commit an illegitimate act of abstraction. When then it is said that the subject-object relation is a necessary factor in all existence, it must be understood that the object here spoken of is the object-in-an-experience, which is the only object of which we have a right to speak, not the object supposed to exist outside experience; for this last, however much common sense may imagine it, appears when we examine the matter closely to be an abstraction, whose existence we can have no evidence for, and can have no right to imagine.

It was, however, only in the concurrence of the new psychological standpoint with the old belief in central knowledge that the modern Idealist movement had its origin. Both elements were essential to it, but the manner of their combination varied in the different forms which the movement took on. Some of the earlier Idealist thinkers were content to set the two side by side; the religious or metaphysical traditions of the past seemed by their intrinsic convincingness to require that the psychological standpoint should be interpreted in the light of the central knowledge which they affirmed. But in the form which on the whole found acceptance as the most convincing statement of the Idealist position the two motives were woven closer together, along a line of thought which claimed to reach a more ultimate understanding of the nature of both subject and object. This form of Idealist thought, as it scrutinized the conception of the object, concluded that the elements in experience which most deserved to rank as objects of knowledge were to be found in beliefs or judgments rather than in percepts or in feelings, and in systems of judgments rather than in particular judgments singly. Such a conclusion seemed to it to give the best account of that department of knowledge, which it was common ground among philosophers that any theory of knowledge should be able to account for, the knowledge achieved in the field of physical science. The object of knowledge that physical science was concerned with was not the percept or

perceptual object, which was in its nature momentary and subjective for each individual percipient; nor again was it the material object, in which common sense had looked for objective knowledge and had failed to find it; it was that construction of thought which we have spoken of as the 'physical' object, and which may be described as the system of judgments or propositions that physics conceives itself entitled to affirm about the characteristics of a particular region in space and time. And the discovery that the true object of knowledge was the judgment or system of judgments applied no less in other fields of knowledge or inquiry which for Idealism had an importance equal with that of physical science; in the study of history and of human institutions, of social and political activities, of ethics and aesthetics. It applied perhaps even more clearly in the field of philosophy itself; here the conclusion that the true object of knowledge was a system of judgments linked up with the traditional belief in a central knowledge to be attained by the reason. The ultimate object of knowledge, if thought could reach it, must be a complete system of judgments in which all particular judgments or partial systems of judgments were taken up into a coherent and comprehensive whole.

And this conclusion as to the true nature of the ultimate object brought with it a corresponding conclusion as to the true nature of the ultimate subject. This ultimate object, this fully coherent and comprehensive system of judgments, was plainly something beyond the grasp of any human knower or thinker; the ultimate subject that could be set over against it as its correlative could be nothing less than absolute thought, and the experience in which this subject and object were united could be nothing less than absolute or universal experience. The subject and the object concerned in any particular act of knowing must each be conceived as only part of a larger whole; the particular human subject or knower as part of the ultimate or absolute subject, the particular object known as part of that comprehensive system of judgments which is the ultimate object of knowledge. In this way of viewing the problem of knowledge there can be brought together harmoniously two certainties which might at first sight seem to be opposed. We find ourselves certain, when we consider the relation of subject and object, that all objects which can be known or which can exist must be included in some experience. We find ourselves certain again, when we attempt to formulate our knowledge in a coherent system of judgments, that a place must be found in it for objects which are not included in this or that particular experience, for

events in space that no human eye can witness, for events in the past not recorded by any historian. And these two certainties can be reconciled in one way only. We must hold that the objects not included in any human experience are included in an absolute or universal experience, which includes both all particular human experiences, and also all those objects or that content which, though not included in particular human experiences, can be inferred from the content of those experiences as required to complete them. The ideal or absolute percipient, conceived by Phenomenalism as a convenient fiction, is for Idealism a necessary existent.

Idealism brings an answer, as Phenomenalism does not, to take the place of what it has discarded. These two ways of thinking may both be classed as mentalist, but they are mentalist with a difference, and the difference appears when we ask how we are in each case to understand the thought that the physical world is a mental construction. For Phenomenalism this can only mean that it is constructed by particular human minds like our own. For Idealism it means constructed by an Absolute or universal mind which is conceived as like our own in that it has the attribute of thought, or at least something analogous to this; but unlike our own in that it is not multiple, or not only multiple, but a unity in which all particular minds, both human minds and others, if others there are, are in some manner included. The work of construction which our minds carry out is thus not merely arbitrary, something in which they happen to agree, though, if there is no material world behind to form and to control them, we can see no reason why they should; it proceeds in accordance with lines laid down by absolute thought. Idealism then has an answer to the question which on the Phenomenalist theory seemed unanswerable: What is it that existed before human minds, that includes and surrounds them, and accounts for their likeness to one another? This something, it asserts, not only may be, but can be known to be, mind; and in asserting this it claims to fill the gap caused by the disappearance of matter as well as any materialist theory could have filled it. And not only as well, but much better; for mind or experience, it says, is intelligible to us in a way in which matter cannot be. We can understand the nature and operation of a universal mind or experience, however imperfectly, because we can conceive it on the analogy of our own mind and experience; but we get no help from this analogy towards understanding the nature of operation of brute matter.

Idealism thus holds out the hope of an answer, complete and satisfactory, to the problems in which we have found ourselves entangled. It does this first in that it proceeds directly by means of its crucial argument to its tremendous conclusion as to the reality and certainty of an absolute experience. We expressed this above by saying that the ideal percipient, which for Phenomenalism is a convenient fiction, is for Idealism a necessary existent. But this only expresses part of the difference. For Idealism, not deriving its doctrine, as Phenomenalism does, from the particular difficulties which physical science has raised about perception, but approaching the problem directly from a new side, does not feel itself limited by this assumption. It starts not with perception but with experience as a whole, and experience includes other elements besides perception; it includes thoughts, and not thoughts only, but emotions, desires, ideals. And in bringing into its philosophy these other elements in experience and setting these alongside of perception, Idealism extends the basis of its possible construction in a way to which it is difficult to set limits. And this widening in the conception of the human experience from which speculation starts is reflected in a widening of the conception of the absolute experience to which, it is claimed, speculation leads us. This absolute experience is more than the ideal percipient, for which, as we said, Phenomenalism or any doctrine that seeks to co-ordinate the results of science must find room as a useful fiction; it is more than this fiction converted into an existent. It is a thinker even more than a percipient; or if these terms seem to suggest too much resemblance to limited human personality, it is thought even more than perception. And more even than this; for if we are to conceive the absolute experience as in any complete way analogous to human experience, we must conclude that there is a place in it for elements to which in our own experience we should assign a high place, perhaps the highest: for emotion, volition, and purpose.

And here, following the principles of reasoning that have so far guided us, we seem led on to a further important conclusion. One of these principles, perhaps the most essential one of all, is this: that knowledge must be coherent with itself, and that if we come to know the true nature of reality we shall find it free from contradiction; that freedom from contradiction is the test of valid knowledge. A main function of reason then must be to observe when apparent contradictions show themselves and to consider how they may be reconciled; it is in dealing with this problem of

contradiction that the activity of reason has been in great part developed. Some such assumption as this has been the motive force in the whole chain of argument which has led us away from the primitive belief that the physical world is just as perception shows it to us. Our perceptions when we examine them appear inconsistent with one another. But in the real physical world outside us these inconsistencies and contradictions, we feel, cannot hold; our supposed knowledge of this real world must be revised until we can formulate it in such a way that apparent contradictions are reconciled.

This principle that where there appears to be contradiction there is evidence of wrong belief, and that we must try to revise our beliefs until the contradiction disappears, seems so self-evident that we have so far taken it for granted without thinking it necessary to set it out in express terms. But at this point we seem bound to formulate and discuss it, for we shall find that Idealism claims in virtue of its main doctrine to extend the principle beyond anything that ordinary reasoning would take for granted; it claims in some sense to apply the principle to the relation between the facts of the physical world and our desires.

We should not say in the ordinary manner of reasoning that, when we observe a want of harmony between our desires and the facts of the physical world, we observe a contradiction in the sense of which we have been speaking. We might say, if we like, that the facts contradict our desires, but what we should mean by this is that they oppose or hinder them, not that there is the kind of contradiction which is a sign that one or the other must be unreal. The desires are real in their place, that is, in our private world, just as the physical facts are real in their place, in the public physical world. But they are real in different places, and so, however much they may be opposed to one another, they can go on existing side by side without any logical contradiction or inconsistency. All this is the elemental stuff of practical common sense; and though no doubt something in our emotional nature rebels against it, so that we constantly need to learn it afresh, yet every day we do learn it afresh under compulsion, as we find that our wants set themselves against the facts, and the facts set themselves against our wants, and yet both facts and wants seem indubitably real.

But if we accept the Idealist doctrine that all reality is a single absolute experience, the position becomes changed, or so at least Idealism claims. The opposition between the desires and aspirations

of particular selves and the facts of the physical world, which, so long as we conceive the selves and the physical world to be merely separate entities, appears as imperfection, disharmony, conflict, but not as contradiction in any logical sense of the term, is revealed, it may be argued, as contradiction, if we look on it as opposition within a single absolute experience; and being revealed as contradiction it is revealed as unreal. How cogent this argument should be held, it is hard to know, when we are entering a region of speculation so much beyond the reach of common sense. Still we can say that Idealism has here opened up a line of thought which may lead us far, once we accept its starting point. Certainly there seems a gulf between our desires, conflicting with themselves and with the facts, as we are aware of them in our personal experience, and our desires, or the counterparts of our desires, as they must on this view be supposed present in absolute experience, that is transformed somehow so as to be reconciled with themselves and with reality. But so too there is a wide difference between our conflicting perceptions as we are aware of them in our private worlds, and these perceptions, or the counterparts of these perceptions, as we suppose them to be present and consistent with one another in the public physical world. Yet some such reconciliation of the conflict of perceptions we must suppose to be possible, if we are to form a conception of a physical world at all. And might not the conflict and reconciliation, which must hold good in the region of perception if we are to believe in a physical world, give us a parallel or analogy for the conflict and reconciliation which might hold good in the region of desire, if Idealism is right in its belief that all reality is an absolute experience? It is no doubt hard to attach a clear meaning to such suppositions. Yet it seems reasonable to say that, in so far as the conception of an absolute experience is taken as valid, the supposition that there can be disagreement or disharmony within it does seem in some way to contradict the conception. When Idealism asserts its belief that reality is an absolute or universal experience, it takes the decisive step; and from this the further belief that reality must be harmonious and perfect, because ultimate disharmony or imperfection within the absolute experience would be a contradiction, seems to follow as naturally included in the significance of what has already been asserted.

The Idealist doctrine as it develops itself may then be summed up to this effect. All that can be known is objects-in-an-experience. All that can be conceived to exist is objects-in-an-absolute-

experience. In this absolute experience thoughts, desires, and aspirations are elements as real and valid as perceptions. Any conflict or disharmony in this absolute reality would be a contradiction. There cannot be an ultimate conflict between reality and our desires or ideals; between what is and what we want. All these tremendous consequences can be seen to follow as certain, once we have given the right answer to the question, What does it mean to know an object?

In thus claiming to pass beyond the region of human percipients and sense perception, Idealism exhibits itself as a philosophy essentially different from either Materialism or Phenomenalism. It finds a place in its philosophy for those elements in our experience, our desires, ideals, and purposes, which we feel in an important sense to be more ourselves, or at any rate nearer to our central selves, than our sensations or perceptions; for these last, however powerfully they may affect us, seem to come to us in a manner from outside, whether from a material world independent of us or from some other source which takes no account of this more intimate part of ourselves. And in thus finding a place for these elements, and in its doctrine of an absolute experience, Idealism holds out the promise of a bridge between what exists and what we want. Our sense perceptions are powerful, but they are not ourselves; our desires and ideals are ourselves, but they are weak. When then Idealism speaks to us of an absolute experience which includes on the one hand the objects of sense and on the other hand our desires and ideals, which includes these so that they are harmonized, and which in promising a harmony promises that our ideals will in the end be satisfied, it presents itself as a doctrine altogether different from any we have yet considered, and one which cannot fail to make a powerful appeal.

For it becomes evident, when we consider the effect of this doctrine, that it is decisive for our whole outlook. We can draw our general picture of the world according to one or other of two alternative schemes. On the one hand, we can accept the picture which physical science sets before us of a universe in which matter and force, or the unknown something which presents itself to us as these, have existed for vast periods of time in the past and are likely to exist for vast periods of time in the future; while all the thought and sentience that we have reason to believe in have existed only for a very short time out of these vast periods, and for all we know may in a short time disappear leaving nothing like

them behind. Or we can accept the Idealist philosophy, telling us that behind all material existence there must be thought, that instead of thought being an episode in the history of matter, matter can only be conceived to exist as an element in the history of thought. Thought is not enclosed by matter, but encloses it.

Idealism thus holds out the hope of an answer, complete and satisfactory, to the problems in which we have found ourselves engaged. And it is perhaps no wonder that it has at certain periods and certain places so dominated philosophic thought, that not to accept its argument has been supposed almost tantamount to not understanding philosophy. Its appeal to our wishes is strong; but in this very strength lies a weakness. For it runs counter to another strong impulse in us, which bids us distrust the imagination, especially when it promises pleasant things, and tells us that we ought not to expect to get what we want too quickly and too easily. And this deep general impulse is reinforced by a voice which tells us that the right methods for attaining trustworthy knowledge are those which have been worked out by science, and that the Idealist philosophy is in some way opposed to the methods and results of science.

The quarrel of Idealism with science, if there is one, is not about particular scientific conclusions. Idealism can assimilate, just as Phenomenalism can assimilate, any of the results of science and keep its own central doctrine unimpaired; it is indeed inclined at present (with what justification we do not here ask) to welcome some of the more speculative and revolutionary conclusions of recent science as favouring an Idealist rather than a Materialist view. And yet the Idealist view has something in it which runs counter, if not to any particular conclusions of science, yet to that whole attitude of mind which would have us build our philosophy out of the conclusions of science and these alone. For it claims to add to the conception of the world which has been reached by science elements which would alter the whole proportionate importance of that conception. Science has built up its knowledge of physical happenings on definite principles of rigour and exclusion, in particular by excluding any appeal or reference to human desires and aspirations. When then Idealism claims to take the whole of human experience as the material out of which to construct its picture of the world, must we not feel that these principles are being discarded and the achievement of science imperilled? Is there not indeed some inconsistency in the language used by Idealism when it tries to formulate its principles of reasoning?

We find Idealist philosophers telling us at one moment that the method of their philosophy is a procedure analogous to that of science and no less strict, at another moment that philosophy must be able to find a place in its structure for human aspirations. But how can these two positions be reconciled?

Idealist philosophers might at this point rejoin that their doctrine is far from promising easy satisfaction to human aspirations or desires. Idealism, they might say, has its own principles of strictness and rigour which are to be found worked out in this or that great system. Doubtless any Idealist philosophy, if it is to claim to be a philosophy at all, must attempt to work out some distinction, however it is to be phrased, between aspirations and desires, or between deeper and shallower or higher and lower desires, between those desires which may hope to be fulfilled because they are in some sense in harmony with a universal purpose, and those which must fail because they are not. And granted the main assumption, that desires and aspirations are to be included as part of the material out of which our picture of the universe is to be built up, we might find it instructive to listen to what great philosophers, Idealists either in the wider or the narrower sense, have written on such matters. But at present it is just this main assumption that is in question for us: is the fact that we have desires, aspirations, and ideals (and from our present standpoint aspirations and ideals must be ranked among desires, however much we may admit that they are to be distinguished from our fleeting everyday desires as deeper or higher than these) any reason for supposing that our desires will in some ultimate way be satisfied, that it can be shown to us that the true nature of things is in harmony with them and they with it? And how does Idealism come by this assumption? Not by any long search, but by finding it lying as a self-evident proposition on the threshold of its inquiry into the nature of our knowledge. But surely it is more than we have any reasonable ground to hope for that, when we set out to inquire into the conditions under which we can know things, we should come so quickly and directly to this supremely important knowledge about the nature of all existence. Knowledge, like other good things, needs to be paid for; and should we not be getting this most precious piece of knowledge rather too cheaply?

Such a misgiving may not itself be an argument, but it is enough to suggest to us that we should scrutinize further the main Idealist argument which we set out above. The essence of this argument

we found to be that we must recognize that all that we can ever know is objects-in-an-experience, and that to cut off objects out of this whole and to suppose that they can exist by themselves is to make an illegitimate abstraction. And this argument seems to be consistent with a principle of reasoning which we might formulate thus: that if we have found something always existing as part of some particular whole or along with some particular other thing, we have no right to conclude that it can exist out of relation to that whole or apart from that other thing. We do not imagine that the existence of eyes or noses as parts of human heads, or the existence of human heads as parts of human bodies, gives us any reason to suppose that human eyes or noses or heads can exist apart from human bodies. But now if we look at the problem again more critically, is not our general principle too widely stated? We find for instance a plant of a certain species growing in a certain place and under certain conditions; we do not therefore infer that it is certain, or even probable, that the plant is to be found growing in no other place and under no other conditions. This seems as good a typical common sense instance on one side of the question as our instance of eyes and noses and heads was on the other. And looking again at our general principle we can see that, while when first stated it may seem plausible and in accord with a strong natural habit of our thinking, yet worded as widely as we worded it above, it comes into conflict with another habit. For all the detailed knowledge, which common sense and science have amassed between them as to the nature of the physical world, and the behaviour of the objects in it, has been built up on the assumption that we can in some cases infer the existence of a thing outside the particular surroundings in which we have experienced it.

Common sense and science can within certain limits predict and construct with success; and the leading principle on which this knowledge has been built up, is that we find by observation that some things appear commonly to go together and other things do not. Some combinations of things, such as the features composing the human face, have a constant coherence which makes us regard them as parts of wholes, and these we shall not expect to find in isolation. Other combinations of things, such as a plant and the various elements in its environment, have this coherence in a much lower degree or not at all; and that these should be found in isolation from one another will seem probable enough, or at any rate not so surprising. That common sense provides us with some such knowledge, and that the work of science is amassing more and

more of it, these seem to be evident facts, whatever ultimate account is to be given of them. We have enough knowledge of this kind, however we come by it and however it is to be justified, to be able to say with some feeling of assurance that here, in dealing with this set of facts, abstraction is likely to lead us right and may be called legitimate, and that there, in dealing with that other set of facts or that other aspect, it is as likely or more likely to lead us wrong and must be held illegitimate.

Can we now venture any assertion about the legitimacy of abstraction in general? This perhaps: that any assertion either way, either that abstraction is legitimate or that it is illegitimate, either that it is reasonable or that it is not reasonable to suppose that a part can exist outside the whole of which it appears to us as a part, can only be in place when we can appeal to an analogy in our past experience; when, that is, the whole-and-part relation about which we are speculating is in some way analogous to a whole-and-part relation which we have been able to observe in the past, and about which we have found reason to think either that this constant coherence holds or that it does not. If there is no analogy to help us, if the question is merely one of the legitimacy of abstraction in the abstract, we can say nothing. And this brings us back to a position resembling in some degree the principle which we asserted above, only with an addition which alters its philosophic bearing. 'If we have found something always existing as part of some particular whole or along with some particular other thing, we have no right to conclude that it can exist out of relation to that whole or apart from that other thing': this principle which we formulated seems still to hold good, only we have now to add to it 'and equally no right to conclude that it cannot exist out of relation to that whole or apart from that other thing'. And when we are considering the crucial argument of Idealism, what analogy can we find to help us? We have reached a region beyond analogies. The whole that is composed of objects-in-an-experience is unique in its nature; we can of course think of various instances of it, of various objects, but the problem as to our knowledge or ignorance arises in the same form in each case. The problem indeed might be stated: Is the whole that we may call the-objective-world-in-an-experience or the-physical-world-in-an-experience a whole from which we have a right to abstract? And if we put it in this way, we can only say that we do not know of other wholes analogous to this whole which we can observe, and by observing which we may learn whether they can legitimately be broken up and abstracted from, or not.

In so far, therefore, as Idealism asserts that nothing can be known unless it forms part of some experience, it speaks with force; in so far as it asserts that nothing can exist unless it forms part of some experience, it goes beyond its rights. True, we cannot get outside experience so as to satisfy ourselves that outside it objects can exist, but equally we cannot get outside it so as to satisfy ourselves that outside it objects cannot exist. And thus our closer scrutiny compels us to reject the crucial argument of Idealism, so that the road along which it sought to establish its conclusions seems to bring us, not to an assurance of knowledge, but to a confession of ignorance; and we are led back to Phenomenalism as being perhaps after all the philosophic doctrine which best defines the limits of what we can know. All that we can know, it tells us, is our own private worlds with their various contents; these contents are of many kinds, sensations, thoughts, desires, emotions, and so on, but from the point of view of knowledge one category among them stands out as important, our perceptions and our thoughts about these perceptions; for out of them we construct first our several perceptual worlds, and then out of the common element in these perceptual worlds we go on to construct the public physical world, which is the subject-matter of science.

Now certainly this mode of thinking does not offer us such a comprehensive philosophy as we hoped to find when we began our inquiry. It leaves us with questions which we feel a need to ask and as to which it has nothing to say. Must there not be some reality between and behind these private worlds, a reality other than this construction of ours which we call the physical world? What is the nature of this reality and how is it related to our construction? These are questions which we have looked to philosophy to answer, and which Phenomenalism finds no answer to. Yet coming back to Phenomenalism after our failure to find any way that can lead us beyond it, we shall be less inclined to reject it summarily than philosophers have sometimes been, or than we found ourselves inclined to be at the end of our last chapter. For we must ask ourselves, have we a right to find answers to all the questions we want to ask, and may not Phenomenalism define the limits of all that we can hope to know?

In considering the problem as to what is the true nature of the world which the senses appear to reveal to us, and in seeking to choose between the alternative answers that may be suggested for this problem, we have been influenced by certain principles of

selection, which we ought perhaps at this point to examine more closely. These principles, which commend themselves as relevant in deciding whether an explanation of the world is to be held adequate or not, seem to be something like this. First, such an explanation should find a place for all those beliefs which seem to us to be true beyond reasonable doubt; secondly, it should exhibit those beliefs in such a way that they appear consistent, or at any rate not inconsistent, with one another; thirdly, it should add to those beliefs no assumption for which there cannot be shown a sufficient reason. It should possess, that is, completeness, coherence, and economy.

Let us take first the principle of coherence, for this, if we can give it a definite meaning, seems to stand out as the most essential of the three. It is, however, susceptible of more than one interpretation, and we must ask which of these we are concerned with here. We have to distinguish several different senses in which the term 'coherence' can be understood. There is, to begin with, coherence in the full sense in which the various propositions of a mathematical or logical system may be said to be coherent or consistent with one another; in the sense, that is, that the whole body of the propositions which go to make up the system of mathematics or of formal logic can be shown to be linked together by necessary connection and to be deducible from a smaller number of original propositions. Falling short of this there is a weaker form of coherence, which may be called in its way 'logical', though its coherence is not that of formal logic. This kind of coherence is negative rather than positive, involving not so much consistency as absence of inconsistency. For coherence in this sense it is not requisite that the several propositions of a system of thought should be deducible from a set of initial propositions or should be seen to have any necessary logical interconnection; it is requisite only that they should be able to stand side by side in the system without contradicting one another. And there is yet a third sense in which the principle of coherence may be understood; this being the sense in which Idealism claims to use the principle when it says that, if ultimate contradiction is to be avoided, reality must be harmonious and must be perfect. Coherence in this sense, going as it does beyond anything considered by ordinary logic, may be distinguished as 'supra-logical'.

We need to recognize that 'coherence' can be understood in these different senses, for all of them have a place in philosophical discussions. But now that we have set them side by side, it seems

evident that it is only the second form of coherence, the weaker logical form, which concerns us here, when we are considering coherence as a necessary condition that any system of thought must be required to satisfy. Coherence in the full logical sense has been claimed, it is true, by some of the great metaphysical systems of the past, or so their language suggests. But it is not altogether clear how precisely this claim was understood by those philosophers who propounded it; it is more doubtful whether the claim was in any instance justified, even as regards the main doctrines of the system; more doubtful still whether it could be said that in any instance a plausible attempt was made to derive the great bulk of the beliefs of history and of the sciences from a central metaphysical principle; and it is certain that, when such an attempt has been made, it has failed in detail, and the result has been to discredit the cause of metaphysics rather than to serve it. Coherence in this first sense may be an ideal which philosophers of a certain type have looked for in the past and will continue to look for in the future; it is not a condition with which philosophy can as a matter of course be expected to comply.

And the same conclusion holds with regard to coherence in its third or supra-logical sense. It holds perhaps even more clearly in this case, for it is surely questionable how far notions of harmony and perfection should be taken for granted when we are asking how we are to construct a picture of the world that shall conform with reality. If reality is harmonious and perfect, our description of the world should indeed express its harmony and perfection and should be coherent in the sense that it does so; but if reality lacks harmony and perfection, our description of the world ought to lack these too, and we should expect it to fall short of coherence in this sense, however certain we may be that it must possess coherence in the sense of avoiding logical contradiction.

A philosophy of the metaphysical type will no doubt find it natural to aim at a world picture that shall be coherent in all these senses. Such an aim arises almost inevitably out of what we distinguished as the essential doctrine of this type of philosophy, the doctrine that there is a central knowledge attainable by reason. If there is a central knowledge, ought not philosophy to be able to show that the facts of the world are in some manner coherent with our desires and our ideals? And if this knowledge is attainable by reason, should it not be possible to show how the several parts of what we know are linked together by rational connection? We have no right at this stage of our inquiry to say that such an aim

must be delusive. It may be that omniscience would see all reality as perfect and harmonious, and would see all its parts as so connected by reason that given a knowledge of one the rest could be deduced. It may even be that it is not beyond the power of philosophy to demonstrate, or to suggest, that reality is in each of these senses coherent. But what concerns us here is the place which the belief that reality is thus coherent should take in the structure of philosophic thought. Is it to be looked on as a conclusion which philosophy may seek to establish, may perhaps claim that at the end of its journey it is able to establish, or as an assumption that can be taken for granted at the journey's starting point?

When we put the question in this way, we cannot doubt the answer. The only form of coherence that can be taken for granted at the outset, as a condition with which any system of thought must conform, is coherence in its weaker logical sense, in the sense in which it means absence of contradiction. Coherence in the other two senses is not a condition requisite to each and every system of thought; it is an attribute possessed by some systems of thought, but not by others, and it is a matter for inquiry whether in any particular case it is to be held present or not. But coherence, as absence of contradiction, must prevail, we cannot help believing, in any system of thought that can be said to hang together enough to be a system. It is this kind of internal coherence, and this only, that we look for in history or in the sciences or in any ordered body of knowledge; if some particular theory or professed piece of knowledge were to fail to satisfy this test through contradicting itself, we should feel entitled to reject it out of hand, whereas we should not feel entitled to reject it either on the ground that it was not logically deducible from some self-evident premises or on the ground that it was not consistent with our notion of what ought to be. As to what it is in detail that constitutes non-contradiction or logical consistency of this lower degree there is no doubt much to be said, and problems and difficulties arise which it is the business of treatises on logic to explore. But that common sense understands, broadly and roughly, what it means by 'coherence' in this sense, is evidenced by the fact that general agreement can be reached in the fields of the sciences and of history, and that when there is disagreement the disputants can at any rate agree as to the main principles by which the controversy should be settled.

We have been led to discuss at some length the principle of coherence, for it is in its interpretation of this principle that

Idealism diverges most from other philosophies and from common sense. We can speak more briefly as to the meaning of our other two principles, completeness and economy.

The principle of completeness, we said, laid down that an account of the world which is to be held adequate should find a place for all those beliefs which appear to be true beyond reasonable doubt. Now when a student of philosophy tries to make clear to himself for instance the effect of either the Phenomenalist or the Idealist school of thought, his first impression is likely to be that each of them cuts away a large number of the beliefs in which he has grown up, and leaves him with a picture of the world that is very far from complete. The beliefs that common sense starts with about the things we see and feel, the structure of beliefs that has on this basis been built up by science, all these are understood by common sense as beliefs about the nature of objects in a material world independent of thought or perception; and so when Phenomenalism doubts, and still more when Idealism denies, the existence of such a material world, this doubt or denial may seem at first to common sense like the repudiation of most of the beliefs about which it has felt most certain. But such an interpretation, the student will find if he carries his thought further, would be a misunderstanding of what either of these doctrines means to say. All the particular beliefs of common sense and of the sciences, in so far as each of them can be supposed to be established by observation and inference—the belief for instance that the earth is this particular distance from the sun, and not that other distance; or again the belief that this compound substance is built up out of these particular two elements, and not out of those two others—these are beliefs which in respect of their particular content Idealism is as ready and as determined as any other philosophy can be to find a place for in its total system of beliefs. What it rejects is not this multitude of particular beliefs, but a single belief which may be distinguished as metaphysical; the belief that there is a world of material objects, independent of being perceived or thought about, to which the particular beliefs of science and common sense apply. Apart from this it claims to leave the whole system of our beliefs standing in its completeness; and such a claim could with as much or more force be made by Phenomenalism, which indeed took shape as an attempt to provide the sciences with a philosophical basis that should be as far as possible free from questionable assumptions.

Our third principle, that of economy, again is doubtful in its

application. What it claims to tell us is that our scheme of thought should admit no assumption for which there is not a sufficient reason. It thus sets up a counterpoise to our principle of completeness, and the two seem in a manner to pull against one another: completeness bidding us include as much as we can, and economy bidding us leave out as much as we can. In theory and in the abstract the principles of completeness and economy need not quarrel; both can agree that a belief is to be accepted if there is a sufficient reason for it, rejected if no such reason can be found. But what is a sufficient reason? for the suspicion is growing on us that here is just one of the fundamental problems about which philosophy speaks with no united voice. And if we do not know what we mean by a sufficient reason, our two principles are likely in concrete practice to appear in conflict. The more we aim at completeness, the less we secure economy; the more economy, the less completeness. The principle of coherence does not conflict with either, and we must look to it to mediate between them as far as it can, but it gives no general guidance as to which we should prefer. We may take it, however, as advising us to this effect. If we find that a belief about which we are doubtful is needed to make our system of philosophy coherent and consistent with itself, let us include it, and its inclusion will not offend against our principle of economy; if we find that this doubtful belief is not needed to make our system coherent or self-consistent, let us cut it out, and by cutting it out we shall not do violence to the principle that our system must be complete.

We must therefore recognize that Idealism and Phenomenalism can each of them claim to find a place in its total system of beliefs for all the particular beliefs about which common sense supposes itself to have reasonable certainty, and notably for the particular beliefs of the sciences and of history. So far both may be said to satisfy equally well the test of completeness; and for our comparison between them we must look to the background of metaphysical belief that supplies in each case the framework or canvas on which those beliefs are exhibited, and ask how far the background satisfies our principles.

Their common rejection of the belief in a material world rests on the principles of coherence and economy. The belief in a material world cannot be formulated in such a way as to be consistent with itself, and it should be rejected on this ground in the name of coherence. Again the belief in a material world is

superfluous and unnecessary for the purpose of accounting for our thoughts and perceptions, and it should be rejected on this ground in the name of economy. And if common sense seeks to defend this belief in the name of completeness, if it pleads that mankind has at all times and places looked on the belief in a material world as one of its essential beliefs, Mentalism has its answer ready. No doubt, it can say, the belief in a material world has seemed an essential part of the structure of common-sense belief, but this was only seeming; what is really essential is the sum total of the particular beliefs of common sense as to the relation of earth and sun, air and water, and such like entities or groups of entities; and these beliefs can remain undisturbed if they are exhibited, not as beliefs about the interrelation of objects in a material world, but as beliefs about the interrelation of thoughts and percepts in experience. The principle of completeness is thus sufficiently observed if all these particular beliefs can be retained; it does not demand the retention of the metaphysical belief in a material world.

So far the two forms of Mentalism may be said broadly to agree. Their radical difference appears when we consider their different attitudes to the principles of coherence and economy. Idealism makes the principle of coherence the keystone of its structure. The right philosophy, it says, is the philosophy which can be shown to have the most perfect internal coherence. In pursuit of this principle of coherence it is ready to throw over beliefs of which common sense has felt certain, and to include as certain other beliefs, such as the belief in an ultimate harmony, for which common sense has supposed itself to have no clear evidence. And in this rejection, and still more in this inclusion, it is guided largely by its claim to interpret the principles of coherence as including a coherence between what is and what ought to be. But when the principle of coherence is thus interpreted it can no longer be called an essential principle of logic, to which all systems of reasoning may agree at the outset that they ought to conform; it becomes a metaphysical dogma, which we may desire to see established, but which needs to be established as the conclusion of reasoning, not assumed as its presupposition.

Phenomenalism diverges sharply from Idealism on this question of coherence. It rejects altogether the Idealist claim to interpret the principle of coherence as implying either universal harmony or full logical interconnection. We have no right, it would say, to suppose that reality is a coherent whole in either of these two senses. We have no reason to suppose that the desires and

aspirations of human minds are harmonious, or can be shown to be harmonious, either with one another or with the nature of the physical world as revealed in perception. All that we have reason to suppose is that our perceptions are so far consistent with one another, that it is possible to construct out of them a public physical world, by reference to which the discrepancies in human perceptions can be accounted for and future perceptions can be predicted. And if it is claimed that there is any knowledge other than this for which a place ought to be found in a system that deserves to be considered complete, then Phenomenalism will meet us with the question which we raised before and which we found so hard to answer: What is the nature of this knowledge, what is the method by which it is supposed to be reached, why is it not generally accepted, as the knowledge of common sense and science about the physical world is accepted? It will admit that a place must be found in any complete system for the desires and aspirations of human beings and for the fancies which have been based on them, in so far as these are facts, in so far, that is, as they form part of the furniture of individual minds. But it will not propose to give an account of any extra-human reality in which these desires or fancies are to be rendered harmonious, and it will claim that its failure to give such an account is not a failure in completeness. It will make no attempt to construct a metaphysics, because it sees no reason to suppose that metaphysical knowledge can be reached or that metaphysical realities exist. It would no doubt hold that our account of the world ought to be coherent in the limited sense of avoiding contradiction, but coherence even in this limited sense does not stand for it as the paramount logical principle. For the picture of the world which it leaves us with, when it rejects the belief in matter and puts nothing in the place of that belief, can only doubtfully be said to be coherent even in the lower sense of that word. It leaves us with a multitude of separate human minds, all of them perceiving and thinking alike to the extent that a world picture consistent in its details can be constructed from their agreement, and yet it has no explanation to offer as to how this agreement can be supposed to arise. Here is a doctrine which, if it cannot be said to be exactly self-contradictory, at least presents us with a coincidence so unaccounted for and so unlikely, that we should be very unwilling in any other field of inquiry to rest in it and leave the problem there. How is it then, as we asked earlier, that in this most fundamental of all fields of inquiry Phenomenalism can be content so to leave it?

In the light of our more recent discussion we can now suggest a further answer to this question. Phenomenalism is content to leave the problem there, because its main principle of reasoning is not coherence but economy. Entities are not to be multiplied beyond necessity. Why, it asks, should we suppose that reality must be coherent and intelligible as a whole? We must no doubt recognize that it is intelligible in parts, or at any rate that parts of it are partly intelligible; so much is implied by our power, limited as that may be, to construct, correlate, and predict. But by what right do we claim to say that it must be intelligible as a whole? We can obtain a sufficient basis for the partial and particular knowledge built up in history and the sciences, if we start with the assumption of a number of separate human minds whose thoughts and perceptions happen in part to agree. Why should we want to push our inquiry into reality further back than this first assumption, or suppose that we are able to do so? If we imagine that behind or beyond these human minds with their thoughts and perceptions there is some further reality, we offend against the principle of economy, and what do we really gain in coherence? If we suppose ourselves to know that beyond these human minds there is some further reality, but find we can say nothing about it except that it is something to which the thoughts and perceptions of human minds refer, do we gain anything by calling it either 'material' or 'mental', or by supposing ourselves to know that it exists? Had we not better be content to say that we know of the existence of these human minds with their thoughts and perceptions and other mental states, and admit that this is the limit of our knowledge?

CHAPTER IX

THE WORLD OF THE SELF: SUBJECTIVISM

THE result of our inquiry so far has been to leave us balanced between Phenomenalism and Idealism. In such a suspense, however, we cannot be content to rest, and there is a question raised in our last chapter which will carry us beyond it. For the Idealist argument, while on its constructive side we could not hold it able to achieve all that it claimed, appeared to have a powerful destructive side; and the implications of this destructive side call for further inquiry.

Let us take as our text for the discussion on which we are about to enter a statement of this argument as we find it set out in what was the earliest, and for an English reader is perhaps still the most persuasive, exposition of Idealist philosophy. Here is the decisive step in Berkeley's dialogue by which Philonous the Idealist convinces Hylas the Materialist.

'Ph. But (to pass by all that hath been hitherto said, and reckon it for nothing, if you will have it so) I am content to put the whole upon this issue. If you can conceive it possible for any mixture or combination of qualities, or any sensible object whatever, to exist without the mind, then I will grant it actually to be so.

'H. If it comes to that the point will soon be decided. What more easy than to conceive a tree or house existing by itself, independent of, and unperceived by, any mind whatsoever? I do at this present time conceive them existing after that manner.

'Ph. How say you, *Hylas*, can you see a thing which is at the same time unseen?

'H. No, that were a contradiction.

'Ph. Is it not as great a contradiction to talk of *conceiving* a thing which is *unconceived*?

'H. It is.

'Ph. The tree or house therefore which you think of is conceived by you?

'H. How should it be otherwise?

'Ph. And what is conceived is surely in the mind?

'H. Without question, that which is conceived is in the mind.

'Ph. How then came you to say, you conceived a house or tree existing independent and out of all minds whatsoever?

'H. That was I own an oversight; but stay, let me consider what led me into it.—It is a pleasant mistake enough. As I was thinking of a tree in a solitary place, where no one was present to see it, methought that was to conceive a tree as existing unperceived or unthought of—not considering that I myself conceived it all the while. But now I plainly see that all I can do is to frame ideas in my own mind. I may indeed conceive in my own thoughts the idea of a tree, or a house, or a mountain, but that is all. And this is far from proving that I can conceive them *existing out of the minds of all spirits.*

'Ph. You acknowledge then that you cannot possibly conceive how any one corporeal sensible thing should exist otherwise than in a mind?

'H. I do.'

Here we have the crucial Idealist argument set out briefly and lucidly by a writer who was, what Idealist philosophers have not always been, a master of brief and lucid statement. And it must surely strike us, when we study it closely, that what it claims to prove is one thing, and what it is able to prove is quite another. What Philonous claims to be established, and what is supposed to be established for the remaining course of the argument, is that neither Hylas nor anyone else can conceive any corporeal thing as existing otherwise than in a mind. But what Hylas says he plainly sees is something very different; it is that all he can do is to conceive a tree, a house, or a mountain as existing in his own thought, in his own mind. And this is surely what the argument proves, in so far as it can be held to prove anything. We can only conceive objects as existing in an experience, we have therefore no sufficient reason for supposing that they can exist outside experience. If it is right to conclude this, then and in the same manner it must be right to conclude that, as each of us can only conceive objects as existing in his own experience, he can have no sufficient reason for supposing that they can exist outside his own experience.

But is not our last statement absurd, both premise and conclusion? For surely each of us is engaged every moment of his life

in conceiving objects as existing outside of his own experience; all science, all common sense, all the plans we make for next year or for tomorrow, presuppose that we are certain as to this. The certainty is obvious to common sense; and yet the reasoning that convinced Hylas is not to be set aside so lightly. We are brought back here to the conflict between common sense and reason. There is a way of using language, and it is perhaps the most natural and ordinary way of using language, in which we can and do conceive objects as existing outside our experience. But there is too another way of speaking, in which we must admit with Hylas that we cannot conceive them as so existing, because the act of conceiving would itself be part of our experience; however little we may be aware of the act, it is there if we look for it. Either of these two ways of speaking seems in itself right and legitimate, but between them there is much risk of confusion; and if we are to use this kind of argument at all, we must do our best to keep them distinct. And when we do so, it seems true to say that in the common-sense way of speaking, in which any man can conceive material objects as existing outside his own experience, he can and does conceive them as existing outside any experience; that there is another sense, seemingly a more precise one, in which he can be forced to admit that he cannot conceive them as existing outside experience; but that, if we try to make this more precise way of speaking as precise as we can, we must add that neither can he in that sense conceive them as existing outside his own experience. The Idealist argument seems then to depend for its force on this: that when the question is whether objects can exist apart from experience in general, it speaks in the stricter language of reason; when the question is posed whether objects can exist apart from the experience of the individual thinker, it drops back to the looser language of common sense.

Some such confusion of thought there seems to be, but it is hard to keep it clearly in sight while we speak in general terms. Let us set ourselves then, or rather (for it will conduce to clearness here if we state our problem as it might appear to a solitary thinker) let me set myself, the task that Hylas did, and try to imagine a landscape without any human mind to contemplate it; Robinson Crusoe's island, it might be, before Crusoe landed on it. I call up then before my mind's eye a picture in which the various objects described in Defoe's book find their place; if I happen to have travelled in tropical seas I may be able to remember the sight of a real island which might fit the story; if not, I do the best I can with

fragments of other things that I have seen and accounts that I have read. And if I now ask myself what I am doing in all this, my first answer will be that I am imagining or conceiving or, as the case may be, remembering, a landscape as it might exist or does exist somewhere in the material world without any human eye to see it or human mind to contemplate it; and that mind does not enter into the business at all. But now comes Berkeley or some other philosopher of the Idealist school, and says to me: 'All this you can only imagine or conceive because it is in your mind.' And this, when it is put to me, I must, as Hylas did, admit. But I must hold to the point, which Hylas too readily forgets, that it is in my mind, and not in any other mind, general or particular. For now let me introduce into the picture a human observer. I imagine Crusoe landing from the wreck, and the relation of my mind to what I am conceiving is in no essential respect altered. Some change there is; for when a human being comes on the scene, there is open to me a double possibility of conceiving it, which was not there before. Either an outside view is now open to me, or an inside view. I can either be, as I was before, an invisible spectator at a distance and watch Crusoe as a moving object in the picture; or I can project myself inside him and suppose myself to share his feelings as he struggles through the waves, finds himself on the beach, and looks about for shelter. Very likely I shall do both these things at once, as readers probably do for the most part, and writers often, making the transition from the inside view to the outside view and back again so quickly and easily that they are hardly aware there is a transition to be made. But whether I do one or the other or both will make no difference to the main issue before me; for whether I think of the outer appearance or the inner life, Crusoe, I must surely say, is in my mind in just the same sense, whatever exactly that sense may be, as the island is. Just as the imagined landscape built itself up in my mind out of images which were aroused by the words of the story and by the recollection of objects seen by me in the past, so the imagined inner life of Crusoe builds itself up in my mind out of the words of the story and fragments of my past experience which these words call up. I may do all I can to project myself into Crusoe, and to look at what I imagine to be happening through what I imagine to be his mind, but all the time it is in my mind that I am imagining his. And what can be seen to hold in this instance will hold, with the requisite changes of detail, in any other case either of imagining or of perceiving. Whatever entity I perceive or conceive, real or imaginary, mental or physical,

thing or person, it is in my mind, not in any other particular mind, and again not in any abstract or general mind, that the work of perceiving or conceiving takes place.

When in fact I consider the nature of the knowledge which I suppose myself to possess, or can suppose anybody else to possess, of the subject-matter of history or the sciences, there seems to be an alternation between two ways of viewing the world, the Materialist and the Mentalist, by which each in turn gives place to the other. The pieces of knowledge about a world external to myself which make up this knowledge appear, if I consider them one after another, to have been derived from other minds; I know for instance the story of the decline and fall of the Roman Empire through knowing thoughts entertained and recorded by Gibbon, and so with most of what I know of the results of history and the sciences. And if I follow up this line of thought and go over the difficulties in the way of conceiving a material world which we have discussed, I am led to ask myself, is this knowledge of external reality that I suppose myself to possess anything more than a knowledge of the contents of other people's minds? Yet when I ask myself how I know of the existence of these other minds, the answer seems to be, I know them as the mode of behaviour of a certain class of physical objects. On the one hand then the physical world seems to be dependent on mind, to be included in mind; on the other hand minds seem to depend on those physical objects, human bodies; and between the two attitudes which view the problem in these two different ways my mind shifts and wavers.

But there is a point at which this alternation comes to a halt. There is a final relation of inclusion whereby all that I perceive or think of is included in my own thought or experience, or in some relation of which my thought or experience is an essential part. If I place myself so far as I can inside some other mind, some other world of thought, I must in the end go outside that thought into a supposed material world for my answer to the question, How do I know this thought structure which I suppose myself to know? But I find no need to go outside my own thought for an answer to the question, How do I know that I am thinking or perceiving this that I now think or perceive? It is neither necessary for me to go outside my own thought nor is it possible. And here the Idealist argument which tells me that the existence of the physical world depends on the presence of an observer, that it is part of an experience beyond which it is impossible to pass, finds its true conclusion; and that conclusion is that the observer whose presence I

am bound to postulate is myself, the experience beyond which I cannot pass is my own.

The form of Mentalism then to which our argument eventually leads is neither Idealism nor Phenomenalism, but Subjectivism, the belief that I can be sure of my own experience, but of nothing beyond this. But if this is so, how comes it that the many thinkers from Berkeley onwards who have used this argument have failed to draw this conclusion?

First we must observe a vagueness or ambiguity of expression which constantly occurs in statements of the Idealist position, and as much so or more in statements of the Phenomenalist position. 'We can know our sensations, or our perceptions, or our experience, but nothing beyond these'—this is a kind of statement that we may often come across in books discussing philosophical questions, and that is so common that it does not surprise us. And yet it should surprise us, for if we examine what it says we shall find it either strangely modest or strangely rash. Who are 'we', and what are 'our' sensations or perceptions? It surely is not meant that all the members of the human race are to be thought of as owning their collective sensations or perceptions in common, so that every member of it has direct access to the sensations or perceptions of every other. 'We' must be taken not collectively, but severally, so that the statement ought to mean 'each of us can know his own sensations or perceptions or experience, but nothing beyond these'. And from this knowledge how is anyone to pass to the knowledge that there is anything that deserves to be called 'we'? If it is true that all I know is my sensations, it is surely rash for me to assert that beyond or behind my sensations there exist other selves with sensations like mine; indeed not only rash but a sheer contradiction of the words of my first statement, if these words are to be taken seriously and literally. And if they are not to be taken literally, if the meaning is understood to be that all I am immediately certain of is my own sensations and that any other knowledge has to be inferred from them, still it would surely be rash for me to go on at once to assert that I can infer from them the existence of other selves, though I can infer nothing else. If I ask myself how I come by my belief in the reality of other selves, the natural answer seems to be that I come to it through my belief in a real world of material objects; and if such a process of inference has its difficulties, it is hard to see an alternative that is easier. When then philosophers speak of 'us' as doubting whether anything can

be known outside 'our' sensations, are they not in this very language assuming as known what they conceive themselves to doubt?

In all this there are at work two contentions, each weighty, yet contrary to one another. The first in the name of reason tells us that we have no right to believe in the existence of objects outside the experience we know, the second in the name of common sense tells us that, right or no right, we do. Might not something be learnt from these contraries, if we would stay to consider them as contraries, without hurrying on to look for a conclusion that may seem to reconcile them? But the Idealist argument hurries on, and concludes that there must be an absolute or universal experience, to provide for the existence of the objects which reason tells us cannot be known to exist outside experience, and which common sense tells us do exist outside any experience we know. From whence is this conclusion derived? Not from common sense, for to common sense the belief in an absolute experience or universal mind is assuredly not a self-evident certainty; it is at best something which might be reached by a long journey through the medium of beliefs more evident than it. Yet equally not from reason, if we are to take as valid the kind of reasoning relied on in the first stage of the argument. For the general principle on which that stage of the argument rested was, that in speculating about what may exist we have no right to abstract from what is given as concrete, that knowing objects only in a certain setting does not entitle us to believe that they exist outside that setting; and it is only by means of the ambiguity by which 'we', meaning 'each of us singly', is turned into 'we', meaning 'all of us together', that the argument is able to substitute for the concrete, each man's own experience, the abstraction, experience in general, or a universal experience. The conclusion then that a universal experience exists is one which common sense cannot bring us to, nor reason either, yet it is derived somehow from a conjunction of the two. And this conjunction is surely quite illegitimate; for what it amounts to is that the Idealist philosopher at the same moment asserts in the name of common sense that which he denies in the name of reason, namely, the independent existence of objects outside the only experience which he can know as concrete.

The course of our inquiry then, after the failure of our various attempts to construct a tenable Materialist doctrine, has led us on through Phenomenalism and Idealism to Subjectivism, or the

belief that each individual can be sure of nothing beyond his own experience. And the problem which opens up before us now is to ask how we are to escape from the train of thought that has brought us to this result. The philosophers who have used the arguments we have followed could hardly have failed to see that there was at least some danger of their being forced into this conclusion. How then have they sought to escape from it, and how is it to be escaped from?

The answer to this question is not likely to be simple or easy, and it may be that at this point any reader who has had the patience to follow our inquiry so far will be disposed to cut matters short by saying: 'Philosophers naturally and properly reject this belief because it is an absurd one, and because nobody can possibly believe it, and is not this all that need be said about the business?' And he may drive his comment home by asking: 'Does the writer of this book believe it himself? and if he does not and cannot, why go to the trouble of supposing that anyone can?' To this question, 'Do I believe it myself?' my reply would be, 'Certainly not; if I believed it I should probably not be writing a book, and anyhow not this one.' But I would ask the reader then to reflect that neither his question nor my reply would be relevant to the problem before us. Doubtless both he and I hold a number of beliefs, relating to various subjects, derived from various sources, supported by various arguments good or bad, which on a suitable occasion we might entertain one another by discussing. But the problem that we set out to explore in this inquiry was not, 'What do we believe?', it was, 'What have we a right to believe?' And as to what we have a right to believe, neither the fact that he believes a thing nor the fact that I believe it can be at all conclusive. The fact that he believes it and that I believe it and that everyone else believes it would not even go the whole way to show that the belief is true; there have been times in the past (have there been any other times?) when everyone living has held beliefs to be certainly true, which everyone in later ages has believed to be certainly false. But what we are concerned with here is not only the truth of the belief, but its justification; how it is to be related to the general principles which may help us in distinguishing true beliefs from false ones, and which should guide us in forming our beliefs about matters on which we have as yet no certainty. And it is just because we have now come on a belief which in the name of common sense each of us is certain of, and which yet in the name of reason can legitimately be doubted, that we may hope by

re-examining the grounds for it to throw light on the principles which should govern belief in general.

Philosophers who have maintained either of the two recognized forms of the Mentalist position, the Phenomenalist or the Idealist, could hardly fail to be aware that they must find some answer to the question, How are we to avoid being led into that third form of Mentalism which we have called 'Subjectivism'? If an inquirer finds himself compelled to doubt whether the material world has any real existence, it is surely a natural question for him to ask, How am I to feel sure that other human beings, whom I apparently know as, or through, material bodies, have a more real existence than other portions of the material world? The Subjectivist hypothesis may at this point present itself for discussion, and perhaps receive some casual mention; but it is surprising how little is done to drive the discussion home to a point at which its full significance would appear.

Philosophers are for the most part ready to dispose of the problem in a short and summary way, as though it were hardly worth talking about. The answers they offer indeed often come down to no more than this: that the Subjectivist hypothesis is contrary to common sense. We must not be too ready to say that this appeal to common sense is unphilosophical. Reason is leading us into strange places, and we may have in the end to look to common sense to help us out. But common sense cannot help us here unless it is able to give a clearer account of what the principle is on which it is relying. And there is a further reason why the inquirer who has been forced back to the Subjectivist position cannot look to common sense to answer his doubts; for part of what is in doubt is the question whether there is such a thing as common sense. And if this question is once seriously faced, no answer that purports to be given in the name of common sense can be supposed relevant to it.

When we find a discussion of the problem which claims to go deeper, and to refute Subjectivism by an appeal to reason, what is discussed is usually not the real and difficult problem, but another problem looking rather like it, which is stated in such a way that the real difficulties are evaded. This is done by setting up an imaginary disputant called 'The Solipsist', who is then disposed of by a short and easy method. The Solipsist is presented to us as a sinister figure of fun, who goes about asserting that he knows that nothing and nobody exists except himself. He is

introduced always under this anonymous style, so that we are left ignorant whether there has been any living man with a name and a date who preached this doctrine. Was there in fact ever such a man? Or is the Solipsist only a phantom called up out of the void by the guilty conscience of philosophers who have murdered common sense? At any rate, whether real man or phantom, he is easily refuted. If he comes to his scepticism by the road of the doubts we have been considering, and no other road is apparent that could bring him even near to this position, he ought to understand that what he comes to is a state of doubt, not of certainty. When he asserts that nothing exists outside his experience, he is claiming that he is able to pass beyond his experience and to satisfy himself by observation that there is nothing there; and however sceptical he may seem from the standpoint of common sense, he is just as much a dogmatist from the standpoint of reason as if he were to assert any other metaphysical belief about ultimate reality. So much then for his doctrine; and to this refutation it may be added that in preaching the doctrine he shows that he himself does not believe it, for what could be the sense of preaching to entities which exist only in his fancy?

Solipsism then is easily shown to be as repugnant to reason as it is to common sense. But the triumph is easy just because the problem so stated is not real. The real dispute is not one in which reason and common sense are united on one side and a supposed empty assertion stands alone on the other. It involves that conflict between reason and common sense which we have found deepening as our inquiry proceeds—or, if not conflict, at least the appearance of it—a conflict of what we have always regarded as common sense with certain principles of reasoning which seem sound in themselves, and which we should trust if they did not lead to this particular conclusion.

For we can conceive an inquirer, who has followed the line of thought we have indicated, finding himself forced into the position we call Subjectivist, and holding this by no means in the dogmatic and truculent way in which the Solipsist is supposed to assert himself, but in a way which is not at all contrary to reason, and which departs only reluctantly from common sense. 'If I am right', this inquirer will think, 'in doubting what in the past I took to be the natural common-sense belief in a material world that exists independently of any mind to observe it, should I not be right on the same line of thought in doubting my belief in the existence of those particular material objects which I have taken

to be human beings, even if this belief seems equally, or perhaps even more, a natural part of common sense?' And he will entertain this thought all the more seriously if he set out with the hope that it might be possible by the aid of reason to pass beyond the knowledge of the world given us by common sense. If he is prepared to trust reason when it assures him of the truth of beliefs which common sense supposed itself ignorant of, should he not also trust it when it tells him that beliefs which common sense supposes itself certain of are groundless? If we allow that reason can add to our common-sense knowledge, must we not also allow it the power to take away? It may be that the reasoning which seems to have brought us to this conclusion was at some point faulty; if so, it is all the more worth while to examine the conclusion, in the hope that we may find out just where we went wrong.

There is, however, another line of argument sometimes brought against Subjectivism which needs further consideration. The inquirer who tries to think out the supposition that there is no reality beyond his own experience will find, it may be argued, that the supposition falls to pieces because it is inconsistent with itself. If he makes a sustained attempt to develop the consequences of the hypothesis, he must be led into contradictions, because he will have to assume that he possesses knowledge which he could not possess unless other minds than his own existed. Each of us derives by far the greater part of his beliefs and his supposed knowledge, not from his own perceptions, but from the perceptions of other persons; he derives by far the greater part of his thought, not from his own thinking, but from thinking that has been done by other persons before him; and this is a fact which Subjectivism altogether fails to recognize or allow for. Here is a reasoned argument against the Subjectivist position which deserves to be considered, and if we are to do justice to it we must examine the position more in detail than we have done so far.

Can the supposition that all we know is our own experience be formulated consistently with itself, or do we find that it refutes itself by containing some inner contradiction? We must try to work out with some fullness an answer to this question, as it might present itself in a particular passage of experience. But if we state the question as we have just done, we bring in a source of confusion by using the ambiguous word 'we'; and it will be better to eliminate this by speaking not of 'we' but of 'I'. Only the word 'I' must be understood as meaning not some particular individual, but a supposed typical inquirer. Any reader of this book then is asked

to take the 'I' that is here spoken of as referring not to the writer of it, but to himself. If he finds it worth while to follow the discussion, the way in which he must do so is to identify himself for the time being with the I who is speaking, to take the arguments, good or bad, as his own, and to think of the author whose name appears on the title page as an entity existing only in his, the reader's, imagination.

Let me suppose myself then, when this impulse to doubt comes upon me, to be walking alone through a part of the country with which I am familiar. I can say to myself that if I pass through this gate in front I shall find a path leading across a field, and if I follow the path it will take me up a slope and through a wood, and in about an hour's time I shall come out on the top of a hill. I say this to myself, and I find that the experience of the hour presents itself as I had foreseen. Now in my previous dogmatic way of thinking I should have said that there was an actual stretch of the earth's surface with actual grass and trees, which I had seen when I walked there before, which had been there ever since with some changes due to the lapse of time, and which I was now recognizing as I saw them again. But in my present mood of doubt I asked myself, Have I any reason to suppose anything more than that I am experiencing a series of sensations, which corresponds to a series of sensations previously experienced by me, in such a way that when the beginning of the series recurs, or when the beginning of the second series repeats the beginning of the first, I am justified in expecting that the remainder of the series will recur? And when I say that I am justified in so expecting, I mean that I can remember that in a large number of cases, when I have had this feeling of walking over a familiar route, I have had along with it a belief that I can foresee within limits what the remainder of the route will be like, and that this belief is within limits verified.

Now how am I to account for the fact that I have this belief and that it is in this sense justified? I may do so along either of two lines. First along my old natural line of thinking, on which I supposed that there is an actual material landscape through which I am walking and which I get to know better and better each time I visit it. But then I run over the difficulties set out above and reflect, first, that if there is a material landscape at all, it cannot have the sensible qualities of scent, colour, and visual form which I am aware of, it can at most be the cause of them; and further, that if I ask what the material landscape can be supposed to be

like in its own nature, apart from the sensible qualities which it might cause in the awareness of an observer such as myself, I find it hard to form any tenable conception of this. And when I ask, what is the least doubtful account that I can frame for myself as to the nature of the landscape through which I am walking, it seems to come to this. I am aware of my own percepts and thoughts, and of a world which I seem to construct for myself, or which is somehow constructed for me, out of these percepts and thoughts; and in this world I observe sequences which repeat themselves to a large extent in an orderly way; so that when certain percepts present themselves, I have the expectation that others will be found if I look for them, or will follow after a shorter or longer interval, and I find that this expectation is fulfilled by what happens. So much as this I should be justified in saying about my experience of the landscape on any of the various theories; this at least, each of them would admit, is not false. Something more than this, each of them would add, is true; but as to the nature of that something more, all of them would differ.

Now my percepts present themselves as though they come from some source outside me, and I am not prepared to deny that it is possible that they may so arise. But when I find it more and more impossible to frame for myself any conception of what the nature of that source can be, it seems reasonable to turn to the percepts themselves, and to see what can be made of them. They at any rate appear to be real, and to have those attributes of orderliness and conformity to law which make prediction and verification possible, wherever they get these attributes from. Why then should I not be content to take the possibility of prediction and verification as arising from a uniformity in my own perceptions, without thinking it necessary to look for a uniformity beyond them?

I suppose then, and this is the second line along which I may think, that this whole landscape, which I am seeing and through which I am walking, is something that comes into existence as I become aware of it and ceases to exist as I cease to be aware of it. I remember a series of similar perceptions in the past, I find that the present series so far as it has gone accords with the past series, I expect that the remainder of the series will so accord, and point by point I find it does. These perceptions of the landscape, present or remembered, I can comprehend, and I can understand what it would be like to have similar perceptions in the future. But I can form no conception of the landscape itself except as that which I am perceiving now, or can remember to have perceived

in the past, or can imagine myself to perceive in the future. And is not this in effect to say that the landscape which I am aware of is, for all that I can tell to the contrary, something that I am constructing for myself? I construct it no doubt in a sense different from that in which I construct an object by a deliberate act of will. I am doing something different from what I should do if I were to sit down and set myself to draw a picture of the landscape. The process by which I might construct a picture would be deliberate and conscious: the process by which I construct the landscape is unconscious; or rather, it seems to cover a range of degrees, passing from something that is partly conscious to something that is unconscious altogether. I select by my attention and by the direction of my looking what part of the landscape I shall be aware of, I interpret patches of form and colour as signs of distant objects, and this work of construction is at any rate partly conscious, in the sense that I could be aware of it if I made the effort. But the part of my perceptual world which I construct, knowing that I construct it, rests on another part, which I construct without knowing that I construct it, on the sensible objects or percepts of which I am immediately aware.

So far my solution of the problem does not perhaps differ very much from what I may remember to have read somewhere in discussions on philosophy. But now another question arises, as to which I seem to have to break fresh ground. At a certain point in my walk I halt and consult a map. I can trace in this the path I have followed and can see that my memory of it corresponds point by point with what is shown in the map; I can look at objects round me and see that these again correspond with the map point by point; I can look at the route in front of me, and I feel confident that I shall observe the same kind of correspondence as I traverse this. And here too the same account seems to hold, that I verify perceptions by perceptions. Only now a new element in the problem presents itself, for in reading the map I seem to find myself in communication with another mind. The map that I am looking at appears to me, not as something that I construct for myself, but as something that I come upon and recognize as having been already constructed by a mind that is not my own. It is something that I do not construct, but discover.

Such seems the simple obvious account; but if I go again over the arguments which have already convinced me, can this simple obvious account hold good? In my natural way of thinking I should suppose the map, just as I originally supposed the

landscape, to be a material object, or a group of material objects, existing independently of any constructive activity on my part. But if I try to make this natural account more precise, if I ask myself what are the elements which I suppose to be present independently of my constructive activity, what can I say? I am aware of a group of percepts, which exhibit a special quality differing in one important respect from that possessed by those percepts which make up the landscape. In my awareness of the group of percepts which make up the map my first natural supposition is that I am in communication with another mind, while with regard to a group of percepts such as a stone or a tree I suppose no such thing. And when I look for the reason, it seems to be of this kind. I can see that the group which I call the map is more intricately organized and is much richer in the anticipation of future perceptions which it affords. My sight of a particular tree or stone may assure me that I am on the right path and enable me to forecast the series of percepts which will present themselves if I follow that path. My sight of the map enables me, I have learnt by experience, to forecast the various successions of percepts which would present themselves if I followed any of the paths marked upon it. I find then that among the groups of percepts that I am aware of I must distinguish some which are simpler, and others which are more complex and richer, in the knowledge they supply. But this distinction which I have to make does not seem to give me any right to assert that the map is a material object independent of my perceiving it, any more than that the tree or the stone are material objects independent of my perceiving them. The map, it is true, suggests itself to me as being the construction of another mind. But all that I can be sure of is that it calls up in my mind certain thoughts; thoughts which perhaps would not come to me but for it, but which as they come to me are the thoughts, not of any other mind, but of my own. Certainly I did not with my conscious mind construct the map, but neither did I with my conscious mind construct the stone or the tree. And if all the account I can give of the stone or the tree is that they are percepts in my private world, which I construct for myself, or which are constructed for me, in or by my unconscious mind, why should I suppose that there is any other account to be given of the map?

I pass to another problem. I meet a shepherd, stop to talk with him, and ask how I can best reach the village I am bound for. He describes the way, and points out this or that landmark which

I can see from the point where I am, and which I may suppose him to see in the same kind of way in a visual world of his own that is similar to mine. I find then that the series of percepts which his words suggest to me is verified by the percepts which occur in my experience. Here is a correspondence, which is an instance of countless similar correspondences, between what I myself perceive and what I am informed of by what I call 'other persons'. And here again the first explanation ready to hand is the one which I assumed in my earlier mood of common-sense assurance; that I meet a man with a body like mine and in it a mind like mine, or if I prefer to put it a little differently, with a body like mine that feels and thinks; and that when our bodies meet, our minds or our thoughts meet also through the medium of our sensations; and that when we part, the man with whom I have been speaking stays where he is or goes on his way, mind and body, as independent of my thinking or perceiving as I am of his. But in the line of thought that I have now set myself to follow, such a conception of a person seems to intrude incongruously, like a solid figure stuck in a painted landscape. About trees, stones, and hills, I am now saying to myself, all I know is my sensations; and if behind these it has been my habit to conjecture the existence of permanent material objects, which would be there whether I had the sensations or not, still this is only conjecture, and I may reasonably doubt whether the conjecture is a true one. Should not the same hold with those more complex material objects that I have conjectured to exist, those which appear to possess thought, life, and movement? If not, what is it that gives them their peculiar independence and permanency? Is it their movement, their life, or their thought?

Engaged with these reflections, I leave the shepherd and walk on; and I find that, as he has told me, the path branches at such a point, and there is a line of posts and rails with a gate in it. Here again I verify thoughts about percepts by percepts, only with the difference that this time my thoughts about percepts are drawn not from memory, or not from memory only, but from the words of another person. And now just as I reach a dip in the ground, I turn and look back at the way I have come. I can still see in the distance the shepherd and his sheep, with the hillside and a barn and a clump of trees; and I ask myself how I am to think about all this, what will become of it all, when I look the other way or pass into the dip which will hide the view from me. About the landscape, the barn, and the trees I can only say what I have said

before, that I can find no reason to suppose that they exist outside my perception. What then of the sheep? I can see them moving over the hillside, and I suppose them to have a life of their own; and if there is a world of material objects at all, here are two important respects, movement and life, in which they differ from those other material objects which I suppose neither to live nor to move. But whether there is a world of material objects beyond my perception is just what I am now doubting; and if I have to admit that those percepts of form and colour, which I group together as the barn and the trees, give me no sure evidence of the existence of material objects corresponding to them, by what right do I suppose that the percepts of form and colour, which I group together as the flock of sheep, give me such evidence? The percepts that I call 'the barn' and 'the trees' seem to carry with them a natural belief in something behind them which persists; the percepts that I call 'the flock of sheep' add to this a belief that the something which persists also lives and moves. But if the first of these natural beliefs may be an illusion, why suppose that the second is anything more?

The landscape that I am looking back on with the various objects in it must, it seems clear, be treated as all of a piece. Either I must think of it as a world of persistent material objects which I somehow take in through my percepts, but which I believe to exist beyond them; or else, if I rejected the belief in such a world as one to which I have no right, I must think of it all as a world which exists in my perception only. And if I take this second alternative, the sheep, for all that they seem to live and move, can be no more than my percepts. What now am I to say of the shepherd? If I think of him as a material object, this gives no guarantee for his existence outside my perception, any more than for that of the trees. If I add the thought that he lives and moves, still this gives him no better title to persistence than I could find for the sheep. But I ascribe to him what I ascribe to neither the trees nor the sheep, a faculty of thought and perception like my own. Can I say that this power of thinking and perceiving ensures his persistence outside my perceptual world?

Certainly when I seemed to myself half an hour ago to meet and speak with him, the belief was strong in me that here was another human being with a continuous inner life like mine. But what evidence had I for the truth of this belief? What seemed certain was that I was brought by what I heard from him into relation with a second perceptual world, different from mine yet nearly

coinciding with it. When I say that it nearly coincided with mine I mean this. The perceptual world of which I am directly aware through my own sensations has a centre, to which my percepts of form, colour, and distance are related, from which I look out on my perceptual space, and which shifts as I appear to move in this perceptual space. And in my talk with the shepherd there was suggested to me the thought of a second perceptual world, the centre of which nearly coincided with mine, as was shown by the fact that various landmarks appeared within it in about the same direction and at about the same distance from the centre. And this second perceptual world corresponded with my own perceptual world in yet another respect, that the words of the speaker, which created in me the thought of this world, carried with them predictions of future percepts of my own which the result has confirmed, such as the percept of the gate in the fence and the branching pathway. To this extent I may say that the belief in this second perceptual world is one which I can verify, as I can remember that I have to this extent verified countless similar beliefs in the past.

I thus get the notion of two perceptual worlds, each with its own centre, which came near to coinciding while we talked, but which are essentially separate. That second perceptual world, of which I became indirectly aware in my talk with the shepherd, had its previous history before it came into contact with mine; or rather let me say, there is a record of previous history attached to it. The shepherd, I can remember, was telling me how he came up on the hills earlier than I did, from a quarter rather different from mine, how the sun had just risen as he reached such a point, and how at such a time a shower started and then cleared up. And these notes of time, place, and weather recorded from the point of view of his perceptual world fit in, I find, with what I observed in my perceptual world. Here again then I am able to verify a correspondence, by comparing reported observations with remembered observations.

Here then is an element in my belief about the shepherd that is different from anything in my belief about the sheep or the trees. I believe him to have a perceptual world of his own, and this belief is one which I can to some extent verify, by finding that it enables me to correlate more fully my past percepts and to predict my future percepts. Can I hold that his persistence outside my perceptual world is guaranteed to me by this different element, that though I cannot be assured of it by the visual or other percepts

which mark out for him a place in my perceptual world alongside of the sheep and the trees, I can be assured of it by my discovery through those percepts of a second perceptual world, which is in some respects like my own, and whose likeness to my own I am able to verify?

But what is it in fact that I was really sure of in my supposed talk with the shepherd, and what was the particular point in it that I seemed to myself able to verify? What I was sure of was my awareness of a set of visual percepts, his face and clothes, and along with these a set of auditory percepts, the sound of his words, and accompanying these again a thought called up by these words, the thought of a second perceptual world, containing percepts like my own, though with a separate centre. These words I imagined to be spoken by the shepherd, the thoughts which they called up in me I imagined to be thoughts in his mind. But can I be sure of more than that the words are percepts and the thoughts are thoughts in my own mind? May not all the rest be imagination? And may not this second perceptual world which I seemed to infer behind them be only an assemblage of imagined percepts grouped round a separate centre in my private perceptual world?

The position then is this. That group of percepts which I recognize as my body is the centre of the perceptual space of which I am directly aware; it contains within itself those lesser groups of percepts which I distinguish as my several perceiving organs; it informs me by their means of various other percepts appearing within this perceptual space, and thus serves as what I may call my 'primary reporting centre'. Other groups of percepts, notably those which I distinguish as other human bodies, suggest to me thoughts of other perceptual spaces with their various contents, supplementing the perceptual space and its contents of which I am directly aware, and thus serving me as secondary reporting centres. Taken in this way, as secondary reporting centres, these groups of percepts have a continuity for my thought. They have what I may call a 'schematic' existence; they exist, that is, in my percepts when I perceive them and in my thoughts when I think about them, and when they appear in my percepts and in my thoughts, after an interval, they exhibit a continuity and coherence with their previous appearances which lead me to think of them as the same. But need I for this reason suppose, or am I justified in supposing, that they have a substantial existence in the intervals when I am neither perceiving them nor thinking

about them? Certain physical objects, I must recognize, have this peculiar power or property, that they can supplement my knowledge of my actual perceptual world by a knowledge of other possible perceptual worlds, and in virtue of this peculiar power I distinguish them as secondary reporting centres. But how am I to suppose that this property or power secures for them a substantial existence which other physical objects do not, for all I can now see, possess?

The building up of my knowledge about the physical world is rendered possible by the fact that the percepts which come to me in various ways are broadly and in the main consistent with one another. The percepts of which I am aware through one sense are on the whole consistent with the percepts of which I am aware through some other sense; so too the percepts of which I am aware at any moment are consistent with the percepts which I remember to have observed in the past; and so again the percepts of which I am directly aware through that primary reporting centre, my body with its sense organs, are consistent with the percepts which I derive indirectly from those other physical objects which I may call secondary reporting centres. In all these cases there may be discrepancies in detail, but I can see my way to account for these in such a manner as not to impair the general consistency. This agreement between the information given me through my primary reporting centre and the information given me through secondary reporting centres is of first importance for the work of ordering my percepts, since it enables me to proceed much further in the work of discovering uniformities and regularities than would be possible if I had to rely only on my direct observations. But this fact and its importance for me give me no sufficient reason to assert that these secondary reporting centres have a substantial existence as minds separate from my own; no more reason, that is, than the kind of reasons which I have considered and found inadequate for asserting that the physical objects which I construct from my percepts have a substantial existence as portions of a material world. If the nature and power of my unconscious mind are such that it can harmonize the percepts which it gives me through one channel of sense with those which it gives me through another channel, and the percepts which it gives me today with those which it gave me yesterday; why should I find it surprising that it can harmonize the percepts which it gives me directly through my primary reporting centre with the percepts which it gives me indirectly through secondary reporting centres? As the first can be

understood without the need to postulate a separate and persistent material world apart from my thinking and perceiving, so the second can be understood without the need to postulate separate and persistent minds.

The only acts of thinking and perceiving which I am directly aware of are my own. I can no doubt imagine that there might be other minds or selves with a power of thinking and perceiving; like mine in that they have this power, yet unlike mine in that they are not mine. But the more I reflect on this problem, the wider the gulf seems to be between the one mind or self that I am aware of from within and the other minds or selves that I can imagine; the more tremendous the leap that my thought must take if it is to cross this gulf. And it is not enough for me to say to myself that in my natural way of thinking I believed each of the groups of sensibles that appeared to me as human bodies to be associated with a thinking and perceiving mind, or to be the sign of the presence of such a mind. For in my natural way of thinking I believed those groups of sensibles, along with many others, to be material objects, or to be the signs of the presence of material objects, having a permanent existence independent of my experience or of any experience that I know of. But this is what a series of arguments has now led me to doubt. And so long as I am doubtful whether the groups of sensibles that I class as human bodies can be taken as signs of the presence of material objects existing independently of my experience, what right can I have to take them as signs of the presence of other minds existing independently of my experience? Even if I can first assure myself that there are permanent material objects outside my experience, the question would still remain, By what right can I then go on to assure myself that some of them are animated by minds like my own, while others are not? This question may turn out not so easy to answer as has often been assumed; but until I have satisfied myself as to the ground for the first assurance, I seem to lack even the beginning of a reasoned ground for the second.

It seems possible however for me, without going outside the Subjectivist hypothesis, to give a reasonable account of my belief in what I have been used to regard as the system of scientific knowledge. All that is needed to enable me to account for this knowledge and to justify this belief is, that I should be able to establish regular correlations between some of my own perceptions in the past and in the present, to predict future perceptions on the

basis of these, and to verify my predictions by comparison with perceptions of my own at some later moment. For this process of correlation, prediction, and verification, it makes no essential difference that some of these perceptions come to me direct from my primary reporting centre, and others indirectly through what I call secondary reporting centres. In the chain of thought by means of which I carry on the process I find myself conceiving entities such as material objects and other minds, which in my days of common sense I took to be realities existing outside my experience; and I may still find it natural and convenient to employ these entities as terms in my processes of thought. But need I on this account suppose them to have a substantial existence outside my experience, any more than say the concepts of mathematics and logic, which are no less indispensable for establishing the connections between one perception and another? When I look at the position in this way the Subjectivist hypothesis seems to be consistent with itself and consistent with my possessing whatever particular knowledge and beliefs I can suppose myself entitled to. All that it deprives me of is my metaphysical beliefs in a material world and in other minds, which its arguments have shown to be superfluous for the purpose of accounting for my knowledge and ordering my experience.

In the light of these reflections it does not seem so surprising that philosophers when they seek to refute the Subjectivist position, can discover no better answer than to turn for help to common sense. This perhaps in the end is the best that they can do. Only we must remember that at the point we have now reached we must not take common sense as meaning that universal consensus of society to which we appeal so confidently in ordinary life. The inquirer who has been forced back to the Subjectivist position cannot appeal to a general common sense of this kind to answer his doubts for him; for part of what is in doubt is the question whether any such general common sense exists. If he can once come by the assurance that his experience informs him of the real existence of other minds, he can appeal to the consensus of those other minds to support his assurance. But the first step towards this assurance he must take for himself alone.

Common sense can at present mean for him no more than that unanalysed portion of his own thought, which is sure that it somehow knows much more than it can give an account of. And this unanalysed thought of his, which claims to speak for common sense, will no doubt remain unconvinced by the Subjectivist

arguments. It may be content to dismiss them with the short answer, that the whole meaning of our experience is that it tells us of a reality beyond itself, and that this is so certain that we do not and cannot doubt it. But if common sense puts its case in this way, it is claiming more than it has a right to claim. For if we reflect, we cannot but admit that it is possible to have an experience which appears to tell us of a reality beyond itself, and which in fact does not. We have such an experience as often as we dream.

But do we not all know the difference between dream life and waking life? At first sight the difference would seem to be obvious, but we must remember that the difference between them that is most obvious to common sense will not help us here; for in its natural interpretation it turns on the relations of each to that material world, the reality of which we are now doubting. Can we then restate the difference in some such way as this: that in dreams each of us is shut up in a world of his own that is altogether private, while in waking life we live in worlds which are in one sense private, but are in another sense public, in that we can relate them to the private worlds of other observers? Some such account of the matter must no doubt be given by any philosophy which claims to pass beyond the Subjectivist position. But this way of speaking will not solve the problem now before us; for what we want to know is, how is the individual, unless he first comes to the belief that there is a material world which does not depend for its reality on his experience, to pass to the belief that there are other human beings who do not depend for their reality on his experience?

We must ask then: Can the individual starting from his own experience find any criterion by which to distinguish dream from waking experience, so that he may regard the waking experience as revealing a reality beyond itself, though the dream does not? Some writers who have discussed this question have sought to distinguish the two by saying that the images which are presented in the dream state are fainter and less vivid than those which are presented in the waking state. But is this true? It is hard to give a decisive answer; the dream experience is quickly lost or transformed in the waking memory, and the experience of one dreamer may differ much from that of another. But there is evidence on the contrary side. The pictures seen in dreams may present themselves with a clearness and beauty that equals or surpasses the impressions of waking life; the emotions of terror or happiness felt in dreams may be no less strong and vivid. This may be said to be a commonplace of romantic literature, and would not the experience

of most of us confirm it? The sensitive and emotional parts of the mind may seem to work as actively in dreams as in waking life; and this not only when seen from the inside in the dream itself, but when looked back on from outside after waking.

But the reasoning and critical faculty, we must recognize, is in abeyance in dreams as it never is in sane waking life. One place changes to another, or to two places at once; one person changes to another, or to two persons at once. In the dream nothing of all this seems to us surprising, but when we wake we recognize that it was absurd. This is true, and yet even this gives us only an external test for discriminating, not an internal one; the dreamer seems to himself to be using his reason, forecasting, taking decisions, as he does in waking life. He may seem to solve some difficult problem with complete success; or he may dream that he wakes up and recognizes that the dream from which he supposes himself to awake was a dream because of its incongruity. It is only when he really wakes that he will discover that the solution of the problem was grotesque, and that the second dream which he seemed to awake into was as incongruous as the first.

It is true no doubt that, looking from the outside on the dream from which we have woken up, we feel sure that, for all its intensity while it lasted, it was, as we say, only a dream. In this sense we can distinguish between the dream state and the waking state. Dream experience is not coherent with waking experience, nor is one dream coherent with another, nor even, when looked at from outside, with itself. It is on grounds such as this that we all for the common business of life come to distinguish the waking state as real and the dream state as unreal. And these grounds would enable even a Subjectivist thinker to make the same distinction between the two. The waking state would be for him, as for the rest of us, in some sense more real than the dream state. But what precisely is to be understood by 'real' and 'more real'?

The dream at least seems real while it lasts, and in respect of its inner quality it may be held even by the waking mind to have been real while it was present. We say, We have had such a delightful, or such a terrible, dream, and in saying this we do not feel that the experience we so speak of was in itself unreal. But we should feel that the dream was unreal in so far as we might have seemed in it to achieve something or to lose something that we should count important for our waking life; in so far, that is, as it purported to tell us something about a reality outside itself. And the question before the Subjectivist is this: May not his whole waking

experience be, as a dream is, real in its inner quality, but unreal in so far as it purports to tell about reality outside itself, about a permanent material world and other people?

Dreams are short and fugitive, and our waking experience compared with them is long and persistent; and we may try to help ourselves with the thought that this is enough to show that the two things are essentially different. But can we lay so much stress on this difference in duration, which is negligible if we measure it against any such scale of time as science would take account of? And this reflection that dreams are short and life is long has another side to it. Our dreams are short and separate, but there are many of them; our waking life is long, at any rate longer, and it is continuous, but it is only one. And this means that life presents us with many instances of dream experience, which we can see first from the inside as they happen, and then from the outside when they are past; and with one instance only of what we call waking experience, which we see from the inside only and cannot see from the outside at all. About dream experience then we can say this: that while it lasts it appears to reveal to us realities beyond itself, a material world and other selves, but when it is over and we survey it from the outside we know that it did not do so. And about waking experience all we can say is that this too while it lasts appears to reveal to us realities beyond itself, a material world and other selves, but we are unable to survey it from the outside and find what it looks like when so surveyed. If then it is a sound maxim of reasoning that we should judge of the unknown by the known, ought we not to say that dream experience is what we know best, because we can see round it, and waking experience is something which, because we cannot see round it, we cannot know completely? So that on this principle of judging of the unknown by the known we should conclude that the relation which holds between the dream experience and a reality beyond it holds good of waking experience too; that the dream state is given us as a small working-model of the universe.

We must believe, if we trust our experience at all, that there occur in it from time to time states with the attribute which our natural thinking ascribes to the dream state, states in which our experience tells us nothing about a reality outside itself. We are not compelled in the same way to believe that what we call our 'waking' experience has the attribute which our natural thinking ascribes to the waking state, that it tells us truly about a reality

outside itself. The dream state and our own immediate experience are entities which we must assume as real if we are to be able to order our experience at all. The waking state, if this is taken as implying the attribute of giving us knowledge of a reality beyond itself, and the material world or the other selves of which it seems to give us knowledge, are entities whose reality it is at least possible to doubt. Plainly the kind of experience which we call 'waking' is different in many of its qualities from the kind of experience which we call 'dreaming'; it is more coherent, more continuous, more prolonged. But may not both be alike in having that essential quality which we attribute to dream, that the experience is deluding us when it seems to tell us of a reality beyond itself?

But are we not perhaps speaking in too unqualified a manner when we say that dream experience tells us nothing of a reality beyond it? If we place ourselves at the standpoint of common sense, we feel confident that the dream stands in some kind of relation to realities beyond it, to the dreamer's material environment or to his previous waking experience. Looking back on a dream from the outside, we can often see reason to guess that this or that detail in it was caused either by some previous experience or by some material condition at the moment of dreaming. And soothsayers have claimed in the past, and psycho-analysts claim today, that dreams rightly interpreted can reveal much that would otherwise be unknown as to the events of waking life. But if we accept those claims at their highest, it would not show that the dream in itself can reveal a reality beyond it. All this interpretation must be done from outside, by the dreamer in his waking state or by some interpreter then aiding him. The dreamer has no power to do it for himself while he is still dreaming. His thoughts as he dreams are far removed from the reality behind the dream, as that might be discovered by an observer from outside; and if the thoughts of waking life come no nearer than this to a knowledge of what reality may lie behind it, the doubts of our Subjectivist would be amply justified.

When we reflect on the problems raised by dreams, we see how idle is an objection sometimes urged against Mentalist philosophies, that the world cannot be a mental creation, for if we created the world in our minds we should create it as we want it to be. Here is no valid objection to any kind of Mentalist doctrine, neither to the Subjectivist form of it nor to any other. There are indeed instances enough in ordinary waking life, from which we

can see that we ourselves and other people conduct even those parts of life which appear most susceptible of deliberate control in a way very different from what we might be supposed to want. But not to dwell on these, I have a crucial example in the phenomena of dreams to show me that the world I construct in my thought may be different from the world I should desire. When I reflect on dreams I am forced to think that the unconscious mind which seems to create them must have creative powers to which it is hard to set a limit. It creates for me an earth and sky, things and persons, colours and emotions, all seeming as real at the time, and sometimes almost as vivid in memory, as the contents of waking experience. And it has this other quality, that it is quite indifferent to the pleasures and pains and wishes of the being which I think of in the narrower sense as myself. It sends indifferently a dream of happiness or a nightmare, and the one is no more under my conscious control than the other. If then my unconscious mind has these attributes and powers, there seems nothing impossible in ascribing to it the same power of creating what I call my waking world as it has of creating my dream worlds. The waking world, it is evident, does not follow the lines I would have made it follow if I had created it with my conscious mind. But the unconscious mind, or the unknown force, whatever it is, that creates my dream world, manifests the same attributes, the same boundless power of construction, the same blend of reason and unreason, the same indifference to my wishes, my pleasures, and my pains, as I find manifested by the force that creates my waking world.

And as the law which determines the course of my dream, while it may itself be determined by causes in a reality outside the dream, is as regards the dream paramount; so the law which determines the course of my life experience, while it may itself be determined by causes in an unknown reality outside that experience, is for me in my life experience paramount. In life it for the most part determines things to happen in accordance with that order of regular sequences we call 'natural laws', an order which seems to be neither friendly to my wishes nor hostile to them, but indifferent. The group of sensible entities which I call 'my body' is subject to the same incidents as are the other groups of sensible entities which I call 'physical objects'; it can be bruised or crushed, fall from a height, sink under water, be impaired by heat or cold. It is subject again to a particular class of incidents that applies to all those particular groups of sensible entities, which

resemble it in form and in their manner of change and movement, and which I call 'human bodies'; it seems, as they do, to suffer from various defects and illnesses, and to need food, light, and air for its normal functioning. In one respect indeed, which for me as a thinking and feeling entity is of the first importance, the group I call 'my body' differs from all those other groups which I call 'human bodies'; that is, that my thinking and perceiving, my feelings of pleasure and pain, are bound up inseparably with the group that is my body. But except that my body has this unique connection with my thinking, perceiving, and feeling (which on the doctrine I am now assuming may be all the thinking, perceiving, and feeling that there is) I see no reason to suppose that it is unique, or that it is not subject to that order of regular sequences called 'natural law' which applies to other physical objects, or to those particular sequences or laws which apply to other human bodies.

The regular sequences then which the law that determines my thinking and perceiving compels me to perceive as applying to other human bodies shall, I conclude, be compelled by that same law to perceive as applying to my own. And in the light of this we may turn to consider the question how an inquirer entertaining the Subjectivist hypothesis should think about old age and death. If he were to play with this hypothesis as a young man, he might be tempted to fancy that these are incidents which will never happen to him; as indeed youth may sometimes be inclined to fancy, however well it may know in theory that it is subject to the ordinary conditions of human life. But we shall suppose our inquirer to have passed beyond any temptation to interpret the doctrine in this childish way. He will understand that it is concerned with metaphysical reality, not with phenomenal events; that it does not mean that his experience has fallen out in the past, or is going to fall out in the future, in the way he would like it to. The dream of life, whatever moments of happiness it may contain, has in it the nightmare quality that the dreamer is pursued by something which he dreads yet feels he cannot escape from. He must be caught in the end by old age, if he lives long enough, and certainly by death.

What then will the Subjectivist inquirer think about a possible experience after death? Here there are two alternative lines of thought open to him. Let us consider each of them briefly, for each may throw some light on our general inquiry.

First, he may fancy that he will awake from the dream of this life, either into another dream or into a state which in comparison with it he might consider to be a state of waking. Such an extension of the Subjectivist belief into a life beyond the present would have the same kind of relation to religious or mythical beliefs about immortality, as the Subjectivist doctrine we have so far considered has to our ordinary beliefs about the world of common sense; it would, that is, be only a small part of these beliefs, but the natural core and centre of them. And he might seem to find a reasoned support for such a belief in a kind of echo of the main Idealist argument: if all that he knows or can know is subject to the condition that it is bound up inseparably with his own experience, may he not conclude that all that can exist must be subject to the same condition?

If he were to argue in this way, his argument would be very similar to the Idealist argument, that all reality must be experience or included in an experience, because all that any knower can know must be included in an experience. The argument must indeed, if it is taken seriously by any individual, that is, if it is to be taken seriously at all, have this individual application. But when it is given this individual application, it loses that cogency which it may seem to bear when stated in general terms. What is left of it is not a demonstration, but at most a possible analogy. The thought that my experience, as it is for me a necessary accompaniment of all the reality I can know, may be a necessary accompaniment of all reality; this thought may be worth something, little or much, as an analogy or a fancy; it is certainly not worth anything as a supposed logical proof. The Subjectivist has no right to conclude that, because dreams within this life are followed by waking, the whole dream of this life will be followed by anything. He can have no reason to believe in another life, unless he derives the belief from a source outside the Subjectivist doctrine.

He is brought then to the other alternative. He must ask himself: May it not be possible, for all he knows, that there never has been, and never will be, anything beyond his own experience of this present life, that the whole universe began to exist when he began to be aware of things and will come to an end when he dies? Not of course that he could have any right to assert this possibility to be more likely than its opposite. But he could hold, and it may be that if he were logical he would hold, that it is as likely to be true as anything else; and that neither he nor any

other thinking being with a constitution like his own, if there are such beings, could ever from their own experience find out that it was not the truth.

But has he not here come to a conclusion so inconceivable that it is not worth while to think about it? The more inconceivable, we may reply, the more worth thinking about. For if he has really come upon a doctrine about reality, which is not meaningless and is not self-contradictory (and our inquiry has shown, we can claim, that it is neither of these) and which yet he can be sure does not hold of reality; has he not come on an instance of that which philosophers have so often discussed, and wondered whether it was possible to find, a means of passing directly from idea to fact, from essence to existence? If he can know, merely by thinking about it, that it is impossible that there should be no reality beyond his own experience, this means that he can know, merely by thinking about it, that there is some reality beyond his own experience. And if so, how many other things may there not be that he can come in this way to know, merely by thinking about them?

The solitary thinker who has reached the point of doubting all beyond his own experience will find problems still to perplex him. In particular he will find these two. The course of his experience is determined by a law or order, which compels him to think, perceive, and feel in certain ways and not in others. And this compels him to perceive and feel, perhaps to think, in ways very different from what he would wish. This is the first problem; and the second is that this law which determines what he perceives and feels links him for no reason that he can see to a particular point in time and space. Here are two problems which his experience gives no clue for answering, and the presence of these unanswerable problems may suggest to him that his own experience is after all not everything, that there is some power outside it which determines it.

Yet it cannot be called a fatal objection to the Subjectivist doctrine that it leaves us with these unanswerable problems. For the first two problems here left on our hands are problems which on any doctrine about the world's nature remain hard to answer and perhaps impossible. The problem, Why am I compelled to perceive and feel otherwise than I could wish?, is the inveterate problem of the origin of evil; it is the form which that problem takes on the Subjectivist hypothesis. And this problem is one which many philosophies and all religions have set themselves to solve, but which of them has solved it to the world's satisfaction? And

the second problem, which we may call the problem of 'particularity', is again a question which on any doctrine of the world's nature each inquirer will have the same reason to put to himself and the same difficulty in answering: Why should the I, that feels, sees, thinks, and suffers, be tied to this particular set of fortunes in space and time? Complete knowledge might perhaps discover some reason (much as it is beyond our present power to guess what) which would show how each item in this set of fortunes may be seen to hang together with the rest, how if I do or suffer this or that at one moment, it must follow that I should do or suffer this or that other thing at some other moment. But what law or reason can be conceived which should decide why the colourless unqualitied I should be linked to one particular set of fortunes rather than to another? Yet on this irrational and arbitrary linking, the happiness or unhappiness, the whole destiny for good or evil of each of us depends.

The thinker whose reasoning has led him on to the Subjectivist position may claim then that his philosophy is no worse off than any other philosophy in leaving him with these ultimate unanswerable problems, if any philosophy must in the end find them ultimate and unanswerable; and he may claim for it the advantage as compared with any other, that it makes fewer doubtful assumptions and follows out more unflinchingly the principles of argument which commend themselves to reason. And if he justifies the doctrine to himself in this way, what answer can he find?

Common sense, or that impulse in each of us which is deeper than common sense and out of which common sense grows, will provide an answer, if he is content to listen to it. He knows, this impulse will tell him, that there is a reality outside his experience, and all the reasoning that can be urged to the contrary will not in fact shake his certainty. And perhaps he does know it, but the question still remains, What is the ground of his knowledge? Ought not philosophy to try to answer this question? For if it cannot tell us how we know the things that we know, why should we trust it when it claims to tell us how we can come to know things that we do not know?

CHAPTER X

THE WORLD OF THE MOMENT: IMMEDIACY

THE doctrine of Subjectivism, which maintains that no one can have sufficient ground for believing in any reality beyond his own experience, seems thus to be forced on us by strong reasons and to be consistent with itself. Can we see any way of escape from it? We can say that we find it incredible, but if we say that, we are giving up the appeal to reason, and appealing to the world of common sense which we had resolved to leave behind. No doubt as long as we remain in that world, or if we slip back into it, we are all sure that each of us is sure that some reality exists beyond his own experience; other minds at any rate, and probably a material world as well. But when we broke with common sense, our purpose was to take this break in earnest and to follow the best principles of reasoning we could find as far as we could follow them. And we seem to find that an inquirer following these principles is led back to his own experience as that of which he is most certain, and if he then asks on what ground he can be justified in believing in any reality beyond this experience, what justification can he discover?

None of the arguments we have so far considered, nor all of them together, have shown themselves able to supply such a justification. But if we search for what philosophers have had to say on the subject, we shall find one other argument sometimes brought forward as a decisive proof that the Subjectivist doctrine cannot be consistently held; and this argument we must now proceed to examine.

It runs to this effect. The same line of reasoning, which tells against my belief in a reality beyond my own experience, tells also against a belief in any experience of my own beyond my experience of the moment; or, if not precisely the same line, at any rate a line of reasoning which is parallel to it and is as strong. If then there is a case for following reason against common sense so far as to doubt my natural belief in a world beyond my

experience, there is equally a case for following it further and doubting my natural belief in my own experience beyond the moment. If I am prepared to renounce my belief in a material world and in other minds, I ought also to be prepared to renounce my belief in my own past and future. And this last renunciation, the argument suggests, I shall not consent to make. I shall reject as unthinkable this further supposition that all I can be certain of is my own experience at the moment, and I shall reject along with it the supposition that all I can be certain of is my own total experience.

Let us postpone for the present the question whether the two lines of reasoning are as closely parallel as the argument maintains; and let us ask first, supposing the argument to be right in this respect, to what conclusion does it point?

It is an argument of the type that seeks to convince by threats. Go thus far, it says, and you will have to go farther; commit yourself to this extravagant position, and you will find that you are forced into another still more extravagant. Arguments of this type have been used by philosophers from the time of Socrates or earlier, and used in the right place they have force. If we push a wrong doctrine to the point at which its full consequences appear, we may see what is wrong in it better than we could have done if we had stopped half-way. But if we are to reach this result, we must be ready to follow out the doctrine to the end and to show that it is condemned by principles which we can accept as final. We must not let ourselves be deterred from it merely by the threat that it will lead to consequences which we do not like. And if we represent to ourselves again the path of our supposed inquirer, we recollect that the decision to break with common sense was taken when he felt himself compelled to doubt his natural belief in a material world. This was the point at which he had to face what seemed incredible; and if in doubting his belief in other minds he is taken on a little further into the incredible, and in doubting his belief in his own past and future a little further on again, these degrees of incredibility are not what matter. He would waste the result of his journey if he were to stop at this or that point for such a reason. All that is worth doing now is to go on to the end, in the hope that he may discover whether the principles of reasoning he has been following were right or wrong, and if wrong, in what way.

The argument which we are now to examine may be developed along more lines than one, and these lines, one or another of them,

have been worked out by philosophers of various types for various motives. They have been used for the most part to support a partial or one-sided scepticism, or it may be, a one-sided dogmatism. They have not always, nor even usually, been brought together to converge on the full sceptical conclusion which we are here envisaging. Yet we shall find when we consider them, that their natural effect, apart from counter-statements or assumptions by which they may in particular philosophies be accompanied, is to lead us to this sceptical conclusion; and if we are forced to hold, as we now seem to be, that we can proceed no further until the possibility of this conclusion is faced, we must regard them as relevant to our inquiry at this point.

The first consideration which tells in this direction is the parallel between perception and memory. Memory like perception goes beyond any immediate and indubitable certainty; if then we doubt perception on this ground, should we not on the same ground doubt memory? The argument may be developed along the following lines:

(1) Just as there is in perception an inherent dualism, that is, on the one hand my sensation or my awareness of a sensible object, on the other hand my thought of an external or material object which I believe myself to have knowledge of by means of this sensation; so there is in memory an inherent dualism, that is, on the one hand, my present act of memory, on the other hand my thought of an event in the past which I believe myself to have knowledge of by means of this.

(2) Just as perception, or what claims to be perception, may be deceptive; so memory, or what claims to be memory, may be deceptive.

(3) Just as it is possible that the picture which perception presents to me may exist only in the mind which seems to itself to perceive, and nowhere outside it; so it is possible that the picture which memory presents to me may exist only in the mind at the moment when it seems to itself to remember, and nowhere outside it.

(4) Just as the only way to avoid the dualism inherent in perception would be to suppose that my perception exists only in my experience and cannot guarantee the reality of a world outside it; so the only way to avoid the dualism inherent in memory would be to suppose that my memory exists only in my momentary experience and cannot guarantee the reality of any past event.

(5) Just as it may be maintained that I can know only objects-

in-an-experience and have no right to assert the existence of any objects apart from that experience; so it may be maintained that I can know only objects-in-a-momentary-experience, and have no right to assert the existence of any object apart from that momentary experience. Just as in asserting the first of these things I may be committing an illegitimate abstraction, so I may be in asserting the second.

The parallel therefore seems to hold. There is a close analogy between those facts of experience to which we give the name 'perception', and those other facts of experience to which we give the name 'memory'; so close that we may find it useful to think of perception as a genus, under which sense perception and memory would fall each as a particular species. In using 'perception' thus as a generic term, the notion which we intend to express is that of a mental state which is believed to give knowledge of some reality outside itself. Perception so understood would be complex, containing two elements which need to be distinguished. The existence of the mental state is a fact, and a part of that fact is the existence of a belief about an external reality; but it need not be a fact that the supposed external reality exists now or ever has existed. For sense perception we have two different terms, 'sensation' and 'perception', which are used, for the most part though not consistently, to express this distinction; 'perception' designating the mental state considered as telling us of an outside reality, 'sensation' the mental state considered in itself apart from any such outside reference. For memory, language is not so rich; we have only the one term, 'memory', which implies that what we seem to remember we remember truly; we have no word to express the mere mental state without this implication. Yet here too the same distinction needs to be drawn between the mental state, which is a certain fact, and the reality beyond it, which either may be a fact or may not.

We learn that sense perception may be deceptive by the clash between perceptions. Two sensations, which, taken as sensations, do not clash, may contradict one another taken as perceptions; we can allow that as the content of two successive moments of experience they may be equally real, but we feel that they cannot both be held to represent truly a permanent external reality. In the same way the conclusion that memory may be deceptive is forced on us by the clash between memories or apparent memories. With memory the clash is perhaps not so frequent or so evident as it is with sense perception, but it is frequent and evident enough

to show that the reports of memory cannot, any more than the reports of sense perception, be implicitly trusted.

Yet the discovery that sense perception and memory are each sometimes shown to be deceptive by internal contradiction is not the only, nor perhaps the strongest, reason for doubting that they can inform us of a reality beyond immediate experience. Such contradictions, with the proof which they afford of occasional error, are the first signs which point us towards scepticism. But behind them lies a more comprehensive ground for doubt. Can we, can any of us, starting from our own immediate experience, have any right to suppose that the mental states which present themselves as sense perception or as memory could, even if they were free from internal contradiction, give us an assured knowledge of a reality beyond themselves? Must not the step, by which we come to believe that what is given as part of an experience exists outside that experience, be pronounced an act of illegitimate abstraction?

We are led back to that crucial argument of the Idealists which we considered earlier, and which seemed to us then so weak for establishing their own philosophy, and yet so powerful for undermining nearly all others. Just as we were driven to ask, first, what right can we have to suppose that material objects exist outside the experience in which alone we can know them or conceive them; and then, what right can the individual have to suppose that either material objects or other minds exist outside his own experience, in which alone he can know them or conceive them; so now we are driven to ask further, what right can each of us have to suppose that his own past or future has existed or will exist outside that momentary experience in which alone he can know them or conceive them? We have no right to suppose any of these things: so we are compelled to say by the principles of reasoning we have followed, unless we can find some new thought which will give the argument a different turn.

There was yet a third line of reasoning which made us doubt whether our belief in the material world could be justified; it was the difficulty of framing any consistent or intelligible account of its nature. The material world which common sense supposed to exist was neither the perceptions of human observers nor a system of mathematical laws; it was something more permanent than the first and more concrete than the second; and the more science has advanced in its power to predict perceptions and to formulate laws, the further it seems to be from being able to give any account

of that permanent concrete thing which (as common sense supposed) our perceptions enabled us in some measure to know, and which the laws discovered by science were to help us to know better. The attempts which common sense made in the past to describe the material world in which it believed must evidently in the light of modern science be rejected as inadequate. Yet modern science is not prepared, it would seem, to provide anything that would take their place. And if we have to admit that no consistent or intelligible account can be given of a material world, permanent and concrete, such as common sense has believed in and would like to believe in still, what right can we have to assert that such a world exists?

This was the kind of difficulty which we found to tell against the natural belief in a material world, and the same kind of difficulty tells against the natural belief in a permanent self or soul or mind. Historic common sense has supposed that there existed something which it referred to by these names, and that it could know, vaguely and imperfectly, yet in substance rightly, what this permanent self or soul or mind was like. And here again reflective thought sets itself to scrutinize this something which is supposed to be known vaguely, in the hope that a clearer and more precise knowledge will emerge from the scrutiny. And here again, as the scrutiny is pushed further, much is discovered, but it becomes more and more doubtful whether this self which it was hoped to know better can be known to exist at all.

It would divert us too much from the main course of our inquiry to review at length the arguments by means of which the belief in the self, once held so certain, has come to seem so doubtful. It will be enough to mention one well-known statement of the argument; perhaps the earliest in philosophy, at least in modern Western philosophy. The problem is thus formulated by Hume.

'For my part, when I enter most intimately into what I call *myself*, I always stumble on some particular perception or other, of heat or cold, light or shade, love or hatred, pain or pleasure. I never can catch *myself* at any time without a perception, and never can observe anything but the perception. When my perceptions are removed for any time, as by sound sleep, so long am I insensible of *myself* and may truly be said not to exist.'

And after an ironic reference to a possible opponent, who may claim to perceive 'something simple and continuous which he calls himself', he goes on to say:

'Setting aside some metaphysicians of this kind, I may venture to affirm of the rest of mankind that they are nothing but a bundle or collection of different perceptions, which succeed each other with inconceivable rapidity and are in a perpetual flux and movement.'

Hume speaks here with a force and vividness which have made his statement a classic expression of the mood of doubt we are examining. Yet is there not, we may ask, some inconsistency in this expression? If the moment's perception is all that can be observed, how does the observer derive or justify his belief in any 'rest of mankind' or in an I that 'always' or 'at any time' does this or that? Is he not in so speaking reaffirming with one breath the permanent entities that with another breath he denies our confidence in? Hume, we must recognize, like other sceptics, has not pushed his scepticism quite to the point when it could be stated with perfect consistency, perhaps has not quite realized himself all its implications; it is confused by relics of common-sense thinking which do not allow it to appear in its full purity. We may perhaps best do justice to his thought, if we understand that all that is said about any existence beyond the momentary self is to be understood hypothetically. The self in the sense of something that observes at the present moment is taken as an evident fact; in any sense beyond this its reality is held doubtful. The momentary observing self may fancy that there are beyond it other observing selves, some of which may appear related to it as parts of a single I, others as the rest of mankind. But all this is fancy or conjecture; the observing self has no right to assert of any of them that they are real, and any other observing self, if there should happen to be one, must be in the same predicament. Reading Hume's statement thus, putting into the expressions 'I' or 'the rest of mankind' no more than this hypothetical significance, we may allow that what he says hangs together well enough. What each of us can observe is a momentary mental state, which changes as he observes it; what each of us seems to remember is a series of such changing mental states; if we seek to describe our inner life, it is these changing mental states, not any permanent reality behind them, that we find ourselves describing. The permanent I, if it exists, is something that cannot be described, nor, in any obvious sense, remembered or observed.

The self when we try to grasp it seems then as elusive as the material world. And as with the material world, so with the self, the further science advances in its study of detail, the less it finds

itself able to give any clear account of what it is that it is studying. Science sets out to study something of which common sense supposes itself to have a vague and imperfect knowledge, and as this study proceeds knowledge *about* the thing becomes more complete and more definite, but it becomes more doubtful whether knowledge *of* the thing, which was at the outset supposed possible and actual, is achieved or is even possible. We here touch on a distinction between knowledge *of* a thing and knowledge *about* that thing which raises difficult questions, and which we shall try later to examine more closely. For the present this distinction may serve to indicate a feature in the development of science which, whatever its precise explanation or analysis may be, confronts us and deserves attention. Physics, which sets out with the aim of studying the material world that common sense supposed itself to know, finds itself more and more unable to say whether anything deserving the name 'material world' exists; it examines one conception after another, rejects each in turn, and gets no nearer to any that seems at all tenable. So again psychology, which sets out with the intention of studying the self or the mind or the soul that common sense supposed itself to know, finds itself more and more unable to say whether anything deserving to be called the 'self' or the 'mind' or the 'soul' exists; it examines one conception after another, rejects each in turn, and gets no nearer to any that seems at all tenable. And if we are brought to the conclusion that the material world is an unknown something to which the system of propositions called physics refers, and that the self is an unknown something to which the system of propositions called psychology refers; do we mean anything by continuing to say that either the material world or the self exists?

Again the same kind of reasoning can be turned against the reality of time. The belief in this last reality is perhaps the most deeply rooted among all the beliefs which we may call 'metaphysical'. In a sense indeed it is beyond challenge; the lapse of time within the specious present is a fact of experience too evident to be denied. And it is natural to believe that the stream which is observed flowing in the present moment flows on continuously before and after that moment, whether it is observed or not. Here is a reality nearer to us and more certain even than the reality of the material world; yet an inquirer who has been led by the line of thought we have followed to doubt the reality of the material world and then the reality of other selves, will find that his belief

in the reality even of his own past and future can hardly survive unimpaired. These main beliefs of common sense hang together and support one another, and when one is cut away the others must lose strength. The belief in the reality of historic or prehistoric time, which strikes us with such irresistible force when we contemplate as real the Alps or the Himalayas, becomes weaker and more dubious if we suppose that there is no reality beyond the thoughts and percepts of observers; and the belief will become more dubious for me still, if I think of it only as a question about my own experience. My past, so memory tells me, once existed and was real; but by what right do I trust memory to carry me beyond the present? And the memory which tells me that my past once was real does not even claim to tell me that it is real now. My future does not yet exist for me; to exist for me it must become present, and by what right can I feel certain that it ever will become present?

The only portion or instant of time which can be known immediately is the present moment as it passes; all that can be thought or believed about past time or future time must be contained in this. If then we allow these thoughts or beliefs to persuade us that the past and the future are realities beyond it, we commit ourselves to that procedure of abstraction which a powerful voice in philosophy would condemn as illegitimate; and if the warning against abstraction has force at all, it must be allowed to have force here. By abstraction in the sense that is here relevant is meant a guess or hypothesis about an unknown reality, which is conceived to exist beyond the reality that is known, and to have some, though not all, of its qualities. We make a guess which we hope may be confirmed or verified by the discovery of evidence not yet available, and which we think worth entertaining in view of the chance that it may be so confirmed. But how are we to justify a hypothesis which by its nature can never receive confirmation? And how is the hypothesis that there has been a past or that there will be a future ever to be confirmed or verified? The past cannot return to verify my belief that it once existed; all that I can do is to verify one present belief which claims to describe the past, by comparing it with another present belief which claims to describe the past, and by finding that the two are coherent; but this coherence does not verify my belief that the past was real. And how can I verify the guess that there really is, or really will be, a future beyond my experience of the moment? It is no sufficient answer here to say that this guess will be verified by the coming of the next moment;

for just in proportion as my experience of the next moment is given, my experience of the last moment is taken away and becomes for me no more than a, perhaps fallacious, memory. The quality of the moment's experience changes continually, and my expectation of any particular change may be said to be verified by the appearance of the expected change in the present moment. But what cannot be verified is my belief that there is a future beyond the present moment, for the future can only become real for me when it becomes the present and is no longer the future.

We need not here go further into the arguments which have been used to show the unreality of time. They have been worked out by acute thinkers, and if we study them we must admit that they are forcible, and that they make it hard to see in what sense either the future or the past can be said to be real. Here again, as with the reality of the material world and the self, this line of reasoning in so far as it is destructive seems to be powerful. But what should surprise us is the conclusion drawn from this destructive reasoning. For the conclusion drawn from it by the philosophers who have most used it is not the sceptical conclusion to which we have found ourselves being forced, but the assertion of a timeless or external reality of which time past and time future are held to be unreal appearances. But how can this audacious leap be justified? If the premise we have to start from is that past and future are unreal appearances, all the reality that we can be justified in inferring to exist behind these appearances would seem to be, not an eternal reality whose nature is unknown to us and which even the philosophers who speak of it cannot attempt to describe, but the one reality of which each of us is certain, his own experience at the present moment.

The argument on this question could be prolonged, but it would divert us from our main purpose to go into it here at greater length. What we are concerned to bring out is the general point that the lines of reasoning which seek to show that the material world is unreal, that the self is unreal, that time is unreal, are variant forms of a single mode of reasoning. The arguments that are employed are different in detail in each of these cases. But they all rest on the same general principle, which is this: that things which seem to be real, and which are judged by common sense to be real, can be shown to be unreal by being shown to be unintelligible and self-contradictory; or (if the argument is put in a somewhat less dogmatic form) that at any rate we have no right to hold any of

these things to be real until we are able to give an account of them which is intelligible and self-consistent.

We have followed out this line of argument in detail as it may be applied to the problem of the material world, and have tried to do justice to its force, which is evident and great. It seemed right to examine the method in full as applied to that problem, because it is over the question of the reality of matter that doubt as to the view of the world entertained by common sense first arose and has been most strongly pressed. To do justice to the detailed arguments which can be urged against the reality of the self or against the reality of time would need a discussion as long as that which occupied us over the reality of the material world, and is unnecessary for the main problem before us. For this main problem, it has become increasingly clear as our inquiry has proceeded, is not as to the details of the sceptical argument in this or that particular case, but as to the cogency of the argument in general. The problem raised by the sceptical argument in its generality seems to be of this nature. Something (to use the word 'thing' in its widest sense), such as the material world, the self, time, appears to common sense to be real; but reason examining this apparent reality seems to discover that one conception of it after another turns out under scrutiny to be neither self-consistent nor in the end intelligible, and again that, if the belief in this supposed reality is discarded, the reasoning mind remains able to give without it an orderly account of that of which it is most certain, its own thoughts and percepts at the moment of thinking. And if when the object of our belief is thus criticized, common sense is compelled to admit the criticism, is unable to show that the belief is either intelligible or coherent or necessary, has it any right to retain the belief? Ought it not to reject it as false, or at best hold it in suspense as doubtful? Most modern philosophy, including all that great movement called 'Idealism' as well as much that is very contrary to it, would force this conclusion on us. And it is not easy to see how we are to resist it. For surely any philosophy must seek to distinguish that which is real from that which appears to be real, but is not; and if these criteria which reason claims to employ are not valid criteria, what others can we find? The method which we have followed seems then to be justified, and yet to lead us to an incredible conclusion. And it is this dilemma in its generality which we want, if we can, to explore, rather than any of its particular issues.

These various questions which the inquirer may put to himself,

Have I any sufficient reason for believing that a material world exists? or that other selves exist? or that my own past and future exist?—may all be looked on as particular cases of the problem, Have I any sufficient reason for believing that any reality exists or has existed or will exist beyond my own experience at this moment? So that with this we have come on yet another possible form of Mentalist philosophy, which we may call 'Subjectivism of the Moment', or 'Immediacy'. We may say of this position, as we said of the Subjectivist position before, that it must be understood as sceptical, not as dogmatic. The inquirer who finds himself forced back to the small circle of his immediate experience can have no right to assert that beyond this circle there is nothing; but on the principles of reasoning he has been following he seems to have no better right to assert that beyond it there is anything. A philosophy of Immediacy is for the logical reason self-sufficient, and everything beyond it is logically superfluous.

But in what sense are we to say that this conclusion is the true end of the road? Have the principles of reasoning which we have followed brought us at last to a reality which can resist their destructive force? Or have they refuted themselves by bringing us to a result which is self-contradictory? Is this immediate experience which is all that they leave to us anything at all, or does it when examined vanish into nothing? If I can be sure of nothing beyond this, can I at least be sure of this?

The line of thought by which we have been brought to this question may seem paradoxical and fantastic, but the question itself has a real enough significance. Common sense, supposing itself to be certain of a great deal more than immediate experience, must at least believe that it is certain of this, as the foundation of all other certainty. And if we look back on the kind of reasoning we have followed, we can see that our reasoning has assumed this belief of common sense as the fixed point on which all its destructive criticism turns. It argues that the beliefs arising from sense perception and from memory are illusory, certainly sometimes, possibly always, because it compares them with an immediate experience which it assumes not to be illusory. It denies one or another of the beliefs of common sense on the ground that they are arrived at by abstraction, and to abstract, it says, is to falsify; but this denial again assumes that there is something which is known truly, which all other supposed knowledge abstracts from, and is false because it abstracts from, and what can this something

be but immediate experience? Belief in the certainty of immediate experience is the standard which our reasoning has used to condemn all other beliefs; and if that standard is not to be trusted, the whole process of reasoning which we have tried to apply, and which so far as we can see is the kind of reasoning which philosophers in general have applied, must fall to pieces. We might console ourselves in that case with the reflection that the destructive criticisms of reason had been shown worthless, but this would be small comfort, for we should be equally at a loss to use it for construction. And so reason, which for most of our inquiry we have found opposed to common sense, must at this point find itself allied with it in a joint cause. Both are concerned to defend the certainty of immediate experience, for if this has to be given up no foundation can remain on which to build any further knowledge.

What do we mean by this conception of immediate experience? Does it represent something which we can understand and believe to be a reality, and feel that we know certainly? Can each of us be sure, if of nothing else, at least that he is aware of something at the present moment? And first, what is to be understood by the 'present moment'? The words can best be interpreted as what psychologists have sometimes called the 'specious present'. What is meant by this is vague, but not so vague as to be useless. It might be defined as a period long enough to have a perceptible content, or long enough (perhaps the two things come to the same) to make it possible for the fact of change to be observed. And if the statement, that in the specious present we observe change, must imply that the specious present contains something that is in strictness past, as well as what is strictly present, this difficulty of words need not detain us. What seems certain is that there is a unit of awareness in which the passing event and the event that has just passed are held together and perceived together. What happens is not merely that we see a thing in one place and remember that before that we saw it in another place, but that we see it moving. Nor is it merely that we think one thought and remember that before that we had another thought, but that we are aware of passing from one thought to another. We perceive directly the passage of time, movement in space, and the transition of thought. That we can be aware of these things sometimes by direct perception, and not merely inference, seems a plain fact of experience; and if we did not sometimes perceive them and know by perception that they happen, how could we ever have ground for inferring them?

We must take it then as a fact that there is this unit of immediate

experience, sometimes called the 'specious present'; and as this is the only sense of the word 'present' that is relevant for our purpose, we shall use it without an adjective. How long a period may be included in this present, and how wide its content may be, are questions which we need not here turn aside to consider. It is likely that the length of the period and still more the richness of the content will vary with individuals and with circumstances; and it is plain that what it needs a series of instants to exhibit in detail can be somehow held before the mind as a whole in a single instant. How otherwise could such activities as reasoning or artistic creation be possible? How could a scientist or a statesman or anyone who has to develop a chain of reasoning be able to shape the parts of it so that they are consistent with each other and with the whole, or how could those who have to follow this argument see that it is an argument and not merely a series of sentences? Or how could a symphony be felt as a harmonious unity either by the musician who composed it or by the audience who hear it? Or how even could any of us when he begins to speak know beforehand the gist of what he is going to say, so that his words when he speaks them hang together and make sense? The least of these achievements shows that the human mind has the power of holding before it in one instant a content more complicated than can be unfolded in that instant; and the greater among them show that this power is one to which it is difficult to set limits. And if we have to go so far, we shall see no reason to deny that a still wider expansion of the contents of the moment's experience may be possible; that under the influence of drugs a moment may stretch out to what seems the length of years, or that a drowning man may see his whole life pass before him in a flash.

But we must now ask, Is this moment of immediate experience something of which we can have complete assurance? This is the assumption which we seem to have taken for granted as beyond challenge in all the sceptical arguments we have examined. And can any such assumption be justified? For when we look at the content of any moment of experience, do we not find that it is in itself incoherent and unintelligible, that it carries us necessarily to something outside itself for its explanation? If I reflect on my own experience at any moment, I conceive it no doubt as a reality, but not as an isolated reality. I interpret it in the light of other assumed realities of common sense: my own past experience, a material world which I believe to surround me now and to have

surrounded me in the past, and the experience of other human beings whom I believe to be fellow inhabitants with me of this material world. What then can it mean to say that I have a right to be certain of my immediate experience, if this is only intelligible in the light of these other assumed realities of common sense, and if, as reason now tells me, I have no right to be certain of these assumed realities?

Here several questions arise. Is it a necessary condition of my immediate experience that I should thus interpret it in the light of something outside itself? Would the immediate experience mean nothing at all apart from interpretation? What is it in the light of which the immediate experience is interpreted?

Certainly we seem all the time to be interpreting the moment's experience in the light of something outside it. But is it a necessary condition of immediate experience that it should be so interpreted? If we think of experience as we may suppose it to be in its earlier or simpler forms, the experience of young children or primitive men or animals, need we conceive of this as being always interpreted by a reference to something outside it? And even with adult civilized man may there not be moments when the content of immediate experience rises to such a pitch of intensity, pleasurable or painful, as to leave no room for the thought of anything outside; or other moments when it sinks back to a condition of half-awareness which would equally rule out any outside reference?

These questions perhaps do not admit of a certain answer. But if we accept it as even possible that this may happen, we shall be helped to see, what is more important, that something immediate to be interpreted must at least always be there along with the interpretation, even if we can never be sure that it is there entirely apart from any interpretation. The reference to a supposed reality beyond the moment adds a new element to experience, modifies what would be there without this reference, changes perhaps in some respects its quality, but cannot so far change its quality as to abolish the something which is to be interpreted and leave only the interpretation standing.

This something to be interpreted, this immediate element in experience, is most clearly evident in sensations of pleasure and pain. The pleasure of drinking when one is thirsty or of the feeling of a spring morning; the pain of cold or of toothache; such things as these present themselves as something which might be felt without being thought about, and which if thought about is at any rate also felt. When they present themselves, it is the habit of

the mind to interpret them in some way or other, to compare them with similar feelings believed to have been experienced in the past, to consider perhaps how they arose and how long they are likely to last. We may think about pleasure to ask how we may keep it or renew it, or about pain to ask how we may get rid of it. But this thinking about is secondary. Pleasure and pain are elements in immediate experience which we are aware of and, in the most important sense of 'understanding', understand, without needing to think about them or describe them or refer them to anything beyond the present moment. And this is almost as clear with the emotions. Joy or fear or anger are known to us each by its immediate quality. When we are aware of the presence of one of these emotions we may go on to ask, What was its cause? but the emotion is not the less the emotion that it is, because the supposed outside reality to which we refer it as cause may turn out to be something unreal.

Finally, although our sense data seem as part of themselves to give us information about a world outside our own experience, there is in the immediate experience of them an element which does not depend on belief in any reality beyond the moment. Nor does it depend on interpretation; it is that on which all interpretation depends. If this element were not present, there could be no ground for any reasoning about sense data that might lead us to a belief either in a material world or in any reality beyond immediate experience. We need then to trust our feeling of assurance that this element can be taken as certain, whatever else is doubtful. Is there any reason why we should not?

Let us recall the arguments which have seemed to compel us to discard one doctrine after another as to the nature of reality. There was the argument from error: the belief that reality is such or such leads to conclusions which conflict with beliefs more certain than itself, and therefore it is not to be trusted. There was the argument from contradiction: the belief that reality is such or such appears when examined to be in its own nature contradictory, and therefore it is not to be trusted. There was the argument from abstraction: the belief that reality is such or such is arrived at by abstraction from the only reality which we know certainly and directly, and therefore it is not to be trusted.

None of these reasons applies here. The argument from abstraction does not apply; my belief that my immediate experience is real, just as it is before me, is a belief, and is indeed the only

belief, which does not entail an act of abstraction of one kind or another. The arguments from error or from contradiction do not apply; these may begin when I attempt to interpret my immediate experience as a sign of some reality outside it, or to compare it with that supposed reality. But if I do none of these things, what place can there be for error or contradiction?

These three notions of error, contradiction, abstraction, in which we have summed up what presented themselves as different lines of objection to our various conceptions of reality, seem when we look at them more closely to run together and grow out of a common root, the attempt to interpret. If I attempt to interpret, I must abstract from the whole which is to be interpreted, and when I abstract there comes in the possibility of error, which shows itself in the end by contradiction, and of contradiction, which implies error. But if I cut away the attempt to interpret, abstraction and the possibility of error and contradiction fall away with it. What remains is the content of immediate experience, and here I seem able to say that I find something that is indubitable, since none of the arguments that have appeared to be good reasons for doubting everything else appear to be good reasons for doubting this.

We now appear to be in this dilemma. The one reality which anyone is entitled to be certain of is his own immediate experience. Is it possible for him to proceed from this to reach any further knowledge? If he does not attempt to interpret his experience, how is he to get beyond it? But if he attempts to interpret it, must he not do so by reference to some supposed reality beyond it? and must not then his interpretation be subject to all the doubts which apply to this supposed reality?

Let us consider some of the chief modes in which we interpret immediate experience.

One mode of interpretation, and perhaps the most prominent in common-sense thinking, is interpretation in terms of substance. All philosophies, except Subjectivism of the moment, would agree that there is an abiding reality of some kind outside immediate experience; but while they agree in this, they differ in all they say about it. Their agreement points us to what is certainly a fact, that immediate experience comes to each of us bound up with an interpretation of it in terms of some outside reality. Their disagreement shows us that, as any interpretation in terms of an outside reality may be doubted, the only hope of arriving at a

decision between these interpretations is to isolate as far as we can the experience from the interpretation, and to look at what is certain by itself before we pass on to what is doubtful.

Again we interpret experience in another mode which we may call 'interpretation in terms of concepts'; and of these we may take qualities as the simplest and clearest instance. This second mode is prior to the first and goes deeper; for we come to distinguish objects from one another through having already distinguished their qualities as like or unlike. But the second mode of interpretation not only distinguishes qualities, it names them. To name is to classify, and to classify is to compare; and when I compare, what happens is, that I set the quality in my present experience which I am naming alongside other qualities remembered from the past, and judge it so far to resemble them as to be rightly classed with them. And for this purpose I have to make use of terms of which I have learnt the meaning of in my past experience, and which have gained their significance through the past history of the language which I speak and of the human race as a whole. As soon then as I name any quality present in my immediate experience, I seem to go beyond that experience; for am I not in so doing assuming the reality first of my own past and then of the whole historic past? Once again, if I describe or even name the content of immediate experience, I find myself going beyond that experience; but if I cannot name it or describe it, can I rightly be said to know it? And if I cannot know it without going beyond it, must I not give up the hope of finding in immediate experience a reality that is at once certain and intelligible?

Our answer to this difficulty is twofold. First we must remind ourselves of the point already made: that there is in the content of immediate experience, apart from any process of interpretation, apart even from naming, an element or quality which I know as it were by taste. And I use the word 'taste' in this general sense, because taste proper is, as we saw, the most idealist of the senses, claiming, in isolation from the others, to tell us of nothing beyond our mental state. When then a man feels a pleasure or a pain, he may not want or may not be able to give it a name or describe it or compare it with anything he has felt before, or even to say whether it should rank as more pleasant or more painful; but he knows as it were by its taste the quality of his feeling, however new or strange or complicated the feeling may be. And so with taste, in the strict sense of the word, as is shown by the fact that he knows a number of different tastes, to which he can give no names.

And so again with colour; the different colours distinguishable by visual taste, that is by sight, might all, it is possible, have their appropriate names fitted to them; but they must be known by taste before they can be known by name. Knowing by taste alone is a process which, it may be said, leaves out something that, as the word is commonly used, is needed for what we call 'knowing'; but it is knowing of a kind, and is the foundation of all other knowing.

And to this first point we have to add a second; the content of immediate experience itself includes a mass of interpretation. This conclusion is brought before us perhaps most evidently by the facts of visual sensation. We have spoken as though what happens is in this case that the observer is aware of a patch of a certain colour and a certain shape, and that he asks himself whether this coloured patch is the surface, or part of the surface, of a physical object, or in what other way it is related to the physical object which he takes to be connected with it. But the real happening is more complicated in several ways. First, the coloured patch is seldom if ever simple; normally it contains within itself a quantity of detail and variety. Next, the coloured patch is seldom if ever seen in isolation; normally it is surrounded by a margin or a background. And finally the coloured patch is not usually seen merely as a coloured patch; normally it is seen as the sign or appearance of a physical object.

Let us take first the last point, which is for us perhaps the most important, and try to be clear as to what follows from this. We are supposing the observer to be certain of his act of seeing and its immediate visual object, and of nothing beyond this; we suppose him then to have no assurance that there is any world of material objects beyond his experience, or any past experience of his own in which he can have acquired a knowledge of the nature of such objects. Nor can the mere act of seeing have in it the power to give him any such assurance. But it assures him of so much as this: that the visual object presents itself as having the quality of being a particular kind of object, no less than it presents itself as having a particular quality of colour and form. For instance, the visual object, just as it presents itself as having the quality of being round and the quality of being white, presents itself also as having the quality of being a rose petal. About any of these qualities endless questions may begin as soon as he seeks to analyse. How does he come to recognize the object as having the quality of a rose petal? For he has no right to say that he has ever before seen a rose petal or the likeness of a rose petal, or that there have ever been any rose

petals in the past. But then how does he come to recognize the object as round or white? for he has no right to say that he has ever seen anything round or white before, or that there has ever been anything round or white in the world, except this visual object that he is seeing now. And where do the words or concepts, 'round' or 'white' or 'rose petal', come from? What is their origin in his own history or in the history of mankind? These are questions to which, if his knowledge is limited to the content of immediate experience, he finds himself without an answer. Yet there is a mode of knowing which does not depend on names, knowing by taste; and in this mode of knowing the visual object seems to be given as having the quality of being a rose petal no less certainly than it is given as having the quality round or white.

We suggested earlier the word 'Immediacy' as a short name for the position we are examining in the present chapter. But how far is that name suitable, now that we find that in the conception of immediate experience there must be included, not only percepts and feelings but ideas, and not only ideas but a whole ideal system? In philosophic terminology it is usual to contrast feeling as immediate with thought as mediate. And the contrast expressed in those terms seems appropriate when thought is conceived, as it is conceived in general by common sense, and is conceived too as a rule in philosophical discussions, as being the means by which we apprehend realities beyond the moment of thinking. Thought can then be naturally viewed as the medium or mediating instrument, through or by which an inquirer reaches out from his immediate experience to grasp the nature of realities outside that experience. But thoughts or ideas may also be viewed as having their own taste or quality of feeling for immediate experience, irrespective of any realities they may stand for; and the expression 'Immediacy' can serve to remind us that this is the view which we are trying to make clear to ourselves at the point we have reached in our inquiry.

If we think of the visual field as it presents itself from moment to moment in the course of the day, its nature seems something of this kind. In the centre there is some object or group of objects on which attention, fixed or casual, is for the moment resting. This object will probably be at most times something more complex than a single patch of colour such as we have been speaking of. Let us then in the instance we have been considering shift our attention from this single rose petal to the bunch of roses from which we may suppose it to have fallen, and which we may

suppose to be seen as a pattern of green and white bits of colour with a certain amount of detail and variety in it. How much of this detail is at any moment apprehended might be hard to say, but what seems clear is that besides what is at any moment distinctly noticed there is much more that is apprehended vaguely, and that might by a slight shift of attention, such as is in one direction or another all the time taking place, come to be distinctly noticed. And this central object is surrounded by a margin or fringe, containing within itself further detail and variety, which again is not distinctly noticed, but one or other part of which might come to be so noticed by a slight shift of attention.

We may be helped to conceive the nature of the visual field if we think of it in terms of these three things: the central object or pattern on which attention rests; the details within the object, any one of which might attract attention so as to become the central object; and the fringe surrounding the object, in which again are details which might so attract attention. The three are not to be sharply distinguished; the boundaries between them are vague and shifting, and the distinction is only one of emphasis. Yet the nature of our seeing, and of our interpreting what we see, is conditioned very largely by how this emphasis falls. And what matters for our main purpose here is that this emphasis, and with it the character of the whole visual field, depends on the particular object selected to form the centre. The visual field is not a collection of patches of form and colour, which we first apprehend as merely forms and colours and then interpret into objects; it comes to us carrying its interpretation along with it as an essential part of itself. And if we use the term 'sense datum' to signify what is given in sensation before we begin to reflect on it, we must take it that the visual sense data are given to us not only as having particular qualities of form and colour, but as having the qualities of being objects of this or that particular kind.

We must not suppose, further, as seems sometimes to be suggested in philosophical discussion, that the certainty possessed by the contents of immediate experience applies only to simple sense data, such as a particular patch of colour or a particular taste or a particular sound. We are in fact seldom aware in ordinary life of a single sensible in isolation; such an awareness when it comes will probably have been brought about by a deliberate effort of attention. Normally it is something more complex of which we are immediately aware, and with regard to which we have the certainty that immediate awareness gives. I am looking, say, at a

cloudy evening sky, and the clouds at one moment present to me the form of a coast line with inlets and promontories, and at another moment the form of a dragon with open jaws; and these combinations are just as much given to me and have as much immediate certainty as any particular patch of colour. And if I could allow all that the senses present to me to pass before my notice as a shifting phantasmagoria, not supposed to have any relation to a permanent external world, all of it would possess the same immediate certainty for me, nor would there arise any question of error. But in fact the process of combining particular sensibles into complex wholes normally goes along with a belief that those wholes are, or represent, permanent things existing in a world outside me, and with this belief comes in error or a possibility of error; a very practical possibility in so far as I assign particular sensibles to particular things in this outside world, and at least a logical possibility in so far as I believe that an outside world exists at all.

It is the same with the data of the other senses. Any piece of sensuous experience may be taken either as what it is, or as a sign of some supposed reality outside it. In any moment of experience then we may distinguish two elements or aspects, the immediate experience and the interpretation of that experience. And this second element, the interpretation of experience, has the quality of immediate experience when taken in itself, and has besides this the quality of interpretation when taken in relation to a supposed outside reality. We are brought thus to the conclusion that everything in experience is certain in so far as it is itself, and everything is doubtful in so far as it is taken as a sign of a reality beyond that experience; but the point which is doubtful is not whether it is taken as a sign, for its being so taken is part of its immediate quality, but whether it is rightly taken as a sign.

This brings us to a new problem, the problem of words and their meaning, which carries us yet further into the region of interpretation. We distinguished two elements in experience, the immediate quality of this experience and the interpretation of the experience; and the relative importance of these two elements varies. In some modes of sensation, such as pleasure or pain, or taste in its stricter meaning, the immediate quality is likely to be the dominant element, and the element of interpretation may be almost absent, though perhaps rarely absent altogether. In visual sensation there may be a fairly even balance of the two elements: the object seen

is seen as having its own sensuous quality of form and colour, it is seen too as having the quality of some particular object, and in virtue of this it is normally taken by common sense as being a sign of the existence of some particular material thing; so that we seem to be aware at once of the shape and colour directly presented to the eye, and of the supposed material thing with a shape perhaps quite different from this. And when we come to examine the place in experience occupied by verbal thought, we find a still more complicated process of interpretation, in which the sensuous quality becomes so little noticed that it almost disappears. The beginning of the process is that we are aware of some sense datum; of sounds when we listen, of visual shapes when we read or write, of imagined sounds (probably) when we think. Or rather we should be aware of them if we stopped to look at them or listen to them, but for the most part we do not stop to do this, but pass on at once to the words and sentences of which they are the signs to us. The words and sentences again are taken as signs of the existence of thoughts in some experience past or present, other than the immediate experience of the first observer; and these thoughts may again be taken as signs of objects in the material world or of other thoughts in other experiences.

Let me suppose that I am sitting indoors and hear a man in the street outside calling 'Fresh strawberries'. I may describe what happens in this way; first that I am aware of a sound, which I interpret not merely as sound, but as the sign of definite words; then that I interpret these words not as words merely, but as signs of a thought which someone in the street means to express; then that I interpret this supposed thought as the sign of the presence of material strawberries out in the street. This is what I find if I analyse the process and ask myself how it comes about. But what I am in fact aware of is not these things in succession, but all of them coming together, or if the later follow the earlier, following so quickly that all are parts of a single movement. The analysis may be instructive in one way or another; it may show how, on the common-sense view of things, I come to make the transition so quickly and automatically, because I have made other transitions of such a kind more slowly and deliberately in the past. Or it may show me how I should justify this process of inference, if so it is to be called; I justify it on the ground that other processes of inference, which might be analysed out in this kind of way, have worked successfully in my past experience. But this process of inference has to be searched for. If I look at what is presented in

immediate experience, I find the awareness of the sound, and along with it an interpretation of it, which includes my understanding of its meaning and my belief in the presence of the strawberries. As in a simple case of visual sensation I might be aware of a patch of mottled red colour, and this awareness would bring with it the interpretation 'Here are strawberries'; so in this case I am aware of a sequence of sounds, and this awareness brings with it the interpretation, more complicated but seeming hardly less certain, 'Here are strawberries'.

Language, and thought as expressed in language, can immensely complicate and extend and enrich the process of interpreting experience, but they do not essentially change its nature. How are we to understand this process? The interpretation of experience carries with it from the beginning a belief, assumed long before it is ever distinctly thought, in the existence of a world of material objects outside immediate experience. This interpretation of experience is itself part of the content of the world of immediate experience; it assumes the belief in a material reality beyond immediate experience, but it does not depend for its own existence on the truth of this belief, and so far as we have yet seen, it can only assume the belief, it cannot guarantee it. The belief as a fact, as an element in the momentary experience, must be real, but all that it tells us may be illusory.

We are led to this conclusion because we can find no halting place in the gradual transition, from the datum that is simplest and carries least interpretation, to the datum that carries within itself the most complicated interpretation. The simplest visual datum, such as the round white patch that we took above as an example, comes to us bearing with it its interpretation in terms of our own supposed past and a supposed material world. We are only carrying the same line of reflection a little further, when we say that the sound which I interpret as a voice speaking, or again the set of spoken or imagined sounds which is the vehicle of any thought expressed in words, come to me bearing a more complicated interpretation in terms of these supposed realities. And the beliefs, express or implied, which I find myself holding at any moment as to the nature of these realities have a place in my immediate experience as unquestionably as any other element in that experience.

In the distinction then which we draw between immediate experience and any reality outside it, we must include within immediate experience all the interpretation of that experience which at any moment appears as present in it. We include it, that

is, as a fact; we do not include any presumption as to whether this interpretation, in so far as it refers to an outside reality, is right or wrong. And this conclusion, to which we have been led step by step, seems once it is reached to be natural and even obvious. My awareness of a belief, just as my awareness of a colour or a taste or a sound, seems to fall evidently within that region of immediate experience, of which we said above, that it appears to us as certain; that none of the reasons which have given us ground for doubting other supposed certainties give us ground for doubting this; that it can rest on nothing but itself; and that if it is not certain, all foundation for a knowledge either of it or of anything else is cut away.

Can we then come any nearer to isolating the element in the moment's content of thought which can be considered indubitable? We may say perhaps that it is that element or aspect which serves only to give expression to feeling, and which does not claim to use a public language for communication with an outside world. Common sense would say, and rightly from its own point of view, that it is the primary business of language to communicate; that the essential function of human speech is social, to inform or direct or question other people; and it might add that this social function can be traced far down into the animal kingdom. But if we listen to a dog barking, or to a skylark singing as it rises, or to a baby as it coos to itself, we may realize that vocal utterance has another function still more primary, in which it does not appeal to or expect a listener; that immediate feeling can express itself in a cry of pleasure or of pain, and be heightened or relieved by the expression. We may guess indeed that such a use of vocal utterance to express immediate feeling must have been there first, if its social function to communicate feeling to others was ever to grow up and develop into the power to communicate thought. And the most elaborate constructions of thought may have a side to them on which they can be viewed as having this primary function of expressing feeling.

We have then to understand the content of immediate experience as including all the beliefs which at any moment present themselves as interpreting that content. But next it must be asked, How far do our particular beliefs, which are already interpretations, require a further interpretation to make them intelligible? We are brought back here to a line of thought which we opened up earlier. The course of my thinking and perceiving is determined by an

order or system of thought which it cannot depart from with impunity; this is one of the deepest of our convictions, perhaps for reason the deepest of all convictions, and the one which it is most reluctant to let go. This order of thought has been supposed by historic common sense to be operative in various realities variously conceived: in a material world; in a number of separate human minds or experiences; perhaps in an absolute or universal mind or experience which includes these and, it may be, transcends them. And reason, addressing itself to the problem, What is the nature of reality?, and abandoning one supposition after another as unfounded or uncertain, retains at least its certainty that there is such an order of thought. If the inquirer is led by a line of reasoning such as we have followed to doubt whether there is any reality beyond his own experience in which this order of thought can be operative, he will still hold to the belief that it is operative in his own experience. And if he goes a step further along this road, and doubts the reality of his own experience beyond the present moment, this again will give him no reason to doubt that there is an order of thought operative in his experience at that moment, which determines the course of his thinking and perceiving to be such as it is. Even if he cannot be sure that anything exists beyond the present moment, he can be sure that for him in that moment two and two make four.

But now if I ask, From where does the belief that two and two make four derive its certainty, what is the nature of the compulsion that this belief exercises on my thinking? the answer must be that it controls my thinking not as a simple isolated belief, but as a belief that is bound up with the whole system or order of mathematical ideas. It is the weight and pressure of this whole system of ideas that is felt behind the particular belief and gives it its compulsive power. If then I seek to give a complete account of the content of my experience at any moment, the right answer seems to be that this content includes, not only the particular ideas or beliefs of which I am at the moment distinctly aware, but also behind them a system or order of ideas and beliefs, which determines my particular ideas and beliefs and gives them their significance. The system gives the particular ideas and beliefs their significance, because each of them stands for something beyond itself, and if I were to ask what it stands for, I should be led into inquiries branching out further and further on various sides into the whole system of my ideas. And the system again determines the particular beliefs which come up in my mind, allows some,

excludes others, and makes each particular belief take the form it does.

Let me suppose that I have before me in my field of vision sense data of line and colour which I interpret as the flower, leaves, and stem of a plant. But of what kind of plant, I wish to ask; for several possible interpretations may present themselves to my thought, and between them I am in doubt. And if I seek to answer this question, I find myself led on to consider a whole system of beliefs as to the form of a flower's organs, as to various families of plants, as to what peculiarities of form are characteristic marks of different families, as to the surroundings in which this or that species of plant would be likely to be found. Of the beliefs which compose this system only a very few can be before my mind at any one moment, and yet the few that are evidently present derive their force and weight from the obscurely felt pressure of the whole system behind them and from their relation to the system. If I first interpret the data before me in terms of the belief that the flower belongs either to this or to that species, but not to any of those others; and if I then take a further step, in which I interpret it as belonging to this species and not to that; I take these successive steps supposing that I can trust my knowledge of the marks that distinguish one family or species of flower from another, supposing, that is, that I can trust the whole system of my beliefs about flowering plants.

When then it is asked, How can immediate experience be understood without going beyond it? the answer is that it is intelligible in itself because it bears within itself its own interpretation. If the simple elements of experience came as isolated elements merely; if the visual scene were to appear merely as a kaleidoscope of bits of colour; if the words that I hear were to come to me merely as a set of separate sounds; they might be said in an important sense to be unintelligible. Not entirely so, for they would even then have their own peculiar quality for taste; but unintelligible in the sense that most concerns our present inquiry, because they would mean nothing that could serve as the starting point for thought. But the interpretation requisite to make them mean something is already present in them as they come before the mind. The sense data come not as isolated units, but grouped into wholes, and these wholes for the most part present themselves as objects with their own nature and their mutual relations. And these objects, their nature, and their relations are further explained by the total system of the mind's beliefs, which is itself as certainly

present in immediate experience as is the simplest sense datum; present, not explicitly in its full extension, but implicitly in the sense that no element in experience would have the particular unique taste that it has, except in virtue of its relation to this system of beliefs.

But is not this interpretation of itself which immediate experience brings with it unintelligible, in as much as it is incomplete? It is incomplete, no doubt; but not therefore to be called unintelligible. On the contrary, just the fact that at any moment there is something that we do not understand is evidence that there is a great deal more that we do. The moment's experience usually, if not always, presents a problem. But the problem is in general a definite and limited one, which is only seen as a problem because its conditions are in some measure understood. And for most of us most of the time the problem is a fairly simple one. That the path here branching to the right and not the left-hand one is the nearest way home; that the tool I am taking in my hand is a screw-driver and not a chisel; that the clock I have just heard strike struck seven times and not eight; if we can interpret experience in such ways as these, the interpretation may very well be all we need. And if we go beyond these simple instances and envisage some more complex situation, still as a rule there will be a particular problem to be solved; either a problem of practice, or a problem of theory, which for the particular mind at a particular moment is a problem of practice. The answer to it will often be doubtful, in its details and perhaps even in its main features; but the problem can only appear as a problem, because the momentary experience is so far intelligible that it can be seen in what part of the field of thought the answer is to be looked for.

We may seem in this last part of our discussion to have elaborated overmuch an argument that might be taken for granted. For the point that we are at present concerned to establish is a conclusion which is needed as indispensable either by common sense or by any possible reasoned system of philosophy: that immediate experience is something that we can in some measure understand by itself. Each of us has at any moment to start from his own experience of that moment, however inadequate it may be. And unless he could in some measure understand this, and understand it rightly, how could it ever be the starting point for a journey to more complete knowledge? Whatever aids he may have to help him to fuller knowledge he must, if he is ever to use them, be able to use in the present. However wide the range of his thought may be, it must find room for itself within the circle of immediate experience.

CHAPTER XI

PHILOSOPHIC DOUBT

THE position to which we have now been brought is this: that an inquirer setting out on his philosophic journey, who asks himself which of his beliefs about reality he can count as certain, which he must hold doubtful, finds himself driven back on one certainty as alone beyond the reach of doubt, the certainty of his immediate experience. His belief in the reality of a material world, or in the reality of other minds, or in the reality of his own past and future, can all of them be doubted; and they appear, once they are questioned, to be so far doubtful that no sufficient logical ground can be discovered for holding any of them to be true rather than false. And all that he can save out of these solid-seeming beliefs is some such shadowy counterpart of them as is needed to prevent the moment's experience from being altogether unintelligible.

But must there not, common sense will say, be some flaw in the line of argument by which this paradoxical conclusion has been reached? The doubt is preposterous enough, and the residual certainty which the argument has claimed to find at the bottom of it seems to make it still more preposterous. If our inquirer is to doubt in this way beliefs which to common sense appear so certain; if he is to doubt, for instance, his belief that the chair on which he is sitting and the street which he can see through the window exist as parts of a permanent material world; what right can he have to suppose that any of the other beliefs with which he started are certain or even probable? None of these other beliefs could well have seemed more certain than the beliefs which he is now renouncing as doubtful; few of them so certain. Must not then all of them be swallowed up in the same gulf of doubt? And if all are doubtful, must there not be an end of all discussion, or of any hope of advancing from the certainty of immediate experience to any further certainty?

If we are to do justice to this question, we must try to consider more closely than we have yet done the mode of reasoning which has brought us to where we now stand. What we have been trusting ourselves to is a procedure which has a recognized place in the history of philosophy; the procedure of methodical or philosophic doubt. It is a method which has been defended by some celebrated philosophers and practised by many; we may say indeed that any inquirer who has gone so far as to doubt the reality of the material world has committed himself to it in some measure. But is the method in itself a sound one? We ought perhaps if we had been setting out in an orderly way to have put this question to ourselves before we began to employ it. But in fact if we had done this we should not have known what we were inquiring into, and we may be able to think about it rather better now that we have tried to put it into practice.

What then is the aim and principle of the method, as it was conceived by the philosophers who formulated it or who have tried hardest to carry it out? In some such way, it would seem, as this. The conflict of human opinion, they would say, extends so far and goes so deep, that we cannot safely trust even our most cherished opinions until we have first attempted to doubt all of them that can be doubted. Let us set ourselves then to question the whole body of our beliefs, or the main presuppositions which underlie these, even those among them which seem to us most certain; let us take each in turn and try to the best of our power to hold it in suspense; let us ask about each what we must lose if we should no longer be able to believe it. Following this method we may hope that we shall be able to discern among them a residue, which stands out as certain beyond question, and which can serve as a firm foundation for our philosophy. Out of this nettle, doubt, we pluck this flower, knowledge.

Plainly the doubt which is here appealed to is doubt of a special quality. It is not the easy doubt, which feels it too much trouble to search for a way through the tangle of conflicting opinions; nor the despairing doubt, which has attempted the search and in face of the difficulties has given it up as hopeless; nor yet the perverse and over-ingenious doubt, which is so ready at every turn with its objections that the most solid certainty could not resist them. It is a doubt which rests on an underlying confidence in reason; on a belief that reason, if we follow it as well as we can, may be trusted in the end to lead us right rather than to lead us wrong, and that it has in it a power of self-criticism and self-correction,

which can enable it to discover its own mistakes and to supplement its own deficiencies. Some such ultimate trust in reason must be taken to be assumed in the whole enterprise of philosophy, and in particular to be assumed in the method of philosophic doubt.

But we have still to ask, Can the method be carried out consistently? Or does it involve some essential fallacy, so that when we try to employ it we are led into a line of reasoning in which our end contradicts our beginning? If I can be certain of nothing beyond my immediate experience, how can I suppose myself to know, for instance, that there have ever been philosophers in the past who practised this method of philosophic doubt, or that there is such a historic construction as the English language in which the words 'philosophic doubt' can have a place and a meaning, or that I can know enough about reasoning to tell the difference between a good argument and a bad one? If I do not know any of these things, how can it be possible for me to discuss the problem? If I suppose myself to know them, shall I not be assuming myself to know a great deal which I was just now assuming myself to be ignorant of? Such are the kind of questions that may be raised as to the consistency of the method; and we must find some answer to them, if the attempt to employ it is not to turn round and round in a circle.

The philosophers who invented the method must have had in mind some principle of order, in the light of which it could be carried out without leading to an inner contradiction of this kind. They assumed that they could with reason and consistency doubt beliefs which common sense has never questioned, and which they themselves would never have questioned before they began to speculate; and yet be entitled to retain a multitude of other beliefs, which to common sense must seem much more problematical. Such an assumption seems to be an essential one, without which this whole method of arguing would fall to pieces. Thus we find that the many philosophers who have doubted or denied what seems to common sense almost the most certain of all our beliefs, the belief in the existence of a permanent material world, have yet supposed themselves to be sure of a number of particular facts of physics or geography or history, which for common sense depend on this belief in a material world and would appear unintelligible without it. Those philosophers again who have maintained other and perhaps even more subversive forms of scepticism, those for instance who have doubted whether anything like the common-sense notion of cause is valid, have yet

continued to take it for granted that they and their readers know a great many things, the knowledge of which depends (or so common sense would hold) on this very notion. This kind of assumption then, that it is legitimate to doubt beliefs which for common sense seem certain, and yet continue to take for granted beliefs which for common sense seem much more doubtful, and which seem even to depend on the very beliefs which are being doubted, must be taken to be a necessary part of the method of philosophic doubt.

There must then be assumed in the background some principle of order, in the light of which what is to be doubted may be marked off from what is to be taken for granted. But it is not easy to find such a principle formulated in the writings of those philosophers who have used the method, and it is by no means clear whether all of them have had in mind one and the same principle. And we may be helped at this point if we appeal to the modern author of the method, and try to find out from his employment of it what he meant by it and what he believed that it could do.

Modern philosophy, as the story is told us, begins with the step taken by Descartes, when he set himself to doubt all that could reasonably be doubted, and summed up the one indubitable certainty in his formula 'Cogito ergo sum'. So much we may take as an accepted item of philosophic history; and the step is looked on as important enough to make the starting point for a new era in European thought. But if we push inquiry a little further, we find no such general agreement as to the manner in which this famous maxim is to be understood, how wide a field of certainty its author conceived it to cover, or what conclusions he claimed to draw or could be justified in drawing from it. As to the interpretation of the words themselves there is difference of opinion; but here we may hope to be near enough to the right view if we suggest the following. That when Descartes says 'Cogito', he has in mind not the act of thinking in a restricted sense in which it might be contrasted with other modes of mental activity such as imagining or perceiving, or at any rate not this only; that he has in mind also a wider significance of the word, in which it may be taken to cover any possible form of awareness or experience. That when he says 'Sum', he does not mean to say that he can be certain that he exists as a particular individual, René Descartes, who was born in such a time at such a place and lived through such a series of events; but only that he is certain that he exists in the moment in which he is aware of himself as (in this wide sense)

thinking. That when he says 'Ergo', he does not mean to assert that the second of these certainties can be shown to follow logically from the first, but only that on examining the first certainty he seems to find the second somehow bound up with it. Or as we might paraphrase the maxim, a little expanding it: in my awareness of my immediate experience I find an assurance of reality that I cannot doubt.

We need not here attempt to trace the steps by which Descartes conceived himself able to advance from this first certainty to a complete philosophy, nor ask how they are to be understood or how far they could meet the needs of speculative thought today. What concerns our present purpose is to note the principle, implied as it seems in his procedure, though not expressly stated in his maxim, by which what is doubted is marked off from what is taken for granted. The inquirer is to take the content of immediate experience, as this presents itself in the moment from which inquiry starts; he is to accept the ideas and beliefs which he finds there, as the material to be used in his inquiry; he is to suspend judgment as to whether any, or which, of these ideas and beliefs are true, in the sense that they correspond to a reality outside the experience. He has then before him at the outset two worlds or two orders of being: a world of reality, which must, if he is to be able to doubt or to think at all, be as large as the moment's experience, though if he is to doubt everything methodically, it must at the outset be conceived as perhaps no larger than this; and a world of thought which, if he is to doubt methodically, must contain the stock of ideas and beliefs with which the business of doubting has to be carried on. This way of looking at the position seems to be reasonable and necessary, if doubt as Descartes thinks of it is to be possible; it comes back indeed to little more than the reflection that, if we suppose ourselves able to doubt, in the sense of being able to compare two alternatives, we must suppose ourselves able to understand the language and the arguments by means of which the comparison has to be carried out. And along this line we may be able to find an answer to the question which is before us, as to whether there might not be an inner inconsistency inherent in the method.

The doubt is to be methodical; and if the inquirer is to proceed methodically in the business of doubting, he will not be able to doubt everything, still less to doubt everything at once. He will have to doubt things one by one, and doubting things one by one will need time. He must start then with the beliefs he has, whatever

these may be; he must take them separately in succession, and ask about each whether in the light of reason he can decide to retain it as certain, or at least highly probable, or whether he should reject it as merely doubtful. And time will not suffice him for asking this question about everything. He will have then to select for scrutiny out of the whole multitude of his beliefs a limited few, which stand out among them as the most general and the most important for his total view of reality. All the rest, the great mass of his particular beliefs, he will have to leave unscrutinized and to go on accepting them as he did before, not because he has in any way justified his belief in them, but because it is not his business along this line of thinking to question them. And one large portion of this mass will consist of the beliefs which he has come to look on as making up the body of public knowledge; the beliefs which he conceives himself to share with the common sense of his time, or with the best part of that common sense, and to represent the opinions of those most qualified to speak in various fields of inquiry. He cannot reject these beliefs in their totality without depriving himself of the power to sustain an argument; and if he is to keep them as a whole, he will have no reason to reject any one of them, until some particular ground for rejecting it appears.

Yet he ought not to suppose that the beliefs which are thus retained in the background of his thought will remain unaffected by the process of doubting. It may very well be that they are retained in so far as they are particular, and yet at the same time doubted in so far as they are general. Any given belief, that is, may be regarded as containing within itself a particular element, which is usually what is prominent in thought when the belief is formulated; and a general or metaphysical element, which is concerned with the status in reality of that whole order of beliefs in which the particular belief has a place. And in methodical doubt the particular element is retained, while the general element is doubted. Or to put the matter in other words, we retain our particular beliefs without prejudice to what their metaphysical significance may turn out to be. They are not cancelled, but they are carried to a suspense account, where they are left standing till we can determine how they are to be applied to reality.

We have here come to a principle which is important for the method of philosophic doubt, and which we may call the 'Principle of Transposition'. Our beliefs about matters of fact, most of them and perhaps all, contain a particular element and a general or

metaphysical element. The particular element in their content is the only part which is usually prominent in our thought when we entertain the belief; it is that element in the belief which distinguishes it from, or relates it to, other beliefs in the same order or system of ideas. But there is also a general or metaphysical implication as to the relation of this whole system of ideas to reality, which is not for the most part present to thought, but which thought can become aware of if the implication is questioned. And any belief which contains these two elements can be transposed, so that the metaphysical implication is altered while the particular significance is retained. The transposition can be effected, we may add, in either of two ways: by a change of words, in which the original wording is discarded as having a misleading metaphysical significance, and a new wording substituted; or by a change of meaning, in which the original wording is retained but is given a new interpretation.

Matter, for example, the Phenomenalists tell us, does not exist; and if this assertion is to be more than a trivial dispute about words, it means that material objects have no independent existence of their own, but exist only in so far as they are perceived or thought about. Here is an assertion which seems at first sight to contradict radically the beliefs of common sense, and the beliefs of physical science which have grown out of these. But a Mentalist philosopher can point out that, when he denies the reality of matter or of a material world or material things, he does not mean that any particular belief either of common sense or of physical science has to be discarded. Such beliefs have only to be transposed out of one set of metaphysical implications into another. Thus any statement about the characteristics or relations of material things can retain its particular meaning for common sense and for science, if it is transposed so that it is taken as a statement, not about the characteristics or relations of material things, but about the characteristics or relations of percepts or thoughts; and this transposition can be effected either by a change of words, as when the word 'matter' is rejected as having misleading associations, or by a change of interpretation, as when the word 'matter' is retained and interpreted as meaning a bundle of percepts or of thoughts.

The method of philosophic doubt seems then to assume these principles. There is first the principle that when we doubt a belief, we must suppose ourselves able to understand what it is that we are doubting; then the principle that we are to doubt

beliefs not in the mass, but one by one; then the principle that each particular belief can be divided into two parts, its particular content and its general or metaphysical content; then the principle that each belief can be transposed in various ways so as to retain its particular content, while its metaphysical content suffers one reduction after another. These principles, it seems, can be applied consistently, and if they are applied consistently they can justify what at first appears paradoxical in the method. Those for instance who maintain that the material world is unreal, will continue to assume that particular beliefs about the regularities known as physical laws retain a meaning, in as much as they hold good of the relation of some elements to others in an order of ideas which we may call the 'physical' order; and those who maintain that time is unreal, will still assume that particular beliefs about events in time retain a meaning, in as much as they hold good of the relations of some elements to others in the order of ideas which we may call the 'historic' order; whatever the metaphysical status of those orders is conceived to be.

We have been led through a series of positions in which we have surrendered piece after piece of our original common-sense outlook, and which have presented an increasing appearance of paradox as we looked at each of them in turn. We have come at the end of them to a final position which should be, and which at the first view of it appeared to be, more paradoxical than any of them. And now behind this paradox we find another: that when we try to draw out the implications of this final position, we seem to be doing hardly more than making a plain statement of the conditions under which the work of thinking has to be carried on. We emerge at the end of this journey through paradox into a conclusion which, if it cannot quite be called obvious to common sense, yet appears when fairly looked at too evident to be denied. How are we to explain this unexpected turn in our inquiry?

Methodical doubt rests, we saw, as all philosophy must in the end rest, on a trust in reason; on a belief that reason as it operates in human thinking has a power of self-criticism, which can enable it to correct its own mistakes and to supplement its own deficiencies. How far this trust is justified, what material reason may need to work on, by what agencies it may need to be reinforced, all these will at the outset be open questions; but one presupposition must be made if inquiry is at any moment to begin, that human thinking is possible and that the conditions which make it

possible are at that moment fulfilled. It is then not surprising that methodical doubt, when it seeks to establish an order of priority among certainties, should place first the certainty of 'Cogito', this certainty being conceived as having two sides or aspects: first the certainty that the moment's experience is a reality, which is the necessary condition if thought is to be possible as a fact in nature; second the certainty that there is access in this experience to a system of ideas, which is the necessary condition if thought is to be able to reach beyond the moment. And when the primary certainty is thus defined, beliefs as to any supposed realities beyond this are thereby relegated to a later place in the order of certainty. This relegation does not mean that philosophy need renounce the hope of being able to establish with sufficient certainty a belief in such realities; but it means that the certainty of these beliefs will be secondary, and that the decision which accepts them must be made within limits which the first certainty has defined. And this view of the position, which seems in the abstract to be reasonable, seems also to be in accord with what in fact happens; it is a fact we cannot escape from that each of us has to do his thinking for himself and in the present moment. The belief in any reality beyond the thought or feeling of the moment can from the point of view of logic possess only a secondary degree of certainty, and if we make our logic strict enough, may be called logically superfluous.

The realization that immediate experience is certain, in a way in which nothing else is, has therefore been in fact the main motive force behind the line of thought to which we trusted ourselves, when we decided to renounce the belief in a material world. It is natural then that it should emerge as the conclusion to which we come, when the successive positions at which we tried to halt on the way have one after another proved untenable. And this reflection does something to dispel the air of paradox which has hung about our discussions since we committed ourselves to a Mentalist philosophy; and which arises, as we now see, because all forms of Mentalism that stop short of Immediacy draw the better part of their force from a sceptical argument, which they are not prepared to push to its logical result. But while the paradox is partly removed, the problem behind it remains, and stands out the more clearly now that we recognize it as the main issue. If we are right in saying that immediate experience is more certain than any supposed reality beyond it, must we not also say that all these other supposed realities are less certain than immediate experience? And if they have only this inferior certainty, if we must admit that

they are in some measure doubtful, why should they not be doubtful altogether? The line of thought which has brought us down to this primary certainty has not so far pointed us to any further line of thought which might be able to lead us back to the world of common sense. What we need is a criterion that can show us which among the entities presenting themselves to immediate experience as ideas, correspond to realities beyond that experience. Can we find such a criterion of reality?

If we imagine an ideal percipient, who could compare the experience of different sentient beings at different moments, he would find the proportions of thought and of feeling at these different moments varying in all sorts of ways. We may suppose that in animals and in young children the whole content, or nearly the whole, would be feeling, in the sense in which we are contrasting this with thought; and thought as opposed to feeling would be absent almost or altogether. And even with adult human beings there may be moments from time to time, when the mind is so taken up with some dominant feeling that it does not attempt to relate this to anything beyond it. But the common case is that thought and feeling are both present, but that feeling of some kind, sensation or emotion or desire, is predominant, and thought is subsidiary to these. We are however more particularly concerned now with a particular kind of moment which may come sometimes in the experience of a thinker or inquirer; a moment in which the mind is concentrated on an intellectual effort, and sensation, emotion, desire, and even feeling, apart from the single feeling of this effort, recede so far into the background that they seem to disappear. Moments of this kind are likely to come now and then to anyone who tries to think hard in any field of thought, and in particular to anyone whose intellectual effort takes the form of trying to think about philosophy.

It is from such a moment of concentration that a would-be philosopher may be conceived to set out on his journey of inquiry, and if he means to begin from the beginning he will have to proceed by the method of philosophic doubt. He will hold in suspense then all his beliefs as to whether there is any reality beyond the first circle of his immediate experience; and what he will find within this first circle is a pin-point of reality, his own feeling, which is now narrowed down to a feeling of intellectual concentration; and a world of thought which in this moment of concentration opens out before him.

A world of thought opens out before him; but how in a moment is he to grasp a world? We are forced here sharply against a question which for some time past has been waiting for us. How is it possible that in the brief present experience, which is all the time that anyone can ever have at his disposal, he should be able to survey the system of ideas and beliefs, which he must somehow envisage as a whole if his philosophy is to be worth anything? It would seem that two or three beliefs or propositions at most could be held before the mind at once, enough perhaps to show whether at some point a contradiction exhibits itself or a valid step in inference can be established, but nothing further than this. It looks like asserting an impossibility when we say that within the moment a whole system of beliefs is somehow present; and yet when we consider what are the actual conditions of knowing or thinking, we have to say that something like this seeming impossibility is no more than the truth. How it can happen is difficult to understand, still more difficult perhaps to describe in words; but the difficulty is not created by the supposition that an inquirer can be certain only of his own experience and of no reality beyond that. It is a difficulty which arises out of the very nature of our thinking, out of the fact that all thinking must be done in the present moment; and our thinking, we venture to say, is something which certainly happens, and which therefore cannot be impossible or self-contradictory in its nature, however hard it may be to understand or to describe it. I seem to be sure at any rate that, when I set myself to compare one belief with another, the two present themselves not in isolation, but each one attended by some at least of the grounds which should make me incline to it rather than to the other. I am not likely to have before me all the possible relevant considerations, not even all those among them which have been before me at some time in the past. But it seems certain that a great mass of associated considerations, which I am not aware of having before me at the moment, and for which it might seem there is no room in my mind at the moment, yet makes itself somehow felt in the background of my mind and determines the way in which the issue is decided.

An inquirer who sets himself to scrutinize the content of his immediate experience, suspending for the time all assumptions as to anything beyond it, can say at least as much as this: that whatever particular beliefs may come before him come not as bare separate beliefs, but as representative of a whole field of thought, so that he seems to see the field spread out before him and to have

power to survey it, as he might survey a landscape from a height. And this perhaps is all that he can say while he looks at the position from the standpoint of methodical doubt; but if he can recover the standpoint of common sense, he will find much in the common-sense outlook which can fit in with this seeming, and which demands and justifies his confidence that he has this power.

But when I say that my mind has this power, I ought perhaps to guard myself; the expression may imply more than I have a right to say. It is only sometimes that my mind is able, or even seems able, to command the thought it wants; at other times, and perhaps always, a thought comes whether wanted and worked for or not. My possession of the system of thought which I call mine is imperfect and fragmentary; I can only get hold of a little bit of it at a time, and that not in the shape or order I most want, so that it may seem claiming too much to call it mine at all; and yet it may be called mine in the sense that the particular thoughts which come to me are different from what they would be if the whole system were not behind them.

This system of ideas and beliefs controls the line which my experience follows as it changes within the moment and as it moves on from one moment to another. And in the successive moments I can get into touch with one after another piece of the system, and so make contact with the whole system in the only way in which the conditions of my thinking allow me to make contact with it at all, that is, in a piecemeal way.

If I try to think of the system as a whole, I must conceive it as no more than possible or ideal; it is actual only in so far as it operates from moment to moment in the circle of immediate experience. And this circle, narrow as it is, is large enough to contain all the thoughts that I can ever think and all the arguments that I can ever use. All thought and argument is made up of successive steps, and each of these steps must be taken in a particular moment, and the justification for me of any step must depend not on my remembering all the previous steps that have led up to it, to do which is quite beyond my power, but on my feeling somehow an assurance that some belief which I entertain at the moment is justified.

We have then to ask, Can we find a criterion to show us which, if any, of the ideas and beliefs thus presenting themselves in immediate experience correspond to realities beyond that experience?

And here it may be worth while to go back to Descartes, and

consider how he answered this question. His criterion, or rule, was expressed in these terms, that all the things which we very clearly and distinctly think are true; or again, that we shall never err if we give our assent only to what we clearly and distinctly perceive. These terms imply an analogy drawn from sight; it is implied that, just as the eye has a power by which it can judge that one visual appearance is more clear and distinct than another, so the mind has a power by which it can judge that one idea is more clear and distinct than another; and the analogy suggests that in either case the conception is one which we have to understand by taste rather than by definition. The same may indeed be said of the notion of understanding itself; some ideas come to us with a taste of being intelligible, we feel that we understand them, and for some of them at any rate we cannot hope to get any better guarantee than this taste or feeling.

But if all we could say was that some ideas have this quality of clearness and distinctness, we should have made no great advance. If the criterion is to be used to effect, it must help us in some way to order our ideas and to discriminate among them; and here two further reflections suggest themselves. First, that ideas which in themselves do not appear clear or distinct, may become so for us, if we find that they can be analysed into simpler ideas which are clear and distinct. Second, that a body of beliefs and ideas can only be called clear and distinct, if we find when we examine them that they are mutually coherent, at least in the sense that they do not contradict one another.

With the notions of analysis and coherence here introduced we are brought to the domain of logic; and Descartes, when he appeals to the tastes of clearness and distinctness, must be taken to assume that he has at his disposal some principles of logical reasoning which he is entitled to trust. In assuming this he is perhaps adding something to the primary certainty he has expressed by 'Cogito'; the thinker who has carried doubt as far as he can is to be supposed still certain, not only that he can think, but that he can think rationally and logically. The assumption is one which it might seem natural to take for granted; it may be said to be implied in the procedure of methodical doubt, and indeed in the whole enterprise of philosophy; yet if we are to set out explicitly our ultimate presuppositions, this should be included among them. The inquirer who takes up the position of methodical doubt must assume that he has left to him, as part of his primary certainty, some principles of reasoning which he can attempt to

follow and which he hopes that he can follow successfully. He need not claim that he can formulate them precisely in detail, nor perhaps that he can formulate them at all, but he must be confident that he can in practice so far employ them as to make his thinking likely on the whole to go right rather than to go wrong. This at least must be included in the primary certainty, if he is to be able to pass from that to a reasoned assurance of any reality beyond it.

The criteria laid down by Descartes, understood in this way, seem to be natural and reasonable criteria to employ when we attempt to order our ideas and beliefs and to discriminate among them. That we should start from those among our beliefs which appear to us clearly true; that we should inquire which among the ideas that compose them are either themselves clear and distinct, or can be analysed into simpler ideas which are clear and distinct; that we should inquire further how far these ideas and beliefs as a whole are consistent with one another; some such procedure as this, however it may need to be amplified or supplemented, seems in principle the right procedure to employ. But our aim at this stage is not only to discriminate among our beliefs and ideas, so as to make of them an intelligible and coherent system; we are concerned further to ask whether they correspond to a reality outside the system. How far can the criteria we have been considering serve us for this purpose?

If I think of the whole body of my beliefs as I have accepted them from common sense, or from what I suppose to be the public knowledge of today, my first impression is that many of these beliefs are certain, or so highly probable that I do no violence to language in calling them certain; and that many of the ideas composing them are reasonably clear and distinct. But if I apply the method of philosophic doubt and try to separate what is particular from what is metaphysical in my several beliefs, I find that all my particular beliefs can be transposed from one set of metaphysical implications into another without losing their particular content; and as the work of transposition and separation is carried out, I find that all the apparent certainty, clearness, and distinctness is left on the side of the particular content, none of it on the metaphysical side. The tests of clearness and distinctness can serve us for the purpose of relating our particular beliefs to one another within an ideal system; they do not seem to help in answering the question what is the reality, or whether there

is any reality at all, which this ideal system corresponds to and describes. And the ideas and beliefs which are most evidently clear and distinct are not the ones which seem most evidently to reveal a reality beyond themselves.

Let us consider first this last point. If we compare with one another the main systems or orders which we can distinguish within the whole system of our ideas, if we ask which of them can be said to satisfy most fully the tests of clearness and distinctness, and the test of coherence which we are taking to be bound up with these, our answer must be: the system of mathematics, to which should perhaps be added the system of formal logic. And these systems and the ideas composing them are just the systems and ideas which least claim to reveal a world of reality beyond themselves, and of which it is least easy to suppose that they do this. In saying this we should perhaps not forget that a famous school of philosophy in the past has maintained the contrary; has held that the ideas of mathematics or logic reveal a world which is not only real, but possesses reality in a pre-eminent sense, and has held this mainly, it would seem, on the ground of the pre-eminent clarity and coherence of these ideas. This was believed once, and it might be rash to say that it will never be believed again; but such a view would find little support from common sense or from common philosophy today. The general view today would be that mathematical ideas neither exist in a real world of their own nor reveal to us any world of reality; they may be said to be true or to hold good in some sense that is important, though difficult to define, of the material world if that exists, and of the thinking of whatever minds may exist; but this is only because they would, in the same difficult and important sense, be true or hold good if nothing existed at all.

Let us turn now to the other main systems of ideas which we believe to form part of the body of public knowledge, such as the physical or the geographical or the historical system. These systems of ideas, however they may differ from one another, have in common some main features which distinguish them from the mathematical system, and we might in view of these group them together as the physical system. The first main feature is that the propositions and ideas of the physical system have a lower degree of coherence than those of the mathematical and logical systems; they are coherent in the sense that they are mutually compatible, they do not admit of contradiction with one another, or if a contradiction is suspected in them, they are felt in so far to need

correction; they are not coherent, as the mathematical and logical systems are, in the fuller sense that the main body of their propositions can be deduced from a few initial ones. A second main feature is that the propositions and ideas of the physical system are supposed by common sense, in a way in which the mathematical and logical systems of ideas are not, to be derived from sense perception and to be justified by reference to that. And a third is that they are supposed by common sense, in a way in which the mathematical and logical systems of ideas are not, to reveal and describe a world of reality or existence beyond themselves.

Can we assign any clear or distinct significance to these vague terms, 'reality' and 'existence', which common sense seems to understand as more or less equivalent to one another? We suggested earlier what might be a partial answer to this question: that an inquirer who believes anything to exist or to be real believes that it exists or is real in the same kind of way and with the same kind of right as his own immediate experience. But this answer is at best only an appeal to a typical instance, not a definition; and even if we allow some truth in it, it does not take us far. It leaves the concept of existence vague in the extreme, and it gives no clue to indicate what entities should be conceived as existing.

If we look for more definite guidance as to the way in which propositions asserting existence are to be understood, we may be led to some such answer as this. A proposition which asserts that some particular entity exists or has existed is to be understood as asserting that an entity marked by some particular set of qualities can be assigned to a particular position in the order of space and time. Common sense would be ready to go further, and to say that it can be assigned to a definite position in the history of the material world; that world which it believes to have a substantial existence independent of thought or perception. But if we are to exclude any metaphysical implication, we must be content to conceive the order of space and time as an ideal order, by reference to which the propositions forming part of the physical system of ideas can be arranged consistently with one another.

What then, we must ask, can be the ground for making such an assertion about existence, and what further ground can be alleged for holding it to be justified? The ground for making it would seem to be that the proposition presents itself to a thinker in some moment of experience, either as one of a very small number of

propositions which seem to express a percept apprehended by him in that moment, or as one of a much larger number of propositions which claim to express percepts, apprehended either by him or by some other person in the past. And the ground for holding it to be justified more or less fully would seem to be this: that it is verified by being found to be consistent with some other proposition or set of propositions, which are grounded in one or other of the ways just mentioned. Taking this account of the matter to be adequate as far as it goes, we may say that a particular proposition about existence must be so far clear and distinct, that the entity to which it refers can be marked off from other entities as having particular qualities and as assignable to a particular point in space and time; and again that it must be consistent with other propositions adjacent to it in the same order of ideas.

The account thus briefly suggested opens up a multitude of problems, which it is beside our purpose to consider here. It is the business of logic to explore these problems in general, and it would be the business of a philosophy which claims to have established a metaphysical doctrine, however modest, to discuss them in relation to that doctrine. For the purpose now before us it is enough to say that we can see here the beginning of a line of thought which might show how existential propositions, in so far as they are particular and in so far as they are verifiable, can be contained within a system of propositions which is internally coherent; and again how propositions of increasing generality, in so far as they are based on such particular and verifiable propositions, might be incorporated into the system. And we can see how the particular propositions and ideas which play their part in the process could be shown to satisfy the criteria of clearness and coherence. But we cannot see here even the beginning of a line of thought, which could show that this internally coherent system of ideas represents or reveals a reality beyond itself. All we seem able to say of the system as a whole is, that it has a certain measure of internal clearness and coherence, but that it possesses them in a lesser degree than they are possessed by the system of mathematical ideas. And if the greater clearness and coherence of the system of mathematical ideas is not sufficient to guarantee them as revealing a world of reality beyond them, it is hard to see why the inferior clearness and coherence of the physical or historical systems of ideas should be held sufficient for such a purpose. The criteria of clearness and coherence are useful, indeed necessary, aids to help us in ordering our ideas and arranging them in a system; they

cannot of themselves answer the question whether beyond the whole system there is any reality other than the ideas.

And now if we go on to compare the particular and the metaphysical elements in our beliefs, as these are related to one another throughout the whole system of our ideas, we find the conclusion to hold that our beliefs owe what certainty, clearness, and distinctness they possess to the particular element in them, not to the metaphysical. Let me consider the point first as regards that part of my thinking which seems most fully coherent, the system of my mathematical beliefs. I believe with an assurance which I cannot doubt that two and two make four, not five or three and a half. What does this assurance cover? First, that I feel sure that I have the belief at the present moment; secondly, that I feel sure that the belief is true. But what does it mean to say that I feel sure that this belief is true? It seems, if I reflect on it, to come down to this: that I am compelled to believe in this way, that the belief is determined by an order or system of beliefs which governs my thinking. If I ask what can be meant by the belief being true more than that I am compelled at this moment so to believe, what objective reality is there beyond my present thinking to which this belief refers, I find no such certainty. How am I to conceive this objective reality? As a world of material objects? or as an eternal world of Platonic Forms? or as a system of logical terms and propositions? or as the thought of the Absolute? or as the thought of other human beings? or as my own thought past and future? Which of these alternatives, or what combination of these alternatives, is the reality to which I am to attach this belief of mine? For any of these alternatives I can cite the authority of thinkers in the past, if I concede so much to common sense as to assume that there has been a past time and in it other human beings who have thought; and whether my suppositions have this authority or not, I can recognize them as alternative possibilities present to me now, between which my thinking hangs loose and is not determined to certainty. Any of them is possible, none is certain; and so I come back to the conclusion that, when I say I am sure that it is true that two and two make four, what I am really sure of is that I am compelled by some law or order in my thinking to think so at the present moment.

And the same kind of conclusion seems to hold good if I turn to consider a part of the total system which has a less perfect coherence, such as the system of my geographical beliefs. I believe

that York is north of London and Newcastle north of York. But what is the objective reality to which I am to attach this belief? To a world of material objects which persist through time and which possess sensible qualities independently of their being perceived or thought about: such is the natural answer first supplied by common sense. But if I am to accept this answer, I must ask, What sensible qualities? The qualities called 'primary' only, or those called 'secondary' too? Or ought I to conceive the answer in some more complicated form, and if so in what form?—for my whole conception of the objective reality must turn on which of these alternatives I select. Or should I in view of the difficulties which have arisen give up the attempt to conceive this objective reality as a material world, and think of it as the content of an Absolute experience, or as the thoughts and percepts of human observers? To assert any of these alternatives is to assert a metaphysic; and if I consider myself not entitled to any metaphysic, I must limit myself to conceiving this reality as my own thoughts and percepts; and if I am to be serious in excluding the last vestige of metaphysical assumption from my thinking, I must limit myself to conceiving this reality as my own thoughts and percepts at the present moment. As regards then the general or metaphysical implications of my belief about the position of London, York, and Newcastle I see various alternatives open, between which I find no sufficient ground for deciding. But this uncertainty as to the metaphysical implications of the belief does not shake my certainty as to its particular content. I remain sure that it is a law governing my thought and perception that I should think, and under the appropriate conditions perceive, the relation between the three places to be such that York lies between London and Newcastle, and not the other way round. This particular certainty remains equally certain whether the metaphysical reality to which it refers is a world of material objects, or the content of an absolute experience, or nothing more than my own thoughts and percepts.

I find then that my metaphysical doubts, even when I push them to the extreme point of doubting all reality beyond my momentary experience, need not deprive me of any particular belief of which at any moment I feel certain. Every belief contains in itself a particular content and a general or metaphysical content. These in ordinary thought are fused together; the particular content being the more prominent, the metaphysical content being felt only vaguely in the background. But the attempt to separate

them must be made by any philosophy which seeks to answer ultimate questions about reality, and notably it must be made by any philosophy which questions the reality of the material world. And when the attempt is made, it is found that they can be separated, as has been shown by one philosopher after another over the question as to the reality of the material world. Any particular belief can be so formulated as to distinguish its particular content from its metaphysical implication, and if I push my doubts to the furthest point I can place on the side of metaphysical implication everything beyond the certainty that the content of the belief is this particular content and that I am compelled by some law or other of my thinking to believe it at the present moment.

And again it is in virtue of the particular element in our beliefs that they are able to explain one another. Let us suppose that a student beginning the study of geometry lights on the forty-seventh proposition of Euclid's first book, and is startled, as an intelligent beginner very well might be, when he finds that the argument undertakes to prove to him that the square on the hypotenuse of every right-angled triangle is equal to the sum of the squares on the other two sides. How, he might wonder, can this audacious undertaking be justified? and how would his teacher explain to him that it is? First, we may suppose, by going carefully through the several steps in the argument, then by showing that each assertion which forms a link in the chain can itself be arrived at by a similar though simpler chain of argument, and in the end by going back to assertions simpler still which the student will be prepared to accept as self-evident. And all the propositions or assertions appealed to in this discussion would be particular propositions and assertions in the mathematical order; some of them no doubt more particular, some more general than others; but all alike particular in the sense in which we are opposing this term to the term 'metaphysical'. What would not be thought relevant to the discussion would be any reference to the metaphysical basis which may be conceived to underlie the whole order of mathematical ideas. Questions as to whether mathematical ideas possess existence or subsistence or neither of them, whether they have their home in a world of Platonic forms or in the thought of the Absolute, or where else, are questions which a philosophically minded mathematician might in a speculative mood be interested to consider; but he would not suppose that the answers to them

could help to explain any particular questions in geometry or mathematics.

Something not dissimilar meets us when we look for the explanation of a particular problem or difficulty in the historical order of ideas. If we ask how we are to explain, let us say, the decline and fall of the Roman Empire, a variety of causes might be assigned by different inquirers: barbarian invasions, the prevalence of slavery, changes in climate, incidence of disease, excessive or defective administration. But all the questions that might arise in following out and comparing these lines of cause would be particular questions, not metaphysical. An Idealist and a Materialist philosopher could agree or disagree about them without reference to any differences in philosophy; and they would not suppose that light could be thrown on them by discussions as to the reality of time or as to the whole status of the historical order.

The power of ideas to explain experience seems then to come from their position in an ideal system, and not to get any additional force from any supposed background of reality on which they may be displayed. In so far as the world of immediate experience appears intelligible, this is in virtue of its being interpreted by some element in the system of ideas; and in so far as it is unintelligible or appears to need explanation, we seek to explain it by a reference to some further element in the system. And does not this in effect mean that, if none of the supposed realities beyond the moment's experience existed, all that they could do to explain or account for experience could equally well be done by the system of ideas which appears in that experience? Certainly the system of ideas is not present as a whole in my immediate experience; but it is present there in the only way in which the conditions of human thinking allow it to be present. There is a small part of the system immediately before me, another small part felt as a margin surrounding it to which I might reach out, and the rest is there as a law or scheme which I feel to determine the ideas so that they appear in the way they do. This is all I can have before me at the moment, however many realities I may suppose to exist outside the moment's experience, and this is not taken from me even if I suppose no other reality than that experience.

We suggested earlier that there are three conditions which a philosophy should satisfy if its explanation of the world is to be held adequate: it should possess completeness, coherence, and economy. It should find a place for all those beliefs which seem to be true beyond reasonable doubt; it should exhibit those beliefs

in such a way that they appear consistent, or at any rate not inconsistent, with one another; it should add to those beliefs no assumption for which a need or sufficient reason is not clearly shown. How far are these conditions fulfilled for an inquirer who reduces his philosophy to a doctrine of Immediacy, and who claims to know nothing beyond the reality of his immediate experience and the system of ideas to which he has access in that experience? As he looks at the three conditions in turn, he can make a plausible case for saying that each of them is satisfied. He can say that his philosophy is comprehensive, in so far as any theory of knowledge can be comprehensive; for whatever belief may at any time present itself in his experience, and that means every belief that it is possible for him ever to think about, can be recognized as having its place in the system of ideas, and can maintain its place there without regard to its metaphysical import. He can say that his philosophy is coherent; not in the sense that it can provide, or can be expected to provide, an answer to all possible questions, but in the sense that any particular question which arises in his experience will have to be answered, and any particular belief which presents itself in his experience will have to be explained, by being brought into relation with other beliefs which lie adjacent to it in the system of ideas; and that it is hard to see how any other philosophy could answer or explain them in a different way. And he can say that his philosophy has in a supreme degree the virtue of economy; since it assumes the reality of no substance or event beyond the one event whose reality it is not possible for him to doubt, his own immediate experience. What then does he lose if he carries economy in belief to this furthest point? Only some metaphysical beliefs about reality, which common sense no doubt is reluctant to let go, but which he finds it impossible to formulate in any coherent or intelligible fashion, and which seem to have no necessary connection in reason with the particular beliefs to which they are somehow attached in his thought.

These considerations may not be watertight; but they are sufficiently like the kind of arguments by which he has heard philosophers better than himself estimating and dismissing the metaphysical beliefs of other philosophers better than himself, for him to treat them with respect. And if he is not to accept them as final, he will need at least to have an answer more cogent than he has yet been able to find to the question, What is the need, what is the sufficient reason, for these metaphysical beliefs which in his

confident past he felt so sure of, and which he is at present holding in suspense?

Let us ask again, now that we have the problem set more fully before us, what answer reason or common sense, or the two together, can make to this question. And first, can reason supply us with any further answer? There is a line of thought that we have not yet fully considered, along which it is sometimes argued that the Subjectivist position can be shown to be logically untenable. The inquirer, it may be said, who holds himself certain of his immediate experience, must in virtue of this certainty be carried on by a necessary process of reasoning to an assurance of some reality beyond that experience. For the self can only be conceived in opposition to something other than the self; the assurance of the existence of the self must therefore involve an assurance of the existence of this something other, of a not-self. This is the kind of argument which philosophies of different types make use of as they begin to construct their world picture; and in particular it is one of the arguments to which the Idealist philosophy looks, to check the destructive tendency by which its other arguments would demolish everything beyond the thinker's own experience. What are we to make of this contention?

Certainly in the view of the world which we take over as natural from common sense this way of thinking about things seems to hold. In this natural view I distinguish myself from the material world which I believe to surround me, and from other selves whom I believe to inhabit this material world along with me, and I conceive it and them to be real equally with myself. But the whole tenor of our argument so far has gone to show that these entities which common sense supposes itself to know are not independent and self-subsistent realities. Thus the supposed realities of common sense are disintegrated; first the world of material objects, then the other selves whose reality so far as we can yet see is bound up with the reality of that world; and it and they are replaced by elements in the system of the thinker's ideas. The supposed realities may still be said to be realities in their own place; that is, they are really present as elements in an ideal system, which itself is really present as a law governing a particular experience. But is the place in which they are realities anything more than this ideal system and this particular experience? This ideal system, this single experience which must be supposed existing for the ideal system to present itself in, are left to us as something that it is

impossible to doubt. But what ground can reason find for deducing from either of them the assurance of a reality beyond that single experience?

We must recognize that we are here only touching the fringe of a vast problem, which, if we can achieve anything like a firm ground for our philosophy, we should need to examine more fully from that standpoint. For the present we draw only certain negative conclusions, which we may formulate thus. The inquirer examining his own experience will find in it a system of ideas in which his own self appears contrasted with and opposed to other realities; but this is no proof that any of these apparent realities exist outside his experience; for what appears as himself and what appears as realities other than himself, may alike be no more than elements in his own experience. He can think about this world of his experience in various ways, in any of the ways in which the law that governs his thinking will allow him to think; but none of these ways of thinking can, so far as we can yet see, give him assurance of a reality beyond the experience. He can call it his 'own' experience, but by giving it this name he cannot prove that there is some other experience not his own with which he can contrast it. Or he can pick out certain elements in it which he conceives to represent himself, and certain other elements in it which he conceives to represent realities other than himself. But neither by calling this world of experience his 'own', nor by selecting certain elements in it to stand for realities other than himself, can he construct a logical proof to show him that there is any experience that is not his own or any reality that is other than his own experience.

The argument that we have just considered addresses itself to the whole Subjectivist position, and claims to show that this position is not logically self-consistent. And a somewhat similar argument is sometimes alleged to show that the extreme form of the Subjectivist position which we have called 'Immediacy' is not logically self-consistent. If I am certain that this moment's experience is a reality, that certainty, it may be said, carries with it the certainty of some reality beyond it, a certainty at least as to some other moment of experience, if of nothing more; and this is implied of necessity in the words I use when I speak of this moment's experience as certain, for the word 'this' is only significant as contrasting this moment with some other moment. I am bound then, if I want to think logically, to admit one of two things about my claim that I can be certain of this moment's experience:

either the claim means nothing, or it means that there is implied in that certainty a certainty about some other moment of experience.

It is indeed true that whatever thought presents to itself in the moment must be expressed in the only language the inquirer has at his disposal, which is the language of common sense with all the implications that this language carries with it. And when he tries to say something about the momentary experience, which is all that he claims to be certain of, he will find it hard, and he may well find it impossible, to avoid using some phrase which verbally implies a reality beyond it; he will speak of it as this moment or the present moment, and any such phrases imply some other moment with which this moment or the present is contrasted. But what this means is that the ideas of this moment or of the present as elements in an ideal system complete themselves by calling up the idea of another moment or of the past or future as contrasted elements in that ideal system. And by what right is he to conclude from the presence of these ideas in his ideal system to the assurance that there are outside realities which correspond to them? If he is to find anything within the moment's experience that can carry him beyond that experience, he must find it elsewhere than in this kind of reasoning.

The field in which reason has to operate is defined for it by the moment's experience, which it cannot help taking for granted, and by the system of ideas to which it has access there and in which it finds itself at home. Within this field its powers are wide; it can show how one idea or belief is to be related to another within the system, how the ideas and beliefs which present themselves from moment to moment can be so arranged as to form a comprehensive and coherent whole; and if it is given the assurance of a reality beyond the moment's experience, it can show how they can be displayed on the background of that reality. But reason cannot of itself carry us out from the system of ideas to a reality beyond them. It takes us back to a circle of primary certainty, within which must somehow be contained the starting point for our journey to knowledge. But how from this starting point are we to advance further? Here reason leaves us with questions to which no answer is forthcoming. And the only road left open to us is that we should turn to common sense, and ask whether that can furnish an adequate answer to questions which of itself it would not have troubled to raise.

If at this point we appeal to common sense, we may expect to

find it rather impatient with the course our inquiry has followed during the last chapters. It may be inclined to say that the whole business of inquiring whether a philosophy of Subjectivism or Immediacy can be held consistently is too far removed from what any sensible person could take seriously to be worth the trouble we have spent on it; and it may go on to attack the conception of methodical doubt by which we have been guided as something too meticulous and far-fetched. And it may be worth while here to allow common sense to state its objections to the method more fully than they have yet been put.

Let us try to state the position as an objector who takes the common-sense view might see it. Granted, he might say, that it is possible for anyone logically and consistently to conceive his present experience as something isolated and solitary beyond which he can know nothing, still, is there any use or sense in his doing so, can any fruitful consequence for knowledge arise from this conception? For is he not really sure all the time, whatever he may say, that there is a reality beyond this present experience, and that it is this reality which determines the system of his ideas and the nature of his experience? And is it not in fact certain, common sense may go on to say, giving the argument a rather more definite turn, that his experience at the moment is conditioned, and his experience in the past has been conditioned, by the material surroundings of his life? What useful result can come from taking this fragment, his momentary experience, in isolation by itself and ignoring all the influences and conditions outside it? Does he not really know that it is these influences and conditions which have made it what it is?

Common sense, if it puts the case against philosophic doubt in this way, is joining together two assumptions, which it is very ready to treat as one, but which are in their nature separate. There is, first, the general contention that immediate experience must be determined by some reality outside it; secondly, the more particular contention that this reality must be a world of material things. The two belong to different levels of thought, and the first springs from a deeper level than the second. We must be ready to treat them both with respect if common sense is to help us, but we ought not to let them be confused. Let us ask first what can be said to follow from the general contention that experience must be determined by some reality outside it. To assume even this is to pass outside any knowledge or belief that reason could guarantee; it is a logical possibility, as we have seen, that there is no reality

beyond immediate experience; it is again a logical possibility that some reality is there, but that experience is not in any way conditioned or determined by it. Yet this last supposition may be said to go against a belief which thought would not willingly abandon: the belief that, whatever reality there may be, its parts are not entirely separate, but in some measure influence and determine one another. This is a belief which reason, though it cannot establish it, would seem to favour rather than its opposite. Let us admit then that an inquirer will be disposed to believe, and may perhaps even feel certain, that whatever reality there may be outside his immediate experience will in some measure determine that experience; still this is at most only a hypothetical certainty, and carries him no further towards knowing the nature of the reality.

He may hold it for certain that, if his own past was a reality outside his present moment of experience, he cannot fully understand his present experience without reference to his past. He may hold it too for certain that, if other persons with their thoughts and feelings are realities outside his experience, he cannot fully understand his own experience without reference to these other persons, their thoughts and feelings. So again he may feel certain that, if there is a real material world outside his experience and the experience of other human beings, as common sense has believed though many philosophers have doubted it, he cannot fully understand his own experience or the experience of other people without reference to that material world. So again he may feel certain that, if God and a supreme purpose are realities beyond his own experience and the experience of other human beings, as historic common sense has in great measure believed in the past, though many philosophers have doubted it and common sense may be said to doubt it today, he cannot fully understand his own experience or the experience of other people without reference to that supreme purpose. He must be prepared in short to accept the principle which philosophers have so often affirmed, though even those who affirm it seem so often to forget it, that he cannot fully understand any part of what appears to him as knowledge until he somehow knows the nature of the whole. But since philosophers disagree with one another, and the common sense of one age disagrees with the common sense of another age, and this disagreement of philosophers and of common sense appears as time goes on not to diminish, but to become more radical and profound, it is useless for him to wait until they have come to an agreement before he dares set himself to understand anything. And if the

problem is looked at in this way, it becomes evident that the method of philosophic doubt does no more than carry out in its entirety a principle implicit in all reasoning: the principle that it is reasonable to start from the things we feel most certain about and make inferences from them to things about which we feel less certain.

If then readers have found themselves rather impatient with our supposed inquirer, when he examines with such care the limits of his immediate experience and inquires so scrupulously what kind of content may be taken to be included within it and what not, we may appeal to them not to be too contemptuous of him; his predicament is only an extreme case of what we are all of us compelled to by the conditions under which our search for knowledge has to proceed. The circle of assured knowledge from which we must start is something minutely small in comparison with the magnitude of the unknown outside it which we desire to know; yet the search for philosophy implies that we believe it possible, starting from this small circle, to arrive at some kind of understanding of the relation of what we know to what we do not know. If we are to suppose it possible to proceed from less complete to more complete knowledge—and this means, as we must all start from very incomplete knowledge, if we are to suppose it possible to advance in knowledge at all—we must assume that our thinking powers are so constituted that we are able, starting from what we are certain of, however little that may be, and using that little rightly, to arrive at true beliefs about a much wider field.

Philosophy then, when it attempts to investigate ultimate questions and to inquire whether a metaphysic is possible, cannot well do otherwise than proceed by the way of methodical doubt. And common sense, we must maintain, goes too far if it dismisses the method as useless or perverse, and if it denies, as it is sometimes inclined to do, the right of reason to ask ultimate questions. Reason must be allowed the right to ask what questions it chooses and to follow its method of doubting as far as it can. And the first general assumption we supposed common sense to make, that immediate experience must be determined by whatever reality there may be outside it, goes rather to justify the method of philosophic doubt than to condemn it. It confirms us in the thought that the criterion which is to direct our judgments about reality must be found within immediate experience. But it leaves us still at a loss to know what this criterion can be.

Common sense, if we ask it for further guidance, will be ready to meet us with its second and more particular assumption. It will repeat that we all know very well that our experience is determined by the reality outside it, and it will go on to say that we all know very well that this outside reality is a world of material things. But when it says this it is definitely challenging reason, not merely claiming to supplement it. It is in effect telling us that we should ignore all the doubts and difficulties about a material world which reason has brought before us, and should trust ourselves to an unanalysed feeling of certainty. And this is not the kind of answer we were wanting. We hoped to be given a criterion, we are given instead an assumption or a dogma. Still it may be that this is the best common sense can do for us, and that we must use it as well as we can.

We are faced here with a cleavage between reason and common sense, which has grown wider as we have gone deeper into Mentalism, and we have at this point to decide what line our inquiry is to take in face of this cleavage. The break with historic common sense began when we were persuaded by reason to renounce the belief in a material world; yet the forms of Mentalist thought we first considered, Phenomenalism and Idealism, retained so much of common-sense belief as to make them possible of acceptance by educated thought today. But as we examined each in turn we found that the principles implied in them led us on to what appeared their logical consequence, first in Subjectivism, then in Subjectivism of the Moment or Immediacy. The more we tried to limit our philosophy to the demands of strict reason, the further we found ourselves from anything that could satisfy common sense; and the conflict between the two seemed at each stage more acute.

And if the conflict had to be pronounced absolute; if we had to understand reason when it drove us on from one sceptical position to another as meaning that the beliefs which it led us to question must be definitely abandoned; so that the inquirer who should trust himself to reason would be left in the end with a belief in no reality beyond his immediate experience; all we should seem able to say would be that, when the issue is joined like this, we know somehow that common sense is right and reason is wrong. We should be left as the result of our inquiry with the feeling that reason refutes itself, or at any rate shows itself useless as an instrument for exploring reality; and that common sense has a rough and summary way of reaching truth, which can demolish in a moment structures that it has taken reason hours or years of work

to elaborate. And this answer, as we observed above, is the kind of answer that writers on philosophy often seem content with when they touch on the problem they call Solipsism; they think it enough to point out that the Solipsist doctrine is incredible to common sense, and they imply that this is all that need be said.

We ought not, however, to leave the problem so, with an unsolved conflict between the two main instruments which we have to depend on for our knowledge. And our reflections on the method of philosophic doubt indicated a way in which this appearance of conflict might be lessened, perhaps in the end dispelled. In the light of this method the work of reason, as it applied its destructive criticisms to one after another of the beliefs of common sense, took on a different aspect; such criticisms could be interpreted, not as meaning that these beliefs must be repudiated, but as showing that they belonged to a secondary order of certainty and should be held in suspense till the problem of method had been fully explored. And looked at from this standpoint the position should leave room for a concordat between reason and common sense, in which the two might work together to help one another. But how is this to be brought about? There seems to be, if not a conflict between them, at any rate a gap. For reason's main contention is that to get at truth we must find the right method; and common sense, while it is sure that on such a question as the reality of the material world it gets at the truth, does not know, and does not very much care to ask, how it gets there. If the gap is to be bridged, if the two are to work rightly together, what we must hope for would seem to be something of this kind: that by studying the manner in which common sense holds its main beliefs about reality, by asking how they are arrived at and on what they rest, it may be possible to discover some ground or condition for them, which reason, so far as we have understood it, has not yet included within the scope of its method, but which it will consent after scrutiny to sanction as a legitimate means of reaching truth.

Here then the initiative must pass to common sense. And what common sense will tell us in its rough summary way will be that we must go back to the historic belief in the reality of the material world; that it was a mistake for us ever to have given that up, and all our subsequent troubles have grown out of this first mistake. Educated common sense today, somewhat puzzled by the arguments of philosophers, and still more puzzled by the latest pronouncements of physicists, might hesitate to be quite so summary.

But the main voice of common sense would be decisive now, as it has always been, in affirming this historic belief, though it would find it hard to say at all clearly what the belief implies. It would be convinced at any rate that the material world has a reality and a nature which are independent of thought and perception, and that the material things which compose that world would continue somehow to exist and to have effects on one another, whether observers were present or absent or altogether non-existent. Its difficulty in saying what this nature could be, or what effects could be supposed to take place in the absence of observers, would not prevent it from feeling sure that there is something there which can be better symbolized by the word matter than by any account in terms of thoughts and percepts.

True, the belief in matter is not the only common-sense belief which under the guidance of methodical doubt we have been persuaded we ought to hold in suspense; other beliefs, which to common sense would seem no less beyond question, or even more so, such as the belief in other minds, or in a persistent self or in the reality of time, have appeared susceptible to the same treatment. But the belief in matter stands out for a common sense philosophy as the central belief on which those other beliefs in some way depend, or with which at any rate they are in some way linked up; and common sense can make out a strong case for saying that our rejection of the belief in matter was the decisive move, and that when this was overturned those other beliefs could not fail to be shaken. If we ask why we should believe in other minds, the connection is clear; the question as to the real existence of human minds is bound up with the question as to the real existence of human bodies, the question as to the real existence of human bodies with the question as to the real existence of other material things. And the question as to the reality of time, though not logically dependent on the question as to the reality of the material world, yet seems, as we saw earlier, to be somehow bound up with it in our thoughts; the certainty that time is real which seems so clear and obvious, when we suppose ourselves concerned with a question about the whole world of common sense, becomes weaker and more dubious, if we think of it only as a question about individual experience.

We propose then at this point to accept the conclusion that the various doctrines about reality, which we have been exploring since we left behind us the belief in a material world, must be looked on as false steps and wrong departures. We shall renounce

mentalist philosophy, whether in its more conventional forms of Phenomenalism and Idealism, or in its more paradoxical forms of Subjectivism and Immediacy. And the only thing that we shall consider secured to us by the work of the last six chapters is the result pointed to by the method of philosophic doubt, which we may sum up thus: that, while no form of Mentalism can pass for an adequate philosophy, the extreme form of it which we have called Immediacy has a value and significance of its own from the point of view of method, as marking out the limits of a field of primary certainty. So far we may say that we have been brought to a positive conclusion by the principles of reason we set out to follow. We have been provided with a starting point or a foundation. But if we are to advance from this starting point or to build on this foundation, we shall need a closer co-operation between reason and common sense than those principles have yet seemed able to allow. We must hope that reason will be able to discover for us among the confused activities of common sense some sound means of arriving at truth which we have not yet been able to detect. And as a first step towards the search we propose to take over as a loan from common sense its belief in the world of matter.

PART TWO

*

MIND AND MATTER

CHAPTER XII

THE PLACE OF MIND IN THE MATERIAL WORLD

We are proposing at this point to attempt a fresh departure; and it may be worth while first to review briefly the course of our inquiry so far. We took our start from the primitive Materialism natural to common sense. This primitive attitude supposes that we find ourselves in a world of material things which have, broadly and for the most part, the qualities that seem to be revealed in sense perception. From this position we were forced away by two lines of argument, which we distinguished as the 'scientific' and the 'philosophical.' The first, the scientific, made it more and more difficult to suppose that the sensible qualities which we seem to perceive in the object really exist in that object independently of perception. The second, the philosophical, sought to convince us that we could claim no right to know anything outside limits, which were variously defined as the limits of perception or the limits of experience, but which appeared in either case to confine our knowledge to a field that was in some sense mental. And thus we were led to the Mentalist philosophy, in one or other of its more usual forms, the Phenomenalist or the Idealist. But each of these we found to be exposed to further questions, which led us on to that third form of Mentalism which we called 'Subjectivism'; for the same kind of arguments which seemed at first to support the conclusion that we could know experience and its contents, but nothing beyond this, or that we could know human thoughts and perceptions but nothing beyond these, seemed when pushed further to point still more strongly to the conclusion that each of us could know his own thoughts and perceptions, or the contents of his own experience, but nothing beyond these. And again the same line of argument

which forced us back into the narrow circle of the world of the self, seemed when pressed a little further to force us back into a narrower circle still, into the world of the moment, or Immediacy.

Here appears a deadlock. Our principles of reasoning seem to have misled us somewhere, and we must try to see where. We propose then to ask whether we may not have been too hasty in rejecting the belief in a material world, for our whole descent into this narrowest circle seems to have been implied in that rejection. The arguments which led us to reject this belief were powerful, yet not so absolute that there was no way out of them. For if we look again over the road we have traversed, we shall observe at one point or another an opening into a by-path which might offer an escape back towards common sense.

But if we are to go forward at all, as we feel we must, some assumption about a reality beyond immediate experience must be made; and if we are to go forward in an orderly way, it must be a limited assumption. We ought not to assume that we are entitled to the whole set of common-sense beliefs, whatever these may amount to; if we did that we should be entangled in all the confusion that must beset the attempt to trust an unanalysed common sense, and we should be giving up the hope that we might criticize and clarify our principles of reasoning. And if we are to make a limited assumption, our natural course will be to go back to that main belief of common sense, which we started from and which, as it now seems, we too hastily rejected; the belief that through perception we have knowledge of a material world. We return to this, because it is the only assumption that we can suppose likely to help us here, now that we have found that any form of Mentalist doctrine leads us down in the end to Subjectivism of the moment; and because it seems to be implied as an essential element in the general structure of common-sense belief, implied in the sense that it is logically prior to the rest of the structure. This conception of logical priority to which we are here brought is one which we must try as we proceed to make more precise. We can attach to it at least this meaning, that the beliefs of common sense, all except that most fundamental belief of each individual in the fact of his own thinking and perceiving, rest on the belief in a material world as their basis; that if any of them were challenged, the test appealed to would turn on the assumption that perception can reveal a world which possesses sensible qualities and which does not depend for its existence on being perceived or thought about.

But even if this assumption is needed by common sense, can it be formulated as a coherent and self-consistent hypothesis? Here return upon us all those detailed difficulties which we classed as scientific, beginning with the problem of the distinction between primary and secondary qualities and coming down to the bewildering problems raised by present-day physics. These difficulties, it has been argued in the past and it is argued today, are so great as to show that the belief in a material world is untenable. But does not this argument too rest on an assumption, on the assumption that what human thought finds itself unable to give a coherent account of, is thereby shown not to exist? And if we make our assumption as wide as this, it seems a very unsure foundation for a theory of knowledge; and it becomes still more doubtful if, instead of 'human thought' we say, what is all we can have a right to say, 'some eminent thinkers of the present generation'. Great as are the difficulties raised by modern science, we may guess that if common sense and philosophy need to believe in a material world, physics will somehow or other be able to reconstruct a conception of it that will hang together.

Our inquiry will not attempt to enter into these difficulties or to anticipate a possible solution for them. What we are concerned with is the question whether the belief in a material world is essential for common sense and for philosophy, and for this purpose it will be sufficient for us now to fall back on that hypothesis about our knowledge of a material world, which in an earlier chapter we outlined, hesitated about, and held in reserve, and which we called 'Johnsonian Realism'. This theory, we may hope, can help us at least to see the kind of place that a theory about our knowledge of the material world should fill. In our earliest discussion of the problem the difficulty which most troubled us was this: if all that we can say about matter is that it is an unknown something which causes our sensations, if we cannot say that any of its qualities have any resemblance to anything in our sensations, have we any reason to say that matter exists, does it even mean anything to say it? And our theory of Johnsonian Realism suggests that it may be possible to say more; that in a certain portion of the field of sensation we become aware of matter, not only as the unknown cause of percepts quite unlike itself, but as something whose nature is directly revealed to us in the sense of contact or resistance.

But we must remind ourselves that even with our present assumption we have not yet gone so far in our construction of a

world picture that we can use the word 'we' without proviso. 'We' must still mean, not 'all of us collectively' but 'each of us singly'. So understood the word need not mislead, and it will be convenient to use it. But we must remember all the time that we are still placing ourselves at the standpoint of a solitary inquirer, who for all he knows is alone in his thinking. He has advanced so far as this: that in spite of all the philosophical difficulties set out above he proposes to assume that there is some reality beyond his own experience, and in spite of all the scientific difficulties he proposes to assume that this reality is a material world with the qualities revealed in the sensation of contact and resistance. But if he formulates his assumption in this way he is at once faced with a further problem: how is he from this assumption to advance to the belief that in this material world are other minds or selves with experiences like his?

The problem of our belief in the reality of other minds is a double one. It includes first a transition from the mental to the material, and again a transition from the material to the mental. A Mentalist philosopher might perhaps here object that when we put the problem in these terms we are surrendering too easily to crude common sense. If by the existence of material objects we mean the existence of objects independent of mind, then it can never be shown, he will say, to be certain or even probable that material objects in this sense exist; it can even be shown to be inconceivable that they should exist. Yet for any Mentalist philosopher who claims to go beyond pure Subjectivism something equivalent to our problem must arise. There must be some complex of entities, whether existing beyond his individual experience or only within it, which appears to him as a world of material objects; and particular portions or entities in this complex, he will suppose, indicate, or suggest to him the existence of minds like his own, while about other particular portions or entities he makes no such supposition. The question then which, if we place ourselves at the standpoint of common sense and use its language, presents itself with regard to material objects, will present itself for any system of philosophy, only in more elaborate language, with regard to the more refined entities, whatever they may be, which for that system take the place of material objects. Some of these entities we suppose to give signs of the presence of mind or sentience, others not. Why do we make this distinction?

Let me suppose that I have been discussing the problem of the

existence of matter with a friend who holds the Mentalist doctrine, and that he has been demonstrating to me that we cannot conceive what the nature of a material object would be if no one were perceiving it, nor again can we conceive how a material object could exist without being perceived. The discussion over, we go upstairs to sleep in our respective bedrooms. And as I run over the arguments in my mind, I find myself persuaded, or half persuaded, that the room below, which we were talking in, and which is now empty, no longer has any substantial existence, now that no one is perceiving it or any of the objects in it. For it is certainly difficult to understand how the colours and the shapes which I should see if I entered the room can be there when nobody is looking, and if these are not there, it is difficult to understand what else can be there. Our theory of Johnsonian Realism has put up the best defence it can against these difficulties, but the defence must be admitted to be precarious.

At this point, however, a new problem presents itself. What of my friend in the room next door, who is now, I may suppose, in a dreamless sleep? His body, on the Mentalist doctrine I am considering, does not continue to have a substantial existence during the interval when neither its owner nor anyone else is aware of any sensations that can be referred to it; all that can be said to persist during this interval is the possibility of such sensations in the future. But what of his mind? Does this also cease to exist as anything actual and become only a possibility of future sensations? If I were to go into the next room and turn on the electric light, the bodily form in the bed would become actual for me as a cause of my sensations, even though the sleeper should not awake. Would then the mind of the sleeper become actual for me observing him, though for no one else? Or would it also become actual for the sleeper, who is aware of nothing? Or has it in some way been actual all the time, when the body was not? Or is the whole conception of mind and body and their mutual relation something that will not fit in with this way of thinking, and, if so, what conception is to take its place?

Such are some of the questions that arise if the problem is approached from the standpoint of that form of Mentalism which we have called the 'Phenomenalist' doctrine. We have stated them briefly and crudely, but they point to difficulties which any possible elaboration of the doctrine seems only to push a little further back and not to solve. And these difficulties along with others which we have mentioned force us to the conclusion that

Mentalism in its Phenomenalist form is in the end untenable, and that if we are not prepared either to take the leap to Idealism or to be shut up in pure Subjectivism we must return to something like the common-sense belief in a material world.

The Idealist doctrine, we have recognized, is internally self-consistent in a way in which the Phenomenalist doctrine is not, and it would have a coherent answer of some kind to these difficulties. If we ask how Berkeley would have dealt with the problem (and he is the one among Idealist philosophers of whom it is easiest to guess how he would have given a plain answer to a plain question) we may suppose that he would have said something to this effect. My friend's mind is a spiritual substance, which has a permanent existence of its own, just as my mind has. His body is a group of ideas, or of sensible qualities, which exists permanently in the thought of God, and with regard to which God communicates from time to time with other men through the sensations of sight, hearing, and touch, and with him through these sensations and the internal sensations as well. Such a doctrine appears, as we have said, internally self-consistent. Only here, as with any other statement of the Idealist doctrine, we must feel the doubt: Have we a right to accept so tremendous a conclusion as a belief in God or in an Absolute mind on no other ground than that we find it difficult without it to form a tenable conception of matter?

And to come back to the problem immediately before us, it seems clear that Idealism, like any other philosophic doctrine, must rely on particular groups of sensations as its evidence for the belief in the existence of particular sentient beings. Its reduction of everything to mind, even if we could suppose this to be successfully achieved, would bring it no nearer to a knowledge of the existence of this or that particular mind. It may be possible, let us for the moment suppose, that there is a way of reasoning which can start from the intuition of pure being and lead by a strictly logical argument to an assurance of the reality of an Absolute mind or experience; nothing that we have said so far has shown this to be impossible. But we cannot think it possible that there should be a way of logical argument which would lead from the intuition of pure being or from any other indubitable starting point to an assurance of the reality of my next door neighbour. For this assurance the Idealist has to trust to perception, as the rest of us have. However high he ranks pure thought and however low he ranks sense perceptions, he must, if he believes that other human beings are a reality, or even an appearance a little less unreal than

other appearances, trace back his belief to an inference from particular sensations.

What now are the assumptions with which we are to start on this part of our inquiry? To begin with, we must note that the inquirer who seeks to interpret the world in terms of matter will not be able to exclude the conception of mind so radically and completely as he could exclude the conception of matter, when he sought to interpret the world in terms of mind. The world, he may think, was perhaps nothing but pure matter in the past; may perhaps be nothing but pure matter in the future; but at the moment when he thinks this, his thinking it shows the presence of something different. The certainty of the presence of something which is aware is the one certainty that remained to us, after the Mentalist line of criticism had seemed to cut us off from the certainty of anything else. I am at this moment aware of something: here is for each of us the primary certainty of which he cannot be deprived; though what is the nature of the I that is aware, or of the something that it is aware of, or whether either this I or this something has any permanence beyond the moment, all these are matters which may very well be doubted. And now if we find that starting from this primary certainty we are unable to get anywhere without the help of a further assumption; and if we proceed to add to it what seems the assumption most natural to common sense, the belief in a material world, our doing so leaves the primary certainty what it was. This assumption must be added to the primary certainty, not substituted for it. The belief that there is an I that is aware of definite momentary contents must be retained along with the belief in a material world, if we are to allow for the possibility of thinking.

And here we must remind ourselves, as we noted in our earlier discussion of the method of philosophic doubt, that what we take as our starting point is not a mere faculty of awareness, but a moment of awareness with a definite content. We are assuming in this only what any scepticism, even the most thoroughgoing, must assume, if it is to be at all reasonable or fruitful. We are assuming that our inquirer starts with the general kind of beliefs and opinions which an ordinary person of average intelligence today would be likely to possess, and that he asks himself the question, as an inquirer today very well might, What is the reality to which these beliefs relate? We suppose then, to repeat a little, that when he sets himself to answer this question as thoroughly as he can, he is led

to entertain the possibility that this reality may be no more than his own momentary experience; that he finds that his beliefs and opinions can, while retaining their particular content, be transposed so as to accord with this general assumption; that again, finding that this assumption, while it may be so developed as to be internally self-consistent, yet fails, for some reason which he is so far unable to formulate, to satisfy him, he decides to add to it another; and now proposes to assume as the reality to which his beliefs relate, not only his own experience, but along with this a permanent material world.

He has then as his data on the one hand these assumptions about the general nature of reality, and on the other hand his particular beliefs as to the character of this or that particular piece of reality. How in the light of these data will he view his own position in the material world? In some such way, it would seem, as this. This world appears to be made up of a variety of material objects, which are so far permanent that they outlast his own momentary experience, and which undergo continual changes that do not seem to depend on that experience. One such permanent material object is of central importance to him, his own body. It is important, not because it is marked out by any peculiar physical qualities, but because his experience is in a peculiar and unique way bound up with it, so that he sees through its eyes and not through the eyes of any other body, feels what it is in contact with as he does not feel what other bodies are in contact with, is aware of pleasure and pain arising from its changes in a way in which he cannot be aware of the changes in any other body. And here the assumption that he has made as to a material world appears to carry with it and imply a further assumption as to his own experience. If he can be aware of the material world as something that persists, his experience must itself persist, at least so far as to be able to compare an earlier state of the material world with a later one. It must have so much permanence and unity as are involved in the fact of memory. And again his own experience or inner life has at least this much of permanence and unity; that whenever he is aware of it, it appears to animate one and the same body, and that all its memories are connected with that body. Whether it has permanence and unity in any further sense will, so far as his present assumptions go, remain doubtful.

The general data then which our inquirer has before him for the investigations on which he is now entering may be summarized as follows:

(1) The primary certainty of his own immediate experience.

(2) The assumption, whether made on sufficient evidence or not, that this experience extends in some manner, however limited and broken, beyond the moment; so much so that he believes himself able to trust memory when it tells him that he has a past.

(3) The assumption, whether made on sufficient evidence or not, that certain elements in his experience reveal to him the existence of a permanent world of material objects beyond that experience.

(4) The belief, which, given these two assumptions, seems to be sufficiently guaranteed by experience, that his own experience is tied up for better or worse with one particular piece of matter in this material world.

The assumptions which our inquirer has here made are assumptions which he must admit to a critic, or to the critical part of his own mind, he has no apparent rational ground for making. They are metaphysical hypotheses, which he assumed as true, not because he has a right to them, but because he wants to get on with the problem of how he can pass from his primitive certainty to the full metaphysical position of common sense, and without some such assumption he seems unable to advance. And having assumed these hypotheses about the groundwork of reality, he will apply to this groundwork all those particular beliefs which the method of philosophic doubt, as we said, must allow room for if the doubt is to be in fact methodical. We are supposing him before he started on his sceptical inquiry to have the kind of beliefs about the subject matter of physical science which an ordinary person of average intelligence would be likely to have today; and these beliefs he will with the metaphysical assumptions that he is now making take to be knowledge or probable beliefs about a real world of material objects. But at this point he will have to face the question as to whether these particular beliefs of his and these metaphysical assumptions justify him in adding to them the further belief that some among these material objects are bound up with an inner experience like his own, that there are other human beings who think and feel as he does himself.

The problem has not been so often or so closely examined by philosophers as its importance calls for. But when it is discussed one of the answers most commonly given seems to come to this. We observe certain physical changes in the appearance of those material objects which we call 'human bodies', and particularly in

the expression of human faces. We are aware that in our own case similar physical changes are accompanied by certain mental events; tears, or smiles, or frowns for instance are accompanied by such feelings as sorrow, happiness, or anger. We conclude that in other cases too such physical changes are accompanied by similar mental events, and that other human bodies are animated by feelings like our own.

Such an inference, so long as we do not examine it too closely, looks very plausible. We see an expression of the face or a gesture of the hand; we infer from these to something that is happening in the mind which we cannot see; and this mode of inference seems so natural that it is idle to question it. And not only does it seem natural, it seems justified by its success. The judgments that we make in this way are, we should admit, liable to error, more so perhaps than most of the simple judgments we make about those objects that we believe to be material and nothing more. Yet all our thinking assumes that our judgments about other people are on the whole not erroneous, that in the main they hang together and support one another and give us a power to foresee the manner in which other people will behave. There is a capacity, we believe, to judge character, which is built up by a series of such observations of small changes in the turn of the head or glance of the eye or tone of the voice. It is a capacity which seems to depend partly on a natural sensitiveness, partly on attention and experience; which varies much from one person to another, which often goes wrong, but which on the whole is likely to be right and under suitable conditions may even be surprisingly right.

And this kind of inference seems to fall generally into line with the other inferences that we learn to make about the business of life. The power to judge character is formed by a series of observations and inferences from them, just as a power to describe or foretell any kind of physical happenings, such as the growth of plants or changes in the weather, is built up out of a series of observations in some other field. The understanding which we believe ourselves to possess about the inner lives of other people seems then, when we look at it as a whole, to be derived by a process of inference of the ordinary kind from our observation of changes in bodily appearance and notably of changes in facial expression; is it not natural to suppose that the initial step in the process, the belief that other people have an inner life to be understood, is derived and is to be accounted for in the same way?

But if we consider more closely the nature of this initial step,

can such a conclusion hold? First, is it the fact that we start all this series of inferences by observing our own facial expression? Most of us know very imperfectly what our own faces look like, and for many ages of history, or of the period before history, men must have known even less. This is brought out, in the way in which legend can sometimes throw a chance light on the conditions of the past, in the story of Narcissus, who going one day to drink from a clear pool, saw his own face reflected and fell in love with it and died of love. It is plain that what we are here meant to understand is a feeling of the nature of love at first sight, something so new and strange and irresistible that it alters everything in life. We should miss the sense of fatality which is the essence of the story if we think of Narcissus as a young man who could look at himself in the glass every day and every day feel a little better satisfied with his good looks. We must conceive, and this is where the legend throws light on the historic past, that its hero, like other men of his time, grew to manhood without having any mental image of what his own face looked like. Yet we cannot suppose that human beings had to wait for the invention of looking glasses before they began to guess that other human beings had feelings like their own.

But even a man of today who can look at himself in the glass as often as he likes is not likely to know very much about the way in which the changes in his face correspond to particular emotions or feelings. An actor may know a little more about it than most of us, but even he cannot derive his main knowledge of how facial changes express emotion from a study of his own face, he must apply to the study of his own face an experience derived from his observation of other people. We, that is, each of us singly, have not in fact that knowledge of how our facial changes express varying emotions, which is assumed as the basis of our inference to other minds by the type of explanation which we are here considering. We, that is all of us together, no doubt believe ourselves to possess such a knowledge about one another; but this knowledge is built up on our assurance of the reality of other minds, and is not its ground. Here, as so often, we make the confusion between 'we', meaning 'all of us together', and 'we', meaning 'each of us for himself', and it is only because we make such a confusion that this common explanation of why we infer the existence of other minds appears at all plausible.

The explanation thus breaks down on one side, but it breaks down even more definitely on another. For what is the nature of

the argument which it supposes us to employ? It is an argument from analogy. I observe certain physical events, changes of facial expression, in my own body; I know them to be connected with events in my inner life in such a way that the first may be taken as a sign of the presence of the second; I observe again similar physical events, changes of facial expression, in other human bodies; and I conclude that these similar bodily changes are connected with similar events in an inner life which is present in those other bodies. Now granted (and as we have seen, it would be much to grant) that I can be said to know either by observation or by introspection what is contained in the three premises, does the conclusion follow? Surely not: for when I speak of events in my inner life I mean events which I am aware of from within; it is this fact that I am aware of them from within that alone seems to give unity to those multifarious and shifting thoughts, desires, sensations and feelings which I call mine. But just this essential element in my inner life, the inwardness in it, is what I have to think away, when by analogy I ascribe an inner life to some material object other than my own body. This inner life, of which I infer the presence in other bodies, is something of which I am not, and cannot be, aware from within. It differs, that is, from the only inner life of which I am directly aware, in lacking the essential quality which makes that inner life what it is; and this sort of inference falls to pieces if, when we compare our idea of the thing which we observe to exist with our idea of the thing whose existence we seek to establish, we can find no essential likeness, but only an essential difference.

But are we right to say 'an essential difference'? For if anyone is to speak about these questions at all, he has to use such phrases as 'other minds' or 'an inner life like my own'; and does he not in so speaking recognize that, if there are other minds or inner lives, they are like enough to his own to be called by the same name? And is it not a part of that whole common-sense view of the world, which we are hoping to get back to if we can, that each of us should understand that other selves are beings of the same nature and order as himself? We can accept both these contentions, and yet maintain that the difference is essential too. Here seems a discrepancy, and it is a deep one, going down to those fundamental problems of our thought which centre round the word 'I'. For all the terms we have been using, such as 'mind', 'self', 'experience', 'inner life', depend for their meaning upon the concept 'I'; and the question we are engaged on might be worded, Have I any

ground, and if so what, for believing in the existence of other I's? Put in this way the question seems to entail a verbal contradiction, for by 'I' each of us understands something that is unique, that there is only one of; yet the question, it is plain, has a real meaning, though it is hard to find adequate language for it. The reality that I am aware of and that I call 'I', is for me unique; and yet I believe that it is not unique, that it is only one unit among many other units like it, and I want to know what ground I can find for this belief. Any answer to this problem which is to satisfy thought must do justice to both beliefs, to the belief that the I is unique, and to the belief that the I is one among many others. But the justification of the two beliefs belongs to different levels of thinking. A philosophy that conceives itself to have reached a standpoint from which it can develop its world picture should be able to find a place for the thinker's I, in which its thoughts and desires and happiness count for no more than those of any other I. But for a philosophy which is seeking its road and which needs to start from something that is certain, the distinction between the thinker's I and all other I's is paramount.

The conception of the mind which we have so far had in view is a conception of the mind as that which is aware; and the mind as that which is aware is again the conception which first comes in view, when we place ourselves, as we are doing now, at the standpoint of an inquirer looking out on a material world, which he believes to be revealed to him through his sensations. He feels himself to be aware, directly of his own sensations, and indirectly of a material world which these sensations reveal to him. And if he asks himself whether this or that object in the material world has a mind like his own, the question, whatever else it may be taken to import, must be taken as importing something about awareness. Is this material object, this animal or plant or human being or whatever it may be, in any way aware of its relation to other material objects? or if not that, is it at least aware of some process or event that goes on inside itself? Must we suppose in this thing or in this material object the presence of an inner witness, meaning by this a witness that is aware of the thing's relation to other things; or at least of something that goes on within the thing itself, which last is what we seem to mean by 'feeling' in the most general sense of that vague word?

But when we speak of the mind as a witness, we have expressed what was no doubt the most essential element in the conception

of the mind held by historic common sense, but we have not expressed the whole of that conception. Mind for historic common sense is not only a witness, it is also an agent; something which can act on the material world and bring about changes in that world. The mind not only witnesses, but wills, and in willing it acts on the body and sets moving the muscles and limbs, and through the movements of the limbs it acts on other material objects and sets going movements in these. The movements in those other objects would not happen unless the movements of the limbs made them happen, or, as we say, caused them, nor again would the movements of the limbs happen unless the mind by willing caused these. This at least is how things look to common sense.

If I am busy in my garden planting potatoes, and stop for a minute to ask myself what I am doing, the answer that will suggest itself is likely to be something like this: I want to get a crop of potatoes later in the year, and I believe that if I dig the ground in such a way and bury the tubers in such a way, the crop will come in due season. The presence in my mind of this want and this belief, and of the act of will arising out of them, I take to be the cause which makes my arms and legs go through the movements which they go through and produce the physical results which they produce. And now if I look over the hedge and see my neighbour in the next garden going through the same kind of operations with a spade and a sack of seed potatoes; if I watch his legs and arms moving in the same way as mine are doing; it is natural for me to suppose that his limbs move like this, because he has the same kind of desire and belief that I have, because behind the percepts which are signs to me of the presence of his body is to be discovered the presence of an inner life.

Whether this inference is good enough to support the conclusion we will consider a little later. We can say at any rate that it seems better than the inference from resemblance of facial expression, which we considered earlier and which we had to reject as inadequate. For here we have, not as in that case a resemblance which must at best be hard to observe and in primitive days usually impossible, but a series of obvious resemblances, some one or other of which would be observable under any conditions of life. And further, and more important, here is not merely an inference to an inner life which, though it makes no difference to any physical happening, I suppose to be present at this or that point in the material world, and which, though it is essentially unlike

my own, I yet suppose to be in some inexplicable way similar to my own; here is an inference to an active agent, one of a class of active agents, which I believe to be the cause of movement in the bodies of other human beings, because I feel sure that such an agent is the cause of movement in mine.

The inner life appears then to have a double character; it is an agent as well as a witness; and the union of these two characters brings us to a conception which has been of central importance for historic common sense. It is the conception expressed by such words as 'soul', 'anima', 'psyche'. The words are vague, as are many of the words which common sense has formed to express its most fundamental conceptions, yet not so vague but that we can make out their main intention. They imply a distinction that is held to exist between two kinds of material bodies. In the one kind is supposed an inner life which can be aware in some measure of changes which the body undergoes and can in some measure influence these changes; in the other kind nothing such is supposed. The presence of this awareness and of this influence is intended by the word 'soul'.

Of the two aspects brought together in this conception, the aspect of the soul as witness must be held the more essential. The soul or the mind or the inner life may be conceived as being a witness and no more, without any power of acting on the material world. But it cannot be conceived as an agent unless it is first conceived as a witness; for without having some awareness, however dim or obscure, of what it was doing or of what was happening, how could it be supposed to guide events so that they should happen otherwise than they would happen if no soul were present? The conception of soul in historic common sense seems then to imply some such metaphysical doctrine as this; that the I, the indefinable entity which is the prime certainty for each of us, is an agent; and it may be added, when the common-sense belief in matter is assumed, an agent that can influence events in the material world. Whatever other implications the word 'soul' might be taken to have, whether, for instance, the soul was supposed to be a separate substance, or to be immortal, this seems to be the main conception it was needed to express, and it is in this sense that we propose to use the word in what follows.

This conception seems to be in itself a consistent and intelligible one, and with its help we can find an answer to the problem we have been considering. Why is it, we asked, that throughout

history men have believed in the existence of other minds? And we can now reply: the reason, at any rate one reason, why they believed this was that each of them felt in himself the presence of a soul that was at once a witness and an agent, and from this assurance and from the observation of the similar behaviour of his own and of other human bodies he inferred the presence in those other human bodies of a soul that was an agent and a witness like his own. We may set out the process of his thought in this way. First, he observes such a movement in his own body, followed by movements in other material objects; next, he observes similar movements in other human bodies, followed by similar movements in other material objects; third, he believes that the movements in his own body and the movements which follow on them are caused by a soul animating his body and would not happen but for the presence of that soul; and from all this he concludes that the movements in other human bodies and what follows on these are caused by souls animating those bodies and would not happen if no soul were present there.

Granted then the belief of historic common sense, that the soul is an agent which can work on the material world, the argument seems to hang together well enough. But is this belief itself one which is able to stand criticism? For if it is not, the only reason that we have so far found to justify the belief in other minds seems to fall away.

But before we enter on this inquiry, which will not be a short one, let us observe that there is yet another line of argument by which a primitive philosopher might have supported his belief in the existence of other minds. He would be aware in his own experience of feelings of pleasure arising from the natural incidents of bodily life. Ought he not, he might ask himself, to conclude from this that his body was made for a purpose by some higher power, and that part at any rate of this purpose was that the life of the body should be a source of pleasure? And having drawn this conclusion he might be led on further. He would observe in other human bodies the outward physical signs of those activities or experiences which in his own case he would be aware of as pleasurable; rest or movement, warmth or coolness, the enjoyment of food and sex. If then his own body was formed so that it might be a cause of pleasure, he might go on to draw the inference that other human bodies having a like physical structure were formed with the same purpose, that these bodies too must

have that capacity of sentience without which pleasure could not exist. And thus by a second path he would come to the conclusion that other human bodies were animated by minds or souls like his. And if he were to knock out the brains of another man, he would seem to himself to be performing an act of a different order from what he would if he chipped a flint or cut a cabbage; he would not merely be carrying out a rather more complicated operation on something that like the flint or cabbage was a material object and no more, he would be extinguishing an inner life like his own.

Along this line of thought again difficult questions would arise. The natural incidents of bodily life, which could be a source of pleasure, could also be a source of pain. Life seemed to show pleasure and pain constantly and inextricably intertwined, perhaps of necessity, certainly in common fact. The purpose then which the higher powers, if there were such, had in view when they created man a sentient being could not have been simply to give him pleasure; it must be something larger and more remote. In conjecturing whether such a purpose could be conceived, and in what fashion, and how it could be reconciled with the facts of life, men were led into all those religious and metaphysical problems as to the meaning of the world and the origin of evil which have perplexed human thought through the centuries. But however much historic common sense and the traditional philosophy which sought to interpret it may have been bewildered by these difficulties and may have varied in their speculations, they held in the main to the belief that man and the material world in which he finds himself were created for a purpose, and that in pursuance of this purpose the human body was made as an instrument through which man might feel pleasure and pain. The connection then which each individual is aware of between the mental events, his feelings of pleasure and pain, and the physical events, the bodily changes which accompany these, could be held not to come by accident but to be part of a plan; and being part of a plan it could be presumed to recur wherever similar physical events were to be observed.

But now we must go on to ask, Can either of these beliefs, the belief that the soul is an agent which can produce results in the material world, or the belief that man's soul and body were created for a purpose, be held to be based upon sufficient evidence? Are they consistent with the general view of the world towards

which science and philosophy seem to be directing modern thought? Or are they no more than survivals from the past, which may have seemed plausible to our ancestors, but which in the light of more refined canons of thinking ought now to be left behind as superstitions? For if so, our discussion of them may have perhaps some historic interest, but it can have no bearing on the problem how, if at all, the belief of each of us in other minds is to be justified to reason today.

Now as to one of the two beliefs we have mentioned, and the argument that might be based on it, the answer seems evident. The argument that the human body appears designed to serve as an instrument of pleasure and pain, and that only by supposing the presence in it of a sentient mind can we explain why the nature of the body should be such as it is; all this kind of argument depends on the assumption that the human body and the material world of which it is part were designed for a purpose. But this assumption that the world was designed for a purpose is for common sense and for philosophy today an open question, is indeed a form of that great open question on which, as we have seen, philosophy is divided into opposing camps. The belief that the world was designed for a purpose has its roots too deep in religion, in traditional philosophy, and in the common sense of the past to be easily dispensed with. But the philosophy which looks to science for its principles can make out a strong case for questioning this belief; for in the work of the sciences, it can say, this belief that the world was designed for a purpose has been discarded as useless.

Perhaps, however, this belief could be restated in a way that would not expose it to this criticism? For it is difficult to help thinking that the human body seems to work as though it were created for a purpose; that its behaviour is, to adopt a phrase we may find used in this connection, at any rate purposive. But what is to be understood by this word 'purposive', and how are purposiveness and purpose related to one another? Our question here becomes merged in a wider inquiry into the problem of soul and body and the problem of cause and effect to which we shall find ourselves led in connection with the second of the two grounds of belief that we are examining.

CHAPTER XIII

SOUL AND BODY

THE argument which would ground the belief in other minds on the supposition that man and the world were created for a purpose was for historic common sense, we have suggested, no more than subsidiary. The line of thought that would give strongest support to this belief is likely to have been the one which grounded it on the belief that the mind or the soul can be seen to be the efficient cause of changes in the material world. And we must now ask: Is this last belief consistent with an outlook on the relation of soul and body which could be held reasonable in the light of the general position arrived at by science and by philosophy today?

We seem here committed to something like an inquiry into the history of the problem of soul and body, and of the changing way in which this problem has been conceived as human thought developed out of what we may suppose to have been the primitive view of common sense. And if we are to do justice to this inquiry, we are led on to an inquiry wider still, as to the origin and growth of the conception of cause. The two questions are connected in a double way. The conception of the soul, we suggested, is essentially causal; the soul is conceived, with or without sufficient reason, as an inner witness which can be the cause of changes in the material world. And on the other hand, when we ask how we are to conceive the relation of cause and effect, we find that our conception of this, or one important element in that conception, seems to be derived from our conception of the relation of soul and body.

We must, however, try to prevent this part of our inquiry from extending too widely, and it is neither possible nor is it necessary for our present purpose that we should seek to explore the problem of causation to the bottom and to determine what light a full analysis of that problem would throw on the belief that the mind

or the soul can be an efficient cause of material changes. What we are concerned to ask is whether in the light of modern analysis this belief can still be held to be either certain or highly probable, or whether it ought now to be regarded as at best doubtful. For if it is to be regarded as doubtful, we must give up the thought that it can play the part we have assigned to it as the main support and ground of our belief in other minds.

It will be sufficient then for our present purpose if we ask, How would this problem look today to an inquirer of average intelligence, who approaches it with a general popular knowledge of the development of scientific and philosophic thought? And by looking at it in this way we may hope to keep our survey within practicable bounds. In doing so it will be necessary to omit much that might seem relevant and to treat many doubtful points in a summary way. All we can hope for is that the general course of the argument is such as might appear reasonable to an inquirer of the kind we are supposing.

To the question, Whence comes the belief in other minds? we answered: It comes from the belief of the individual that something in him which feels and thinks is a cause of changes in the material world. He is aware of himself as thinking and feeling, as a mind or a soul or an inner life; he is aware of himself again as a material object in a world of material objects. And his inner life seems to enter into relation with the material world at two points. On the one hand the material objects round him have power to affect his body and through the body to affect his inner life; they can cause pleasure or pain, they can satisfy his bodily needs, they can become objects of desire. On the other hand something in his inner life which he comes to call the 'will' seems to have power to cause movements in his body and through these to cause movements in other material objects. Here are two things, sentience and will, which seem to work together in this way, that sentience suggests a need or a lack which the will then seeks to satisfy. These are the elements in the inner life of which the individual first becomes aware; they are the essentials which common sense supposes present in animal life. From these develop later in time those other mental constituents which make up the fullness of the inner life as we know it; perception, memory, emotion, thought. These as they develop make possible a gradual extension of the interval between sentience and will, so that the future can be forecast and undertakings, lesser or greater, planned and carried out. Yet in the child

or the savage they may be present only faintly, and in animal life at a certain degree perhaps absent altogether. But sentience, which can respond with pleasure or pain to the contact of material objects; and will, which can act on material objects so as to supply what sentience needs; seem the necessary conditions which must be present in some measure if animal life is to exist at all.

Next we ask, How does the individual pass from his awareness of himself as an animated material object to the belief that other material objects have in them an inner life like his? The inference, we are supposing, comes about in this way. He observes that other material objects exhibit movements which he recognizes as like his own, and the belief then arises that these movements are produced by a power analogous to the power which he seems to feel working in himself. He sees the movements occur, and he infers that they are produced by will, as he believes that the similar movements in his own body are produced; he infers again that the will which produces them must be sentient, or must be set in motion by sentience, as he feels his own will to be. And thus he comes to believe that these other material objects too have in them an inner life, which includes the essential attributes of will and sentience, and along with these perhaps those other mental attributes such as perception, memory, emotion, thought, which he is aware of as contributing to build up purposed action in his own case.

The inference, we said, comes about when the individual observes other objects displaying movements like his own. But what is to be understood by 'movements like his own'? Is this to be taken as meaning movements precisely like his own in all details? But this would be to draw no inference at all, for he would find no human body going through a course of behaviour precisely like his own. It must be sufficient then for the behaviour to be rather like his; as much like his, first, as the behaviour of his neighbours whom he would see joining in the same communal work with himself, and then again as much like his as the behaviour of any other human beings; for however different the ways of foreign tribes might seem, such differences would turn out to be a matter of degree. Should then the inference be held to cover human beings and to extend no further? Here perhaps might seem a possible halting place; and philosophic thought, if it could guess the difficulties lying ahead, might be inclined to draw the line here, though it would be hard to say just for what reason. But certainly common sense never did. Common sense even today does not

doubt that animals, at any rate the higher animals, have sentience and will as surely as human beings, if not as fully: and historic common sense doubted it still less. Men in early days, if we may judge from folk lore, could find birds and beasts quite as human as human beings, as indeed children may do today.

And now the primitive philosopher, having reached the conclusion that the movements like his own which need a soul to produce them must be taken to include the movements of all human beings and all animals, will be led on further to the conclusion that a soul is needed to produce, and its presence may be inferred when he observes, any movement which appears spontaneous; any movement, that is, which does not seem to be produced by some power outside the moving body. The principle thus stated leads out in two directions beyond the purview of present-day common sense. First, to the whole of organic life, including the vegetable kingdom as well as the animal, and including, besides the evident phenomena of local movement, phenomena of internal movement such as breathing, growth, nutrition. These last are not marks of sentience and will as he is aware of those in himself, for they go on for the most part without his purposing them or being aware of them. Yet they, no less than the willed activities, are movements needed for the welfare of the body, and thus they seem to be linked with and to depend on the working of the soul which has sentience and will, though the soul appears to cause them without being aware of them in the same full sense. There is thus supposed a soul of some kind present, not only in men and animals, but in plants and trees, though differing from the human soul in the level of its awareness.

Evidence of the presence of a soul was found in another direction too, in some at least of the phenomena of the inorganic world. All those material objects which moved with a movement, whether regular or irregular, that seemed not to be caused by an external power, but to come from inside them and to be their own, were held also to have souls; sun, moon, and stars, rivers and seas, wind and fire. And by a line of thought rather different from any of these a soul was ascribed to the earth too, not as itself moving, but as the source of growth and movement in organic life.

Thus in all these various portions of the material world, human beings, animals, trees, and plants, heavenly bodies, natural forces, early thought supposed the presence of a soul, conceived, with however much vagueness and divergence, as having something like awareness and sentience and will. This is the way of thinking

called 'Animism', which is found in the early stages of human thought in many countries, perhaps in all, as evidenced by folk lore, myth, religion, and primitive philosophy. And in view of this, to the question, Why do men believe that other men have minds? we can now add the question, Why did men begin by believing that everything in the world had a mind or a soul, and why having begun with a belief so wide did they later narrow it down to apply only to other human beings or at furthest to other animals?

Let us turn now in the light of the above to examine the conception of cause. This conception as commonly held seems to comprise two notions. First there is the notion of power; this has power to produce that. Second there is the notion of regular sequence; this is regularly followed by that; or, when this is observed, it is a sign that that is likely to follow. But between these two notions there is no clear or necessary connection. We constantly conceive of a cause as producing an effect and having power to produce that effect, as for instance in most of our own acts of will, without conceiving any regular sequence of which we suppose this to be an instance. And again we often conceive of one event being regularly followed by another, as for instance night by day, without supposing the first to have power to produce the second. How are we to suppose these two relations, of power and regular sequence, to stand with regard to one another? Should we conclude that in any case of cause and effect a right analysis, if we could carry it far enough, would show that both relations hold? Or are we to say that the union of the ideas of these two relations in the common-sense conception of cause is a misleading confusion, and that precise thought should seek to separate them? To attempt a full answer to these questions would carry us beyond the scope of our present inquiry; what concerns us is to ask whether the assumptions which have seemed natural to common sense in the past can be held certainly valid for common sense today.

And first, can we say anything as to the probable origin of this twofold conception? If either of the two elements which compose it is to be ranked prior to the other for historic common sense, it would seem to be the notion of cause as power. This notion must arise as soon as man becomes aware of himself as a material object in a world of material objects. Some of these objects, he will observe, have power to affect his body in one way or another, to make it feel pleasure or pain, compel it to move in this way or

that; and conversely he himself has power by his will to produce movements in his limbs, which in turn produce movements in other material objects. Here then arises the first notion of cause; cause as power, cause seen from within. But now looking out on the world of material objects he will observe a certain regular order in this world. The notion of this regular order must in some sense be as early as the notion of cause as power; for it is implied in the ability to distinguish one object rather than another as affecting his body or being affected by it. But this general notion of regular order is wider than the notion of cause. For regularity may appear in either of two forms, regular persistence or regular change: the first of these gives the notion of substance, the second the notion of cause and effect. And while the notion of substance (at any rate part of this notion) must be there in the germ if any one thing is to be distinguished from any other, the notion of cause and effect or regular sequence will in the natural course arise later. Yet this too must present itself before man can make much progress with his task of disentangling the world before him. Here then is the second notion of cause; cause seen from the outside as something that happens, cause as regular sequence.

The two notions so far appear separate. The feeling of each of us that he can exert power does not of necessity carry with it the belief that this exercise of power is a case of regular sequence. In childhood any act of will appears as something new, and one of the last lessons we learn from experience is that we are all the time repeating ourselves. Nor again does the observation of regular sequence seem to carry with it of necessity the belief that the later event in this sequence is made to happen by the power of some earlier event. Why should not either event just happen, and this be all there is to say about it? Cause as seen from the inside, cause as power; and cause as seen from the outside, regular sequence; seem so far to be quite separate notions.

There is, however, in practice a necessary connection between them. Cause as power seems to require cause as regular sequence as its necessary means and instrument. How, for instance, does a child come to find out that by one kind of movement he can pull things nearer to him, by another he can push them further away? What happens is that he learns from experience that a particular quality and quantity of effort on his part will produce particular results in the material world, and he can only learn this by experience if he can trust the material objects on which his effort operates to behave in a regular manner. Unless the child could

build up an understanding of what the result of a particular effort will be, he could never adapt himself to the material world at all.

But so far we have only reached a connection in practice between the notions of cause as power and cause as regular sequence, not a fusion of the two ideas. Cause so far appears to cover two disparate notions; on the one hand a power that is irregular and active, on the other hand a set of conditions, passive and regular, upon which this power can work. How then is the union of these two ideas brought about? It was implied in that process of inference which led man to believe that the movements of other material objects were caused by an inner life like his own. With this a third way of looking at cause is added to the other two. First comes the internal view, which gives the notion of cause as power producing its effect; then the external view, which gives the notion of cause and effect as regular sequences; and to these is added what we may call the 'sympathetic' view, that is, the view which sees the process from the outside and imagines how it might also be seen from the inside, and thus arrives at the twofold notion of a regular sequence in which the cause has power to produce the effect.

This inference, as we said, would arise naturally when a man found himself doing the same kind of thing as other men; from the same kind of outward behaviour he would infer the presence of the same kind of inner life. But the same twofold method of study, by observation of physical changes and interpretation of these in terms of a supposed inner life, was applied by early thought not only to the behaviour of human beings, but to the whole material world, or at any rate to the greater part of it. All those events in the material world which appeared to be striking or unusual or unexpected were explained as the result of will. The detail of this explanation need not detain us here; it is to be found in the histories of folk lore and mythology.

But though the sympathetic interpretation of the world extended so widely in early days, we need not suppose that it covered everything. Primitive man, we are constantly reminded, was immensely different from us, and no doubt it is right for us to realize the vastness of the difference. And yet perhaps in some ways his manner of thinking may have been more like ours than we commonly suppose, and one of these ways may have been the way in which he thought about cause and effect in his ordinary daily work. Man in early days was, we said, an animist. But in trying to

summarize this tendency of early thought we were led perhaps to describe it in too unqualified a manner; for it may be doubted whether even then he found it necessary to think of everything in the world as having a soul. Souls, he believed, were present in a multitude of material objects, and to their influence he ascribed all the most unusual and striking things that happened in the world. But there were a great many happenings in everyday life that were neither striking nor unusual, and that yet in their total effect were very important for human welfare or survival. How important to know that if stones or planks were arranged on one another in one kind of order they would stand firm, and arranged in another kind of order they would tumble down; and how reassuring to feel that if they were arranged in the right way they could be relied on to stay where they were put! And the power to build a house or a boat meant that man could be sure of so much. It seemed then that there were some properties which belonged to material objects in virtue just of the fact that they were material objects. Some modes of movement, of which the tendency of heavy bodies to fall to the ground was perhaps the most evident, appeared so common and natural that they did not need the supposition of a soul or inner life to account for them. Some material objects again, being observed to exhibit no form of movement except these natural movements of matter, or other movements imparted to them by a power from outside, did not need to be supposed to have any life or soul, but could be conceived merely as brute matter.

But this conception of brute matter without an inner life needed to be brought into some relation with the conception that the meaning of cause and effect consisted in the power of the cause to produce the effect. The belief that the meaning of cause was to be found in power came from what we have called the 'internal' view of cause; from the fact that cause seemed most intimately intelligible when it appeared as the working of will. But once this was accepted as the general meaning of cause a natural logic suggested that it should be applied also to those cases in which there was no will in the full sense, because there was no inner life. Direct experience too seemed to show that even in these cases some kind of power was operative. Each man in his immediate experience was aware of himself, or of his body, as something that not only exercised power, but was subject to power, and subject often to the power of brute matter. A stone falling down the mountain side might sweep him off his feet, an arrow might strike and

wound him, and happenings of this kind could quite override his will. Thus arose the conception of a sort of blind counterpart of will supposed to be resident in brute matter, the conception of force.

We have now arrived at a picture of the conception of cause as it appeared to early common sense. Observation of the material world showed the occurrence of sequences in which an event of one particular kind was regularly followed by an event of another particular kind. In such cases the prior event, the cause, was held to determine the occurrence of the later event, the effect. In the cases that seemed best understandable, either as being known from within or as being interpreted by sympathy, the determining cause was, or possessed, or exercised, an act of will. We must use the alternative words here, because common sense was never very clear as to whether what should be spoken of as the 'cause' was a thing or person, or an event. In other cases, when will was absent or did not operate directly, the determining cause was, or exercised, that counterpart of will called 'force'.

How far did this early conception of cause as we have described it differ from the conception of cause today? The difference, it is evident, was great. Early thought extended the operation of will to vast regions of nature where modern thought sees no trace of its presence. It had discovered few of the regular sequences which modern thought regards as instances of causal laws, and those which it knew it gave a different account of. And yet we must not press the difference too far, certainly not to the point of supposing that early thought knew nothing of cause, and that this conception was not formed until men began to think scientifically. For, as we have said, a belief in a general order and regularity of the material world, substantially like that of common sense today, is implied, if not in what men said and thought, at any rate in what they did, in the fact that they built houses and made tools to work with.

But there was a difference we have not yet mentioned which perhaps goes deeper. What is to be said of the belief in a universal law of causation, which has ranked for long as an established doctrine of philosophy and science? How did this come to be added to the primitive outlook? For our account of the origin of the conception of cause has so far shown no reason for such a belief. Every effect must have a cause, so much may be taken as obvious, for the term 'effect' is defined in relation to the term 'cause'. But why suppose that every event must have some prior event to which it

is related as effect to cause? The conception of cause, we have suggested, grew up from two roots. First, there was the conviction that direct experience showed that some events were compelled to happen by other events preceding them; but this conviction, whatever it was worth, applied only to a limited number of events. Second, there was the belief that events could be observed to happen in sequences, such that an event of one particular kind was regularly followed by an event of another particular kind; but this observation again extended only to a limited number of events. Why believe that what was observed to hold of a limited number of events could be held true of all events without exception? How did historic common sense come by this belief?

If we look for an answer to this question we find ourselves led to the thought of a complex interplay between the sympathetic and the external views of cause. For the work of amassing knowledge about the material world the external view would for the most part show itself the more fruitful. Men wanted to understand in order to be able to predict and construct, to forecast and to influence the future. Whatever the subject-matter of observation might be, stones or timber, the heavenly bodies, plants or animals or human beings, the main need in practice was to observe regular sequences, to discover what was likely to be followed by what. Whether in a particular case the method of purely external observation or the method of sympathetic interpretation was to be preferred would depend on which offered the better help to prediction. There were cases, and important ones, in which the second method seemed to offer this. In dealings with human beings, and to some extent with animals, the method of sympathetic interpretation, the assumption of an inner life, appeared to justify itself by its results. If the object of study was a man or a dog or a bull, the most useful way in which to sum up observations of present behaviour and to predict future behaviour might be to suppose the presence of an inner state, anger or fear or friendliness, as a centre round which these observations and predictions could be grouped.

But there were other large portions of the material world for which the method of external observation alone seemed available; there were others again in which the method of sympathetic interpretation, while it was accepted as valid in principle, was not found to give help towards detailed prediction. It was thus with the study of the heavenly bodies, which was one of the fields in which science achieved its chief early successes. Why did the sun move daily across the heavens? Mythology might answer, Because

he was a divine being whose will it was to give light and warmth to humanity. But this explanation supplied no assistance towards predicting his movements in detail; it did not help to show after what interval the solstices and equinoxes would recur, what the length of the days would be at different seasons, when eclipses were to be expected. All these facts had to be ascertained by the method of external observation, by seeing what happened. And thus in the development of astronomy there came a time when the sun was still believed to be living and divine, but his behaviour was accounted for in terms of external observation. The belief that the sun was a living being, if it could be said to explain anything, explained one thing only, how it was that he was able to go through a series of movements which appeared quite different from the natural movements of material bodies as observed on earth; it could not explain why these movements were the particular movements that they were or show what they were going to be in the future. The sympathetic interpretation was not discarded, but for the purpose of reasoning and prediction it became superfluous.

Here then is to be observed a tendency at work in which the external view of the world gained at the expense of the sympathetic. But there was also at work a counter-tendency in which the sympathetic view gained at the expense of the external, and seemed at one time destined to absorb or replace it. There was a movement from the pluralist view of the world which we have been describing towards something which we may call, giving it as wide a name as possible, a 'monist' view; a centralizing or unifying movement, by which the belief of men in a multitude of souls or spirits, present and active independently in various parts of the environment, gave place to a belief in a smaller number of greater gods, conceived as a ruling society with something of a common purpose, and this again to a belief in a single God either sole or supreme, or at any rate to a single purpose or power operating throughout the whole extent of the material world. Whether, if we were attempting a history of mythology or religion, it would be sufficient to speak of a movement from pluralism to monism may perhaps be doubted. There may be evidence to suggest that for the religious sentiment of mankind the view which saw the world as in some sense a unity was present from the beginning along with the view which saw it as a multiplicity; that what we have to envisage is not simply a process in which the first came to replace the second, but a continual struggle in which now one and

then the other was emphasized. Here is a problem into which for our present purpose we need not enter. We seem, however, to be able to discern how the two tendencies we have mentioned, the one widening and extending the external view of the world, and the other coming more and more to view the world as the expression of a single purpose; how these two worked together at a critical period in thought, the period in which Greek science and philosophy had their rise, and from which a direct line of succession can be traced to the thought of Europe at the present day.

At this moment in history is to be seen the beginning of two things, which differed in degree, if not in kind, from anything that had gone before. First, the beginning of science. Observation of the physical world and of physical happenings reaches a point at which it may be said to change its character; the slow process by which earlier observers had gathered information about the course of nature becomes more rapid, more aware of itself, passes into something that may be called the 'scientific attitude'. Second, the beginning of the traditional philosophy. The monist view of the world which, if it had been present at all in earlier religion and mythology, was there dimly and vaguely, comes in this philosophy to the foreground as the central point in thought to which all particular beliefs should be related. Both movements drew their impetus in large measure from the newly discovered confidence in reason. Reason was the instrument which was looked to, on the one hand to order and interpret the mass of observed fact, on the other hand to guide thought to the central conception that should unify knowledge. At the outset indeed the two movements were hardly distinguished; physical science appeared no more than a portion of philosophy, the form or aspect which philosophy presented when it turned to study the physical world.

The view of the physical world which science and philosophy as they set out on their journey took over from common sense was not perplexed by those radical doubts which exercised us in earlier chapters of our inquiry. It recognized, as it was bound to, that its material must be drawn from the varying perceptions of separate individuals; but it was not much concerned to explore the divergences between these perceptions, and it was not troubled by the suspicion that perhaps the perceptions were all that could be known to exist. It took for granted the reality of the physical world in the simple unquestioning way in which historic common sense took it for granted. The common-sense conception of the

physical world had been built up round a few leading notions, among which the notions of time, space, matter, and force stand out as perhaps the most important. These leading notions may be thought of as carrying with them some such belief as this: time, the belief that the portions of time lived through by each individual were included in a single historic time, stretching back into a past before human memory; space, the belief that the various portions of space perceived by each individual were included in a single common space, which extended immensely far beyond them; matter, the belief that this common space was the field or ground for a system of material bodies possessing various sensible qualities, and in particular such qualities of size, shape, and position as each individual is aware of in the sense of contact; force, the belief that the material bodies which composed this system had a power of moving through space and of causing changes in one another.

It was within the framework of these leading ideas that the earliest discussions of philosophy took shape; and the central problem in those discussions was not, as it has come to be for modern philosophy, the problem of sense perception, but as might naturally be suggested by the animist view in which thought had grown up, the problem of cause. How were the causal processes appearing in the facts of movement and change to be conceived? How was the concept of force or efficient cause to be related to the concept of will or purpose or final cause? How far could either force or will be seen or supposed to be at work, first in the activities of particular persons or things, and then beyond these, in the totality of the movements and changes making up the material world?

With the last of these questions we come to a conception of wide and vague significance which now becomes prominent: the conception of Nature. Nature is the material world, and the things and changes that have a place in it, conceived as a totality, and conceived not as passive and static, but as active and dynamic. But is this activity to be understood as the expression of will or purpose? Here was the most important issue at stake in the speculations which centred round the problem of cause, and various answers were given to it. Is Nature, or some power behind Nature, to be conceived as pursuing a purpose or aim, and if so how far should this purpose be conceived as analogous to human purposes?

One answer, which expressed the monist view in its most thorough-going form, and which in the end became the dominant view in the traditional philosophy, was definite on both these

points. The world, it said, was ordered by a supreme power for a purpose, or in accordance with a pattern, which might be recognized by reason; this purpose or pattern was given in the Idea of the Good; and the good which could be discovered by reason in the order of the world was identical with, or was in harmony with, the highest good for mankind. The power which showed itself in this universal purpose might be variously described; as the will of God, conceived to control Nature from above, or as the law of Nature, conceived to have something divine in its own quality, or perhaps in other ways; but these different expressions were in agreement on one common point, that the key to the understanding of the world was the Idea of the Good, and that the good which the philosopher might and should recognize in the world's order was the same as the good which he might and should recognize as the guiding clue to his own life.

This answer, which expresses the monist doctrine in its most complete and thorough-going form, is a doctrine that plainly goes beyond external observation of the physical world and passes into the region of myth or metaphysics; if it appeals to the conception of Nature, the conception appealed to is more than can be simply derived from the study of what is visible or tangible. And other answers to the problem were given, which might be claimed to confine themselves more closely within the observable facts. Nature might be looked on from a biological standpoint, as the power which produced and fostered life and growth in plants and animals, which caused the various kinds of living beings to conform more or less perfectly each to his own specific type. Here the relation of efficient to final cause is less clear; the connection of Nature's activity with human ideals or with a central Idea of the Good becomes faint or disappears. Yet Nature is still conceived as aiming in some sense at perfection, though now not at a single absolute perfection, but at the various perfections appropriate to different kinds of organisms, and as achieving this in a certain measure and within certain limits; and in so far as this aim is supposed a reality, some mythical or metaphysical element is still implied in the conception. But there was another possible answer in which that element might seem altogether dispensed with. Nature might be conceived from a mechanical standpoint as the sum total of purely physical processes, providing room for the activities of living beings, but in itself indifferent either to human ideals or to animal welfare, and only allowing these to achieve

their aims by chance. Here Nature becomes hardly more than a name for this totality; yet the monist conception is still so far present, that the physical processes are conceived as making up a whole, as a system of laws which compels events to happen in a certain order.

It has seemed worth while to attempt a summary of these conceptions as they appear in the earliest philosophy known to us, because here as in so many other fields we find the Greek spirit giving brief and simple expression to contrasts which may have a permanent significance for human thought. The answers that we have distinguished corresponded to natural divergences of opinion, though they were variously combined and modified in practice as speculation ran its course. Each of the three conceptions was so far prominent as to supply the central principle for a leading school of Greek philosophy. And it was the first of the three, with its thorough-going affirmation of monism, which as time went on became dominant in the thought first of Plato and later of the Stoics, and which was in the end bequeathed by Greek metaphysics to Catholic theology.

Are we to suppose that the monist view of the world was not only coincident with the rise of the scientific spirit, but was also its occasion? To suppose such a connection would be to speculate too far. There have been periods when the monist view of the world was dominant, yet science was neglected; and again science has been pursued by periods and by individuals to whom the monist view made no appeal. Yet the monist view of the world could not fail to influence the scientific outlook which developed along with it, and in particular it was bound to have important effects on the conception of cause. For when this view was accepted it became natural to interpret all the uniformities and regularities observable in the world as being caused directly or indirectly by a supreme purpose or power. The movements of brute matter were now envisaged, not merely as something that happened, but as something that was determined by this power. The inferior wills of the material objects which seemed to have an inner life of their own, men or animals, stars or planets, or whatever they might be, must be supposed to operate within limits and under conditions determined by the supreme power. And thus arose the idea of a system of laws, conceived as the manner in which the supreme power expressed its purpose. The supreme power ordained its laws, which brute matter must obey, and which the inferior wills (being

as inferior wills partly constrained and partly free) partly must obey and partly ought to obey.

Here then is to be found the origin of the belief in a universal law or system of causation. Once a supreme power was recognized, it was reasonable to hold that all events were caused in the sense of being compelled to happen. This conclusion indeed did not necessarily follow in full strictness. It did not seem necessary to suppose that the governor of the universe would desire, any more than human governors do, to regulate every single event by law. He might at any rate be conceived (so human nature claimed and most philosophers agreed) to allow human wills and other inferior wills liberty within limits to control events as they pleased. He might even be conceived (so some philosophers thought it not too unphilosophical to suppose) to allow events of trifling importance to happen at random. But what did follow from this ruling idea was that law must be conceived supreme; that if there were exceptions to it they could only be such as law itself allowed.

And this conception in either of its forms, either in the form which asserted that everything was determined by law, or in the form which asserted only that all that was most important was determined by law, depended on the belief in a supreme purpose or power, and had no sufficient ground apart from this belief. Observation could show that there were many regular sequences in nature, but not that all nature fell into regular sequences; it could suggest that many events were compelled to happen by particular events preceding them, but not that all events were so compelled or determined. The belief in a universal system of law extending everywhere did not come from observation and could not be justified by it. Or if we choose to say that any belief must in the end rest on observation somehow, at least this belief did not come from observation directly. The belief in a supreme power was arrived at first, whether as an inference from observation or in some other way, and the belief in universal law was derived from this.

The monist outlook as it develops may be seen to pass through a phase of critical importance for the history of thought, in which science pursuing its research into detail and philosophy pursuing its general outlook are for a while able to march together. This phase occurs twice in the history of European speculation; first in Greece in the fifth and fourth centuries before the birth of Christ, again in western Europe in the seventeenth century after it. The second of these periods, it seems in the main true to say, takes up

the problem where the first let it drop; for the intervening centuries, great as were their achievements in religion, art, and even philosophy, cared on the whole too little for physical science to contribute much to the particular problem now before us. Yet out of their religion and philosophy came results that changed the atmosphere in which the problem was viewed when it was restated. The monist view in its most thorough-going form had been held so long and so widely that it was now taken for granted as a truth beyond question. The men of the seventeenth century believed themselves to know certainly, what the men of the fourth century in Greece had only conjectured vaguely, that the world was governed by a supreme will, which determined for a good purpose everything that happened.

Into this framework of a universal and beneficent determinism were fitted the contents supplied by common sense, religion, and science. The framework was supplied by the traditional philosophy, which for all its inner variation maintained the presence behind the observed world of a principle intelligible to reason. The content was derived from several sources; from the accumulated stores of common sense; from the doctrines of the Christian church; and more and more from that mass of observed fact and inferred law which the science of Europe as it revived so quickly gathered together. And all these various contents could fit, it was hoped, into the common framework. The men who laid the foundations of modern science had their quarrels with the church, sometimes mortal ones; but they no less than the churchmen saw the world as determined by purpose.

And now the way seemed open for a concordat between philosophy and science, in which each of these activities should work freely within limits determined by itself, and yet both should cooperate to a common end. It would be the business of philosophy to show how the laws observed in the course of nature express the supreme beneficent purpose. Science in its search for particular laws must be free from reference to the concepts of purpose or the good; for science as it advanced came to hold more and more firmly that these concepts were useless for the discovery of any particular law. Yet the system of laws, it was believed, viewed and comprehended as a whole, could be seen to work together for good; nothing in the charter of freedom assigned to science prevented this from being possible, and it was the task of philosophy to show how this possibility could be seen to be a reality; to show, as the problem was summed up by one of the greatest thinkers of

this great period, that the world discovered by human observation was the best of all possible worlds.

Everything is determined by the will of God, and this will expresses itself in a system of laws. Such is the doctrine which seems to lie behind the thought of the philosophers of the seventeenth century, or at least to be the programme of what they hoped to establish. But after what type was science to conceive these laws? in what kind of regular sequence did the purpose behind the world appear most evidently to manifest itself? The answer which came from science was that the typical laws were to be discovered in the processes of the physical world, and most clearly in the simplest of these processes, the movements of brute matter. Earlier scientists had on the whole been less interested in the study of brute matter than in studying the behaviour of the material objects which they conceived to be animated, the animals or plants around them, the heavenly bodies above. But now the behaviour of brute matter was becoming the central field of interest, as it was realized how much could be achieved in this field by observation and experiment. Here definite and measurable results could be obtained, regular sequences could be looked for and found, and one discovery led on to another in a process to which there seemed no end. And for philosophy these regularities in the behaviour of brute matter obtained a new dignity and importance; for now these, just as much as the behaviour of other objects, were seen as the expression of a purpose; only that these expressed, not like the behaviour of men or animals, some particular subordinate purpose, but the purpose of the Creator. And might not the simple laws, observed to operate thus constantly and invariably throughout the whole extent of brute matter, be the groundwork of the whole system of universal law, give perhaps the clue to its understanding? Was it not the supposition most consonant with the dignity and order of creation that all events should be governed by a single system of laws? And if so, should not a study of physical laws be of value, not merely as the acquisition of interesting information, not merely as serving the aim of the craftsman and the technician, but in yet another way, as helping men to understand the purpose behind the universe?

'Everything is determined by the will of God, and this will expresses itself in a system of laws': to this formulation is now added, 'and the laws which make up this system are mechanical'. Here we come on two momentous and ambiguous terms; 'law' and

'mechanical'. Each of these terms as applied to the universe contains an analogy or a metaphor. 'Law' is a metaphor drawn from human society; it implies a command which is imposed by a supreme will and obeyed by subordinate wills. 'Mechanical' is a metaphor drawn from human construction; it implies a machine or instrument which is constructed to serve a purpose and the parts of which can be depended on to work together to serve that purpose. Both conceptions seem to arise naturally out of the climate of thought we are considering, and to be specially appropriate to that climate. The conception of universal law, which is the wider of the two, might have suggested itself, and seems indeed to have first arisen, in the earlier period when Greek philosophy was passing through a similar phase. The conception of universal law as mechanical is a more particular conception, which could hardly have become dominant at any other time than the seventeenth century.

'Law' in its natural sense implies a lawgiver, 'mechanical' implies a mechanic or an engineer. To say that the world is governed by law implies belief in a supreme will which commands all events to happen in some regular way. To say that the laws which govern the world are mechanical implies a belief that the world is a machine constructed to serve a purpose, the parts of which act neither capriciously, nor spontaneously in accordance with their own wishes, but in a regular manner determined by the purpose that made the machine. Each conception loses half of its natural meaning when it is carried over into a world picture which has discarded the belief in a supreme will or purpose. The laws of nature are now laws without a lawgiver, the world machine is a machine not designed by any engineer. Yet the other half of the meaning remained definite enough to make it worth while to keep the terms. A conception was still needed to express the fact that events are observed to happen in regular sequences, and for this it might seem convenient to retain the term 'law', though that could now mean no more than the regular habits of the material world. A conception again was needed to express the more special fact that the regular sequences of which science finds widest evidence are to be described in terms of movements of matter which appear neither random nor spontaneous, and for this the term 'mechanical' might continue to be useful. The conceptions as thus limited and purified seem in themselves clear and definite enough, only they have lost that element in them which made their names appropriate. For it is hard to see why men should have chosen to

say that the habits of matter are governed by laws unless they had thought that such laws were commanded by will, or why they should have chosen to call the world a 'machine' unless they had thought that it was constructed for a purpose.

But we must turn back to trace the process by which the limiting or purifying of these conceptions came about. We have reached a point in the history of thought in which it is believed that a supreme will determines all that happens by a system of mechanical laws. This belief applied, with a partial exception for human free will, alike to those events which had appeared to earlier common sense to be determined by lesser particular wills, and to those events which had appeared to exhibit evidence not of will, but only of blind force. Both these classes of events now appeared to exhibit in a fashion more or less complex the purpose of the supreme will. At this point then the conception of cause which we have called 'external' seems to disappear altogether from the world picture and to be replaced by the conception which we have called 'sympathetic'; nothing is conceived just to happen, everything is conceived as the result of will. But in the history of thought, as in the history of nations, the moment of greatest apparent triumph is often the moment when decay sets in. The idea, or the authority, stretched too far, loses its force. And so it was here. The conception of the supreme will first swallowed up and made superfluous the conception of the lesser wills by which earlier thought had explained the world, and then itself seemed to become superfluous.

The process which we are tracing showed itself in many fields of thought, and first and most signally in the revolution by which the concept of mechanicalness was extended to cover the movements of the heavenly bodies. How were these movements, so constant and so orderly, yet so unlike the familiar movements of material bodies on the earth, to be accounted for? The answer given by traditional thought was that these movements must be caused by a directing will, by the will either of the heavenly bodies themselves, or of a spirit or angel controlling them. Some such fancy or hypothesis, whichever we are to call it, is to be found in varying forms, in early mythology, in the systems of Plato and Aristotle, in the world picture of Dante and Milton, and still living and active in the beginnings of modern astronomy with Kepler. It first came to seem unnecessary when Newton put forward his doctrine that the laws of motion determining the movements of the heavenly bodies were the same as those that determine

the movements of material bodies on earth. The celestial movements were thus assimilated to the mode of movement which had always seemed to common sense to come more clearly within the inherent power of brute matter and the least to require an animist explanation; they appeared as only an exemplification on a vaster scale of the same system of laws which could be observed in that most familiar of all regularities, the tendency of solid bodies to fall to the earth. Common sense had always supposed itself able to understand how the ripe apple could drop from the branch to the ground, without feeling any need to imagine either that the apple had a soul of its own or that its course was directed by a guardian angel. And thus when Newton's theory unified the laws of celestial and terrestrial motion, the whole physical universe began to appear as a single vast machine governed by a uniform system of laws. If two great systems of observed sequence could thus be included within a single system, was it not reasonable to expect that all observed sequences could one day be so unified, that a single system of natural or mechanical law could in the end be seen to account for and to describe all happenings whatever? It was this hope or forecast of the discovery of a universal reign of law, even more perhaps than the particular laws he formulated, that constituted Newton's pre-eminence in the thought of his contemporaries.

Here then seemed an immense step forward towards that goal which the new European philosophy had set before itself, to discover and explain how the whole universe was ordered by law for a purpose. But what was the purpose? At this point the concordat between philosophy and science began to show itself one-sided. Philosophy and science were to advance together, science exhibiting the nature of the laws, philosophy demonstrating how they served a purpose. But as this division of labour worked out in practice, the initiative was left to science. Science in developing its scheme of natural law omitted all reference to the idea of purpose; not to let itself be confused by looking for purpose was one of its main principles of method. And this purpose which science had left out philosophy could not restore, could not at any rate exhibit in detail; it could do no more than go on repeating that the whole universe must have been designed for a purpose. And for those who merely by contemplating the world could be convinced that it was beneficent, such a pronouncement, constantly and impressively repeated as it was by the great thinkers of this period, might be enough; but it carried no new ground of

conviction for those who were not already at least half convinced. The thought that the laws were designed for a purpose added nothing to the laws; it left them in their details the same as they would be if no purpose were present. Why then suppose a purpose at all behind them?

And the more the system of laws was generalized and universalized, the more dubious became the signs of particular purpose which earlier ages had seemed to discover in particular natural sequences. That the sun should return to us every morning and should renew his power every spring had seemed to primitive thought a clear sign of a beneficent purpose at work in the world. And now when science had shown that this came about as a particular case of a general law of gravitation, it remained possible that this law of gravitation was a sign of the same beneficial purpose; possible, but somehow less convincing. It was still possible that there were spirits or angels guiding the movements of the planets, but if so, they only acted in accordance with mechanical laws, that is, they only did what would happen just the same if they were not there.

What could philosophy say to this? The answer, if there was one, would have to be found in that portion of the world's happenings which was conceived to lie outside the mechanical system. One possible answer, and it was sufficient for many of the scientists of the period, and notably for Newton himself, was to turn for guidance to religion. Religion had revealed to man the purpose of God, and this revelation was not to be supposed annulled by the new revelation of science; it remained standing side by side with that or rising above it. But the older revelation was at least not helped by the progress of the new. Science at one or another point claimed to refute the particular teachings of religion, but this was not what was most important. What was decisive for thought was that it introduced a new conception of evidence, in which the evidence on which religious belief was grounded seemed to find no place. Religion offered its detailed account of the divine order and of man's destiny, as science offered its detailed account of physical law. But philosophy could not find in its general and abstract conception of the supreme purpose any force sufficient to bring these two concrete particular accounts together. Henceforward in the thought of Europe religion, philosophy, and science more and more move apart.

The ground for supposing a purpose must be looked for in that

part of the world which was conceived to lie outside the mechanical system. And for philosophy and for common sense there was still a large region, or two large regions, in which the conception of purpose seemed to hold its own; large at least in relation to human activities, though small in comparison with the area over which the system of mechanical laws was now seen to extend. There was first the whole region of organic life, in which the theory of mechanical determination seemed inadequate at several points. It did not explain how the various species of plants and animals were able to maintain themselves and to multiply, nor how they had come to possess structures suited to their mode of existence and adapted to their environment; to account for all this it seemed necessary to suppose the working of a supreme purpose. And within this was the smaller region of thought or sentience, possessed by man and shared by him with the animals, at any rate with the higher animals. Here seemed evidence, not only of the supreme purpose expressing itself through general laws, but of the lesser purposes of the various organisms, animal or human, expressing themselves in particular movements.

How then were these two regions of life and thought to be brought into relation with the new conception of the world as determined by a single system of physical law? There was the problem of life and mechanism, and there was the problem of soul and body; separate problems, yet in a manner connected. Each of them was bound sooner or later to come up for examination in the light of the new world picture, and it was the problem of soul and body that first came to the front.

How does this problem of the relation of soul and body present itself to an individual observer? He seems to himself, if he can trust memory, to be aware of a continuous inner life of his own, made up of mental processes of various kinds, sensations, desires, emotions, thoughts. He seems again, once he accepts the belief in a material world, to observe physical processes, changes, and movements, going on from moment to moment in the material objects round him. He infers or supposes, with what right or on what ground we are now inquiring, that in some of these material objects which he distinguishes as human bodies there is a soul or mental life like his own. What then is the relation of the mental process to the physical process in his own or in any other human organism? Each process seems to run a course of its own, continuous and intelligible in itself. In the mental process one state seems to arise naturally out of a preceding one, thought or desire

from sensation, will from thought and desire. In the bodily process again events seem to follow naturally on one another in the kind of way in which physical processes go on in other material objects whether living or not living. And there are certain points at which these processes seem to interact; impacts from the outside world producing sensations, desires, thought, perhaps will; will in turn producing movements in the body, which result in movements in external objects. At these points the two processes seem to interact or at least to coincide. Yet the coincidence holds between two series that are different in their nature; the mental process has its own continuity, the physical process again has its own continuity; events or changes in the mind may coincide with, perhaps cause or be caused by, events or changes in the body, but they do not resemble them.

And the more deeply research probed into the nature of physical processes, the greater appeared on the one hand the continuity of all physical process, and on the other hand the disparity between it and the mental. Man in early days as he went about the business of his daily life would not find himself much troubled by this disparity. It would be natural for him before common sense had begun to grow into science to take the perceptual object as a replica of the supposed material object, and the physical act as a replica of the mental act of will. He sees a bird flying and aims at it; the object presented in his visual field seems to him a replica of the material object at which he aims; the physical act, the shooting at the bird, seems to him again a replica of the mental act by which he wills to shoot. But analysis interposes in all such cases between the material object and the mental sensation a chain of processes in the sense organs and nervous system leading inwards to the brain, and again between the volition and the action a chain of processes in nerves and muscles leading from the brain outwards, and it conceives a passage from the one set of processes to the other within the brain which corresponds to the passage from sensation to volition; and none of these physical processes in sense organs or brain or nervous system bears any resemblance to any mental process which the doer is aware of from within.

Here then arose the question, How can we conceive two such disparate sets of happenings to interact? If there is to be supposed a causal connection between them, it must be of a different nature from the causal connection that holds within each series. In the

series of mental events as we observe it from within or reconstruct it by sympathy, and again in the series of physical events as we observe it from without, we seem to find a continuity which makes the passage along each series appear intelligible. But in the passage from one series to the other the continuity is abruptly broken.

So far the problem might seem only one of theory and analysis; but along with it came another question, more practical and more disturbing. While it might be difficult in theory to see how a causal connection could operate in either direction; either from the series of physical events to the series of mental events, or from the series of mental events to the series of physical events; the difficulty seemed to apply with special force in the direction of the passage from mental to physical. For here arose the problem, How was the common-sense belief that human actions are directed by purpose to be reconciled with the doctrine of the supremacy of mechanical law?

One possible answer was to say that soul and body were two substances, each with a causal efficacy of its own, which interacted with one another. This was the answer which, vaguely conceived, had commended itself to historic common sense, and it was defended at the opening of the modern period by the authority of Descartes. But Descartes in face of the new difficulties could not leave the problem where common sense had left it, and there were features in his solution which were new and which looked strange. The uniform system of mechanical law must, he felt, be extended over as wide a field as possible, and he included in its field all the phenomena of life except where it seemed impossible to separate life from thought. And with man alone in the whole creation this separation seemed impossible. Man is assured by direct experience that he exists as a thinking substance; he is assured by revelation that he is capable of good and evil; he must then have a mind or a soul which is both a witness and an agent. The purpose of God requires that the human soul should exercise free will; to exercise free will the human soul must possess a certain limited power of influencing the movements of matter; and the way in which it influences matter is that it can control the direction, though it cannot add to the amount, of the force imparted to the body by natural agencies. All the rest of the world, as it could be observed by common sense or by science, was mechanical in the original sense of that word; that is, it was a machine devised by God to work according to regular physical laws in order to make possible the achievement of his purpose for human beings. This complete

determination by mechanical law applied not only to brute matter, but to organic life, and not only to plants, but to animals. A sharp line was thus drawn between men, conceived as having will and sentience; and other animals, which were conceived as mere automata, without either sentience or will.

Descartes had the high philosophic merit of seeing where the vital problems for philosophy arose, and of insisting that some answer must be found for them. And his answer to this problem, however strange it may seem, was clear and precise. But the particular distinction by which he attempted to find room for the causal efficacy of the soul was broken down by the next generation of physicists. The same arguments and evidence, they said, which showed that mechanical laws determined the amount of force, showed when probed further that they determined its direction too; if mind could not be conceived as having power to determine the amount, neither could it be conceived as having power to determine the direction. The sequence of physical events then must be conceived to run its course not interfered with by the sequence of mental events. Yet they corresponded, perhaps at all points, certainly at some decisive points. How was this correspondence to be explained?

A second possible answer, and it was the answer that might seem to accord best with the new outlook of physical science, was that the changes and movements of the body alone had causal efficacy, and that the happenings in the mind were results of these. Common sense, no doubt, was reluctant to accept this doctrine of the complete supremacy of the physical over the mental; but could its reluctance be justified by reason? Each of us sees the series of mental events in his own case, and imagines it in the case of other persons, as something that is being constantly determined and controlled by physical events; such determination, if he supposes himself to have any knowledge of a material world, is implied in every moment of sense perception. The series of physical events on the other hand appears to him as something that for the most part goes its own way not determined or affected by any mental event. He must recognize then that it is the nature of the mental series to be determined at many points by events in the physical series, and that it is the nature of the physical series to be for the most part continuous with itself and unaffected by any mental events. He seems no doubt to be aware of certain mental events, his own volitions, as determining physical events in a particular small

region, in his own muscles and limbs and in such part of the material world as these are in contact with. But is this the only way in which he can interpret the phenomena that appear in volition? Is it not a possible account to say that one physical event, the state of his body and brain at the moment of willing or desiring, determines a succeeding physical event, certain movements in his muscles and limbs, and that this physical determination presents itself to him as though the mental event corresponding to the earlier event determined the later physical event? And does not this possible account become the more probable one, when science links up the fragmentary sets of physical events which separate observers are aware of into a single connected series, and extends this series indefinitely backwards in time and outwards in space?

The argument seemed forcible, but it had not yet gathered force enough to overcome the objections felt by historic common sense. And there was a third possible solution, which was the one that most commended itself to the immediate successors of Descartes. The events of body and soul, they conceived, ran in parallel courses, neither of them determined nor interfered with by the other, but both determined by the supreme will to be what they were and to correspond. This conception reads strangely to us now, but it was perhaps the answer most consonant with the general philosophic temper of the time, and it can help us to realize what that temper was. If the principle that the supreme purpose determines all events by regular law is taken in earnest, it seems to follow that the importance of all lesser causes dwindles, that lesser purposes when they seem to act do no more than provide the occasion, and what really acts is the supreme purpose. This consequence was worked out by seventeenth-century thought in two different forms. One was the doctrine called 'Occasionalism', which held that neither could mind act on matter, nor matter on mind, but that every change was produced by the will of God in accordance with regular laws when some preceding change had given the right occasion for it. The other was the doctrine of psychophysical parallelism or pre-established harmony: God, it was thought, had at the moment of creation so ordained the course of the world that the sequence of bodily and mental events must for ever run parallel, though neither caused nor interfered with the other.

And for an age which took seriously its belief in mind, in matter, and in God, there was about this line of answer nothing paradoxical. Nor would it make much difference, if the law-giver was conceived to be as real as his laws, whether he was supposed to have laid

down his laws once for all at the beginning of time or to reaffirm them at each moment when the occasion arose for them to apply. This doctrine then in either of its forms seemed to offer an equal balance between mind and matter, which allowed the physical and the mental each to be supreme in its own sphere. But for it to seem tenable, the condition that the law-giver must be no less real than the laws was essential. And as the laws came more into the foreground of thought, and the conception of the law-giver behind them grew fainter, the equal balance between mind and matter could not be maintained. It could be understood how two parallel yet independent sequences could co-exist if both were determined by a power superior to either. But if there appears no reason to assume the reality of such a power, and if thought is left merely with the two parallel series, could these be really independent, must not one of them be supposed to determine the other? And if one determined the other, must it not be the series of events in the body, which is an integral part of the series of physical events in the whole material world, that determines the series of events in the mind? The doctrine of psycho-physical parallelism, severed from its connection with the belief in a pre-established harmony, must surely be taken as implying that events in the body and brain are the cause, but never the effect, of events in the mind.

The theory of psycho-physical parallelism thus came, as time went on, to lose its original implication that the bodily and the mental series were parallel and co-ordinate, and to become only a half-hearted version of the materialist theory. The materialist theory had in its favour the constant propensity of philosophers to explain all phenomena as manifestations of a single principle; it was strengthened too by the fact that the study of material processes lent itself, as the study of mental processes did not, to scientific discovery and prediction. The interactionist theory had in its favour the natural dualism of common sense, which feels as sure that the mind influences the body as that the body influences the mind. And whatever its weaknesses it seemed difficult to dislodge, for did it not seem an evident fact that men and animals were able in some measure to achieve their purposes and to get the things they wanted, and how could this be supposed to happen if mechanical law determined everything and purpose had no say? Purpose then appeared to retain its place in the material world; a place that shrank in importance as the extent of the world over which mechanical law ruled, and the small part played by life and thought in this world, came more and more to

be realized; but yet that could not be altogether dispensed with. And for the problem of body and soul common sense fell back on the theory of interaction, though without facing the difficult questions which Descartes had raised. These remained in the background, vaguely felt to be disturbing, but not probed.

But in the nineteenth century the balance was once more shifted by two great scientific generalizations, which were of importance not only for science but for philosophy, and still more for the new common sense which was trying to build up a philosophy on the results of science.

The first of these was the doctrine of the conservation of energy. We are not to suppose that this was the discovery of a new fact; it was rather the summing up and brief statement of a view of the world implicit in the thought of Galileo and Newton. Perhaps indeed we ought not to suppose it the discovery of a fact at all. The scientists who propounded it did not mean to say that they had measured the total sum of energy in the universe at two separate moments and found it to remain constant. The doctrine was rather to be conceived as a rule of method, which was found continually fruitful in one particular instance after another. Take some portion of the material world which forms a partially closed system; estimate as well as you can the amount of the energy present in it at the beginning and end of a period, and the energy coming into it and going out of it during the period; the energy at the end after allowing for these incomings and outgoings will be found the same as at the beginning; and if at first there seems to be a gain or a loss, research will put the inquirer on the track of some cause not yet noted which will account for the added or subtracted energy, perhaps in a quite unexpected way. Here was a rule of method which was found over and over again to work and in no case to break down. And although it could be applied in practice only by means of a set of subsidiary assumptions, any of which might be questioned, yet it seemed evident that science, relying on this principle, was able to extend immensely the field within which it could correlate and predict.

But if the sum of energy was constant, this implied that energy was at bottom uniform, and that any one form of energy could in certain conditions be transformed into another that was its precise numerical equivalent. And the various modes of force which could be observed working in the physical world, and which to common sense looked so different, came one by one in the light of this

generalization to appear as forms or manifestations of a single principle of energy. Heat revealed itself as a form of motion; light, electricity, magnetism, and as time went on other phenomena, took their place in a continuous scale of vibrations. Was it not then reasonable to suppose that all modes of force or energy observable anywhere in the universe could be shown with sufficient knowledge to be forms, more or less complex, of this uniform energy, whose simplest form was the movement of particles of matter in accordance with mechanical laws? Certainly there were many phenomena which could not at present be described in terms of mechanical laws, but might not this be due to nothing more than their greater complexity? We cannot at present fully describe or predict the phenomena of the tides or the weather in terms of these laws, yet we suppose that they could be shown to conform to them if our knowledge were more complete. And if we consider other regions of inquiry which for the present science needs to treat as autonomous, as falling under special laws of their own, such as the region of chemical phenomena, still even here there seems no reason why these special laws should not in the end be exhibited as more complex cases of the simple mechanical laws.

But to describe and explain the phenomena of life a different order of laws seems requisite, or so at least the problem looks to common sense. Here we find partially closed systems, living organisms, whose history proceeds as though it were determined in part by the purpose of preserving the organism. Here seems evidence of something more than a complexity which is not yet reducible to mechanical law, but which one day might be; here seems evidence of laws of a different kind, which make things happen in a way other than the way in which they would happen if mechanical laws alone were at work. Is there not a conflict here between the appearance of purpose which to common sense looks so evident and the reign of physical law which science seems to have established? How is this conflict to be resolved?

Here seemed a problem hard to answer, but a new and radical solution for it was offered half-way through the nineteenth century by the second of the two great scientific generalizations of which we have spoken. This was the doctrine called the theory of evolution; or to put it in terms rather more precise than that ambiguous word, the theory propounded by Darwin of the descent of man from other species and of the origin of species by natural selection. The propounding of this theory had a momentous effect on thought

in two ways, each of them revolutionary, though neither perhaps was altogether new.

First, the theory recalled to man in a sudden and startling way his kinship with the animals and with the whole of organic life. Not that this kinship was a new and unknown fact. Earlier men, as we can see from their folklore, had realized it very well. It must have been evident, as soon as men began to study nature, that the realm of organic life shows a gradual scale in which the transition from lower to higher proceeds by successive steps, and that the higher animals seem to approach nearer and nearer to man in respect of their structure, their powers of perception, their capacity for feeling and for something like thought. It must have been apparent again, before there was ever any science of embryology, that each individual in infancy and before it passes in his own person through a transition from a simpler to a more complex state of being. These were obvious facts, but facts which have been obvious for long enough cease to be startling. And the whole trend of human development for centuries had gone to make man think of himself, not as one among the animals, but as different from them; different, as religion assured him, in that he had an immortal soul and a knowledge of good and evil; different again, as science and philosophy encouraged him to believe, in the range of his intellectual powers. The reminder of his kinship with the animals raised disturbing questions as to whether this difference on which man prided himself was so fundamental as he had supposed.

The second consequence of the theory was even more revolutionary. Man, it said, like the other animals, had come to be what he was by a process of natural selection; by the operation, that is, of those regular physical laws which are observed to operate throughout the extent of the inorganic world, and which as there observed seem to present no evidence of a purpose behind them. And here appeared a sharp break with one of the most general beliefs of the past. Historic common sense, seeing the conditions of life to be such as to make it possible for living organisms to survive, for the individual to persist for a certain space of time, for the species to perpetuate itself, felt that these conditions must be somehow the expression of purpose. Men and the other animals, it supposed, get the things they need, not always and in detail, but on the whole and for the most part and enough for their survival, because the purpose that made the world has designed the conditions of their life to satisfy their needs. But according to the theory of natural selection the problem should be looked at the

other way round; men and the animals get, on the whole and for the most part, the things that they need, because the conditions that brought them into existence have made them such that they need only what those conditions allow them to get. The new theory showed, if its claim could be sustained, how a set of phenomena that looked like the work of design might come into existence as one particular result of the working of physical laws, which in their general nature and in their general effects gave no evidence of being designed to serve a purpose; how a series of happenings might, to use a term and a distinction for which the need now first made itself felt, be purposive, though not purposed; might, that is, present all the appearance of purpose, though purpose had played no part in bringing them about.

Darwin himself, it would seem, was not much concerned with the wider implications of his doctrine. He came to the problem as a specialist, seeking for an explanation which would unify as many as possible of the disconnected facts that he observed in the field of biology. He was a scientist rather than a philosopher; he was concerned, that is, to work out a theory bringing order into this wide yet limited field, rather than to ask how this theory affected the general world picture. Could not the theory, he asked, be accepted by any unbiassed student whether he conceived that there was a purpose in the universe or not? Could not the believer in a Creator hold it as consistent with the wisdom of Providence to work out its designs by the complex plan of evolution as to effect them by the simpler means of direct separate creation?

So no doubt he could, and theologians, once they had recovered from the first shock of realizing that the new theory was inconsistent with the literal words of Scripture, found no difficulty in reconciling it with the essential doctrines of the church. Anyone who was convinced either by religion or by philosophy that the world was governed by purpose need see in the teachings of Darwin no reason to abandon his conviction. The theory of evolution by natural selection was as compatible as any other biological theory with the belief in the presence of a purpose in the universe. But it was also compatible, as no accepted biological theory had been for centuries, with a belief in the absence of purpose; and it was this second compatibility that mattered, for this was something new, or almost new, in the history of thought. Two thousand years earlier a few Greek thinkers had put forward the idea that the phenomena of life might be accounted for by the natural working of physical laws, and this idea contributed to build up the picture

of the world which took form in the epic of Lucretius. But these earlier speculations were no more than guesses, unsupported by detailed evidence. It was Darwin who first presented this view to common sense as the view which could claim the authority of science; as the view which seemed to an observer studying the facts with patience and without prejudice to be the conclusion to which the facts pointed. And what struck the imagination of the time, and was bound to strike it, was not that this theory still allowed room for the old view of the world as designed by purpose, but that it for the first time allowed room for the new view of a world in which purpose played no part.

The philosophic conclusion which Darwin was not concerned to draw was drawn by his most vigorous disciple and champion, Thomas Huxley. Huxley combined in a way not often found the scientific type of mind with the philosophic, if by 'philosophic mind' we understand a mind that does all it can to bring together the beliefs forced on it from widely different quarters and to see how they can be made to fit. He realized that the double problem of the relation of purpose to mechanism and of mind to body, which had been felt obscurely in the background since the beginnings of modern science, came to the front with a new urgency in the light of these two great generalizations, the principle of the conservation of energy and the theory of natural selection. It presented itself with a new urgency under new conditions; the whole development of thought had tended little by little to shift the balance of power from purpose to mechanism, and these two generalizations brought a sudden accession of weight to the same side.

The problem at issue may be summed up as follows. The principle of the conservation of energy had seemed to carry thought so far at least as this: that all happenings in the world were to be explained as cases of the working of regular physical laws, unless some sufficient reason could be shown for bringing them under some different principle. Admittedly there were many happenings which in virtue of their complexity could not at present be explained as instances of known physical laws; but mere complexity was not a sufficient reason for appealing to a different principle, it only meant that the details of the working of the physical laws in a particular case had not yet been disentangled. But in the phenomena of life, more particularly of sentient life, there appeared to be more than mere complexity, there appeared

also signs of purpose. And this did seem to common sense a ground for appealing to a different principle, since the physical laws which science had discovered were formulated without any regard to the conception of purpose and did not appear in their general working to exhibit any sign of serving a purpose. How then was it to be understood that as they operated in one seemingly exceptional case, the phenomena of life, they appeared to serve a purpose, the welfare of living organisms? Was the explanation that at this point the regular physical laws, purposeless in themselves, were modified by other laws which served a purpose? Or was it that the physical laws had been so designed from the beginning that they were destined, late in time and at one minute point in space, to produce and foster life and to reveal themselves as designed to produce and to foster it? Either of these answers must seem strange to the scientific atmosphere. Was then a third explanation possible, that the phenomena of life might be accounted for without any reference to the idea of purpose, merely as more complex instances of the working of the physical laws that governed inorganic matter?

Faced with these questions Huxley went back to the point where Descartes had left the problem. But the solution which Descartes had propounded could for several reasons not commend itself to him. He found no evidence either in his philosophy or in science for the belief in a supreme purpose which held together the disparate sides of Descartes' solution. And there were two more particular grounds on which that solution was ruled out for him. The doctrine of the conservation of energy seemed to preclude the suggestion which Descartes had put forward that an immaterial entity, the soul, might be able to determine the direction, though not the amount, of physical force. The doctrine of the origin of species seemed to preclude the sharp distinction which Descartes had drawn between man, conceived as active and sentient, and animals, conceived as machines without feeling. Men and animals, Huxley felt, must share alike; and he allowed to animals something more than Descartes had done, to men something less. The view of the world to which he found himself led by the conclusions of science was to this effect. There is no evidence that any physical happening is determined by purpose, either by the supreme purpose which, as earlier ages supposed, created the world, or by the lesser purposes which, as they supposed, determined the actions and the movements of men and of animals. All the phenomena of life, whether in plants or in animals or in human beings, come about through the working of physical laws. The conception of

purpose is not needed to explain why physical laws are such as they are; it is then not needed to explain the phenomena of life, either of life as the observer sees it from outside in plants, animals, and other human beings, or of life as each sentient being is aware of it from within. Yet it is still true that each of us is aware of his own inner life and that he assumes a similar life in other human beings; and this inner life is a reality in its own place, but it is what may be called an 'epiphenomenon', an effect only, not a cause. The mental state of each moment is the effect of the physical state of the organism at that moment or at a moment immediately preceding, but it is not itself a cause or a part cause of any succeeding state whether physical or mental.

Such is the conclusion to which one of the most philosophic scientists of the nineteenth century found himself led by the movement of scientific thought, and it is a conclusion the more impressive because it was not welcome. Huxley was not only a theorist, he was a moralist and a reformer; and the doctrine that human efforts were limited and controlled by physical laws indifferent to human desires was no more attractive to him than to other people. He put it forward not because he supposed it to be pleasant, but because he believed it to be true; true for philosophy, because it seemed to follow from the conclusions that research showed to be true for the particular sciences.

But Huxley wrote eighty years ago, and have not the advances of physical science since his time rendered the whole materialist and mechanist view of the universe out of date? So we may often hear it said now, by some who are men of science, as well as by many who are not; and this way of speaking may claim support from the difficulties which seem to be felt by physicists today in framing a conception of matter that will meet the requirements of modern thought. But 'matter' and 'materialism' are ambiguous terms under which various implications are concealed, and these difficulties, whatever the right solution of them may be, have little relevance to the problem before us. Huxley was himself alive to the difficulties of framing an intelligible conception of matter, even though these were less apparent in his time than they have become since. Like the idealist physicists of today he hoped that the difficulties could somehow be solved by an explanation of matter in terms of mind, though he was no more successful than they have been in showing how an explanation in terms of mind was to be constructed that would hold together. Our own attempt

to look for a solution along Mentalist lines has brought us to the conclusion that, if we attempt this road, we are led through Phenomenalism and Idealism to Subjectivism, and in the end to Subjectivism of the Moment, as the only form of Mentalist doctrine that is ultimately tenable. It has left us then with the conviction that however great the difficulties of Materialism may be, they cannot be greater than the difficulties of Mentalism; and that our most hopeful course is to hold to the belief in a material world which has always been the essential belief of common sense, and see what progress we can make upon this basis.

Common sense sets out with a belief in matter and mind as two separate fields for study, and science starting from this belief builds up its structure of the physical and mental sciences. These two regions, matter studied by the physical sciences, mind studied by the mental sciences, need to be somehow brought into relation with one another; and Huxley's philosophy was an attempt to work out clearly and consistently one possible view of the relation, the view which seemed to him most consonant with the main conclusions so far reached by the particular sciences. If we want to know how the problem Huxley raised looks in the light of the present state of scientific thought, we must draw the material for our answer from the more concrete sciences, from biology or psychology.

It is to these sciences that we must turn for guidance on the main problems which have concerned us in this chapter; to biology for guidance on the problem of the relation between life and mechanism, to psychology for guidance on the problem of the relation between mind and body. The two problems are separate, yet connected, and their connection is immensely intricate and hard to disentangle, and we may find our best chance of grasping its nature if we do what we can to view each of them in the light of the other. And let us pass on first at this point to ask how the position looks in the light of modern psychology.

CHAPTER XIV

SOME PROBLEMS OF PSYCHOLOGY: UNCONSCIOUS MIND

PSYCHOLOGY is a science which during the last century, and still more during the last generation, has made great advances, if we are to measure by the amount that is written about it and the interest that is taken in it. But this advance has not made it easier to know what is its bearing on the main problems of philosophy. Modern psychology, it is very commonly supposed today, has something new and important to contribute to philosophy, but what? It is hard to say; for psychology, as it widens and deepens its researches, finds itself led on into problems of the same far-reaching kind as those which perplex and divide philosophy; and different schools of psychologists propound different answers to these problems. What we called earlier the characteristic mark of a science, its power to arrive through disagreement at agreement, is here only very partially apparent.

Psychology starts, as other sciences do, by working at the level of common sense. It assumes, as common sense does, the mind as a reality, the body as a reality, and the two as interacting; and on this assumption it collects and studies data as to how these two realities behave and interact. Much of the work of present-day psychology, and perhaps its most fruitful work, continues to be done at this level. To revert to what was said earlier, if we ask what psychology can contribute that is of practical value to human life, the answers are of this kind: in the field of education there is the study of how the child's mind differs from the mind of the adult; for the administrator, there is the study of how the mind of the savage differs from the mind of civilized man; for industrial life, there is the study of how different types of mind are suited to different employments or how they may react to one or another stimulus or to fatigue. In fields such as these and on this

common-sense level there is no reason to doubt that agreed results have been achieved, and that more are on the way to being achieved.

But if this collection of facts on the common-sense level were all, psychology would have no special contribution to make to philosophy. Particular sciences have affected the course of philosophic thought, in so far as each of them has been able to work out some comprehensive principle which goes below the level of common sense, and to show how the mass of facts falling within its field may be related to this principle or how further conclusions may be deduced from it. In the development of modern psychology we find a realization of the need for some such comprehensive principle and attempts to supply this need. And it will be by its attempts to formulate such a principle, rather than by its collection of facts, that psychology may be supposed to have power to influence philosophy and perhaps remodel it.

It is, however, at this point, where psychology seeks to go beyond its work of collecting and ordering facts on the level of common sense, and claims to establish some comprehensive guiding principle, that agreement ends and disagreement takes its place. Different schools find themselves in conflict as soon as they attempt to formulate their principles; and the conflict perhaps lies even deeper than this way of speaking might suggest. It is a conflict, not so much of principles that can be formulated, as of preconceptions or methods of approach; and the rival schools of psychologists seem to find the same kind of difficulty in meeting one another's minds and understanding one another's answers as different schools do in the region of philosophy. In this divergence it would be premature for us to hope that we can distinguish the principle which will ultimately guide, or which ought to guide, psychological thought. All that we can here attempt to do, and it may be enough for our present purpose, is to examine a few of the main conceptions that seem to commend themselves today as consonant with the general trend of scientific inquiry. And we may begin by considering two conceptions or methods of approach which have received a definite formulation and have been prominent in recent discussions; the Psycho-analytic approach and the Behaviourist approach. Let us look briefly at each of these and ask how it bears on the problem before us.

The term 'Psycho-analysis' covers a variety of movements, and is itself in turn a part of a larger movement, that of the discovery of the unconscious. The conception of the mind generally assumed

by psychologists, when psychology began to be organized as a science, was that the mind is something that is aware of what it is doing and has a reason for what it does. And this has for the most part been the view of common sense. Common sense has always felt sure that there go on in human beings mental processes, such as feeling, perceiving, thinking, willing, of which they are aware; it has not much concerned itself with the possibility of other mental processes of which they are not aware. But for the psychology of the unconscious the mind that is aware is only a small part of a larger mind, much of which lies below the level of consciousness. And the new view put forward by this psychology, which many regard as its great discovery, and which even others who are more cautious regard as at least a plausible hypothesis, is that a large amount of what common sense had supposed to be deliberate rational action is in fact carried out by an unconscious part of the mind, without deliberation or reasoning; and that the work of the conscious mind is in such cases confined to finding reasons for what has been done, and if planned at all has been planned by this unconscious part. Into the service of this hypothesis are collected the most diverse phenomena, from what common sense might call 'genius' or 'inspiration' to what it would call 'pathology' or 'madness'.

The facts which can be alleged to illustrate the hypothesis are drawn from many quarters, but the main considerations urged in support of it are of this kind. Men are observed to behave in various ways and to perform various actions. They declare, and so far as their thoughts can be guessed at they seem to believe, that they behave in these ways, perform these actions, because they wish to gain certain ends, and because they are moved by certain motives or are obeying certain principles. But the psychologist, scrutinizing their actions more closely, observes that these do not appear directed to the avowed end, do not conform with the principle or motive professed, but that they are the kind of actions which the doer might be expected to perform if he were actuated by motives or were aiming at an end different from those which he avows. The behaviour appears then to be determined by some causal process in the doer which is other than his conscious mind, and this causal process the psychologist calls the 'unconscious mind'.

But now we must ask: Is the hypothesis of an unconscious mind needed to account for the facts that it is invoked to explain? Why suppose this causal process which is not the conscious mind to be

a mind or to be mental at all? Why should it not be the working of the bodily organs?

The hypothesis of an unconscious mind may seem a natural supposition to an inquirer who sets out on the study of psychology by exploring his own mind without any reference to a belief in a material world. If he tries to look at his experience of any moment as a whole, he will find there a central part that is, to use an obvious metaphor, brightly illuminated, round this a wider circle that is more obscure, round this again an outer fringe that is still more obscure; and he will find that, as the minutes run on and attention shifts, what was clear becomes obscure, and out of what was before obscure emerges another little patch or circle which for a moment becomes clear. It may seem natural then for him to suppose that the conscious mind is a small shifting part of a larger unconscious mind, which is unlike the mind of which he seems to be directly aware in that it is not conscious, but like it in that both are minds; natural again to suppose that all that seems to be incomplete and to need explanation in the working of the conscious mind finds its explanation and completion in the working of the unconscious mind.

Yet when we speak of the unconscious mind we are speaking of something which, as our language attests, we do not know directly, but which we only assume or infer as the cause of what we do know directly. An observer looking at another human being observes directly only physical acts; it is from these acts that he has to infer somehow the presence of any mind at all, whether conscious or unconscious. How is the observer, from his awareness of his own mental states, and from his observation of the physical behaviour either of himself or of other human beings, to arrive at the conclusion that there is an unconscious mind in himself and in other human beings, which plays a part in determining their actions?

He has at his disposal, let us assume, a body of facts such as the psycho-analyst or other psychiatrists allege to have been observed, and he asks himself how these facts are to be accounted for. He may read in the literature of psycho-analysis about conflicts, repressions, and inhibitions of which the conscious mind is not aware, which produce devastating effects on the organism, and which can be cured by bringing them up into consciousness. But why should he, assuming that the facts are as stated, suppose that a mental process in an unconscious mind is needed to account for

them? Why should it not be a sufficient explanation, as it is certainly a more economical one, to suppose that all that happens is a physical process in the body and the brain? Let us consider a typical instance. The organism has undergone some shock, perhaps a shock to the awakening sense of sex in early life, perhaps a terrifying incident in war time; this shock was not accepted by conscious experience in the normal manner at the time it happened, and the memory of it has been repressed and forgotten; but it has left traces in some region of the organism not accessible to ordinary consciousness, and these work disastrously because they have not had their normal effect on conscious experience; observation shows that if the normal reaction in the conscious mind can be induced, the morbid symptoms caused by the suppression are removed.

Taking this as a correct summary of observations made in a series of cases, we must ask, Why is it necessary to assume an unconscious mind, and processes in this unconscious mind as the causes of these morbid symptoms? The patient is aware, when the period of repression ends, of the emotion that is said to have been repressed; he seems to remember, and may remember truly, that he was aware of it before the period of repression began; he is not said to become aware, and it is difficult to see how he could ever become aware of it as having been present somehow or somewhere in an unconscious part of his mind during the period of repression. What then can be inferred? It may be reasonable to infer that during the period of repression a process which was in some way causally connected with the emotion was at work in the organism, and was producing the morbid symptoms that the psychologist observes. But this process is not observed by the patient at all, and in so far as either it or its effects can be said to be observed by the psychologist, what is observed is physical, not mental. Why then suppose that the process is anything but physical?

Can the psychology of the unconscious point to any leading principle which might supply an answer to such questions? It is possible to find one, implied perhaps in the whole conception of an unconscious mind, and sometimes more definitely stated, though never with quite such precision as seems called for. This may be summed up as 'the principle of the autonomy of the mental life'; and its effect would seem to be that the mental life of every human being is a self-contained whole, such that the mental state of each moment finds its full causal explanation in some preceding mental

state; or perhaps even more than this, that the whole state of the organism at any moment, whether mental or physical, finds its full causal explanation in events that are happening or have happened in the mind, in thoughts, desires, feelings, emotions. Something not less far-reaching than this seems to be implied in the claim that the psychiatrist should be able to detect in the most trivial incidents, in dreams or slips or stammerings, the presence and the nature of deep underlying emotional currents. And such a principle would explain why this school of psychology finds itself entitled to postulate unconscious mental processes, which are to supplement and to account for all that seems fragmentary and unaccountable in the conscious mental processes.

But the principle of the autonomy of the mental life thus understood implies a relation between the individual mind and the material world differing widely from that conceived by present day common sense. Common sense today, having in mind the findings of physical science, would say that the mental life of the individual is in large measure controlled by its physical environment and by happenings in that environment, which are determined as regards their own sequence in accordance with regular physical laws, but which in relation to the mental life are mere accidents. It might allow to the mental life a certain limited autonomy in so far as it would admit that character or temperament could show themselves in the manner in which they might respond to these accidents; it would regard as fantastic the notion that the mental side is so far dominant in the response that every physical expression or movement of the organism is to be interpreted in mental terms, in terms of emotions or fears or desires. If a man slips and sprains his ankle in going to keep an appointment, it would admit that his character might show itself in his way of responding to the sprain, whether he screams or swears or takes it calmly; it would find it hard to believe that the accident happens to him because he does not want to keep his appointment. Yet the principle of the autonomy of the mental life, if it is taken seriously, seems to claim as much as this; it claims in effect that in human life there are no physical accidents; that everything that common sense would call a physical accident could be seen, if rightly understood, as an attempt on the part of some desire or fear in the unconscious mind to get something or to escape from something. Or if the principle does not go to this extreme point, at any rate it goes a long way in this direction, and it is hard to know where short of this it would draw the line.

An inquirer, who is starting from a belief in the material world and seeking for a conception of mind that he can relate to this belief, would find it difficult to accept this principle. The hypothesis that the mental world is autonomous and self-contained, in such a way that each mental happening finds its complete causal explanation in some previous set of mental happenings, seems to be put forward as a counterpoise to the hypothesis that the physical world is self-contained, in such a way that each physical happening finds its complete causal explanation in some previous set of physical happenings. But the two hypotheses stand on very different footings. The hypothesis of complete physical determinism is one which, however much it may outrun the facts that have been observed, rests on a vast mass of observed facts and can be justified by wide powers of exact prediction. A hypothesis of mental determinism must appeal to facts which compared with those are scanty and fragmentary, and it has little that can count as exact prediction to justify it.

We must say then that this doctrine of the autonomy of the mental life cannot help us unless it can somehow be so restated as to take its place in a philosophy which does justice to physical determinism and the material world. But without the support of this doctrine is anything left of the case for the hypothesis of an unconscious mind? For the main ground for assuming an unconscious mind, and so far as we can yet see, the only ground, was the principle that the causal explanation of every mental event must be sought, not in any physical events, but in some mental event or set of mental events. And apart from this principle or prejudice, why duplicate the physical events which can be observed, or which can be plausibly inferred as being continuous with the physical events that are observed, by supposing a set of mental events which are in their essential quality unlike any mental events that can be known directly?

But if we reject the principle, we have still left to us as needing to be accounted for the facts which the psychology of the unconscious claims to have collected; and notably those facts which go to show that human beings, while professing and seeming to believe that they are aiming at one result, in fact often perform actions which are directed very effectively to promoting quite a different one. And these facts support a conclusion which is of great importance, and which the earlier psychology seems not to have noticed or to have too little attended to; the conclusion that

long chains of activity, of a kind which might naturally appear to need intelligent planning, are carried on somehow by the psycho-physical organism without the intervention of the conscious mind. If then we find no sufficient reason for assuming the hypothesis of an unconscious mind, should not our conclusion be that activities of the kind can be carried out by the physical organism without the intervention of the mind at all?

And this conclusion, to which we have now been led through our study of the considerations urged by the psychology of the unconscious, turns out, as we shall see, to be the very conclusion which has been reached on other and more general grounds by a second main school of modern psychology.

CHAPTER XV

SOME PROBLEMS OF PSYCHOLOGY: BEHAVIOURISM

We are brought now to the second leading conception or mode of approach which is prominent in modern psychology, the Behaviourist approach. The Behaviourist position may be summed up thus. Psychology has in the past conceived itself as studying something which it calls 'mind' or 'soul' or 'consciousness'. But these conceptions cannot be defined, and what is even more important, they cannot be used. A man cannot observe his own consciousness, because self-observation is impossible; and when he sets himself to observe other men, what he can observe is not their consciousness, but only their behaviour, that is, movements or changes in their bodies. Why not then be content to regard psychology as the study of physical behaviour? Why suppose that consciousness or mind or soul exists at all? To a psychologist with the prepossessions of the past this doctrine must appear startling. Yet it finds adherents and defenders today, and we shall be less surprised at this when we see it as the goal to which powerful tendencies in thought have been pointing the way.

Let us take it first as a doctrine of method. The Behaviourist may find it hard to prove that self-observation is impossible, but he can make out a strong case for saying that as a method of psychological study it is unscientific and untrustworthy. Psychology, he can point out, so long as its method is self-observation or introspection, must differ from the recognized natural sciences in one vital respect, that it is condemned by the conditions under which it works to study a unique object. A main feature, and perhaps an essential one, in the work of the natural sciences, is that they study classes of objects, which they can compare with one another and between which they can note points of likeness or

unlikeness. When, however, the psychologist makes his own mind the object of observation, the object is unique; he may assume the presence of other minds, partly like it and partly unlike, in other human beings; but supposing him to be justified in making this assumption, he still cannot look at their minds in the way in which he looks at his own. But if he changes his point of departure and takes as his field of study the behaviour of human beings, the case is altered; he has before him now a multitude of objects, he can compare these objects one with another, can observe their differences and their resemblances. Psychology then will fall into its appropriate place among the natural sciences as a special, and for human beings a specially important, branch of biology.

And these general reflections may be reinforced by sound practical reasons for distrusting the introspective method. In the first place everyone who seeks to observe his own mental state comes to it with a bias set up by his personal prejudices, his hopes and fears, his sympathies or antipathies, which it is hard for him to discount. Further, even if he could discount this bias so far as to observe correctly what is going on in his mind, the mere fact of observing the mental state must make it different from what it would be if it were not being observed. And this fact, that observation here must change the thing that is observed, will become more important and more disturbing the further the observation is carried; the psychologist who gives his time and attention to introspective study is likely thereby to produce in himself a mental attitude which, however well he may be able to observe it, will be very unlike the attitude of the ordinary unintrospective human being. But the psychologist wants not only, or not mainly, to study the mental states of psychologists, he wants to study the mental states of human beings in general. And one of the things he most wants to do is to study the growth of the mind and its powers in the individual, and if he can, in the race. He will want then to be able to compare the minds of adult civilized human beings with the minds of children, savages, and animals; and here the method of introspection, or even the hope of employing this method at second-hand, becomes impossible. And when he looks for an alternative method to take its place, the answer which suggests itself is, that he should study behaviour. Let him do this, and he can work out a method of study which will cover the field, and will apply equally well to children, animals, savages, and brother psychologists. The field that he takes for study will be no longer a unique object, his own mind; it will be a set of observable physical

objects and the habits and behaviour of these objects. Psychology can then take its place along with other natural sciences.

So far the Behaviourist is Behaviourist only in method; he leaves the concept of mind or of thinking out of his view because he regards it as irrelevant for the purpose of science. But now he may go on to ask the further question: why should this concept which is irrelevant for science be supposed to have any significance at all? Certainly human beings are a different kind of physical object from rocks or stars, and behave in a different way; so too rocks and stars behave differently from one another; and it is convenient to have different sciences, astronomy, geology, psychology, to study these different ways of behaving. But why suppose a special and unique difference in the behaviour of human beings that should lead either scientists or philosophers to postulate in this case, and in this case only, the conception of mind? Science studies observable happenings, that is, happenings that can be studied by the method of external observation; observable happenings are physical happenings; physical happenings happen in accordance with physical laws; and can it be supposed that physical laws allow any place for mind or purpose as a determining force? So the Behaviourist asks, going back to the question as it was posed by Huxley; and he finds no answer to it, other than the answer which he has found given by Huxley, that if we suppose mind to act on body, we are supposing all physical laws to be invalid.

Here then the Behaviourist takes up the problem where Huxley left it. And now he goes one step further. The mental state of each moment is the effect of the physical state of the organism at that moment or at a moment just preceding, but it is not itself a cause or a part cause of any succeeding state whether physical or mental; such is Huxley's contention. But if it is only physical happenings that can be observed or can have observable effects; if mental happenings cannot be observed and can have no observable effects, why suppose that mental happenings are anything at all? Common sense might here rejoin: because each of us, whether or not he can observe mental happenings in the world about him, seems at least to be sure that he can observe mental happenings, such as emotions or thoughts, which go on in his own mind. But what is it that he actually observes when he supposes himself to be observing his own emotions or thoughts? Here the Behaviourist finds himself able to add something to Huxley's argument. What is called 'emotion', he says, is in fact physical happenings in the

internal organism. Pity, love, fear, anger, are changes in the viscera, and when we suppose ourselves to feel an emotion, what really takes place is that we feel these physical changes. In this he is saying something that is startling, but not without precedent; the suggestion is one that has been put forward by other psychologists in recent years, and it may claim to derive support from the outlook of historic common sense. For on this way of thinking old-fashioned language was essentially right when it coined such phrases as 'bowels of compassion', or spoke of the heart as warming in sympathy or sinking in terror. What is called 'thought', the Behaviourist goes on to say (and here he seems to be saying something altogether new) is physical happenings in the throat or larynx; spoken thought is a succession of audible movements, unspoken thought is the slight beginnings of similar movements that do not go so far as to produce sounds.

At this point two comments suggest themselves. First that in putting forward this contention Behaviourism has contributed something new and important to the study of psychology. If the facts alleged are true (and anyone who tries to observe carefully what goes on in himself at moments of emotion or of thinking will admit them to be at least plausible) they are, apart from their intrinsic interest as facts, important in their general philosophical bearing. It seems evident that they go some way to confirm Huxley's contention that all mental happenings are accompanied by and depend on physical happenings, or at least to fill up a gap in the evidence for that contention. No doubt they leave the question, How precisely do mental happenings depend on physical happenings? unanswered, as it is perhaps in the end unanswerable. But they add a further support to Huxley's contention when they persuade us that as far back as we can push our study of mental happenings we find physical happenings that go along with them.

But next we must ask, does not the whole argument as we have stated it refute the position which it claims to establish? We were looking for evidence for the Behaviourist position, which is that there are no such things as mental events. And what we seem to have found is evidence for the Epiphenomenalist position, which says that all mental events depend on physical events; there are, that is, mental events which are different from physical events, though dependent on them. And again the whole argument relies on that method of introspection which was to be abandoned as impossible. It is only by the method of introspection that any inquirer can discover that thoughts or emotions are going on in

himself, and it is again only by introspection that he can discover that the physical events, which are alleged to accompany, or to be, thought and emotion, are going on in the viscera and larynx. None of these things, neither the mental events, the thoughts and emotions, nor the physical events, the small changes or movements in viscera and larynx, can be observed by him in the case of any human being other than himself.

There is certainly here a formal contradiction, and this contradiction points to an overstatement in the Behaviourist case as it is commonly set out. The arguments against introspection come from a level of reflection which is not the deepest. They can show very convincingly that the method of introspection is liable to abuse and is limited in its application; they cannot show that it is impossible. They cannot even show that it is not indispensable, for the Behaviourist case, as much as any other, appeals to introspection to supply its foundation. An inquirer who feels himself drawn towards the Behaviourist standpoint must, if he is to be able to express himself consistently, qualify in one respect the orthodox statement of the doctrine as we have set it out above. He cannot say that mind and mental happenings are nothing at all, for he cannot refuse to recognize that something mental is happening in himself. And at this point we may find it helpful to clear thinking that we should fall back on the use of the word 'I'.

Let me suppose then that a Behaviourist philosopher and I are sitting at a window watching the people pass in the street. He may persuade me by the arguments above mentioned that neither of us has any reason to believe that any of the processes we call 'mental' is going on in any of them. But a more delicate question arises as between him and me. I find it difficult to think that when my interlocutor sets out his arguments so convincingly, all that happens is that movements are taking place in his larynx, and no thought is going on along with them. Yet if his words are really to convince me, they must convince me even of this; for there is nothing in principle to distinguish his case from the case of any man in the street. There is one thing, however, that he cannot convince me of; that when I reply nothing is going on in me except such movements. For even if my words at this moment are automatic, as I must recognize that my words sometimes are, and as they might perhaps be now when I am saying, 'Yes, of course, I see'; still I should be sure that I was aware of something, if it were only that the chair I was sitting on was hard, or that a fly was

tickling my nose. Here then is something, my certainty of my own immediate awareness, which it is impossible for me to doubt; yet equally impossible for me to convince him of, since all I could do would be to say words, or perhaps write them, and these for him would be only movements of my lips and fingers.

This 'I' that is aware in me is, if I accept the Behaviourist theory, a witness only, and not an agent; but as a witness it is indispensable. And when I run over the Behaviourist arguments and find them persuasive, its presence in me is appealed to at every turn. Thought, these arguments say, is small movements in the throat; and if I try to observe what happens when I think, I find I can observe something that looks at least very like this; I find that most of my thoughts, perhaps all of them, are accompanied by words, spoken or unspoken, and that these words are expressed by small movements of the kind described. But this very observation implies a mind that can observe its own states, for nobody observing my body from outside could observe either these movements or the thoughts. So again, the theory tells me that my emotions are visceral movements, and if I observe closely I do find reason to suppose that when I feel such emotions as fear and anger I am aware of some internal state that seems to have a particular physical quality. But here again it is only introspection that can tell me that I have either the emotion or the physical feeling, for neither of these could be apparent to an outside observer; nor could I in observing anybody else observe either the emotion or the feeling, all I can observe is his words and acts.

Here then must be recognized an inconsistency between Behaviourism in the form in which it is usually stated and the experience to which it appeals. But the Behaviourist view can be restated in a form which will avoid this inconsistency and still retain its most important conclusions. It has to start, as any world view must, with an observer. How is this observer to formulate his theory of knowledge so as to allow a place for himself and yet keep as close as he can to Behaviourist principles? He must begin by observing his own immediate experience, by what he must admit to be an act of self-observation or introspection. But he can decide to construct the fabric of his knowledge out of a limited region in this experience, out of those elements in it which most definitely claim an outside reference, his sensations or perceptions with so much of thought as is implied in these; he can fix his view on these elements in experience and ignore the rest of it. He can interpret his sensations and perceptions in the way that

common sense interprets them, as signs of the existence of a material world; and he can assume, as common sense for the most part does, that he is looking, not at them, but through them at the material world which they reveal. And having reached this point he can say in a loose yet quite intelligible way of speaking that he is engaged, not in self-observation or introspection, but in observing a reality outside him.

He will see this material world as a world of physical processes. There are physical processes going on in his own body, the nature of which at any moment is revealed to him by his internal or organic sensations; there are physical processes going on in other material objects, the nature of which is revealed to him by his external sensations. But now comes the question, how is he to think of the relation between the material world and those mental states of his own, his emotions and thoughts, which he finds after all he cannot altogether ignore? Looking inwards, he sees these mental states as regularly accompanying physical processes in his body. Looking outwards, he sees the material world, and holds that he is compelled by physical science to see it, as a continuous chain of physical processes, whose continuity cannot be supposed to be broken or modified by any mental event. Both these lines of thought thus bring him to the conclusion that his mental states are mere results or concomitants of physical processes in his body, which are themselves conditioned largely, and in the end perhaps completely, by physical processes in the surrounding world. And having reached this conclusion in his own case, he can go on to conclude by analogy that the same relation between mental states and physical processes holds in the case of other human bodies.

The position that we have here summed up might be described as the moderate Behaviourist position. It is not precisely the Behaviourist position as that is usually stated; it is in fact what Huxley called the 'Epiphenomenalist' position, reaffirmed and supported by some new psychological arguments. But it is consistent with much of the language that is used in statements of the Behaviourist case; it provides for what seems the most essential contention in that case, the contention that mind cannot act on body; and it may very well be the form or one of the forms that the Behaviourist theory would adopt under criticism, to avoid the inconsistency that we have noted.

It is true that the language commonly used by writers of the Behaviourist school seems for the most part to have in view, not

precisely this form of the doctrine, but that other and yet more extreme form which denies that any such thing as a mental state can exist at all and which we have had to criticize as inconsistent with its own premises. And psychologists who approach the problem from a standpoint opposite to the Behaviourist position have found no difficulty in showing that the position in this last form rests on conflicting assumptions and is inconsistent with itself. But if we are content to bring out this formal inconsistency and to leave the problem there, we miss the main significance of the Behaviourist movement. Its real significance is that it expresses a natural conclusion towards which various influences in thought tend and converge. These influences come from several quarters; from physical science, in the broad sense in which this term may be taken as covering the natural sciences other than psychology; from psychology, in so far as it is treated as a natural science; and from that whole type of philosophy which regards it as its business to order or criticize the results of the sciences and to do no more. None of these, it is true, compels, or for the most part professes, a Behaviourist doctrine, but they use or imply principles which point in this direction; and the importance of Behaviourism is that it makes these principles explicit, pushes them to a critical issue, and raises a problem to which no adequate answer is yet apparent. And let us admit that in raising this problem it has made a valuable contribution both to psychology and philosophy; a better contribution than its opponents are making, if all they can do is to repeat that the Behaviourist solution must be ruled out as self-contradictory and incredible.

The soul for historic common sense was at once an agent and a witness; this was for it, as we saw earlier, the essence of the conception. And the effect of the critical movement which finds its climax in Behaviourism is to break up the unity of this conception and to ask two separate questions. First, is there any reason to suppose anywhere the presence of the soul as an agent? Second, is there any reason to suppose anywhere the presence of the soul as a witness? And when the questions are thus put separately, Behaviourism finds no reason in either case for supposing a soul to be present. We need to give an account of that complex of activities and movements in the human organism which reacts to the environment and produces effects on the environment. This may be summed up as human behaviour, and its nature and the way in which its activities and movements differ from the activities and movements observable in other material bodies provide the subject-

matter of psychology. But there is no reason to conceive that a soul plays any part in these activities and movements, or that any of them could furnish evidence of its presence. The soul, if it is present, could be nothing more than a bare witness, which does nothing and which makes no difference; what reason then can there be for supposing it to exist at all? Or, if it be preferred, the complex of movements characteristic of the human organism might be allowed to retain the name 'soul' or 'psyche', on the understanding that this implies nothing mental, nothing more than a particular complex of movements.

And once it is understood that for Behaviourism what acts is the body, or that complex of activities and movements which may be summed up as the body's behaviour, the objections that common sense cannot help feeling will no longer seem fatal or even very formidable. Let us consider in particular that problem which for common sense may perhaps present the greatest difficulty, the problem of language and communication. A Behaviourist philosophy must, like any other philosophy, offer some account of the systems of knowledge which we suppose ourselves to possess, such as the sciences and history; it must have some theory as to how this system of knowledge was formed and as to how it hangs together and provides a basis for prediction. And two things for which it would seem that room must be found in any such account are: first, something about events and their several characteristics and relations; and second, something as to the manner in which events can be perceived and recorded, so that the record of them is at the disposal of an investigator today. And does not this mean, common sense will say, that we must believe that the events we suppose ourselves to have knowledge about have been recorded by a succession of persons, by thinking and sentient beings, who perceived the events as they happened and who communicated records of their perceptions to one another and in the end to us?

Clearly this is the kind of thing that is assumed in the ordinary language in which science and history are talked about; but if we ask how much of this assumption is necessary to vindicate the internal consistency of either, we shall have to admit that common sense is reading into the assumption more than is strictly needed. What is needed is, not that we should suppose the real existence of persons, if by 'persons' we are to understand 'thinking and sentient beings', but only that we should suppose the existence of centres of perception, or of bundles of some kind in which percepts

can be grouped. And this can be done in more ways than one without supposing the existence of persons in the full sense assumed by common sense. In working out the theory of Subjectivism we found that persons could be interpreted as being no more than secondary recording centres, any one of which would be no more than a particular focus or nucleus in the experience of a solitary observer. The interpretation offered by Behaviourism does not call on us to renounce so much; it allows us a larger residue of common-sense belief. The Behaviourist takes over from common sense one of its main presuppositions, the belief in a permanent world of material objects; and these material objects, or some of them, can serve as recording instruments for the purpose of his theory of knowledge. But he sees no reason why he should take over from common sense the further presupposition, that some or any of these material objects are thinking and sentient persons. For material objects of many kinds, he can say, and by no means only those among them which common sense would call persons, can serve as recording instruments, in the sense that they can permit successful inferences to be drawn from their present physical state to the nature of physical events in the past.

Looking out from his window in the morning he can judge from the state of the ground whether there has been rain or frost in the night. And with care and patience this process of inference from physical signs can be carried out into great detail and carried far back into the past. If he has studied botany or forestry he may be able to calculate approximately the age of a tree from the rings in its trunk; if he is a geologist he can tell by the strata or fossils in the face of a cliff about how many millions of years ago the rocks which compose it were laid down and under what conditions; if he is an archaeologist he can reconstruct from a mound of rubbish the physical types of the people who built their cities on that site and the nature of the tools they used. The tree, the rock face, and the mound can serve him in their various ways as recording instruments, that inform him of the past events which they may be said, in a loose sense of the word, to have witnessed; but he does not therefore suppose, nor does common sense suppose, the presence in them of an inner witness in the full sense, of a thinking and feeling mind. Why then, he may go on to ask, need he suppose the presence of an inner witness in those human beings who existed in the past and have left records behind them?

The Behaviourist would no doubt have to admit that the human body is a more delicate and sensitive recording instrument than

any of those other material objects, and that it can play its part in more complicated processes of recording information as to past physical events. But a physical organism might be highly sensitive, a physical process highly complicated, without its being necessary on that account to suppose the presence of a mind anywhere behind them. And if mind is to be introduced into the consideration of the problem, the question has to be asked: At what stage in the succession of physical events does the process become so complex, that it can be affirmed that this particular physical event could not have happened unless it were caused by a mental event?

And if the capacity for recording and transmitting detailed and precise information is to be taken as the test for deciding whether mind is present, it must be recognized that there are other material objects, not supposed by common sense to have minds, which might for this particular purpose be held to satisfy the test as efficiently as human bodies can. A dictaphone can record and repeat a conversation as accurately as a human shorthand writer; a gramophone can reproduce the performance of a violin concerto, not perhaps in its full perfection as it was played by the original performer, but better than most musicians could repeat it; a photographic plate can perceive, that is, discover, the presence of stars, whose presence could not be perceived by any human observer. The particular class of recording instruments which we are now speaking of, such as machines or instruments of precision, have it is true this special feature about them, that they have been produced or caused to exist by human beings. But the fact of this causal relation does not seem to throw any clear light on the question before us, as to whether it is reasonable to hold that the capacity for transmitting precise information is sufficient evidence for supposing mind to be present in human beings, while it is not supposed to be any evidence of mind's presence in these other instruments. What the causal relation shows is that, whenever a machine is observed to exist, it may reasonably be inferred that some human being existed before it. But so too there is reasonable ground for inferring that rocks and trees as a class began to exist before human beings. And if all we can say as to the relation of the three classes of recording instruments we have been distinguishing is, that rocks and trees as a class began to exist first, that human beings as a class began to exist at some later date, and that the class of man-made machines began to exist at some later date still, this seems no reason why we should conclude that human beings

are animated by minds, and material objects of the other two kinds are not.

And once the essential meaning of the Behaviourist doctrine is grasped, it is not necessary to pursue it further into its detailed consequences. All these consequences, strange as they may at first appear, seem naturally to follow if we accept its main principles, which are that all the events that can be observed are physical events; that to suppose that in human behaviour there is a mental event which accompanies and causes the physical event, in the sense that without it the physical event could not happen, is contrary to the findings of physical science and to a sound philosophy; and that unless it is supposed that there is a mental event which causes the physical event in the sense that without it the physical event could not happen, there can be no reason to suppose a mental event at all.

But we must consider here an objection which can be urged equally against Behaviourism and against Epiphenomenalism. The doctrine that thought is the result of bodily processes is claimed to refute itself; for if this doctrine were true, it is said, it would be impossible that anyone should ever think truly. The argument deserves attention, for it is one which we find used by able thinkers; but if it is scrutinized it appears to lead us into strange consequences. What it seems to assume is that a man can only think truly if he thinks freely, and that he cannot think freely if his thinking is conditioned by bodily process. But what is meant by 'thinking freely'? and what is it supposed that thinking ought to be conditioned by, if not by bodily processes? Does the argument mean to say that thinking ought to be conditioned by processes of pure logic? No doubt if the operations of the human mind were entirely unaffected by any material conditions and entirely guided by logical principles, the human mind would think more logically than it does. But would it not then think quite differently from the way in which any actual human mind can be supposed ever to have thought? and how could it arrive at any knowledge of its material surroundings? When we begin to ask such questions, it seems clear that the argument in this extreme form belongs to an Idealist way of thinking. An Idealist might be able to find answers to these questions which from his own standpoint could appear adequate. But they could only appear adequate if the Idealist position is accepted in its entirety and if the conception of a material world is rejected as groundless. The

argument has its place in an Idealist scheme of thought, but as so often happens with philosophic arguments, it has strayed out of its proper home and finds itself employed in contexts in which it has no relevance.

For if we believe that there is a material world of which the mind obtains knowledge through sense perception, we must surely hold that it is just those beliefs which are most directly and obviously conditioned by physical processes that are most certainly true. My beliefs as to what I see and touch in my waking state are, so common sense would say, plainly seen to be conditioned by physical processes, and these I find that I can on the whole and for the most part trust. I trust them because I believe that they are determined by regular physical processes. If I did not believe them to be so determined, if I thought that the organism was so constructed that external objects might or might not be represented correctly on the retina, a visual impression might or might not be transmitted accurately from the retina to the brain, I should not suppose that this indeterminism would help me to perceive or to think better. The images which I see in dream or call up in fancy are not connected with the external world by any such obvious physical process, and these I do not in the same way accept as giving me true information. If we consider then the beliefs arising from perception, which are the class of beliefs as to whose origin and whose trustworthiness we feel most sure, we find that they tell in no way against the view that true beliefs can be produced by physical processes, but on the contrary support it or presuppose it. As to the rest of our beliefs we cannot speak so definitely; we suppose them, or many of them, to be much more liable to error than the beliefs arising from perception; and we do not suppose ourselves to know anything like so much about the physical processes which produce them. Yet if we hold to the common-sense belief about a material world and about the relation of mind and body, we must suppose that our thinking as a whole is conditioned by the brain, and if we are not to be entirely sceptical we must suppose that our thinking is on the whole likely to be more right than wrong. For must not any theory of knowledge, if it allows that a material world exists, hold that the human organism is so adapted to its environment, by whatever means, that its thinking is more likely to be right than wrong?

We might be glad to have, if we could get it, a guarantee of the correctness of human thinking and its power of reaching truth, which would come to us from outside the material world

altogether, from some purely ideal realm. But if we have not got this, and at the outset of our inquiry into the conditions of our knowledge to imagine that we have it must be at least premature; if all that we have to go on is a conjecture as to the extent to which our thinking depends on physical conditions in the body and in the environment, then surely we ought to say, that the closer this dependence, the more precisely we can suppose that our thinking is conditioned by physical processes, the better our chance of getting at something like truth. The belief that our thinking is conditioned by physical processes may not hold out the hope of getting at all the truth we could wish to have; it holds out at any rate a hope of getting at, what is not unimportant for us, a measure of truth about our physical environment. But the doctrine set up in opposition to this, that the more our thinking is conditioned by physical processes the more it is likely to be false, seems at best merely sceptical; while for anyone who believes that he has a body and that he lives in a material world which he wants to understand, it is a counsel of despair.

CHAPTER XVI

SOME PROBLEMS OF PSYCHOLOGY: INSTRUMENTALISM

THE Behaviourist position then, with the slight restatement suggested for it above, seems able to hold its own in face of any of the reasoned objections that we have so far found to tell against it. This however is not decisive. Even if the theory is self-consistent, that does not show it to be true; and if it is the logical goal towards which an inquirer may find his thought leading him when he sets out from the belief in a material world, that does not mean that it is the only reasonable halting place. For all its logic it breaks too sharply with common sense to be accepted as the general view of psychology. What then may we take this general view to be? What are the main assumptions about the problem of soul and body that can be said to underlie ordinary thought about psychology today? There is room here for a range of alternative conceptions, one or another of which we seem to find suggested from time to time, though none of them so definitely formulated as the two that we have so far considered; and we may be able to see our way among them better, now that we have examined one extreme limit of the range in the Behaviourist conception.

We may begin by asking, what should we suppose to have been the general view of historic common sense about the problem, and how is this view likely to have been affected by the development of psychology as a science? The study of the mental world did not first begin when the term 'psychology' began to be used; it may in a sense have been as old as the study of the physical world. But it was only after the chief sciences of the physical world had taken shape and made substantial progress that the study of the mental world came to be known as 'psychology' and to claim the position of a science. The new science thus grew up in a climate of thought

which had been largely formed by the conceptions of the physical sciences, and it was natural that as it developed the traditional view should be modified in the light of these.

The outlook of historic common sense on the problem has no doubt covered a wide diversity of beliefs, but its main assumptions may perhaps be summed up to some such effect as this. It has believed that the mind or soul is a reality, that the body is a reality, and that these two realities, soul and body, the mental and the physical, can interact with and influence one another. It has supposed that the presence of the soul could be known both from within by introspection, and from without by observation of its effects in the physical world; that each individual could discover by introspection something about the mental world existing in himself, and could discover something about the mental worlds of other persons by what might be called 'introspection at second hand', that is, by interpreting words and other physical signs in the light of his awareness of his own mental states. It has supposed further that there could be discerned in the mental world the activities of mental or spiritual forces, of desires, purposes, aims, ideals, which might be thought of as objective realities. They could be called 'objective' in a double sense; first, in that they were believed able to produce objective results, not only in the inner mental world, but through this indirectly in the material world outside; second, in that they were believed to point to an objective realm of values or standard of value, by reference to which they might be judged and ordered. These activities were controlled, or should be controlled, by two main faculties, the reason and the will, which working in concert could direct them so that they would conform to right standards and would achieve right results; reason judging what ends should be pursued and by what means, will supplying the power with which to pursue them. The belief in a realm of values and in a standard of value underlay and coloured the thought of the past about human activities; and the nature of this realm, with the problem as to the significance and authority of the standard ordering it, formed the subject-matter for a department of thought called 'ethics', which might be conceived perhaps as an independent study, perhaps as dependent either on metaphysics or on religion.

Some such conception as this historic common sense may be said to have taken for granted; so much is attested by its literature, poetry, and drama, by its attempts at an interpretation of history, by its belief in an ethical standard and in the possibility of ethical

teaching. Here then we find something which we may call the 'traditional' conception of psychology, or of the field which a science of psychology was later to concern itself with. Common sense in this, as in other matters, assumed its main beliefs vaguely and confusedly; it looked at the mental world broadly and as a whole, not by any such methods of precise analysis as science seeks to employ; and within its general outlook there was wide room for disagreement and inconsistencies. Yet this traditional conception possessed some main common features in respect of which it differed from the conception of psychology more commonly entertained today, particularly in respect of its belief in a realm of values and its trust in introspection. And it may be said to have been on the whole in accordance with the traditional or metaphysical conception of philosophy, particularly in the high place and wide authority assigned by it to the faculty which it called 'reason'. The emphasis on reason and will was central to its outlook; and at the period just before psychology began to take shape as a science this emphasis was perhaps, owing to influences arising from metaphysics and religion, even more prominent than it had been in earlier times. And the development of psychology from that point onwards may be said to have been largely conditioned by a growing doubt as to whether these two powers were as real, and their authority as far-reaching, as the past had supposed.

The science of psychology, when it set out to plan its field of study, had to decide how large a part of the beliefs of common sense about the mind and its nature could be taken over as material for scientific construction, how much must be discarded as falling beyond the limits of a science. One important line of demarcation was suggested at the outset by an accepted principle of scientific method, the principle of ethical neutrality. Pre-scientific thought had been ready to suppose that beliefs about existence could rightly be based on beliefs about value, that judgments as to what was objectively good or what might conduce to human welfare could help to knowledge about facts of the physical world. But scientific research found no evidence to support the idea that valid conclusions were to be reached in this way; and it came to be regarded as a main principle of method that for the business of science, for the observation of facts and for drawing right inferences from facts, questions of value must be held irrelevant. Should not then psychology conform to this main principle, if it was to rank as a science, at any rate as a natural science?

With the acceptance of this view there came about a displacement of the standpoint from which the problems of the mental world were envisaged. For earlier thought the most important questions that could be asked about the activities of the mind had been questions as to value. Ethics then, as the study which sought to answer such questions, had occupied the centre of attention in this field; it filled to some extent the place which has been taken by psychology today, and its having done so may help to explain how it was that a science claiming that name arose so late. But the two studies, ethics and psychology, differed widely in their range, though in part of it they overlapped. Psychology in one part of its range set itself to explore a multitude of questions, not dealt with by ethics or by any previous form of systematic study, as to the manner of the mind's working in sense perception and in other fields. In another part of its range it was concerned, as ethics had been, to examine the facts of volition, to ask what men desired and valued, what ends they aimed at, how they tried to achieve these ends. But it was concerned with these things as facts; it did not think it its business to ask, as ethics had asked, whether there was any objective standard by which these desires and aims, these varying judgments of value, should themselves be judged and valued. The possibility of a standard of value was not denied; such a standard, it could still be allowed, might be found somewhere, perhaps in ethics if this could be recognized as a valid department of thought, perhaps in a sufficiently general consensus of opinion on fundamental questions; but if questions about value were to be raised and followed up, the answers to them would have to be looked for outside the field of scientific psychology.

Here then was one point at which the outlook of common sense was bound to be modified by the development of psychology into a science. But in other respects the main features of the traditional view might at first seem likely to persist. Psychology as it began its career relied mainly on introspection. It looked on the mental world as something that could be studied from within by self-observation, understood by the reason, controlled by the will, and that in virtue of being so understood and controlled could have definite foreseeable effects in the physical world. But this introspective approach to psychology was exposed to troublesome questions, some of which have come up for mention in our review of the Behaviourist argument. For the definite measurable facts which psychology needs to have, if it is to have at its disposal material analogous to that on which the other sciences have based

their construction, are facts about behaviour; facts about a particular kind of physical objects, human and animal bodies, which in respect of their behaviour may be said to have a special quality called 'mental', but which must like other physical objects be studied from the outside by the use of the data given in sense perception. And thus the more psychology elaborates its researches, the more it is led to look on the method of external observation as primary and reliable, the method of introspection as secondary and dubious.

In this way there came about a development which may appear paradoxical; that psychology, which started by taking over from common sense the conception of the mind or the soul as the subject-matter with which it is to deal, had hardly well established itself as an independent science when it began to cut at the roots of this conception. We find it, if we try to follow its course, examining various modes in which the idea of the soul or the mind might be formulated; rejecting one concept after another as too metaphysical, replacing it by a second which may be held to imply less, and then rejecting this second in turn as insufficiently tenuous. At one point in the process it is proposed to discard the term 'soul' and replace it by 'consciousness'; a little later it is proposed to discard the term 'consciousness' and replace that by something else; and the line of thought seems opened up which should lead in the end to Behaviourism.

And yet after each rejection some residue appears still to be left, carrying with it at least some of the implications which common sense meant to express in the word 'soul', and the problem of getting rid of that arises again. This residue, which remains so indispensable or so hard to dispense with, is supplied by the conception of purpose. Each of us, looking at his own inner life, feels sure that he sometimes entertains a purpose, plans to achieve it, and sometimes can see it achieved; each of us, looking at the world outside him, feels sure that he can observe in the lives of other persons the same kind of attempts at a purpose, the same occasional successes, as he can see in his own. In purpose we seem to discover a causal process which has its origin in the mental world and its result in the physical world, which can be observed in its origin by introspection and in its result by external observation. And if purpose is kept in mind as a factor that must be taken into account, there may be room for a conception of psychology, which would not break so sharply with common sense as does

Behaviourism, and yet could claim to be a scientific conception based on observable facts.

Common sense has no doubt that there is often definite evidence to show that events in the mental world can interact with and determine events in the physical world. A man, we said before, is aware of going through a series of movements in order to achieve some purpose; he observes his neighbour going through a similar series of movements; he assumes by analogy that his neighbour is animated by a purpose like his own. Here is a process of inference in which the method of introspection and the method of external observation both play a part. Introspection indeed underlies the whole process, as it must be found to underlie any process of observation, if the observer goes back far enough. But once the observer has taken for granted that he is himself a part of a world of material objects, he can divide the stages of the process between introspection and external observation on common-sense lines. He is assured by introspection that a particular purpose is present to his mind; he is assured by introspection and observation together that his limbs are moving in accordance with this purpose; he is assured by observation that his neighbour's limbs are moving in a similar way. He is assured further by introspection, or seems to be, that his own limbs move as they do because of his purpose, would not so move but for the purpose; and in view of this assurance he assumes by analogy that his neighbour's limbs likewise move as they do because of a similar purpose and would not so move without it. He seems, that is, to observe a purpose at work as part of the chain of physical processes which he observes in the world outside him. The appearance of purpose is the test which shows mind to be present, and purpose shows itself by making the chain of physical processes happen in a way different from the way it would happen if purpose were not at work.

We are brought here to a view which it may be convenient to call 'Instrumentalism'. This term does not mark off such a definite school of psychological thought as the two that we considered earlier, the Behaviourist psychology and the psychology of the unconscious. But it has been used in recent years as the name for a way of thinking about the relation of mind and body which shows itself in psychology and also more widely in philosophy; appearing in various fields of thought in various forms which are not all connected with one another, yet which seem to go back to a common main principle. The essential principle of the Instrumentalist view in the wide sense in which we are here

understanding it is that the mind is an instrument of action; it makes itself evident by its effect in producing successful action, and its presence may be presumed where successful action can be observed.

But how are we to interpret the term 'Instrumentalist' when it is thus used? What precisely are we to think of as the instrument of what? It is not to be taken as meaning that the mind is merely the instrument of the body; this would be the view that calls itself 'Epiphenomenalist'. Nor on the other hand must it be taken to mean that the body is the instrument of the mind, if by mind is understood the mind as introspective psychology might conceive it, aware of its own processes and having a reason for what it does. The Instrumentalist doctrine is concerned with the relation of one part of the mind or inner life to another part of that life. It distinguishes within the inner life two elements; the first, desire or impulse; the second, thought or reasoning. The first of these, it holds, is primary, and that in a double sense; primary in the sense that desire or impulse provides the motive power for action and determines the object at which action aims; primary again in the sense that its presence may be said to be evident when a natural object of desire is observed to be achieved. The other element of the inner life, thought or reasoning, is secondary, and that in a similar double sense; it is subordinate, in that its function is to carry out the aims given by desire or impulse; and its presence is not evident, though in cases in which these aims are successfully achieved, or in some of these cases, it may be inferred that thought has been at work.

Thought and reasoning then may be shown to be present by their observable results. And here Instrumentalism passes over into a theory of knowledge. To know, it says, is to know how to do; and when it says this, it is using the words in a sense that is generally accepted and understood. A man may be said to know a stretch of country if he knows how to find his way about it; to know something of engineering if he can design a bridge, or if he can take a car to pieces and put it together again; to know the history of a period if he can pass an examination on it. This then is an accepted meaning of 'knowledge': but it is something different from the meaning we have so far been considering, according to which a man can know directly by introspection what passes in his own inner world, and can know, or seem to know, indirectly by sympathy what passes in the minds of other men. The inner or introspective mode of knowledge is, however, for Instrumentalism

something so dubious and uncertain that it can hardly be said to deserve the name. Knowledge in the full sense must be something that can be tested, and how can it be tested except by its effect in producing successful action?

But how are we to recognize successful action? What is the evidence that an aim has been achieved? What are the aims (this seems the question that we are now faced with) which men want to achieve?

Historic common sense has given to this question a multitude of answers, covering a wide range. At one end of the range there are aims which we may suppose to be shared by all human beings or to be shared by men with the animals; impulses or desires for the preservation of the organism, for the satisfaction of the primary biological needs, food and sex, warmth and shelter, for the avoidance of physical pain and injury. Passing on we find aims, less universal yet widespread, which spring from a feeling of human sympathy; desires for the pleasure of social contact, for the welfare of the family or the tribe. And passing still further along the range or upward in the scale we come on aims which the traditional philosophy would rank as higher or ideal, directed to such conceptions as love, honour, wisdom, beauty, the welfare of nations, the progress of humanity, union with God, eternal life. It is conceptions of this higher or ideal order that have stood out as prominent in the discussions of the past about the right ordering of human activities; and these discussions have for the most part assumed, or have attempted to show, that some at any rate among the conceptions of this order could point to an objective standard of value.

But is such a confidence justified? How are we to be sure whether these conceptions stand for realities or fancies, whether the aims that they express can be really achieved or even really desired?

What we are looking for is a criterion of achievement that can be called positive or objective. Traditional philosophy and psychology were confident that such a criterion was given in the objective standard of value studied by ethics, and that it could with the aid of right reason and good will be applied by each individual to the circumstances of his inner life. But the two beliefs which went to make up this confidence are both of them questionable for ordinary thought today. The belief in self-observation as a means to knowledge of the inner world, the belief in value as a reality to be discerned in that world, hang together and support one another;

and in proportion as one of them is weakened, the other is bound to lose in strength. When then a belief in objective value is dismissed as outside the scope of science, it goes with this that much of the knowledge which it was supposed in the past could be gained by introspection must be held doubtful or suspect for a scientific psychology.

Can we, if we leave the realm of values outside our present inquiry, find any objective test to show that a purpose is sometimes aimed at and achieved? If we are to be able to do this, we need to find an unquestionable purpose expressing itself in a clearly observable activity; a purpose so obviously desirable that its presence can be taken for granted, expressing itself in an activity so definite that its operation is shown by observable results. And such an objective test seems to be provided at one point, though it may be at one point only, in the sequence of physical events; it is to be found in the activities or modes of behaviour by which living organisms maintain themselves in being. Here purpose appears to show itself in the processes of the physical world as a factor evident to external observation. And if we trust external observation when it tells us that a purpose is achieved, this implies some corresponding measure of trust in introspection. For purpose is in its nature two-sided. We must be able to recognize its origin in the inner life, if we are to be able to observe its results in the external world, if indeed we are to mean anything by calling it 'purpose' and by saying that it has results. The main principle of the Instrumentalist view might then be stated in some such way as this; that there is to be discovered in the behaviour of living organisms a primary impulse or purpose tending to maintain the existence of the organism and to preserve its being from destruction or injury; that we can be assured by introspection that such a purpose is aimed at, and assured by external observation that it is in some measure attained.

But how far can we extend the range within which we may trust introspection, while still keeping within the limits which external observation marks out for us? On the side of introspection it is not enough to say that there is evidence of a purpose aiming at the preservation of the organism. This primary aim may be constantly present in the background, may make its presence evident at critical moments; but what introspection would for the most part be aware of would be not this, but a multitude of less general impulses and desires, aiming at something more particular than the organism's safety or physical welfare. The choice of particular actions is not for the most part a deliberate choice of means to

this primary and general aim, but is determined by another element in the inner life that works more directly; by a sensitiveness to pleasure and pain, which leads to the pursuit of the one and the avoidance of the other; or (as it might be better to say, departing still further from generality) which leads to the pursuit of such objects or experiences as have been found to be pleasant, and to the avoidance of such as have been found to be painful. And broadly and on the whole there seems to be a natural adjustment in the working of the organism, such that the general aim of self-preservation is secured by the particular impulses arising from feelings of pleasure and pain. Not that this can be held a complete account of the matter; impulses or instincts must begin to work and produce results, before these results can be felt as pleasant or painful. Nor can the adjustment be said to be by any means perfect; it is easy to find instances in which pain may be useful or pleasure harmful, and in which the avoidance of pain or the pursuit of pleasure may tell against the primary aim. But after allowing for all such qualifications we must, if we are to keep at all in line with common sense, accept it as a fact that the impulses which go along with feelings of pleasure and pain tend on the whole to promote the physical welfare of the organism, and supply the main guidance by which that welfare is secured.

Here then we seem to have an adequate foundation for a view of the Instrumentalist type, a view which may claim to provide a conception of mental life and mental activities that can be accepted as scientific, and that can be brought into intelligible relationship with the wider and more fundamental department of thought to which a science of psychology must somehow be related, the science or sciences of biology.

The problem of biology, or one of its main problems, is to bring into order and relate to one another a multitude of various phenomena, whose common feature (the feature, that is, which leads them to be assigned to the field of biology rather than to the field of some other science) appears in the fact that they serve the purpose of maintaining living organisms in being. The problem of psychology, or one of its main problems, is to discover which among the multitude of various motives and purposes that introspection seems to reveal to the individual can be held to be objective, as being operative factors first in the mental world, and then through this in the physical world. Is it not a natural conclusion to suppose that the problem of psychology is the same as

the problem of biology, only viewed from a rather different side; and that the various motives revealed by introspection find their essential unity, as do the various phenomena studied by biology, in the purpose of maintaining the living organism in being?

If we look at the problem of mind and body from this standpoint, we are brought to a conception of the mind which is very different from the conception that the introspective school of psychology took over from common sense, and which has in some ways more affinities with the conception of the mind or soul that we seemed to discover in the earlier animistic mode of thinking. The mind or soul is in this new or revived conception no longer the reasoning, moralizing, conscious entity which an inquirer may seem by introspection to observe within himself, and which, by some process of analogy whose nature we have yet to discover, he assumes to be present in other human beings. It is an instrument for action, which can show itself to be at work by causing action that tends to promote the welfare of the organism, but which need not, because it leads to successful action, be supposed to be moralist or rational or perhaps even conscious.

And at this point several far-reaching lines of thought open out, along which the Instrumentalist conception might be developed. One of these is that the conception appears to link up with the psychology of the unconscious, and to offer that ground for the supposition of an unconscious mind which we earlier found it hard to discover. Our difficulty was to this effect. Why, supposing it to be shown that processes in the organism of which we are not aware produce results similar to the results produced by those mental processes of which we are aware, why should we for that reason suppose that these processes of which we are not aware are mental and take place in an unconscious part of the mind? Why should they be mental at all, why not merely physical? But now the Instrumentalist doctrine that we have come upon tells us that the evidence by which mind is shown to be present is its success as an instrument; and if this doctrine is right, there may be reason to assume mental processes present where successful action is to be observed, even though that part of the mind which in the ordinary sense of the word thinks may be quite unaware of them.

There is perhaps an objection that might present itself at this point. The unconscious mental processes which the psychology of the unconscious on its therapeutic side talks most about are pathological or morbid processes, which impair the welfare of the organism rather than promote it. Can they be said then to support

or to fit in with a theory for which the test of a mental process is that it should conduce to successful action? This however is a difficulty of detail to which various answers might be forthcoming. It might be said that at any rate some particular desire or impulse in the organism is getting what it wants by setting these morbid processes at work, even though the rest of the organism may have to suffer for it. Or it might be said that in such cases the unconscious mind is doing its best for the organism as a whole; that it is setting up a bad state of things to avoid what would be a worse state, as may happen in cases in which a symptom of some disease is to be regarded as the reaction of the organism against that disease. And it must be remembered that the psychology of the unconscious claims to be something wider than a theory as to the cause and cure of certain morbid processes. It claims to show how what it calls the 'unconscious mind' can carry out successfully aims and purposes which the organism as a whole wants to be fulfilled, but for which the conscious mind does not wish to feel itself responsible. And it is only if we suppose the unconscious mind, or some element in it, to have this power of aiming at a result and of achieving the result it aims at, that we can find any ground for assuming an unconscious mind at all, an assumption which at an earlier stage we were inclined to dismiss as self-contradictory and unnecessary.

Followed up in a somewhat different direction, the Instrumentalist view may lead to a philosophy of history which interprets the whole historical process and the growth of intellectual activities as the result of economic causes. The course of economic development is conceived on this theory to run through a succession of phases; in each phase the processes of production by means of which men satisfy their physical needs work in such a way that the larger share of the product falls to a particular class of privileged persons; and there come into being systems of beliefs, legal and political, ethical and aesthetic, scientific, religious and philosophical, which are all of such a nature that they tend to support and justify the position of this privileged class. These systems of belief are accepted as objectively true, first by the privileged class and then by the community as a whole; and as they grow they take on a secondary life of their own, and they may be in some measure valued and developed for themselves. But their life is bound up with the economic phase out of which they have arisen; and as methods of production change, the economic process takes on a different form, which will by a more or less violent revolution transfer power

to a new privileged class, and new systems of belief will then come into being which will justify the privileges of this new class. And thus the ethical and political and religious ideals, which history as it has been written in the past has conceived to be the main influences in human progress, have in fact only a secondary and derivative importance; the effective forces which condition human welfare, and which lead to progress, in so far as progress can be supposed a reality, are not these ideologies apparent on the surface, but the economic movements which underlie them and determine them.

Such is one of the forms that the Instrumentalist conception may take, when it is employed to give an interpretation of history. But that conception might be followed out in another direction, along which it would lead to even more far-reaching consequences. When we consider the processes that go to promote the total welfare of the organism; the whole set of psycho-physical processes as we may call them, not for the moment attempting to distinguish them as psychical or physical, since all alike are physical as viewed from outside; we shall have to recognize that those among them which are accompanied by anything that can be called 'awareness' are a small proportion of the whole, and that the processes of which there is no awareness are far more numerous, more continuous, and more essential for survival. If we take as the test of what is mental, not consciousness or awareness, but the successful achievement of a purpose, we seem compelled to include in our conception of what is mental though not conscious such processes as growth, digestion, breathing, the action of the heart and the lungs. Unless these underlying processes that we are not aware of are carried on successfully, the mental processes of which we are aware would be powerless to achieve any of their purposes. It would be useless for the mind to make its plans for getting food, if when the food had been eaten the organism were not able to digest it; useless for the mind to carry on its activities during the day, unless the organism were able to restore its energies at night by sleep. The achievement of the purposes of which the mind is aware seems to rest and depend on the achievement of a number of other purposes of which the conscious mind knows nothing. Ought not then the hypothesis of an unconscious mind, if it is once admitted, to be taken up into a wider generalization which would include the whole activity of the organism in so far as this appears to serve a purpose?

This widening of the concept of mind seems in a measure, we suggested, to be a return to an earlier mode of thinking. It is a return from the conception of mind as an inner world, whose nature is to be discovered by introspection, to the conception of mind or soul as the animating principle of the organism, whose nature is to be discovered by observing its mode of operation. But the organism whose functioning is to be studied must in the light of present scientific knowledge appear something immensely more complicated than it appeared to earlier common sense. Common sense before the rise of modern science might not unreasonably have conceived that the conscious rational mind on the one hand, and the body with whatever unconscious mind or soul might be supposed at work in it on the other hand, ranked as fairly equal partners in promoting the welfare of the organism as a whole. No such simple view of the problem could be open to reflective thought today, in view of our increased knowledge of the extent and complexity of the physical processes on which the daily functioning of the organism depends. Whether these physical processes are physical only and no more, or whether they are accompanied and guided by mental processes of which the rational mind is not aware, may be a doubtful question; but whichever they are, it must be recognized that they play a much larger part in human life than do the mental processes of which we are aware.

Perceptual construction, for instance, is effected, not slowly and with the help of elaborate apparatus as the scientific construction is effected, but instantaneously and without the help of any instrument other than the bodily organs. The body or the unconscious mind or whatever it is in us that carries out this construction is able to assign each light wave as it impinges on the retina to its appropriate source, to the atom or electron or however it should be described from which that particular light wave emanated; or to assign it at any rate to its right direction viewed from the place of the observer; to build up out of the chaos of atoms and electrons a world of definite objects with form and colour; and to do all this from moment to moment, not infallibly, but for the most part successfully, without serious error or confusion. Here is an achievement completely beyond the power of the conscious mind. When we reflect how complicated and how bewildering to common sense is the nature of the material world as physics describes it, it seems like a miracle that any sentient being should be able to move and act in this world, that a man should know how to find his way home at the end of the day, or a bird return to its nest or a bee to the

hive. It ceases to appear miraculous only when we recognize that by far the greater part of the work on which the preservation and welfare of the organism depends is done not by the conscious mind, but by something else which is vastly more powerful.

We are not then unduly disparaging reason, we are only accepting a conclusion to which reason itself impels us, when we say that the work done by the conscious rational mind in understanding the world is only a small part in a much wider activity carried out by something in the organism that is not rational and is not aware of itself; and that this irrational element in the organism is immensely more efficacious than the rational element, if we take as our test of efficacy the power to promote the welfare of the organism, and may even be said to be more intelligent, if we take as our test of intelligence the power to respond rightly to the physical environment and take as our test of knowing the power to do. And thus from another side there is borne in on us the reflection how small a part in the scheme of things is played by the rational mind that each of us seems to know through introspection. On this point at any rate the various schools of present-day psychology appear to be in agreement with one another, and to have moved far from the introspective line of approach with which the science of psychology began its career.

What maintains the organism in being and provides for its needs is not, or is for the most part not, the rational mind, it is something else. But is this something else to be conceived as the body or as an unconscious mind? Are we, putting our question in rather more definite terms, to say that the organism is a material aggregate of the same order as other material aggregates, differing from them only in that the physical processes which make up its behaviour are more complex, but resembling them in that its physical processes are, as theirs are, purposeless? Or are we to say that the living organism is marked off from other material aggregates in that it exhibits processes of a different order which serve a purpose, and which, as the notion of purpose seems unintelligible apart from that of mind, are to be thought of as mental processes, not as merely physical?

We have then before us three various ways of thinking in which the problem of soul and body may be envisaged; the three which we have distinguished as the Traditional or Introspective, the Instrumentalist, and the Behaviourist. These as we find them presented may take various forms, and one of them may seem to run

into another; but they are distinct enough to provide three typical points of view from which the whole tangled problem can be surveyed, and now that we have them all before us we may be able to exhibit a little more clearly the difference between them.

The traditional view is distinguished from the other two by the character of its belief in value, in introspection, and in the efficacy of mental action. It believes in an objective realm of values, and in the power of reason to make judgments about values by reference to a standard, which can be known with more or less approach to truth. It believes in the possibility of introspection or self-observation; not taking this to be something that is easily achieved or always successful, for it may need to be constantly confirmed or corrected by external observation; but looking on it as primary, in the sense that self-observation is the indispensable means to an understanding of values. And it believes that mental activities can have effects in the physical world, though as to the extent and nature of their efficacy difficult questions might arise and various answers might be given.

With the Instrumentalist conception all these beliefs are reduced in scope, though none of them is altogether abandoned. The belief in a realm of values which can be understood and judged by reason gives place to a belief in a single value or purpose, the purpose of preserving the organism, to which other purposes and values are secondary and instrumental; and reason is now concerned, not with a scale or standard of values, but with selecting means to this purpose. The method of external observation is on this view taken as primary for the study of the mental world; the method of introspection is regarded as secondary, and is only trusted in so far as it may seem to be guaranteed or supported by external observation; and evidence as to the nature of the mind's working is looked for, not so much in the aims apparent to introspection, as in the purposes which appear to external observation to be actually pursued. It is still believed that mental activities are real and can have effects in the physical world; it may indeed be contended that this view can allow to mental activities as wide an efficacy as could reasonably have been ascribed to them by the traditional view; but the power of mind to influence the physical world must lose much of its significance, when it is admitted that the nature of the mind's working can be determined either by physical causes or by unconscious mental processes to an extent to which it is hard to set limits.

And at the end of the scale we come to the Behaviourist conception, which may, as we saw, be understood in a more or less extreme form, but which in either of these forms discards altogether any belief in objective value, in the possibility of introspection, and in the efficacy of mental activity. In its less extreme or Epiphenomenalist form, it would allow that mind may be present where common sense has supposed it to be present, but would hold that it can be only a superfluous addition, accompanying the chain of physical causation, yet not capable of making any difference to what happens. And in its more extreme and radical form it goes on to draw the conclusion that if mind can be no more than this, there can be no reason for supposing it to be anything at all.

We may here go back for a moment to remind ourselves of the central problem aimed at in this part of our inquiry, and of the standpoint assumed for the discussion of it. This is the standpoint of an inquirer who takes as his premises the assurance of his own reality and of the reality of a material world, and who asks what conclusions about the general nature of reality, and in particular what conclusions as to the existence of other minds, he may reasonably arrive at, if he starts from these as his main premises and builds on them with the help of beliefs and opinions such as might be commonly held today. In the course of the discussion our inquirer has been led to examine several of these beliefs and opinions with some fullness, and he may seem to have been carried a long way from the central problem set before him at starting. He may seem too to have been assuming answers to the very questions which were supposed to be left in suspense; to have assumed that there are now and have been in the past other thinking beings like himself, and that he and other persons when they begin to speculate can make probable conjectures as to the way in which human beings in general think and feel. In all this he has taken a rather wide circuit, but he has in fact made no assumptions which he cannot by a reasonable transposition of language reconcile with his first assumption of doubt. He has done no more than use his natural mental equipment in the way in which (as we argued in the chapter on Philosophic Doubt) the most thoroughgoing sceptic must use it if his scepticism is to be methodical. When he uses the word 'we' he can interpret this merely as 'I, and other thinking beings like me if there should be any such'; when he speaks of the thoughts of Descartes, Newton, or Huxley, he can

interpret this as involving only that he finds books which have a particular causal relation to marks made on paper in the past by human bodies distinguishable under these names. He is not in all this committed, nor is he entitled, to the belief that there are, or ever have been, any minds other than his own, or to any conclusion as to the nature or faculties which minds may have if they should exist. And when he returns to the central question, he is left with the possibility of a choice between the three ways of viewing the problem which we distinguished above.

Yet the first or traditional conception must be held to fall beyond the limits of his survey, so long as he keeps within the assumptions that we have supposed for him. For this conception, as we have defined it, contained as an essential element that belief in a realm of objective values, which we have found ourselves obliged to dismiss as not coming within the scope of a scientific psychology. And the dismissal of the belief in objective value must be accepted, at any rate provisionally, as closing a possible line of thought for the purpose of the discussion in which we are now engaged. The question as to an ethical standard, as to the relations of our beliefs about value to our beliefs about existence, is one to which we must come before our inquiry closes; but it is too large and far-reaching to be introduced incidentally, and to assume an answer to it prematurely would confuse issues which we must do our best to keep clear. What we are asking at present is how the problem of soul and body would appear to an inquirer starting from the beliefs and opinions which an ordinary person would be likely to hold today; and for the moment we must be content to say, as an inquirer of the kind we are supposing might be expected to say, that the belief in an objective standard of value is at best doubtful and is probably groundless, and in any case falls outside the scope of science and of reasoned philosophy.

We must try then, without appealing to this belief, to see what answer we can make to our original main question, Assuming the existence of a material world, what ground, if any, can an inquirer find for supposing anywhere in it the presence of a mind like his own? In looking for an answer to this we were led to a second question, Could the presence of mind be supposed to show itself by making a difference to the course of physical events? And then we were led to a series of further questions: If mind can influence the course of physical events at all, what kind of difference can it make to them? If successful action or the achievement of a purpose are to be taken as evidence of mind's presence, what are we to

understand by 'purpose' and what are we to regard as successful action? And with the last of these questions we found ourselves in danger of being caught up in the whole problem of value. This branching out of our original main question seemed unavoidable if we were to view it in its right setting and context; but we must now try to disengage it from the others with which it has become entangled, and to ask how far each of these questions, if they are considered separately, appears susceptible of an answer which will not involve an answer to all the rest. It should be possible, we may hope, to find some answer at any rate to our original question about the ground for believing in the existence of other minds, without having first to decide for ourselves the vexed question as to an objective standard of value.

And now if we look at these questions one by one, and relate them to the three conceptions we distinguished above, we find that the first two questions are raised in the issue between the Instrumentalist and the Behaviourist conceptions; the question whether mind can make any difference to physical events being raised in the issue between the Instrumentalist conception and the Epiphenomenalist, and our original question whether there is any ground for supposing mind to exist at all being raised in the issue which divides both of these from the Behaviourist conception in its thoroughgoing or radical form. And the series of further questions which we saw stretching out beyond these two lie on the other side of the Instrumentalist conception, and are involved in the issue between that and the conception which we called 'Traditional'. For our immediate purpose then, for an answer to our first two questions, we may confine ourselves to considering the Instrumentalist and the Behaviourist conceptions; and if we confine ourselves to these, we may hope to keep within the limits of reasonable inference from sense perception and to avoid becoming entangled in considerations of value. Later, if we find reason to think that the Instrumentalist conception can establish itself as valid, at any rate as against the Behaviourist conception and in so far as it differs from this, it may be appropriate to raise the further question; how far it is possible to construct on an Instrumentalist basis what can stand as a reasonable account of human activities, or whether this needs to be supplemented or replaced by a conception which will include a belief in objective value. But for the present we shall regard questions of value as falling outside our survey.

CHAPTER XVII

SOME PROBLEMS OF BIOLOGY: MECHANISM AND VITALISM

One of the main problems of psychology, we suggested, is to discover which, among the various motives and purposes that introspection seems to reveal to the individual, can be held to be objective, as being operative factors either in the mental or in the physical world. If we try to find an answer to this problem from a standpoint which may be claimed to be scientific, the choice seems to lie between the Behaviourist and Instrumentalist views. It might be expected that the antithesis between these two views would show itself in some form in the wider science of which psychology may be considered a department, in biology. And when we turn to biology to see how the corresponding problem looks from that side, we find an antithesis which is expressed in different terms, but which appears very similar to the one which we have been examining. This is the antithesis between Mechanism and Vitalism. What are we to understand by these terms, and what is the essence of the controversy between them?

To begin with we have to note an obvious broad distinction between certain modes of behaviour of living organisms, which they share with material objects in general, and other modes of behaviour which are peculiar to living beings. A man climbs a mountain, and as he does so his body behaves in a way in which no piece of dead matter would behave. But if a falling stone throws him off his feet and sweeps him over the edge of a cliff, his body will fall just in the way in which the stone might fall. Here then we find on the one hand a certain kind of behaviour which is subject to the same laws as apply to all material objects, whether living or not, and which may in a general sense be called mechanical: and we find on the other hand a residue of behaviour that seems to be peculiar to living beings. And the question at issue is

whether this seemingly peculiar residue seems so only to our ignorance and is really only a more complicated case of the working of mechanical laws: or whether we can observe in it the working of special laws which operate in living beings only.

But what are we to understand by the term 'mechanical', which we have perhaps been using without sufficient scrutiny? It has, we said earlier, a confusing origin. The conception that it was framed to express was one in which all regular process was conceived to be designed by a supreme purpose: but it has been carried forward, and is used now, to express a notion of regular process from which any assumption of purpose has been excluded. And the implication which hangs about it of an analogy with human machines tends to confuse the issue, by suggesting just that notion of purpose which is now out of place. Still this is no more than the kind of verbal confusion which often happens when a word changes its meaning. We can avoid being misled by it, if we bear in mind that the analogy with a machine is to be supposed irrelevant in so far as it implies a maker or a mechanic: and relevant only so far as this, that mechanical processes are to be conceived to work, as the parts of a machine do, in a regularly determined manner and without any spontaneous tendency to vary from this routine.

But we come on an ambiguity that is more perplexing when we ask what is the nature of these regular processes which are called 'mechanical'. From what other processes do we mean to distinguish them when we so call them? One answer which is ready to hand is that by 'mechanical' processes are meant processes which can be sufficiently described in terms of the conceptions of mechanics, or in terms of the movements of the simple constituents of matter. Here is evidently one meaning of the term which is legitimate and proper. But this does not seem to be the only meaning with which the term is used in scientific and philosophical discussions: a biologist can hardly be supposed to be using the term in this sense when he asserts that all biological processes are to be thought of as mechanical, nor a philosopher when he maintains such a position about the universe as a whole. We have then to distinguish between a narrower and a wider sense in which the term 'mechanical' is used; a narrower sense in which it means those processes which can be sufficiently described in terms of the conceptions of mechanics; and a wider sense in which it may be extended to cover all such processes as it seems reasonable to think could with sufficient knowledge be reduced to, or could in principle be reduced to, mechanical processes in the narrower sense.

The distinction which we are here trying to draw may become clearer if we apply it to a particular case. Are the phenomena of the weather or of the tides to be called mechanical? Probably yes, both in the narrower and in the wider sense of that word. It is probable, even in the light of our present knowledge, that if that kind of knowledge could be extended sufficiently, these phenomena could be exhibited as highly complicated instances of the processes of movement which are studied by the science of mechanics in the narrower sense. But whether this is so or not, science and common sense today would agree in saying that they are mechanical in the wider sense, that there is no reason to appeal here to any explanation that is clearly not mechanical. Earlier common sense found it hard to discover in the movements of the winds or of the tides the presence of any regular law, and found it natural to think of them as due to the action of deities or water spirits. But common sense today finds any animist explanation here uncalled for; these phenomena, it feels sure, could with sufficient knowledge be seen as examples of simpler regular processes, however much their complexity may prevent us from seeing this at present or perhaps from ever seeing it in fact.

The question raised then by the word 'mechanical', in one important sense in which this word is used, is the question of end or purpose. And it is in this sense that the term 'mechanical' is to be understood in the opposition between the Mechanist and the Vitalist theories that we are now to consider. What the Mechanist theory in the sense in which it is opposed to the Vitalist is to be taken as asserting is, that the processes which go on in living organisms could be seen, if our knowledge were sufficient, to follow the general physical laws which apply to the movements of inorganic matter, or at any rate to follow laws which are related in a regular manner to those general laws, without its being necessary to introduce into the description of them any reference to an end or purpose. And as against this the Vitalist theory asserts that the processes which go on in living organisms, or some of them, are processes which can occur only in a living organism; and that what makes it possible for them to occur there is the presence of a soul or entelechy, which directs them so that they contribute to a particular end or purpose, to the preservation and welfare of the organism. The phenomena of life, it maintains, are only made intelligible by supposing that the organism, or something in the organism, aims at a purpose which it in some measure achieves. And as science finds no evidence of purpose in the processes of the

physical world as a whole, and as each of us derives the idea of purpose from his own inner life, behaviour in the organism which appears to serve a purpose can best be accounted for by supposing in it an inner life, an entelechy, a soul.

But how does the Vitalist come by his theory of a soul or entelechy? Evidently he does not get at it by the method of introspection: this is a method which, whether it has a place in psychology or not, can certainly have none in biology. He justifies the theory, and believes himself to justify it, by the ordinary methods of science, by observation of sensible data and by inference from these data. Certain facts, he holds, can be observed in the manner in which living organisms react to their environment, which can be understood on the supposition that the organism has in it a power to control happenings with reference to a purpose, the purpose of the welfare of the organism, and which cannot be understood without this supposition. Now what are the kind of facts which the Vitalist points to in support of his contention? They are facts of this kind. If the leg of a newt is cut off, the newt may in certain cases recover its original shape by the growth of another leg; if a worm is cut into two pieces, either part may grow into an entire worm. Here we seem to see at work a principle for which there is no analogy in inorganic matter; if a piece of a flint is chipped off, there is no tendency in the flint to recover its original shape by restoring the missing piece. And this special power possessed by living organisms cannot reasonably be accounted for, the Vitalist will say, merely as a more complex result of the general mechanical or physical processes which operate throughout inorganic matter. It is only to be accounted for by supposing the presence in the organism of something which controls physical happenings with reference to an end, and which may be called an 'entelechy' or 'soul', because we can best understand it as similar to the soul which each of us seems to be aware of as working in himself.

But how far does the supposition of a soul help to account for phenomena of this kind? To begin with we must note that in those cases in which common sense assumes most readily the presence of a soul, the soul seems to have no such power as those that it is here invoked to exercise. Common sense would feel more sure of the presence of a soul in man than in the newt or worm; yet the human organism cannot replace a lost limb, nor even after a certain period in life a lost tooth. The fact in itself need not be a

fatal objection to the theory; we can understand that the more complicated organism might have lost powers of self-renovation which the simpler organisms retain. And yet it must weaken the force of the argument when we observe that, just in those cases in which common sense is most sure that a soul is present, the soul seems least able to perform those functions by which Vitalism seeks to show that its presence in the world at large may be detected. There is too another objection, perhaps a stronger one. For let us suppose that something were to happen in the case of a human organism like what is reported in the case of the newt; that an instance or a group of instances were reported in which a lost leg was observed to grow again, or to make the supposition sound a little less extravagant, let us say a lost tooth. How would the Vitalist theory help to explain this? All it could say would be: The tooth came again because the man had a soul. But this would not be felt to go far towards a scientific explanation. What science would look for, if a group of such cases were credibly reported, would be the physical conditions, either internal conditions of structure or function, or external conditions in such matters as diet or climate or heredity, that might be observed to be present in the members of the group, and not present in other cases. The explanation that would be felt to satisfy would not be an explanation in terms of purpose; it would turn on some observable physical regularity and would be in the broad sense mechanical.

We need not here consider at length the detailed instances that may be urged on behalf of the Vitalist contention. However large a number of facts might be adduced to support it, the two main points mentioned above would seem to hold good of them. First, that the evidence alleged for the operation of an instrumental soul or entelechy is drawn from cases having very little in common with those cases in which the presence of a soul or mind has been supposed by common sense to be most apparent; and second, that a Vitalist explanation appears in the face of any particular problem to be no more than a confession of ignorance. The strength of the Mechanist view, on the other hand, is the help which it gives towards answering specific questions and predicting what results are to be expected under specific conditions. Detailed experiment has shown that the mechanical explanation of vital phenomena has at least a solid foundation in fact; and the growing sciences of biophysics and biochemistry are constantly adding to the structure built on this foundation. It has been established in one instance after another that processes which are characteristic of living

organisms, which seem essential to their welfare or survival, and which common sense might find it natural to explain as designed to serve the purpose of these, are in fact susceptible of a mechanical explanation; that they can be sufficiently accounted for as more complicated examples of the physical and chemical processes which are to be observed in the inorganic world, or at any rate that they can be related in a regular and uniform manner to these processes. It is natural to suppose that, as research continues, more and more of such instances will continue to be discovered; such a forecast might have been precarious a century ago, but the time is past when it would be reasonable to doubt it.

Yet when all this has been said, the issue between the two views still remains open. The conflict is one of those in which no decisive result can be reached, because the combatants cannot come close enough to grips with one another. Whatever evidence can be produced is, and under the conditions of the problem must be, on the side of Mechanism: but the reflection that it must be so lessens the significance of the fact that it is. And while the Vitalist theory can explain no happening in particular, there is something in it that must appeal to common sense, and that may appeal to a biologist too if he looks at his field of study as a whole and asks, What is it that distinguishes living beings from dead matter? Living organisms differ from matter that is not living in that they get what they want, or at least they seem to get, for a time and within limits, something that we may suppose them to want; they grow from embryo to maturity, maintain themselves in being over a certain period, and multiply their kind. And is not this fact, that the human organism seems to want things, to try to get them, and within limits and for a time to succeed, the most definite evidence that common sense can find for the presence of a mind or soul in human beings? Though how the mind or soul can direct the working of the body so as to effect its purpose is hard to understand.

A survey of the issue between Mechanism and Vitalism seems thus to leave the problem as it stood at the point when Huxley coined the name and propounded the doctrine of Epiphenomenalism; and our conclusion so far must be that nothing in the ground we have covered renders his answer to the problem out of date.

Let us therefore try again to summarize briefly the main elements of the problem for which the theory of Epiphenomenalism was propounded as a solution. Observation of the material world

seems to show that it is made up of small units which are constantly forming themselves, or being formed, into larger wholes, which larger wholes are in course of time resolved again into their units. For the most part these processes of coming together and being dispersed appear to go on in accordance with laws which are uniform throughout the universe, which are comparatively simple, and which include no reference to purpose. But in a certain small region of space and time, that is on the earth and during the last few million years, and so far as we have reason to believe nowhere else, there have appeared those more complex wholes which we call 'living organisms'. These living organisms have the power over a limited period and under particular conditions to maintain themselves in being as wholes, though their parts may be all the time changing. And during this period the physical processes which go on in them exhibit a kind of regularity and a kind of variety different from anything that is observable in other physical processes: the regularity consisting in this, that they appear to serve the end of maintaining the organism in being; the variety consisting in this, that they do not lend themselves to a comprehensive description in any other way than as appearing to serve this end. And this combination of regularity with variety seems to be appropriately summed up by saying that they are purposive; it being understood that this term is to be taken for a description only, not for an explanation; that it is to be taken not as implying that the processes are actually directed by a purpose, but only that they appear as though they had a purpose, the purpose of maintaining the organism in being.

The appearance of purpose is a fact, and a fact which biology so far does not seem able altogether to ignore in its statements. But are we to suppose that there is in fact a purpose at work, and if so, whose purpose? Is it the purpose of the organism itself, or is it the purpose of some power outside it? The first is the question raised, at any rate the question more directly raised, in the hypothesis of a soul or entelechy that is at issue between Vitalism and Mechanism. But the purposiveness, the appearance of purpose, in the life of the organism and its conditions goes beyond anything that could reasonably be ascribed to a soul animating the organism itself. What promotes the welfare of the organism, what helps it to continue in being, comes at least as much from the character of its physical constitution and its physical environment as from anything that a soul at work in it could be supposed to do; at least

as much, or indeed much more. If then, the appearance of purpose is to be taken as the sign of a purpose actually at work, how are we to interpret this purposive element in the life of the organism which cannot be purposed from within? Can it be supposed that there is a purpose at work in the world which designs the physical constitution of living beings and adapts them to their environment and their environment to them so that they are able to survive? What can either science or philosophy have to say about such a supposition?

To this question there seem to be two lines of answer. First there is the line of general principle, that science does not regard it as its business to account for the events that happen in the world by supposing them to be ordered by a supreme or general purpose. If for any particular set of events it could suggest no other explanation than this, it would offer no explanation at all. And there is also the more particular answer that biology conceives itself able to offer a theory about the facts which makes any appeal to a general purpose in this case superfluous. The theory of natural selection provides an account of the origin of species which involves no reference to purpose, and which claims to show how under the special conditions prevailing on the earth the various kinds of living creatures may be supposed to have come into existence with organisms adapted to their environment, as a result of the same general physical laws as obtain throughout the inorganic world.

The answer then to the question which we have just asked might seem so obvious that it was needless to raise it. Whatever biology may have to say about the Vitalist hypothesis, and about the part which particular purposes may play in accounting for the phenomena of life, it should be plain that natural science, and philosophy in so far as it bases itself on science, can have nothing to say about any part to be played by a general purpose in accounting for these phenomena. Yet there is a conception of a large and vague order that constantly recurs in popular expositions of the results of science, and even in the writings of men of science themselves when they are speaking with some looseness, and that seems half to bring back into the world picture that notion of purpose which precise scientific reasoning has so definitely left out of account. This is the conception of Nature. What are we to understand by this word, so often met with in poetry, rhetoric, science, and philosophy, so seldom, even by scientists or philosophers, defined?

Its meaning, like that of other such wide and vague terms, is variously conceived and is taken for granted rather than closely examined. Yet it has filled so large a place in popular language and in philosophical discussions that it is worth while making some attempt to realize the implications which it has for the most part carried; and we may understand it in some such way as this. Nature is the material world and its contents; earth, sun and stars, land, water and air, plants, animals and human beings, or at any rate human bodies; all this world of material things, conceived as having a substantial existence which does not depend on the perceptions or thoughts of observers; and conceived, not as something passive or static, but as moving and changing in regular sequences in accordance with what are called 'natural laws' or 'physical laws'. Here are two conceptions. First, that the material world exists independently in its own right. So taken the conception of Nature stands for the belief which emerged at the end of our inquiry into Mentalism as the central core or keystone of the common sense outlook, and which we have assumed as the starting point for any further inquiry. And to that is here added the thought or feeling that this material world which is known as an independent reality is known as a field of action. This perhaps should hardly be called an addition, but only the bringing out of an element already implied in the first conception; the certainty that material things have an independent existence seems bound up with the certainty that these things move and change and act on one another. The word 'Nature' may then be said to sum up this twofold certainty; a certainty which common sense might attempt to formulate in some such terms as this, that the material world is a continuing substance which manifests itself in a constantly changing yet orderly activity.

But then arises the question, What is to be thought about the relation of this substance to this activity? Here the certainty with which common sense holds its central belief gives place to hesitation and passes into various forms of conjecture. Are these phenomena of change and movement which make up the behaviour or activity of the material world to be thought of as the expression of purpose? And if so, how far is this purpose to be conceived as analogous to human purposes? Some analogy there must surely be, if there is to be a meaning in speaking of purpose here at all; but how far can this analogy be supposed to extend? We saw this problem arising earlier with the first emergence of speculative thought in Greece, and we distinguished three main answers that

were then given to it; answers which stand for divergent lines of opinion, and the distinction between which is still relevant today.

The conception which came to the front in the traditional philosophy, and which for many centuries dominated thought, took the belief in purpose as the key to the interpretation of the world. Within the range of this conception there was room for differences of view as to whether the purpose should be thought of as the purpose of Nature or of a power beyond Nature; for differences of view again as to the particular mode in which the purpose should be conceived; but these different views agreed in the belief that whatever happened in the world, or at any rate the general course of the world's destiny, was determined by a supreme purpose, and that this purpose was to be understood in the light of what could be recognized as best and highest in human purposes. This conception drew its deepest root from some source other than observation of the material world; in the various forms which it assumed in the traditional philosophy or in religious doctrine it might claim support from metaphysical argument or from supernatural revelation or from immediate faith or certainty; but it was not based mainly on observation of the facts given in sense perception and on reasoned inference from these facts, nor could it claim to be so established; it could at most claim that the observable facts were not incompatible with it. And drawing as it did its main force from outside the scientific field, it lost its dominance as the common sense of the metaphysical and religious past gave place to the common sense of the scientific present; and we must leave it out of account in looking for an answer to the problem now before us: How is the question as to the presence of purpose in the world to be thought of by an inquirer approaching it from the standpoint natural today?

During the long period for which the conception of a supreme purpose was dominant, thought was not much concerned with the conception of Nature; this was obscured by or merged in the conception of a larger purpose including or controlling whatever lesser purposes might be supposed to be at work in the material world. But as the belief in a supreme purpose became fainter, the conception of Nature began to re-emerge, and with it returned the question which had earlier arisen: What could be conjectured as to the presence of a purpose in Nature, without going beyond the limits allowed by observation of the material world and of physical processes?

Here as we saw before, two main lines of answer suggested themselves. One of these rejected the idea of purpose altogether, as falling outside the scope permissible for scientific thought. Nature should on this view be looked on only as the sum total of purely physical processes, in which there is to be observed an order which is regular and uniform, but which has no reference to human purposes and, if at times it seems to serve these, serves them only by accident. But there was another possible answer which conceived itself to find real though limited evidence of purpose within the observable facts of the material world; evidence not for a purpose such as the traditional philosophy had spoken of which was in harmony with the highest human purposes and might, it was hoped, allow these to be fulfilled; but at any rate for a purpose aiming at the growth and development of various kinds of living beings in accordance with their various potentialities.

Each of these last two answers claims to keep within the bounds of observation and of reasoned inference based on observed facts. How is an inquirer to come to a decision between them?

On the one hand, the semblance of purpose, dislodged from almost all of the material world, still seems to hold its own in one small region, the region of organic life. Here Nature presents a purposive aspect; she appears as the foster mother of living organisms, providing the environment requisite for their survival and their welfare. For do not the lesser particular purposes, of whose reality common sense feels so sure, imply somewhere in the background a greater general purpose as a condition of their being able to find even temporary fulfilment? And is not this an argument for supposing a purpose in Nature, an argument which is independent of any appeal to metaphysics or to religion, and which is drawn from observation of the physical facts?

Yet if we allow ourselves to conceive of Nature as aiming at a purpose, are we not bringing into our world picture a belief as to which science can say nothing and which a philosophy that takes its stand on science should reject as groundless? So large a belief based on such doubtful evidence seems to go beyond anything that could be admitted as a reasoned hypothesis; it might at most be allowed to rank as a myth or fancy, making a plausible guess in a region where certainty is unattainable. Taken as a myth this thought of Nature as a kindly foster mother, providing the conditions requisite for the preservation and welfare of living organisms, makes a natural appeal to common sense; it answers to a natural sentiment, and keeps on recurring as a natural fancy after

any more definite beliefs as to a purpose in the world are supposed to have been renounced. But can it when it is more closely looked into be called even a coherent myth? If Nature's purpose is the preservation and welfare of living organisms, how are we to understand it that this purpose should manifest itself, so far as can be conjectured, only within very narrow limits of space and time, on the earth and during the last few million years? And how are we to understand it that even within these narrow limits the purpose manifests itself so imperfectly, and that the lives of the organisms whose preservation and welfare are aimed at are so soon brought to an end by violence or natural decay? The thought that this should be Nature's purpose, if it stands by itself, is hardly even plausible; to become that it would have to be taken up into a more elaborate myth, which would need to go further yet beyond the scope of the observable facts.

If we follow out the difference between the two forms of the Mechanist view which we have here distinguished, we may be led to another line of thought which will further complicate our problem. We began our inquiry into the issue between Mechanism and Vitalism by taking the Mechanist view to be equivalent to the view which Huxley calls 'Epiphenomenalist'. This seems the natural way to look at the position when the biological problem is approached, as we have approached it, from the side of psychology; when we begin by considering the relation of soul and body in human life, and then pass on to consider their relation as it appears in the animal world. But the animal world covers only half the field studied by biology; and if we extend our survey to the other half of that field, to the world of plants, the problem may take on a different aspect. How are we to conceive the relation between these two great portions of the biological field, their points of resemblance and the points in which they differ?

Common sense, if the question is put to it, would be ready with a confident answer. When we look at the material world, it would say, we see the things which compose it divided into three main kingdoms or orders of being, animal, vegetable, and mineral; or if we try to make our language come a little closer to a standpoint that might be called 'scientific', we may distinguish first a fundamental line of cleavage between the organic and the inorganic, and then within the organic a second line of cleavage, less fundamental but hardly less definite, between the world of animals and the world of plants. The whole organic world is marked off from

the inorganic world by the possession of life in the biological sense; animals and plants alike possess the power to grow, to maintain themselves for a time in being as living organisms, and to reproduce their kind. But the animal possesses in addition, as the plant does not, an inner life with the attributes of sentience and awareness and at least the appearance of desire and will. And along with this inner distinction goes an outer observable distinction; there is to be observed in animals a power or a habit of movement, which is not possessed, or is possessed in a much lower degree, by plants; and it is natural to interpret the movements of animals, or some of them, as voluntary movements resulting from will.

The inner life supposed by common sense in animals has these two main attributes or faculties: sentience conceived as passive awareness, will conceived as an active power. And of the two sentience is supposed the more fundamental; common sense would still hold to its belief in that, even if it should find itself driven by what it takes to be cogent reasoning to doubt or reject the belief that anything in the inner life can have power to affect physical happenings. The Epiphenomenalist conception allows a place for this residue of common-sense belief within the limits of the Mechanist outlook. But such a compromise is only plausible as a hypothesis about the animal world. In the world of plants common sense would find no use for it; here the presence of a soul must be supposed to show itself by observable effects, if there is to be a case for supposing it at all.

When then we think of the distinction between the plant and the animal world, we seem to come on yet another conception of the soul or inner life, rather different from either of the two that we have so far considered. The sensitive inner life which common sense for some unexplained reason feels to be so surely present in animals is neither the intelligent inner life, which each human observer knows by introspection in himself and believes himself to recognize in other human beings; nor again is it merely the instrumental soul or entelechy, which may be supposed to reveal itself to external observation by its effect in promoting the welfare of the organism. It goes as far beyond the second of these things as it falls short of the first.

But might it perhaps be looked on as an intermediate or bridge between the two conceptions? And in particular might it be linked up with the conception of the instrumental soul by the thought that, if the soul is an active agent in biological processes, sentience

and desire play a part in determining its activity? Such a view would find a natural place in a picture sometimes drawn by the traditional philosophy, which displays a hierarchy of orders of being with a hierarchy of souls corresponding to these. The phenomena of life on this view exhibit a scale or gradation, in which the activity of the soul can be discerned rising and expanding through various phases; and the soul as a human observer conceives it in himself and his fellows is held to comprise distinguishable faculties, which in the human being work together as members or aspects of a single whole, but which in lower organisms appear partially and work separately. The full capacity of the intelligent soul, with its faculties of thought and reasoning, its power to judge values and to conceive ideals, is present and active only in human beings. In the animal world these higher faculties are wanting or rudimentary, but the soul retains the faculties of awareness and sentience, desire and will; it takes in by sentience impressions coming from the outside world, it responds to them by various desires, and these desires converging in will produce activities which take the form of voluntary movements. Lower down in the world of plants there is to be found only the vegetative soul, with its functions or faculties of growth, nutrition, and reproduction; but these functions are the essential foundation for the higher faculties, so that there is ground for supposing the soul a reality here if there is ground for supposing it a reality anywhere. Here, however, in the plant all that can be supposed present is an entelechy or instrumental soul, working blindly without sentience or awareness to fulfil the purpose of preserving the organism. Further still, beyond the lower end of the scale of life, lies the inorganic world, in which change and movement are observable as facts, but are conceived either as carrying out some general cosmic purpose or as happening without reference to any purpose at all.

Such an account seems to hang together well enough if we look on it as a myth, as the kind of imaginative picture in which from time to time historic common sense has sought to sum up its general reaction to reality. But can it be thought of as more than this? Can it rank as a hypothesis of which account might reasonably be taken by a philosophy which aims at keeping in touch with science? Judged by this standard it seems to contain too much unverifiable fancy and conjecture. The attributes or powers which it assigns to the several phases of the soul; the processes of thought and the ideal aims which the intelligent soul apprehends and seeks to discriminate; the sensations, feelings, and desires of which the

animal soul is aware; even the purpose which the vegetative soul appears to pursue; none of these are physical characteristics that can be observed from outside, they are all attributes of inner states, whose existence can only be conjectured by introspection working at second hand and relying on analogy. And the conception of a hierarchy in which forms or phases of soul rise one above another implies a belief that the ideal values which the intelligent soul recognizes, or some of these, can be seen to be in an objective sense higher than the value of self-preservation which the vegetative soul works for or the value of pleasure which the sensitive soul desires. And the whole picture thus rests on two assumptions which we have so far not found that we have any right to rely on; the assumption that introspection can be trusted and the assumption that there is an objective standard of values. It only restates our problem in rather more vivid and fanciful language, without bringing us any nearer to an adequate answer.

If we try to look at the facts without any such presupposition, we may see reason to doubt whether the distinction between the animal and the vegetable kingdom is so sharp and clear-cut as common sense has been in the habit of supposing. It is doubtful even whether common sense, if it considered the question more closely in detail, would extend its confident assumption that animals are sentient to the whole of the animal kingdom; it would hardly know whether it should ascribe sentience and desire to a tapeworm or a cheesemite. That sentience might vary in quality and intensity, and might become fainter as we descend the scale of animal life, could well be understood; yet we can hardly dispose of the question by saying that it is merely a matter of degree. The same impulse which makes us feel sure, rightly or wrongly, that in some particular cases sentience is present, seems to assure us with no less force that in every case it must either be present or not; and if the insight which common sense trusts to is in some cases at a loss to say which, must not this throw some doubt on its trustworthiness even when it claims to speak with confidence?

And when we turn from the doubtful guidance of common sense to ask what answer is indicated by strict observation and reasoned inference, it seems still more uncertain whether any definite dividing line can be found. It is a tenable, perhaps the most probable, view that the animal and the plant go back to a common ancestor, which might with equal justice be called either of them or neither. Such a view seems to be implied in the language

used about the problem as to the origin of life; when the question is raised whether life should be supposed to have sprung from inorganic matter on this planet or to have been brought to the earth from outside, it is discussed as though it were enough to ask about a single original source, not necessary to postulate for animal and for vegetable life origins separate from one another. We need not, however, try to go further into hypotheses about the distant past. Whether or not it is right to think of animal life and plant life as branches springing from a single root, we have before us the broad fact that both of them as we find them existing today are on the whole successfully adapted to this environment. Judging by the biological test of capacity for self-preservation and self-reproduction, we must say that the aim of life is on the whole achieved by plants at least as well as by animals, if not better. If sentience is necessary to achieve this aim for the animal, why not for the plant? If it is superfluous for the plant, why not for the animal too? We seem to be brought to a choice between two conclusions; either we should suppose that sentience is present in some degree throughout both worlds, or we should suppose, as Descartes did, that it is present nowhere in either of them, and that animals and plants are alike automata.

Could we, however, perhaps find a dividing line, which would support the distinction drawn by common sense between plants and animals, in the fact that animals seem to possess, as plants do not, a faculty of voluntary movement, and in the thought that voluntary movement implies will, desire, and sentience? Here again the answer must turn on our right to interpret external behaviour as the expression of an inner state. It is natural for a sympathetic observer as he watches a living creature moving, perhaps a swallow skimming over the water and turning in its flight, to read into the movements that he sees a reflection of the pleasure with which he sees them; a pleasure compounded, it may be, half of the pure visual pleasure of looking and half of the pleasure which he imagines that he might himself enjoy if such perfect movements were within his own capacity. It is natural for him as he takes in from hour to hour impressions of animal or human movements to interpret these in the light of his own feelings or of what he imagines might be felt by other human beings or by animals; and so come to a belief, which if he begins to speculate he might condense into a philosophic doctrine, that movement and activity are things in themselves desirable and fulfil the nature of the inner life. But in all this he will be adding something from

his own imagination which goes beyond anything that can be called biological inference. It is imagination that tells him what the swallow is feeling as it flies, or what his fellow human beings are feeling as they go through the less obviously pleasurable movements of their everyday business. Closer observation may suggest that the impulses behind these movements come not from sheer enjoyment of the activity but from biological need; that the swallow wheels and turns as it does because it is chasing the insects which it feeds on, that human beings work in factories and coal mines or get into trains and go to offices because they want food and find this the readiest way to get it. And if this is the true account of the cause which sets these movements going, it is not so evident that the need to perform them is a sign that the creature which performs them is better adapted to life than it would be, if it could satisfy its biological needs without them.

It is in place here to say a word about two sets of experiments carried on during the present century, which bear from rather different sides on the problem before us. On one side fall the investigations of Pavlov into the conditioned reflex. We need not here enter into the details of these experiments, which have been described and discussed with some fullness in recent scientific and philosophic literature. They bear on our problem by suggesting that a distinction commonly drawn in the past between two categories of animal movements is less fundamental than has been supposed. The general view has been that a clear distinction should be recognized between reflex movements, which can be sufficiently described and accounted for as exhibiting a physical response to a physical stimulus; and voluntary movements, which appear to be the result of will and must be thought of in that light. These last, it would be said, cannot be accounted for simply in terms of physical stimulus and response; for an adequate explanation of them it would be necessary to refer to some mental activity, such as memory, attention, or sentience. Such a reference would need to be introduced when the response to a particular stimulus is found to be conditioned, not merely by the present physical state of the organism, but in part also by the nature of its response to stimuli in the past; here the explanation would turn in part on the fact that something which has happened in the past is remembered.

Pavlov's experiments go to break down the sharpness of this distinction. They show, for instance, that under certain conditions

a stimulus which was originally indifferent may, if it is applied often enough in company with a stimulus which evokes unconditionally a particular reflex response, come to evoke the same reflex response when it is applied by itself without the other stimulus. An example often quoted is supplied by a series of experiments made on dogs. The sight or smell of food is an unconditioned stimulus inducing a flow of saliva, the ringing of a bell is originally indifferent to any such result; but it is found that if a bell is rung often enough at the same time as food is presented, the sound may become a conditioned stimulus which will produce a flow of saliva as its conditioned reflex. By experiments of this kind it is shown that definite and quantitative changes of stimulus can be correlated with definite and quantitative change of response, and that the extent to which one stimulus can replace another may be measured, without the need to appeal to any mental activity such as remembering. And the general effect of these researches is to transfer to the category of reflex movements a number of movements which would in the past have been classified as voluntary; and to open up the prospect that similar researches in the future may carry this process of transference continually further, and even perhaps, it is suggested, the possibility that all movements now thought of as voluntary may come to be interpreted as a more complicated kind of reflex movements.

Another set of experiments, carrying different implications, but also relevant to our problem, were conducted a few years earlier by a distinguished Indian physicist and biologist, Sir Jagadis Bose. He was able by the help of delicate recording instruments to show that the movements of certain plants under the effects of various gases or poisons or wounds displayed, when highly magnified, a close analogy to the kind of movements which would be natural to animal organisms under the influence of some painful shock or injury. The impression made on spectators is said to have been that the movements of the plants as seen under these conditions presented all the appearance of expressing a high degree of sensitivity. The investigator himself summed up his conclusion from the experiments as follows.

'We find that the plant is not a mere mass of vegetative growth, but that its every fibre is instinct with sensitivity. We find it answering to outside stimulus, the responsive twitches increasing with the strength of the blow that impinges on it. We are able to record the throbs of its pulsating life, and find those wax and wane according to the life conditions of the plant, and cease with the

death of the organism. We find the different parts of the plant are connected together by conducting threads, so that the tremor of excitation initiated at one place courses through the whole, this nervous impulse, as in man, being accentuated or arrested under the several actions of drugs and poisons. In these and in many other ways the life reactions of plant and man are alike; thus through the experience of the plant it may be possible to alleviate the sufferings of man.' And passing on into a region of conjecture, he says further:

'These our mute companions, silently growing beside our doors, have now told us the tale of their life-tremulousness and their death-spasm in script that is as inarticulate as they. May it not be said that their story has a pathos of its own beyond any that we have conceived? In realizing this unity of life, is our final sense of mystery deepened or lessened?'

These two sets of researches, apart from their intrinsic interest and importance, are significant for the problem now before us in this respect; that the conclusions drawn by the two investigators, while they are in some respects opposed to one another, yet as regards this particular problem point in the same direction. The conclusion suggested by Pavlov's experiments is that a large field of animal behaviour, which has in the past been thought only explicable in terms of some mental faculty, such as sensation, memory, or volition, is now placed on the same footing as behaviour which it is natural to account for without reference to any such conceptions. The issue is here not directly raised between Vitalism and Mechanism in the strict sense; the reflex movements to which the voluntary movements are reduced still remain movements peculiar to living organisms, they are not further reduced to movements such as might occur in the inorganic world; but with the conclusion that sentience and volition can here be left out of account as superfluous, the main step is taken towards a Mechanist or Behaviourist explanation, and the main obstacle in the way of such an explanation is removed. The conclusion suggested by the experiments of the Indian scientist is in some respects just the opposite. Movements in plants which common sense would look on as merely mechanical, or in any case as having nothing to do with consciousness or sentience, are now presented to us as exhibiting under close scrutiny evidence of a sensitivity analogous to that of animals or even of human beings. From the point of view of common sense the first set of researches might be said to bring down the animal to the level of the plant, the second to raise

the plant to the level of the animal; but both work together to break down the difference which common sense conceives between the two. Investigation as it probes more closely into the complexity of fact seems to suggest, on the one hand that in the plant as well as in the animal are to be found the kind of signs which suggest the presence of sentience, on the other hand that in the animal as well as in the plant behaviour can be sufficiently accounted for in terms of physical response to physical stimulus. And thus then the double question is pressed home: first, when we look at the phenomena of the animal world, why should we suppose sentience to be anything more than an idle epiphenomenon? Second, when we look at the phenomena of life as a whole why should we suppose it to be even that?

'Sentience' is a term which denotes a wide range of mental states. What we have so far chiefly had in view in using the word has been sensations, the capacity of the organism to perceive objects and changes in the physical world. But the word also denotes, as the investigations we have just considered may remind us, something that may be called 'sensibility' or 'sensitivity', the capacity for feeling pleasure and pain. This aspect of the inner life did not come up for consideration when we earlier asked the question how the story of evolution was to be viewed in relation to the issue between Mechanism and Vitalism; and we may return to that question now with this new point before us.

In the story of evolution as it is usually told pleasure and pain appear as operative factors. The animal, it is supposed, is supplied by nature with instincts which lead it to seek those things that tend to preserve it and keep it in health, and to avoid those things that would destroy it or injure it; and these instincts work by means of pleasure and pain, by making the animal feel pleasure in the things that are in this sense good for it, pain when it comes in contact with things that are bad for it. And this way of telling the story, according to which pleasure and pain take their place as essential factors in animal and human development, makes an appeal to a natural sentiment, particularly perhaps in that it gives a reason for pain. All the pain and suffering, it says, which we cannot deny the presence of in the history of men and of animals, has at least this justification or has had at least this result, that pain and suffering are among the essential means by which the development of animals and of men has taken place.

The problem will, however, appear differently according to

whether we adopt the Epiphenomenalist or the Behaviourist form of the Mechanist doctrine. The Epiphenomenalist version of the story of evolution will be this; that under certain conditions which have prevailed on the earth in recent times (in times that is which astronomy would call recent, though so far as can be guessed perhaps at no other time or place), organisms developed with a complex structure which was accompanied by the origin of sentience, the power to feel pleasure and pain; and that along with the growing complexity of the physical organism, the feelings of pleasure and pain also became more complicated. But pleasure and pain are on this version of the story by-products only, and play no effective part in the evolutionary process. What operates in the process is not these, but the physical processes in the organism to which they correspond and of which they may be said to be the awareness. Pleasure is a momentary accident we are glad to have; pain is a momentary accident that we would rather be without. In so far as the natural workings of the organism give rise to feelings of pleasure, as in some measure it may be said they do, this is for us a piece of good fortune. But the moments of pleasure can have no value except in themselves, and the moments of pain can have no value either in themselves or in their consequences; both alike are irrelevant to any end.

This conclusion that pleasure and pain are ineffective accidents in the life of each of us and in the development of the race is surprising and unexpected. Yet it seems to be what we are driven to if we survey the process from outside, and if we cannot find in this external survey any sufficient reason to adopt a Vitalist view. Unless there is in each organism a soul or an inner life which controls or partly controls the physical processes, pleasure and pain will either, we must think, be absent altogether, or if present they will be present merely as feelings and nothing more. We must assume in any case the presence of the physical processes which, if sentience were present along with them, would produce feelings of pleasure and pain; and these physical processes will play their effective part in individual life and in racial development; but they would play it just the same whether or not there were that awareness of them, which constitutes pleasure and pain as each of us knows these for himself.

This, if we understand the Epiphenomenalist theory rightly, is how it must envisage the problem; and in this light the history of evolution takes on a new aspect. Nature, it seems, when she set out on this pursuit of her purpose of complexity, which on the

theory is all the purpose she can be supposed to aim at, never guessed, it never happened to occur to her, that it might be going to hurt. The conclusion when we first realize it, may strike us as startling, almost shocking. It seems indeed at one moment to have shocked Huxley. But when he speaks of the conscience of man revolting against the moral indifference of Nature, is he not half forgetting, and are not we in danger of forgetting, if we let ourselves think of Nature as callous or cruel, that all this talk of a purpose in Nature is not a serious myth, but is only a metaphor? Nature cannot be cruel, because she cannot be kind, because when it is said that she works towards a purpose this is only a short summary expression for what observation seems to show to be the trend of the evolutionary process; namely that, when things reach a certain point of complexity, they tend to go on getting more complex, until, presumably, another point comes, when they have become as complex as the conditions of the process allow and begin to disintegrate back into simplicity.

But if we have no right to be shocked, we must still feel unwelcome the thought that sentience in men and in animals is something merely passive, compelled to endure whatever results may come from physical processes within the organism or without it, and unable in any smallest degree to guide or to modify them. And it may even be a relief at this point to turn from the Epiphenomenalist view to the way in which the thorough-going Behaviourist would envisage the problem. A Behaviourist of this type could at any rate have no reason (except perhaps a strictly personal one) to protest against the callousness of Nature; for he could have no reason to believe that either pleasure or pain exist anywhere in the universe (except, on the proviso we had to make above, in so far as he might feel one or the other at a particular moment in himself).

Or are we when we say this perhaps misinterpreting him? For if we look back to his statement of his position to confirm our impression of it, what he means to say is not altogether so clear. He tells us expressly that there can be no reason to believe in the reality of anything mental, and he tells us very plainly that what is mental includes thoughts, sensations, perceptions, emotions, desires. But pleasure and pain, now we notice it, are missing from the list. Yet pleasure and pain, if we understand by these words not the physical states which cause or accompany the feelings, but the feelings themselves, are surely mental, if anything is to be called 'mental' at all. Is the omission intended, and if so, how are

we to account for this gap in the theory? Is the Behaviourist half-hearted about it, because pleasure and pain make themselves felt so insistently that they cannot be ignored? But if he allows feelings of pleasure and pain to be realities, his case for denying the reality of other elements of the mental life can hardly hang together; and his doctrine would thus come back to a restatement of the Epiphenomenalist contention, that the mental life exists, but that it does nothing. Only we must still recognize that he has added to this a new and forcible argument, which points towards his more extreme conclusion, whether he is himself prepared to drive it home or not: if the mental life does nothing, if all that happens would go on just the same whether it were present or absent, why suppose it to be anything at all?

We set out at the beginning of this part of our inquiry to find an answer to the question, Why do we believe in the existence of other minds? and in trying to answer it we have been led far afield. We have been led first into attempting a short history of two of the deepest philosophical problems, the problem of body and soul, and the problem of cause and effect; and then on further into a discussion of some of the most controversial questions that arise in the provinces of psychology and biology. The critical reader is likely to have detected some serious weaknesses in our handling of each of these subjects. He will have observed that our short history is full of vague phrases and unproved guesses; that it brings within a general statement processes and tendencies which must have differed widely from one another; that it ascribes to men in the past thoughts and feelings which we cannot be sure that they entertained, which indeed we may be pretty sure they never did entertain in the precise form we have given to them; that in fact it has all those defects which a short history dealing with so vast and complex a field is likely to have. And as to our incursion into the provinces of psychology and biology he may be still more critical; he may object that we have touched hurriedly on a succession of large problems, any of which for its adequate treatment would need a volume; that we have approached them from neither of the standpoints which might seem likely to lead to useful results; neither, that is, from the standpoint of the man of science, who collects the relevant facts, exhibits some theory as arising from them, and tests this theory by further reference to the facts; nor yet from the standpoint of the philosopher, who claims to survey the results of the sciences in the light of some unifying

principle which he conceives himself to have grasped; that all we have done is to raise one question after another, leaving them at the end in a confusion in which it is hard to see their mutual relevance or interconnection.

Criticisms to such effect would, we must admit, be quite in place. A philosophy that should succeed in working out a metaphysical doctrine would clearly need to review in the light of that doctrine the ground that we have covered, and to probe more deeply problems of which we have only explored the surface; and the answers it would in the end come to might be very different from any of those that we have suggested. Yet the line of thought we have followed has its bearing on the question we set before ourselves at the opening of this part of our inquiry. We cannot claim to have found the true answers to the problems of mind and matter, body and soul, cause and effect; we may hope that we have done something to show how these problems might present themselves today to an inquirer of average intelligence, who has done his best to take to heart what the science and philosophy of the present time have to tell him. And for the question we are here concerned with this last is the important point.

We may be helped to see the way we have taken across this broken ground, if we distinguish in it two main questions. First there is the question with which we started. We placed ourselves in the position of an inquirer who believes himself to know that he exists in a material world, revealed to him in sense perception, but not depending on his thoughts or perceptions for its existence; who does his best to set aside all further presuppositions as to its nature; and who then asks himself what ground, if any, he can find as he looks at this material world for supposing at any point in it the presence of a mind or an inner life like his own. And in trying to answer this we came on a further question, or set of questions, which seemed to arise naturally out of the first: What difference, if any, could the presence of an inner life or of mind be supposed to make to the course of events in the material world? The first question must from the standpoint of common sense be viewed as a question, not about existence, but about knowledge, not as to the nature of reality, but only as to how we come to know this nature, which we are certain that we know before we start the inquiry. Yet to look at it as a possible question about the nature of reality seemed requisite if we were to bring out its full significance for the problem of knowledge. The second question is, for common sense and for philosophy alike, a question about

the nature of reality as much, or more, as it is a question about theory of knowledge; it seems indeed to go down to that deep cleavage, perhaps the deepest of all, in the philosophy and common sense of the present day: the cleavage between the view which asserts the presence of purpose in the universe, and the view which doubts this or denies it.

Now to the second of these questions we must recognize that our inquiry has found no kind of answer; the most that it has done has been to bring together considerations and difficulties which deserve to be taken into account as factors in the problem. As such they seemed relevant to the discussion; but drawn as they are from different sciences and from opposing views as to the results of these sciences, it is not easy to see their true bearing on one another, and the result of their juxtaposition so far is to leave us feeling that the problem becomes more tangled and confused the more we study it. But when we turn back to consider the bearing of all this on our first question, the case is altered; here the very inconclusiveness of our result brings with it an important conclusion; here the absence of an answer is itself an answer. And that answer is that an inquirer, who has done his best to follow what the philosophy and science of today have to say about this problem, can find there no adequate reason for believing that he can discover in the material world the presence of any mind or self other than his own. The belief is not excluded; he can find arguments and analogies which would present it as a permissible hypothesis, and if space had allowed we might have added to those we have mentioned other ingenious arguments which have been urged to this effect in recent discussions. What however he is looking for is not arguments that might support a possible or even a probable hypothesis, but ground strong enough to justify his certain conviction that he discovers in the material world the presence of minds other than his own; and for this certainty he seems to find, in what philosophy and science have to tell him, no justification at all.

PART THREE

*

REASON AND COMMON SENSE

CHAPTER XVIII

BELIEF IN OTHER MINDS

In the part of our inquiry just completed we have described a process of thought which seeks to interpret the world in terms of matter and to eliminate so far as possible all such concepts as mind or soul. We have traced the history of this process from the early age of animist belief to the turning point which was reached some three centuries ago with the beginning of modern science, and again from that to what seems its logical goal in the Behaviourist psychology of today. In an earlier part we outlined a process of thought seeming just the reverse, which seeks to interpret the world in terms of mind and to eliminate the concept of matter. The development we followed in that case was logical rather than historical, but this tendency too appeared to show itself at about the same point in time and to have found expression during the same three centuries. And we have now to ask, How are these two tendencies, which seem so contrary to one another, to be viewed in their right mutual relation?

Critical thought today, finding philosophy on this and other problems so much at variance with itself, may be led to ask whether the intellectual activity of the period has not, in spite of all its achievements, been in some radical way misdirected. Something would seem to have gone wrong somewhere, but what and where? Has the prime error been the attempt to discard matter and reduce everything to mind, or the attempt to discard mind and reduce everything to matter? Some of the critics are sure that it was the first, some that it was the second. Each diagnosis is plausible, and one perhaps is as plausible as the other; but they cannot both be right, and it is hardly likely that either has gone to the heart of the issue.

A partial answer to our question may be found in the reflection we noted earlier: that different philosophers start with a different

bias, which leads one of them to look for his explanation of the world in terms of matter, another in terms of mind. Here, it may be said, is a natural line of cleavage, which shows itself in the thought of these three centuries, as it might in the thought of any other time; but the whole current of thought during the period cannot be said to be moving in one direction rather than the other, cannot be summed up either as Mentalist or as Materialist, so that if we leave the answer there, we do not account enough for the sense of fatality which is brought out by our review of the two opposing tendencies of which we have spoken. There seems something inevitable in the development by which the world of mind, as conceived in the various forms of Mentalist thought, reduces itself first to the world of the self and then to the world of the moment; and again in the development by which the less extreme forms of Materialist thought work up to a climax in Behaviourism. And if this is so, is it not a sign that there is present a single underlying tendency, of which these two apparently conflicting tendencies are in their different ways the effect and the manifestation?

We may sum this up as a tendency to discard what is logically superfluous. Reason seeks to eliminate whatever concepts or beliefs it finds superfluous, or what for strict reason amounts to the same thing, unintelligible. As it looks out on the material world, it finds superfluous the supposition that at any point in this world mind is present. As it probes further and asks itself how it can know the material world, it finds superfluous the supposition that there is a material world at all. The concepts of mental substance and material substance are equally alien to it, not because one is conceived as mental and the other as material, but because each is conceived as a substance, that is, as something supposed to exist outside the momentary event which is the act of thinking; for this is the one event which the strictest reason cannot find either superfluous or unintelligible without refuting itself.

This seems to be the general tendency at work, the under-current which shows itself in what on the surface look like two opposing streams. It is a tendency, not a doctrine, and we must not expect to see it expressed in its purity in the work of any one philosopher. A philosopher is not a moment in a tendency, but a human being, and this means that he will not limit himself to what his logical principles entitle him to believe; he will contrive somehow to supplement this with whatever else he feels to be wanted to make up the world picture in which he does in fact believe. But if we ask

how his thought hangs together, we must say that the supplement is no more than a private mythology of his own, and it is only what his principles of reasoning entitle him to that can be called in a full sense his 'philosophy'. And the effect of this general tendency is that, while the supplementary mythology may be wider or narrower as the individual chooses, the sphere of belief which is held to be justified by reason tends steadily to shrink.

How then are we to explain the paradox, that by following out as thoroughly as we could what seem approved principles of reasoning we arrive at results, which are self-consistent indeed, but somehow incredible? Why if they are self-consistent should we find them incredible? Have we in our nature some criterion of truth that is paramount to reason, or that is able to disclose to us principles of reasoning which philosophy has not yet discovered or which the philosophy of today has forgotten?

In attempting to answer this question, let us place ourselves again at the standpoint of common sense, and let us try to set out its main assumptions or beliefs, arranging them in the order of their logical priority. Each of us while he remains at this standpoint believes himself to exist as a body and mind linked together, as a sentient and thinking material object in a world of other material objects, some of which he believes to be sentient and thinking like himself. This is the essential framework on which the fabric of common-sense beliefs is hung. Taking then this set of essential beliefs, let us consider how we should arrange them in their order of logical priority, beginning with the belief or beliefs that we find it least possible to doubt, and going on in the order in which one seems naturally to follow on another. First must be placed the assurance which each of us has of his own existence at the moment of thinking, and of the content of his experience at that moment: this is the one and only belief which can be said to be for each of us quite certain and immediate. Next to this comes the belief of the individual thinker that he himself has existed in the past and will exist in the future as a thinking and sentient being. After this and as a further stage comes his belief that he exists as a material object in a material world, which exists independently of his awareness of it. After this again, and as yet a further stage, comes his belief that some of the objects in this material world are sentient beings animated by minds like his own.

We see then the field of belief widening out in successive circles

from the narrowest circle of immediate assurance to the full range of common-sense belief, in such a way that each successive circle includes the narrower ones which have preceded it in the order of certainty. Each of these circles of belief constitutes a framework into which the particulars given by sensation and thought can be fitted, or a background on which they can be displayed, in a manner that may seem to provide a consistent and sufficient account of these particulars. Each circle then, when looked at from the point of view of strict reason, appears complete and self-contained; yet common sense passes on without a halt from the first and narrowest circle to the last and widest. And what we want to do is to explore if we can the nature of the steps by which this transition is made.

We have attempted, we said, to arrange these circles of belief in the order of their logical priority. What is to be understood by this? It is not that we can hope to exhibit them in such a way that the later beliefs can be deduced from the earlier by a process of pure reasoning, as in the case of a set of mathematical propositions. Some hope of this kind, never very nearly attained or precisely formulated, does seem to have inspired the aims of many philosophers of the metaphysical school; but our inquiry so far has given us no reason to share this hope. On the contrary, it has gone to show that when we seek to set out our essential beliefs about the nature of existence we come at one point or another upon a gap or discontinuity. From my assurance of my immediate momentary experience I do not seem able to conclude by any necessary logical process to an assurance of my experience as something persisting beyond the moment; nor again from the assurance of the reality of my own past experience to an assurance of the existence of a material world outside my experience; nor again from the assurance of the existence of a world of material objects to an assurance that some of these objects are sentient and thinking beings like myself. At each of these points there is a gap which it seems beyond the power of strict reason to bridge.

Yet the notion of logical priority which we are here employing seems to have a real meaning, however hard it is to express it precisely. What we mean to assert as to the relation of a prior and a later belief in this order is, that if the prior belief is accepted, the later belief, though not strictly deducible from it, yet appears to arise naturally, given some further assumption or condition; but that if the prior belief is rejected, the natural ground for the later belief is cut away. The prior belief is certainly not a sufficient

condition for the later belief, perhaps not even strictly a necessary condition, but it may be called a natural condition. My assurance of my own existence at this moment is not in itself enough to justify my belief in my existence beyond the moment; yet given the first assurance the further belief may follow, if I can find reason to trust memory, while without the first assurance there seems no room for the further belief to arise. So again, from my belief in the reality of my own past experience there is no logical inference to the belief in a world of material objects; yet given the first belief I can observe in my experience recurrences which may suggest a belief in the existence of material objects, while without the first belief I could have no ground for a belief that there is any material object existing beyond the moment. So again, from the belief in the existence of a world of material objects there is no logical inference to the belief that some of these material objects have an inner life analogous to mine; yet given the first belief, there may be elements discernible in experience which make it natural for the second belief to arise, whereas if I rejected the first, if I were content to interpret my percepts as merely changes in my own experience, I could have no reason to suppose that the groups of percepts which present the appearance of other minds were anything more than groups of percepts.

Let us turn back for a moment to the various philosophical doctrines about the nature of existence which we have been considering, and try to relate them to this conception of the circles of belief and their natural order. We have worked out in some detail three forms of sceptical doctrine which correspond in a direct and evident way with the first three circles. To the first circle corresponds that extreme form of Subjectivism which is sure of the reality of immediate experience, but of nothing beyond this. To the second circle corresponds that less extreme form of Subjectivism, which would accept the reality of the thinker's total experience, but nothing beyond this. To the third circle corresponds the extreme Materialist or Behaviourist doctrine which would accept the reality of the material world, but nothing beyond this; only that here we must note the qualification which we felt compelled to make before. A Materialism which should claim to think of the material world as a world in which there was no thought even at the moment of thinking would contradict itself. But interpreting it with that minimum addition of a mental element needed to make it thinkable, adding to it the assumption of

the thinker's own momentary thought, or at least of the presence of thought somewhere, it corresponds to our third circle of belief, and falls in with the principle that each circle must be approached through those which are logically prior to it.

Each of these philosophic doctrines or positions then, however fantastic it may appear from the point of view of common sense, has this to be said for it from the point of view of reason: that it corresponds to a definite stage or circle in the order of belief and shows how one or other of these circles may be viewed as logically self-contained. But in the course of our inquiry we were led to consider two other sceptical doctrines, the Phenomenalist and the Idealist, which do not seem to fit in equally well with our conception of the four circles. We must call these doctrines 'sceptical', for so from the standpoint of common sense they seem plainly to be; the belief in a material world independent of thought and perception, whether we are to hold it right or wrong, must be recognized as an essential part of the world view of historic common sense. It is true that Idealism presents itself as a dogmatic doctrine, not a sceptical one; it claims not only to subtract from our common-sense knowledge, but to add to it; but this claim, that it can reveal to us something more than what we know, we have felt bound to hold in suspense unless it can first give us a more convincing account than it seems able to offer of how it is that we know what we know. It is true again that both Idealism and Phenomenalism claim so to replace the belief in a material world as to rob us of nothing which is essential for science, or even, they might say, for common sense; but such a claim, we have seen, can only be justified by a radical use of the principle of transposition, the principle which asserts that nothing is lost by abandoning the general or metaphysical content of a belief, provided its particular content is retained; and this principle, if it is to be accepted as valid, would seem to justify an extreme form of Subjectivism as much as it could justify any other philosophical doctrine.

Both Idealism and Phenomenalism then must count as sceptical doctrines from the standpoint of common sense; and their scepticism about the common-sense belief in a material world does not seem to proceed from any consistent principle of reasoning. The common-sense belief in which we all grow up is that we are aware of other persons, as we are aware of trees or tables or pennies, as objects in a material world; aware of them also, and in a secondary way, as thinking and feeling beings like ourselves, but aware

of them primarily as material objects. This original support for our belief in the existence of other persons is however swept away by Mentalist arguments to show the unreality of matter. These arguments subject our belief in the material tree or table or penny to an exacting analysis, from which it emerges as doubtful whether the object scrutinized can be regarded as having any existence except one which is in some sense mental, either in the percepts or thoughts of particular observers, or in thought or experience generally. How then, the question ought next to arise, does the case stand with those more complicated objects, human beings? If sensations are to be held not adequate to testify to the existence of permanent material objects, how can they be supposed adequate to testify to the permanent existence of other selves? The status of these, it would seem, should be held doubtful until either the question of the relation of our sensations to physical objects has been determined, or in the alternative some other way of passing directly from our sensations to a knowledge of other minds has been worked out. Yet this is not the way in which the problem is handled. The general problem, whether a material world can be known or believed to exist, how it can be known, what is its nature, is conceived as one which can properly be treated as an open question, without any doubt being thereby suggested as to the existence of other human beings. The simpler belief, that the tree exists, is analysed and discussed; the more complex belief, that the philosophers who are discussing the tree's existence exist, is taken for granted.

And it is not here a sufficient answer to say that it is reasonable to begin with the simpler problem. For the problem of the existence of the tree only seems to be as simple as it does, because it is approached with the help of the assumption that philosophers exist just in the way that common sense supposes them to. Nor again is it easy to find any systematic attempt made to apply to the problem of the existence of human beings the results, whatever they may be, derived from the analysis of the status of such physical objects as trees and tables. Such an attempt, if it were made, would at least show how much more complex the problem is than any problem about the nature of physical objects which is usually discussed. More complex in two senses: first in the sense that a human body is a more complex physical object than a penny or even a tree; and again more complex in the more important sense that a human being is an entity to which we ascribe certain attributes of thought, sentience, and so on, which we do not ascribe to

other physical objects, and that the question why we ascribe to it these mental attributes is one which remains to be answered, whatever conclusion we come to about the attributes that belong to human beings as physical objects. And on any possible theory as to the nature of physical objects, the question arises and cannot be avoided, How are we to pass from those beliefs, whatever they may be, which we think ourselves justified in holding about the nature of physical objects, to the further belief that some among these physical objects reveal to us the existence of minds other than our own?

The philosophers who have set themselves to inquire into the problem of our knowledge of an external world have for the most part begun by taking it for granted that we have each of us somehow an assurance of the existence of other minds, and that we can build on this as on a firm foundation when we set ourselves to speculate as to the nature of physical objects. And if later on they turn to conjecture as to the ground of this assurance that other minds exist, their answer seems to be that our belief in the existence of other minds is an inference from our belief in the existence of physical objects; which belief however we were only able to come by because all the time we supposed ourselves to be certain of the existence of other human minds in the simple unquestioning way in which common sense feels sure of this. This procedure shows itself in various forms in various types of philosophy, Idealist or Phenomenalist or even in some which would call themselves 'Realist'; but in one form or another it seems to appear in all except those which begin by accepting as beyond question the belief in a material world. Philosophers of this last type, however much their Materialism may be criticized as crude by more subtle types of philosophy, are at any rate free from the particular confusion which we are trying to examine here; they may not have gone the whole of the way to reach a justification of the belief in other minds, but they have at least gone half of it. But of the rest it seems true to say that, having two gaps to cross in passing from the thinker's own experience to the world of common sense—first the gap between the thinker's own experience and the physical world, and second the gap between the physical world and other minds—they have set themselves the task of crossing the first on the assumption that they were beyond the second, though in fact to be beyond this they must have already crossed the first. Without this assumption the task must fail, but if they were justified in making it the task was unnecessary. It would be as if a man who

had jumped twenty feet should then sit down to wonder whether it would be possible for him to jump ten.

And yet this procedure, for all its want of logic, appeals to something in our feelings as a natural way to proceed. The forms of sceptical thought outlined above, which would refrain from asserting a belief in the reality of other minds until a valid ground for this belief has been established, rank both for common sense and for philosophy as no more than self-consistent paradoxes. And on the other hand Idealism and Phenomenalism, which begin by taking this belief for granted, and then proceed to demolish the belief in a material world that forms its natural support, are doctrines which have between them been maintained during the last century by more distinguished names than has any philosophy asserting the independent existence of matter; they are doctrines too which the common sense of today, if it does not quite take them seriously, is at any rate prepared to treat with respect. Our inquiry has brought us to the view that in such a way of proceeding there is some essential error; but this view has only emerged at the end of the detailed investigation into which we have been led as to the order of priority in our beliefs. Apart from such a detailed investigation it seems natural enough to make the assumption with which Idealism and Phenomenalism start, and to suppose that we are all more sure of one another's existence than we are of anything else. And if we place ourselves in the position, not of an inquirer into philosophic method, but of a general reader interested in philosophic results, this way of looking at things seems even more in place. We should say that in the present state of philosophic controversy and uncertainty it might be natural and reasonable for such a person to doubt, in a full and serious sense, whether a material world exists; but if on the same ground of philosophic uncertainty he were to go on to doubt seriously whether there existed any minds other than his own, we should feel that he had failed to understand the right relation between philosophic inquiry and human life.

We all feel more certain that other minds exist than that a material world exists; yet when we ask what is the foundation for this more complete certainty of the reality of other minds, we can only find it in our less complete certainty of the reality of the material world. Surely there is here a sign of some dislocation in the strata of our beliefs, by which their natural sequence is altered, so that they do not underlie or support one another in the order

we should expect. And when we find evidence of this dislocation, not only in the system of this or that particular inquirer, but in the general outlook of philosophy during the last two or three centuries, and even in the outlook of common sense in so far as this has been affected by philosophy, we must suppose that what we have before us is not a mere failure to think clearly on the part of individuals, but a fact of general significance for human thinking. One conclusion then which seems to emerge from our inquiry is that the problem of the order of priority among our beliefs is one of more fundamental and far-reaching importance than has commonly been recognized. This problem has not been ignored; it may be said even to be the very problem which philosophers have had in mind in setting up for discussion the study of epistemology. But it has been discussed for the most part piecemeal and in the light of some particular philosophic doctrine, Idealist, Phenomenalist, Materialist, or whatever it may be; and this means that the discussion has taken the line of seeking to show that the conclusion which the particular philosopher wishes to establish is inevitably implied in his starting point. Philosophers planned out the field of investigation called 'epistemology' to provide a foundation for metaphysics, but most of them have begun by putting into their epistemology conclusions which only their metaphysics could justify.

But an inquirer who approaches the matter in this way must be tempted to rate too low the complexity of the problem. For if our suggestion of the four circles of belief and their order of priority is accepted, it would seem that no quick or easy conclusion as to a complete metaphysic can be drawn from a consideration of the problem of knowledge, that is, from the relation of these circles to one another. The first circle finds us in Subjectivism, and the second leaves us there, and so far our conclusion will seem repugnant to Materialists. But with the third circle we come to a conclusion that will be repugnant to Phenomenalists and still more to Idealists; we find ourselves in a material world, which so far as we can yet see, may be material and very little more. And so when we come back in our fourth circle to the world of common sense, we are left in suspense, as common sense on the whole has been, as to whether the mental element in the world or the material is to be supposed paramount. We have gained from our inquiry no certain answer to our metaphysical problem. Yet we have found something that, if we are not too impatient, may be worth having; we have found a clue as to the manner in which we

may suppose the transition to be made from one circle of belief to the next.

Can we now say anything as to the manner of transition, as to what it is that transports us over these gaps which reason seems unable to bridge? We observe at a certain point a dislocation in the strata of belief. The belief in the existence of other minds, which in a logical order of thinking should follow after and rest upon a belief in the existence of a material world, seems in our actual thinking to be independent of that belief and to underlie it and support it. Philosophers, however sceptical they may be about most of the beliefs of common sense, suppose the belief in the existence of other minds to be so certain and indubitable that it can continue to be taken for granted, even when other beliefs on which it should logically depend are cut away. And if this belief is found to possess in all philosophical systems a place of security for which no logical reason is apparent, we must look for a source outside the sphere of logic.

What can this other source be? It is not reason, nor is it sensation, nor reason and sensation put together, for both of them together would not without something more added carry us beyond the circle of immediate experience. And even if we trust memory to carry us on to the second circle, and even if we trust sensation to carry us on from the second circle to the third, to a belief in the material world (and our arguments have left us with no assurance that we can trust either to do this), we seem to require a ground for belief of a quite different order to carry us on to this further conviction, that behind certain material objects we recognize minds like our own. The source of belief we are looking for must be found then in some part of our experience other than any we have yet taken account of. And after we have tried so many lines of advance and found them all fail us, one other only seems to remain open. The source of the belief must lie in this, that the belief satisfies a need of the emotions which in philosophers as in other men is so strong that it demands to be satisfied, and which cannot be satisfied without this belief.

We are bringing into our discussions at this point a new and vague term, which we cannot here try to define precisely. Let us for the present use it widely, so as to include within its scope the whole region in which liking or disliking, approval or disapproval, preference or its opposite, play a part. We have so far left this region out of our survey, assuming it to be irrelevant to our

problem of how we can know things. And in assuming this we have followed the general practice of philosophers. But the philosophers who would be most strict in ruling out the emotions as irrelevant to a discussion of any theoretical problem would admit their supreme importance for the business of living. Here in this region are to be found the elements in life which more than any other give it interest and value. And within it the central and the larger part is taken up by those emotions which are concerned with human beings. These personal emotions are not, it is true, the only ones there are; if the inquirer tries to arrange his emotions in a scale determined by their width of reference, he will find at one end of the scale such purely self-regarding emotions as spring from his own private pleasure and pain; while at the other end of the scale he will find, or he may suppose himself to find, emotions with a more extended range, directed to truth or to beauty or to God, intellectual or aesthetic or religious. But all that great middle region of the emotions which lies between these two extremes is concerned with other persons and is bound up with the belief that other persons exist. It derives its life from this belief and would wither away if this belief were destroyed.

If we ask what element it is in experience which more certainly than any other gives to each human being the assurance that he is not alone in the world, one line of answer only seems left open. The assurance is given by emotion, and the most certain assurance is given by love. Love more unmistakably than any other element in life demands this belief; it refuses to entertain the possibility that the object of love can be an illusion. Adam and Eve lying together in the garden of Eden, or the first parents of the human race whoever or wherever they may have been, could have had no better evidence than this to show to each that the other existed, body and soul together. This was the surest proof they had, and this was sufficient for them and for their sons and daughters after them. But the highest powers should not be invoked except for due reason, and we need not here appeal to so great a name as 'love.' Other emotions, less intense and perhaps less rare, will serve the purpose of our present argument well enough. For the whole personal emotional life of each human being demands the existence of other persons whom he can, as the mood takes him, love or hate, like or dislike, admire, trust, envy, pity, look up to or look down on, laugh at or quarrel with or pose before. Cut away the belief in the reality of other persons, and all this rich variety of the emotional life must be cut away with it.

When we look for a single word that will bring together these various forms of emotion which direct themselves towards other persons, we may sum them up under the term 'sympathy'. Only we must here understand by 'sympathy' something more general and in an ethical sense more indifferent than the quality usually called by that name. We understand it here as wide enough to include those emotions which in a narrower usage of words might be said to display not sympathy but antipathy. Hatred, cruelty, and revenge feed themselves, no less than do love, pity, and gratitude, on the realization that the person towards whom they are addressed is not a piece of dead matter, but is a fellow human being sensitive to pain or pleasure. Whether from the standpoint of ethics there might be discerned some ultimate perversion or contradiction in the process by which the antipathetic emotions grow out of what in this wide sense we call 'sympathy' we do not here inquire. What concerns us now is that there is no incompatibility in the fact. Cruelty gives pleasure to the man who indulges it, just because he believes that his victim is capable of feeling pain; if he did not believe this we might call him inhuman, but not in the proper sense cruel. Sympathy then, as we here intend the term, is the root of all the personal emotions, the field in which they manifest themselves. It is a quality, itself almost colourless, which makes itself felt by its presence in a variety of highly coloured forms, and we are aware of them rather than of it. And thus it comes about that we fail to recognize its significance for our knowledge. We see plainly this or that personal emotion as they appear in ourselves or in other people; we see how often they mislead the judgment; and it is natural to conclude, as science and philosophy have for the most part concluded, that in the pursuit of knowledge emotion is an irrelevant and disturbing factor. We do not see the common element of sympathy, though this too has an emotional quality and is an essential factor without which the particular emotions would not arise. And while the particular elements in the different emotions are rightly held disturbing for knowledge, though perhaps not such merely disturbing influences as philosophers have commonly held, this general element of sympathy is a source of knowledge on which our whole interpretation of the world depends. Without it none of us could know, perhaps he could hardly even fancy, that anywhere in the material world revealed to him by the senses there was sentience or feeling like his own.

The presence of this emotion of sympathy then is a cause of our

belief in the real existence of other persons: so much seems undeniable. And it seems possible to go further and to say that it is not only a cause, but the cause; or at least a main condition, in the sense that without it no other cause could account for the certainty we feel. For though it is no doubt true that the belief, once we have entertained it and have built up round it our system of thought about the world, may draw confirmation from evidence of various kinds which will appeal with various strengths to various thinkers; yet the one conclusive universal ground which so forces the belief on all minds that they cannot even listen to a suggestion of its falsity is surely the presence of the emotional need of which we speak. It is a fundamental need of the emotional life that we should believe that other persons are a reality, not an illusion; and our nature is such that this fundamental need irresistibly creates the belief which it requires. Here is something that we have to take as a fact about the way in which we are made. And we may illustrate the conclusion to which we have come by this thought: that if the extreme Behaviourist theory which we have suggested as logical were to be seriously put forward as a metaphysical doctrine, by a writer who realized its implications for our emotional life, as the Behaviourists themselves do not seem to have done; we should not set ourselves the task, difficult or perhaps impossible, of finding intellectual arguments to refute him, we should think it enough to say that no one could believe this unless we were devoid of natural emotion to the degree of no longer being human.

But can we say that this emotion of sympathy, which appears thus to be the main cause of our belief in the existence of other selves, is also a valid ground for it? We seem so far to have reached this point. Each of us feels a certainty which he does not doubt that other human beings exist. And if he asks, what on any particular occasion is the manner in which this certainty arises, and if he searches for the answer in his experience, what he will find is that he is aware of some group or set of sensations, and along with them he is aware of that emotional state, vague yet distinguishable, which we have called 'sympathy'. From the presence in experience of these two elements, the sensations and the emotions, arises what we may say is a special kind of perception, a complex state which includes in it the belief that he sees before him a human being. The belief does not arise from the emotion by itself; this without the sensations might give rise to thought, memory, imagination, but

not to perception. Yet also it does not arise from the sensations by themselves; for these without the emotion could give rise to no certainty of the presence of another mind, but at most to an inference, which looks more doubtful the longer we examine it.

If we suppose the inquirer, who asks himself how such an inference can be justified, to be a reflective civilized adult, we may admit that he might contrive to put together a chain of reasoning which would give some support to his belief. These colours and forms which he is aware of through the sense of sight may, difficult as philosophers find it to understand how, be signs that he is perceiving a permanent material object which exists independently of his perception of it. Again this material object may on examination prove to be sufficiently like himself, and sufficiently unlike trees or stones, for him to be justified in supposing it to be animated by a mind as he himself is, while about trees or stones he makes no such supposition. But such processes of reasoning could at most be a support and confirmation of the belief; they cannot be thought to be its origin. Children and savages are sure of the reality of other persons; so too are animals, at least the higher animals; yet we cannot suppose them to reason in the way described, and we find no trace, either in the early memories of each of us or in the early records of the human race, of a period when we or our ancestors were in doubt as to the existence of other selves and reached conviction on the subject by arguments of this kind. All that we can reasonably suppose to be present as grounds for the belief in children, savages, or animals is on the one hand the sensory data and on the other hand the emotional state which we call 'sympathy'. From the union of these two comes the certainty, 'Here is a person like myself'; a certainty which must be as complete before reflection as it ever is after it, and which reflection may perhaps confirm, but could certainly not create.

Supposing that our only warrant for the belief in the reality of other persons was a chain of reasoning such as we have suggested above, it is hard to see how any of us could be justified in feeling anything like certainty about this belief. For we have seen how intricate and precarious this chain of reasoning is, and how at one and another point it involves assumptions which are by important schools of philosophy denied. Reasoned arguments of this kind, supporting from one side or another the natural belief in the reality of other persons, have their place, no doubt, in a complete philosophical system. It is the business of philosophy to do what it can to link together the main beliefs of common sense so that

they support and confirm one another. And our discussion has suggested that, given two premises, the belief that there is a material world and the belief that the soul can act as an efficient cause, the belief in the reality of other persons might be inferred as following naturally from these. But this very suggestion shows how far such an inference must be from being conclusive; for neither of the two beliefs we have postulated as premises would be universally held by philosophers at the present day, and few philosophers perhaps are likely to hold both together. Even then if this or some other line of argument may rightly be looked to as a confirmation or support of the belief in other minds, it should surely be regarded as a confirmation or support only; as a secondary ground, and not as the sole or primary ground.

Can we then hold that the emotion which is the primary ground of this belief is a valid and sufficient ground for it? Or ought we to say that, while the cause which first gave rise to our belief was a feeling or emotion, yet when we come to ask what is the justification for the belief, we must regard the presence of this cause as irrelevant, and we must look for the justification in a chain of reasoning which never occurred to anyone till long after the belief had arisen? Some such line of thought we may seem to find implied in the mode of arguing often employed by philosophers, not only as to this problem but as to others. They are apt to speak, that is, as though the right reason for believing some doctrine which they wish to establish, and which many persons have believed before their time, was, not the reason for which all those many persons have believed it, but some other reason which the philosopher in question is now formulating for the first time and which may never have occurred to anyone in the past. The error is perhaps one of emphasis rather than of direct assertion. The philosopher of whom we are thinking asks what is the basis for some belief which he and other people hold, conceives it to need a firmer basis than is usually alleged for it, and sets himself to construct an argument for it which will ground it on some other belief that he conceives to be more certain. And here, if the argument is a good one, he may be doing useful work in supplying a confirmation of the belief. But where he will tend to give a wrong emphasis is in this: he will speak as though the sole or the main or the strongest evidence for the belief is to be found, not in the reasons for which it has been held in the past, but in this new line of argument which he has just constructed for the first time. And in this way he obscures a part of the problem, which is important

for those who are concerned with the general question of the justification of our beliefs. Looking at the problem from this side we want to know, not merely whether this particular belief is true, but also whether we, taking this as an instance of a belief that is certainly true, can find support for any general view as to the manner in which true beliefs may be arrived at.

Our study of the instance we have been examining has led us to this conclusion: that the belief of each of us in the existence of other minds or selves has as its ultimate and most certain ground an emotion; the emotion which in a wide sense we have called 'sympathy'. Other grounds, more open to discussion, may in various degrees have contributed to support the belief in the past, and may, if discussion can justify them, do so again. But the sympathetic emotion stands out as the ultimate and most certain ground because, even if the others may have lost their convincingness in the light of critical thought today, this ground and this one alone remains unshaken by such criticism. And if it is the ultimate and most certain ground for a belief which we hold to be certainly true, it seems not too much to say that it is a valid and sufficient ground.

The reliance which we are here placing on emotion may appear too venturesome to a philosopher (if there is one) who really doubts whether any minds other than his own exist, and it may appear unnecessary to a philosopher (if there is one) who conceives himself to see how the existence of other minds can be proved by rigorous demonstration. But to anyone who is not content to take up either of these positions the suggestion should seem worth considering.

The thought that there may be knowledge which is given, and can only be given, by emotion, may well look questionable when it is put in general terms; and we must go on to ask whether it can draw support from other instances and how it is to be understood. But before we pass to that question, let us turn back for a moment to consider how this suggestion, if accepted provisionally in this particular case, would affect the various views as to the relation of soul and body which were discussed in the last part of our inquiry.

Our discussion branched out as it proceeded into a number of questions whose relevance to one another it was not easy to see clearly. Yet we found ourselves able to distinguish in this tangle two main problems. First, the problem with which we had started:

What ground, if any, can an individual observer as he looks at the material world find for supposing at any point in this world the presence of an inner life or a mind like his own? And beyond this a further problem or set of problems, which seemed to arise inevitably out of the first: What difference, if any, could the presence of an inner life or of mind be supposed to make to the course of events in the material world? The first problem, we agreed, might from the standpoint of common sense be regarded as a question, not as to what exists, but only as to how we know it; common sense has no doubt about the rightness of its belief that here or there a mind or inner life is present; yet to look on the problem as a possible problem about existence seemed requisite if we were to bring out its full significance for the theory of knowledge. The second problem is, for common sense and for philosophy alike, a problem about the nature of reality; a problem which seems to go down to what is perhaps the deepest of all divergences in philosophy, the divergence between the view which finds a purpose in the universe and the view which doubts this or denies it.

Now it is to the first of these problems only that our inquiry may be said so far to have disclosed an answer. The second still remains behind, for philosophy to deal with if it can. All that we are able to say about it as yet is that, with the first problem answered, the tangled questions which emerged in our discussion begin to fall into some kind of order. They retain their importance and their difficulty, but they need no longer perplex us in our attempt to answer the first problem, why each of us believes in the existence of other selves. The inquirer who has followed our road so far will be sure of one thing at least: that whatever he is, he is not in the radical sense of the term a Behaviourist.

Here then we can take our leave of the Behaviourist doctrine, if we understand it in that radical sense; the only sense, we observed, in which it could be looked on as something new or philosophically important. But before we leave it let us admit once more the force and relevance of its arguments. They have done good service by carrying to the extreme point a line of reasoning that is implied in much modern thought. They are right in telling us that if we confine ourselves to the principles of reasoning now very commonly accepted, if we look only to sense perception, and logical inference from sense perception, we can find no sufficient ground for believing that any material objects, human bodies or any others, are animated by minds. They are of value just because they make it clear that the ground for such a belief

must be sought outside those principles. And we may hold that the Behaviourists have in this way done more to clear up the confusion of modern thought about the relation of mind and body than has been done by those more sensible and more orthodox psychologists, who have contented themselves with pointing out, quite truly, that the Behaviourist doctrine is incredible because it is contrary to common sense.

The Behaviourist doctrine again has helped to give us a clue at just that point where we found it evading the issue. It did this, we observed, over the question of pleasures and pains. It denied the reality of sensations, perceptions, images, thoughts, desires, emotions; it did not venture to go so far as to deny the reality of pains or of pleasures. And its drawing the line at this point we can now see was natural, because what sympathy feels most sure of in fellow creatures, men or animals, is not any of those other mental qualities or faculties; it is sentience, the feeling of pleasure or pain, the capacity to suffer.

When then we trust to sympathy as a means of knowledge, we are not asking it, nor should we feel that we have any right to ask it, to decide for us those various questions as to the relation of soul and body which confronted us in the last part of our inquiry. Is the inner life, as the Epiphenomenalist theory maintains, a mere passive concomitant of physical processes? Or is it, as historic common sense has believed, an active force which can direct these processes, or some of them, so that they serve its aims? And if the second, is it a force which so far as we can tell is directed only to aims that may be ranked as biological, to the preservation of the organism or its species in the material world, as the Instrumentalist would say? Or can it be supposed, as historic common sense has for the most part, though vaguely, supposed it, to envisage not only these biological aims but others of a different order? Sympathy cannot tell us. All it is sure of is that in men and in animals there is something which it recognizes as an inner life or a mind or a soul; something which, whether it is an agent or not, is at any rate sentient.

If then we are to build up our conception of the world step by step from the bottom upwards, as we are attempting to do, we shall be well advised in relying on sympathy rather than on the more intense emotions to justify our belief in the reality of other persons. If we were to appeal to any of the intenser emotions, to love, pride, admiration, worship, we should find them ready with much more sweeping answers. They would claim to view reality

from a height from which they can see at once that the Epiphenomenalist doctrine is false and the Instrumentalist insufficient; that we are in error if we suppose the inner life to be a mere consequence of physical processes, hardly less wrong if we measure its action only by biological needs. We must find, they would tell us, another scale of measurement which will correspond more fitly to the dignity of the soul. And if our suggestion that emotion may be a means to knowledge can be vindicated as a general principle of philosophical thinking, it is possible that in telling us this they may be right. But possible also that they may be wrong; for we can find plenty of philosophers who, viewing the problem with a different emotional attitude or without any emotional attitude, are no less confident on the other side. We shall do well then to take as the foundation for our theory of knowledge not any of the more colourful emotions, but that colourless emotion we have called 'sympathy'. For about all those higher attributes of the mental life sympathy makes no pronouncement one way or the other. It does not claim to tell us that human beings can rightly be said to achieve or to think or to aspire; it is sure only that they can feel and suffer. And if we search our own feelings, is not this the one point at which each of us can be certain that the Behaviourist theory breaks down?

Our suggestion that it is the emotion of sympathy which assures us of the existence of other human minds may be confirmed if we ask why it is that we believe that animals are not merely machines, but that they have minds or at least have sentience. Common sense is confident that a clear line is to be drawn in this respect between animals and plants: animals, it is sure, have sentience, the higher animals at least have some degree of intelligence, plants have neither. If an ordinary person today reads the story (we must not be held to vouch for its truth) that the Cartesians tortured animals to vindicate their doctrine that animals were machines without feeling, he will be indignant that men could allow false reasoning so to mislead them; they ought, he will think, to have been content to look at the facts, and they would have seen that animals are alive and feel. If he reads that the Greeks or some other people in the past supposed trees or plants to have a sentient life of their own, he will feel superior to what he would call at best an attractive myth; they ought, he thinks, to have been content to look at the facts, and they would have seen that trees, if in a sense they may be said to be alive, are certainly not sentient. But what are

these facts to which common sense appeals? What evidence can be derived from observation to establish the dividing line that is here drawn so confidently? At what point in the whole long chain from man down to the simplest living organism or below it are we to fix the boundary on one side of which we suppose mind and sentience to be present, on the other not?

The answer given to this question by common sense seems strangely arbitrary. If observation and inference are to determine the point, there are various alternatives for which good logical arguments might be found. One possibility is the extreme Behaviourist view discussed above, that there is no evidence which could indicate the presence of mind anywhere in the physical world. But leaving this on one side as impossible for common sense, however defensible in logic, we may say that there are two, or perhaps three, other alternatives that might plausibly suggest themselves. The first would be to make the boundary of the animate world wide enough to be coextensive with life; here appeal could be made to a definite criterion in the presence of behaviour that enables the organism to survive. The second would be to limit it as narrowly as Descartes did, so that it should include human beings and no more; here appeal could be made to a set of definite marks, to physical structure and upright posture, command over language and tools. Yet natural sympathy draws the boundary much more narrowly than the first of these alternatives and more widely than the second. It does not even seem to draw it at a third point where a dividing line might perhaps suggest itself, at the boundary between animals and plants, if such a boundary can in fact be discovered in nature. It seems more true to say that our feeling of sympathy assures us of sentience in man and in the higher animals, but that as we go down in the scale the feeling grows gradually fainter, until at a certain level it becomes too faint to tell us anything. Common sense then, if it were pressed to define its position, would probably find this not too easy to do. But we may conjecture that it would feel sure that some kind of mind is present in the higher animals, in dogs, cats, and horses, as certainly as in human beings; that it would feel less sure about its presence in worms and in jellyfish; and about cheesemites or tapeworms quite uncertain or inclined perhaps to feel the other way. If at this level it were a question of destroying animal life, the feeling of an ordinary man would probably be, not merely that he would for sufficient reason be ready to go against his natural impulse of sympathy, as he might in the case

of one of the higher animals; he would feel that there was no sympathy to go against, that sympathy did not come into the question at all. And this absence of sympathy on the side of feeling would express itself on the side of thought as absence of belief in the capacity for sentience. He would kill perhaps a cockroach, certainly a cheesemite or a tapeworm or a microbe, without any more thought that he was destroying a sentient life than he would have if he were spreading weed-killer on his garden path. And it is hard to see any logical or scientific justification for drawing the line at the particular point where feeling draws it.

Yet however weak the position of common sense may appear in the light of reason, it is likely that if we tried to question it and work out a better one, we should find ourselves brought back to it in the end. And what would bring us back to it would be, not any argument which could be called logical or scientific, but the emotional outlook that is natural to human beings today. We find it natural to feel for the higher animals a sympathy like in its kind to that which we feel for our fellow human beings, though lower in degree; and we are sure in view of this feeling that we are right in believing them to have an inner life, to enjoy pleasure and to suffer pain. And thus when Descartes argues that there is no evidence to show that animals are anything more than automata, we feel that his argument, however logical, is a sign that he was lacking in a certain kind of sympathy or emotional experience; that he can never have known, not at any rate intimately, a dog or a horse or a cat. On the other hand it is not natural for us, whatever it may have been for earlier ages, to feel such sympathy with plants and trees; and it is natural for us to feel it only faintly, if at all, for the lower ranges of the animal kingdom, where the power to enter by imagination into the inner life fails us, and we are left to judge of the presence of life in the biological sense merely by external observation, as we do with plants.

We find then that sympathy supplies no answer to that other question which perplexed us, as to whether plants should be supposed to have sentience. It seems evident that they must either have it or not have it; one or other of these things must be true; and it seems evident again that our feelings of sympathy have no power to tell us which. And this leads to the thought that if emotion, like sensation, can give us knowledge, we must expect our capacity for knowledge to be limited by the scope of our emotional nature as it is limited by the scope of our sensory nature. Our powers of vision reveal to us directly a certain range of

material objects, and with the aid of instruments a wider range, but aided or unaided they have their limits. Yet we do not conclude that the extent or the detail of the material world come to an end where the human power of observation stops. And what holds of the knowledge given by sensation may hold too of the knowledge that can be given us by emotion. Both of them within a certain range of cases speak with a certainty that we find it impossible to question, but lose that certainty as we pass beyond this range; neither need be mistrusted when they speak clearly, merely on the ground that they may be doubtful guides in borderline cases. Sympathy assures us with a clearness there is no doubting that an inner life is present in a limited class of material objects, in human beings and in, at any rate, the higher animals; if we ask it about the lower animals it speaks more doubtfully; if we ask it about plants or trees it has nothing to say. And thus the belief of earlier ages that plants and trees have their own inner life appears to us no more than myth or fancy. This is the way in which belief is moulded by the feelings of sympathy that are normal to present-day humanity; and anyone who has such normal feelings will conclude that common sense is certainly right in the first case, when it affirms the presence of an inner life, and only wrong in the second case when it denies it, because it dogmatizes too much; because it makes the mistake, which common sense too often makes, of interpreting an absence of knowledge as a knowledge of absence. It may be that the Indian scientist is right when he tells us that the belief in the sensitiveness of plants to pain and pleasure, which he is able to present to us by the methods of experiment and external observation as falling just within the bounds of permissible hypothesis, was to his ancestors a direct certainty reached by sympathetic perception. We must be content to say that for us with our more restricted powers of sympathy his experiments represent an interesting hypothesis and nothing more.

Our conclusion then that the belief in other minds rests on the emotion of sympathy is not to be taken as being in itself an answer to any of the vexed problems about reality which have arisen in the course of our discussion. It is not a positive conclusion as to the nature of reality; it is a hypothetical conclusion as to the way in which, if we suppose ourselves to know something about the nature of reality, we may suppose ourselves to have come to know this; but this very limitation may strengthen our confidence in it as a

contribution to our theory of knowledge. The other possible arguments which suggested themselves as justifying the belief in the reality of other minds were all open to the suspicion that they proved too much; they could only justify this certain belief by justifying other beliefs which were much less certain. The argument, for instance, that mind could be shown to be present by its power of causing successful action would tell us, if it is accepted, not only that we can sometimes know mind to be present, but that we can know that mind can produce effects in the material world, and that we can know what kind of action should be called successful. And in trying to follow out the consequences of this argument we were led into the confused discussion of our last few chapters, in which questions belonging to different orders of thought seemed inextricably tangled together.

It is thus a point in favour of the view to which we have now come that it enables us to unravel this tangle, to isolate the main question as to the justification of our belief in other minds from the subsidiary questions which had become linked with it, and to find a ground for this indubitable belief which does not claim to be at the same time a ground for various further beliefs that are much more doubtful. On this view we justify a single belief about reality, of which everyone can be said to be certain, by a single element in experience, which everyone can be said to share. Our supposed solitary inquirer, who is looking for a reason why he should believe that there is any experience other than his own, cannot, it is true, put the case to himself quite so simply as this. But he can at least feel sure that, if there is any element in his own experience that is certainly present and that points to a reality beyond the experience, it is the feeling of human sympathy; and he can make the guess that if there are other sentient and thinking beings at all like himself, they will be like him in this fundamental respect. And if he trusts to this feeling and to this guess, he will find that the results confirm them.

We seem then here to have come on a discovery which is vital for our theory of knowledge: the discovery that there can be knowledge, that there is at any rate one important piece of knowledge, which is given by emotion or feeling, and can be gained in no other way. We may call it a discovery, for it is certainly not in general stated or assumed in discussions of philosophical method. And if we may take it as pointing us to a class or category of beliefs or pieces of knowledge which are in this way grounded on emotion, the possibility will have far-reaching consequences and

will open up a new and difficult field of inquiry. We shall have to ask how it is to be understood, what place is to be assigned to it in a complete theory of knowledge, and how far it has either been admitted, or assumed without being admitted, by philosophers in the past. But one instance does not make a category, and before proceeding to this general inquiry let us ask whether we can find other clear instances of beliefs which satisfy these two conditions; that they depend on emotion and yet that they are so certain that we must rank them as knowledge.

CHAPTER XIX

BELIEF IN THE SELF

THE position which we have so far arrived at as to the problem of knowledge may be stated thus. The inquiring mind as it examines the whole field of what it supposes itself to know finds itself compelled to abandon one large province after another as open to doubt. It is driven back in the end to the small circle of its own immediate experience. And in this it discovers a fastness which it can maintain against scepticism; but the problem now arises, is it possible and if so how, to set out from here and recover any part of that field of supposed knowledge? Looking out from this inner fastness, thought finds the passage to any reality beyond it barred at one and another point by gaps which appear impassable to reason. Yet common sense crosses the gaps easily, never seeming to notice that they are there. How are these bridges built, over which common sense can pass while reason is compelled to halt?

We have considered this problem in a crucial case, the case of the gap which lies between the belief of each thinker in a world of material objects and the belief that among these objects are sentient beings like himself; we have examined one after another of the chains of reasoning that might be thought able to lead from the first of these beliefs to the second, and have found that none of them appears firm enough to bear the weight of the conclusion. But it is certain that the gap is bridged for common sense, and when we ask how, the answer seems hardly less certain: it is bridged by emotion, by that general emotion underlying all our particular personal emotions which we have called 'sympathy'. In admitting that emotion could be a valid ground for metaphysical belief we had to recognize that we were admitting a new and questionable element into our principles of reasoning. But must not in the end our conception of what is a valid ground for

belief be derived from what we find to be the grounds, which in particular instances lead to beliefs which we hold to be certainly true?

But now comes the question, Can we conclude from this particular case to a general principle of reasoning? Do we find other instances where emotion appears to be the ground for a belief which we hold to be certain, yet which can be justified in no other way? There are two other cases in which our inquiry has shown gaps between one circle of belief and another, across which no bridge seemed to be offered by any line of reasoning we could discover. There is the passage from the inquirer's belief in his immediate experience to his belief in the reality of his whole life-long experience; there is again the passage from his belief in his own experience to his belief in the reality of the material world. In each of these cases we have the problem that common sense makes the transition easily and confidently, while the accepted principles of reasoning seem unable to justify it. Let us examine each in turn to see whether emotion plays any part.

About the first of these we shall find little said in philosophic discussions. The problem lies too far below the level at which thought, even the most sceptical thought, is accustomed to move. Yet it has been forced upon us, first because our examination of the Idealist and Phenomenalist doctrines brought us up against the question, Must not anyone who accepts their argument go further and ask himself why he should not be a Subjectivist? And then again, because we found that the argument against the Subjectivist position, which to those thinkers who had taken the most pains to understand and to challenge that position seemed most conclusive, was the argument that a Subjectivist, if he is to be consistent, must confine himself to a Subjectivism of the Moment. This argument seemed to us on the principles of reasoning that we have been following to be a cogent one, and it led us to a train of thought in which each inquirer seemed restricted to the circle of his immediate momentary experience. The first problem then which must present itself to him when he seeks to go beyond this will be, how is he to pass from that smallest circle of belief which covers his immediate experience to that wider circle which covers the whole experience of his life? And we may state this problem in other words as being, How is he to justify his trust in memory? If the trust in memory can be justified, he can pass on to the belief in his own experience beyond the moment, and through this, it may be, at a greater or less remove, to the

belief in a material world and in other selves. If the trust in memory cannot be justified, he is left within the circle of his immediate experience; and with this all reason for believing in any reality beyond the moment, whether of a material world or of other selves or even of his own past experience, is cut away.

The kind of reason that we are in search of here is the kind of reason we were in search of before, when we asked how each of us comes by his belief in the existence of other selves. For the belief in the reality of our past experience we need a warrant which we can see to be universal and feel to be adequate, and which is not dependent on other beliefs that are more doubtful, or that can be shown to depend on this belief for their own establishment. The use of such terms as 'we' or 'universal' in this connection should not at this point be found confusing; what has been said earlier will explain the sense in which they are to be understood here. And just as we had before to discard as inadequate, for the purpose we were then concerned with, one and another of the grounds which might commend themselves to common sense as justifying the belief in other selves; so now we may have to reject as inadequate for our present purpose grounds for a belief in our past and in memory, which in some other context might seem relevant and important. What is meant by such a caution as this? If we suppose ourselves to have arrived at a comprehensive world picture we need first to trust memory; any arguments then for trusting memory which may be built up on such a picture, and which depend on a particular philosophy, whether Mentalist or Materialist, for their persuasiveness, cannot be the primary ground on which our original trust in memory depends.

The point that we are trying to make will become clearer if we examine some of the grounds that may be put forward as accounting for or explaining memory, and ask which of them will meet our need. We shall find here, as we found before when we looked for the guarantee of the belief in other selves, that common sense supposes itself to have a good answer, or several good answers, ready to hand, but that one after another of these answers when examined fails to maintain itself against criticism.

First then historic common sense seems to hold it as a natural belief that the self or the soul is something which persists through time, while its states change, and which in virtue of this persistence can be understood to have the power to remember its changing states. And starting from this natural belief of common sense the

traditional philosophy of the past developed a metaphysical doctrine that the soul is a spiritual substance, which is in its inherent nature simple and indestructible and immortal, and that this may be seen by an intuition that cannot be questioned or established by arguments that cannot be refuted.

This doctrine has too great a place in the history of philosophy for us to rule it summarily out of court. But we may say at once that it will not help us to an answer to our present question. The understanding with which we set out on our inquiry was that we must find our principles of reasoning within the limits of present-day common sense; and the belief that the soul is immortal is a belief which goes much beyond these limits, and which is too far from being universal to be a foundation for the belief of each of us in his own past and future.

Can we then find a less ambitious conception of the self that will serve our purpose and yet keep within the limits of common sense? The self, it may be claimed, is a substance at least in the sense that it is a unity, and this can be seen without going beyond immediate experience. For we can say this much about the quality of the moment's experience, that within it a multiplicity of different constituents is held together in a unity, and both unity and multiplicity must be taken as essential if any thinking is to be possible at all.

But the self as a unity of the moment's experience falls short of what we need no less than the self as an indestructible substance goes beyond it. For if we have to admit that the existence of the unitary self at one moment is no guarantee of its existence at all other moments, no evidence that it is immortal, by what right can we assert that its existence at one moment is a guarantee of its existence at any other moment, is evidence that it had a past or will have a future? Among the multiple contents of the present moment's experience appear images and thoughts which claim to tell of past moments. But how are we to be sure that this claim is justified, that the images and thoughts are anything more than the contents of the present moment's experience?

For while we seem to be on strong ground when we assert the unity of the self as a necessary condition of the multiplicity of the moment's experience being held together, we seem to know it or infer it only as this necessary condition. What we can observe is not the unity but the multiplicity. In this multiplicity images and thoughts present themselves that claim to represent past moments of experience. But what common element is there to be found in

them that should make it possible to recognize them as parts of the experience of a single self continuing through time? And if they are not to be recognized as parts of the experience of a single self, why suppose them to be memories of a real past at all, why should they not be merely imaginations of the present?

But here common sense may meet us with another line of answer, drawn not from that side of its thought which links up with the traditional metaphysic, but from that other side of it, today more living and more active, which is concerned with the material world. Memory and the belief in the self and in its past depend, it may be said, not on any belief in the soul as a substance, but on the certainty that the body is a material object in a world of material objects. We know the self neither as an indestructible spiritual substance, nor as a momentary existent, but as something that began when the body was born and may be presumed to cease when the body dies. The body is a material object with a continuous existence, and the multitude of thoughts, desires, sensations, and emotions, that seem to have no unity among themselves are linked together as constituents or accompaniments of the behaviour of the body. Physical processes in the body and notably in the brain account for all the functions that we call 'mental', and among them for memory. Memory of a past event comes about because the past event occasioned or included a particular process in the material organism, and this process has left material traces of itself behind it, and these traces when aroused into activity by some present stimulus produce memory of the past event.

This is a summary account of what is supposed to happen, and there are evidently gaps in it. Whether these gaps could be filled by a more detailed and precise statement of the doctrine, we do not at this point inquire. For the purpose before us it is enough to say, first that the recall to the material world is now, as always, a salutary reminder of something that any complete philosophy ought to take into account; and second, that it is no sufficient answer to our present problem. Our whole belief in the material world, however early a stage in the growth of our beliefs it may derive from, must at least be later than, and must depend on, the assurance which only memory can give, that this which appears as a material object at the present moment is the same as that which appeared as a material object at some moment in the past. And the particular belief that thought is conditioned by processes in the brain, which is essential for the coherence of a materialist

world picture, is not an early development, but a very late one. None of us by himself, or except as the result of an elaborate and slowly constructed process of inference, could guess that when he remembers it is because of some physical change that is taking place in the convolutions of his brain. And thus the physical theory of memory as resulting from traces left in the brain structure, while it may, if it can be successfully worked out, be a useful confirmation and secondary reason for our trust in memory, cannot be what we are now looking for, the original and primary reason for that belief.

Let us ask then what account can be given of the individual's experience that commits us least to any hypothesis and goes least beyond the plain indubitable facts.

Such a non-committal account is offered by the conception of a stream of experience. The various contents of the stream pass before the mind in a continuous flow. Are we to think of it or of them as a unity or a multiplicity? Whichever alternative we choose, it seems to turn into the other. We use separate terms to distinguish some of the main currents in the stream, such as 'thoughts', 'sensations', 'emotions', 'feelings', 'memories'; yet these are not in any sharp way distinct, but shift and blend together. And if we try to carry the subdivision further, the same holds; no one part or element that we seek to single out can be treated in isolation from the rest. Yet to leave the problem there would be to neglect a side of the truth that is no less important. For we must draw from out of this stream of experience the material for all the knowledge we suppose ourselves to possess about a real world, about physics or geography or history; and this knowledge is a thing of parts and details, and these parts and details we conceive ourselves not to construct, or not merely and arbitrarily to construct, but in some sense to discover. Those main currents in particular which we call 'thought' and 'perception' carry with them a multitude of solid-seeming units out of which we construct our picture of the physical world. Philosophers oscillate, and no wonder, in their way of speaking about all this. One sees the flowing stream, another the solid units which it bears along with it. Either way of speaking would seem useful and legitimate if it could find a formulation which would not deny the other; but the right formulation is not easy to achieve.

But however difficult it may be to find an adequate way of speaking which shall express how immediate experience is at once

one and many, a unity and a multiplicity, we must be content to take it as a fact that it is both. Even those philosophers who have most insisted on one side of this opposition have not ventured to go so far as altogether to deny the other; they have been too well aware that if they did so all power to say anything must stop, their own as well as everybody else's. We take then the existence of the moment of immediate experience, uniting somehow in itself a multifarious content, as a fact that is beyond doubting; and we turn back to examine the problem as to which doubt is possible. How is the passage to be effected from this to any reality beyond it? Doubt is certainly possible here, and we have already seen that neither of the two answers which we supposed common sense to offer to the problem would be likely to commend themselves to critical thought today.

But need we in fact say more than that the stream of experience is aware of its contents as they present themselves, is aware immediately of each moment as it passes, and is aware by the process we call memory of each moment that has passed? This is in effect the answer proposed by one of the greatest of recent psychologists, William James. That the experience of each moment contains an awareness of time passing is as certain a fact in the world of appearance as anything can be. May we not then say that the moment's experience is aware of the moment just passed, and again of the moment just passed before that, and so in the end of all the series of momentary experiences which went before it; and that in the chain of awareness by which the present makes contact with the distant past there is no abrupt break? There remains an intrinsic difference, this way of speaking would have to admit, between the present and the past, even if we suppose it bridged by imperceptible gradations. There is a point, not easy to define precisely, but whose whereabouts is evident, at which a transition has to be made from the awareness of time passing to something that is different in kind, a memory of time that has passed. And yet, when the problem is thus stated, the transition seems so easy and gentle, that it is tempting to look to this way of telling the story as a solvent of all our difficulties; to hold that it gives us both a sufficient account of how memory arises and a sufficient warrant of its substantial accuracy.

But for this way of conceiving the matter to seem even plausible, experience must be supposed continuous. And so any philosopher who adopts this way of speaking will be led to emphasize the continuity of experience. We find, for instance, James stressing the

point that sensational experiences 'pass continuously into their next neighbours, so that events separated by years of time in a man's life hang together unbroken by the intermediary events'. But surely this unbroken continuity is just what the stream of experience, as it is known directly, has not got. Morning by morning the stream emerges for each of us out of a tunnel, the tunnel of sleep. And the content of the stream as it emerges in the moment of waking is cut off by a break, sharp and sudden, from what that moment dimly imagines to have been the content of the stream during the last moments of its passage through the tunnel, and is not linked up in any necessary or invariable manner with the stream's content just preceding its entry into the tunnel the night before. The last thoughts and feelings of yesterday may come back to the mind on waking, and perhaps they commonly do, but by no means always. Yet whether they do or not, today's experience reaches back to the experience of yesterday at once without hesitation or fumbling, and in spite of the gap accepts it as virtually continuous with itself.

Even more strange and difficult to account for is the way in which the experience of the present identifies itself with parcels of experience recollected from the past. Something in each of us that will not be denied asserts this identity. But by what criterion is this identity, or any identity persisting through change and time, to be established? The answer that naturally suggests itself is, by the tests of continuity and similarity. But the test of continuity, as we have seen, fails us here almost at the outset; fails us as we attempt to identify the self that wakes with the self that dreamt, or the self that is awake today with the self that was awake yesterday. And it fails us even more conspicuously when we seek to take a wider view. Thought as it looks out over the expanse of the past discovers no connected stream of experience, but scattered pools or reaches, far removed from one another, which are felt to be, but are certainly not seen as, portions of a single stream. The moments that are forgotten much outnumber those that are remembered, and those that are remembered seem not to be picked out on any principle, or if they are, it is one not easy to discover.

And as we look backward, the test of similarity fails us no less. The grown man may seem to himself to remember how on such a date fifty years ago he was at such a place by the seaside. Yet what has he in common with the child who there gathered shells and built castles in the sand? Some particular sensuous images of

form or colour or scent may seem to persist from that past date and to be as vivid as any images remembered from yesterday. But even if there is in this no illusion; if the grown man, could his thoughts be put back into the experience of the child, would find and identify there the images he seems to know so well; a few such particular items would be all that he could recognize as familiar. The rest, the mass of sensations, desires, and interests that made up the childish mind, would seem as strange and unintelligible, almost, to the man of today, as the contents of the grown man's experience would have seemed to the child if he could for a moment have been carried forward to that. Except for the fact, if it is a fact, that certain sensuous images given by memory in the present experience resemble in quality certain sensuous images which were given by perception long ago in the past experience, there is hardly any similarity to be discerned between the two. The child and the man were both human beings, both expressed themselves, more or less imperfectly, in the English language, and we must assume a vague general resemblance from conditions such as these. But as far as particular resemblance goes we may take it as pretty sure that, if we could cut off slices of experience and compare them, the child's experience would in its quality be much more like the experience of another child playing by the same seashore, the man's experience much more like the experience of another man of the same kind of life habits, listening to the same wireless or solving the same crossword, than the quality of the child's experience would be like the quality of the experience of the man, who yet knows himself to be the same.

Neither continuity then alone nor similarity will explain the assurance of personal identity. And yet they seem the obvious tests to apply, and given something else which we have yet to discover, they seem to be the right tests. For if, putting ourselves some way on in the construction of our world picture, we ask ourselves how in the world of common sense we should solve the problem of how to connect the child with the grown man, the answer would evidently turn on these two things. The mother or the nurse who would take the child home from the beach and put him to bed would find next morning in his place a child whose identity might perhaps be questioned by philosophers, but who would still be like, so like as to be indistinguishable from, the child that was put to bed the night before. And even the uncle or the aunt who might visit after a month, and say 'Billy has grown so much since I saw him last that I should never have known him',

would still feel no doubt that Billy was the same child. And so in varying degrees with friends or school fellows who would see Billy from time to time as he grew up. Some similarity, though never complete; some continuity of observation, again never complete: these are the tests by which common sense decides as to the identity either of another person or of any other material object. And they are the appropriate tests, only that they need something besides themselves to make them sufficient. Once we have each of us taken the big jump and supposed ourselves to be material objects in a world of other such objects, we must go along with common sense in accepting the tests of resemblance and continuity. Only we must maintain that taken by themselves they give us no valid ground for believing that there is any such thing as identity of substance, or that the tree or the animal or the human being which I see now and suppose myself to have seen a while ago has had any continuous existence during the interval, or that there has been any real interval or any real 'while ago'.

What we have to account for then is something of this kind. Memory is able to bring before us a past moment of experience which is in its content much unlike the content of the present moment, only so far resembling it that there may be some element in the content, a scent, a sound, a colour, which serves as a connecting link; and again which seems quite discontinuous with the present, being far removed from it in time, and perhaps not having been remembered for many years. This power, strange as it may seem, memory claims to possess. The claim, if we set ourselves to reason strictly, may be doubted; it is possible to hold that all that memory claims to tell us is a self-consistent romance. But if we admit memory as a source of knowledge at all, we must admit that it carries with it a peculiar kind of certainty which is independent of what we should call rational canons of evidence. Everyone is likely to remember certain incidents from his childhood, which it is impossible for him to verify by any evidence that could appeal to anyone else, but which in practice he is so sure of that to doubt them would mean that he could feel sure of nothing. And yet in these incidents the natural tests of resemblance and continuity may be reduced to a minimum.

We need here to distinguish between two different ways in which we may use the word 'memory'. We often speak and think of ourselves in a loose sense as remembering a great deal with which memory, in the stricter sense in which we are here speaking

of it, is not concerned. We say that we remember facts of geography or of history or of natural history, that the cuckoo, for instance, comes in April or that Madrid is the capital of Spain. But when we say that we remember such things as these, all we mean is that we believe ourselves to know them and that along with this belief goes a vague general belief that we came to know them at some time in the past. In somewhat the same way we might say that we remember how to skate or to swim or to play chess, meaning that we can do these things and believe that we learnt how to do them at some time in the past. When then we speak of remembering in this loose general sense, we mean that we find ourselves at the present moment possessed of a certain store of beliefs or of abilities, and that we believe that this information or these abilities came to us as a result of something that happened in the past. But if we add to this the memory of a particular moment in the past when we first found ourselves able to swim or heard the cuckoo in April, we are adding something of a different kind, which we may call 'personal' memory.

In the wider and looser sense of 'memory', I may be said to remember all that I know, or the total system of my beliefs, including under this head both those beliefs of which I am actually aware at the moment, and that much larger mass of beliefs which I suppose that I might become aware of if the right stimulus were applied to call them up. This total system of beliefs, actual or potential, is, we said earlier, the equipment which each of us has to start from at any moment in his attempt to understand the world. We have tried to show how it might be displayed on a canvas of greater or less extent according to the nature of our metaphysical beliefs. Assuming the metaphysic of common sense, I might say that the system of my beliefs includes what I remember about real events which have taken place in the past in the material world, as related by history and the sciences, and that it includes again sequences of imaginary events as these have been represented in plays that I have seen or stories I have read. It is a natural way of speaking to say that I remember these things; but all that this means is that I know them, and suppose that I came to know them at some time in the past, though without concerning myself to think at what particular time I did so. And this wider kind of remembering is something different from remembering in the stricter sense, from the way in which I find myself regarding that small number of my memories which call up incidents in my own past.

For the present, when I am still inquiring into the credentials of memory, I must not suppose myself entitled to the metaphysic of common sense. I take the whole system of my beliefs as a system in accordance with which I feel myself compelled to think, and I ask what further I can say as to the relation of this system to a reality beyond it. Many of these beliefs, I find, refer to sets of events which I conceive as following one another in a fixed order of time, some of them being events in that great time order, the historic past, others being events in some lesser time order, the time order of this or that novel or play. In either case I am aware that I must think of the events as following one another in a fixed order if I am to think of them rightly; and in either case, so long as I am suspending any metaphysical belief that can consistently be suspended, I have to ask the question: Is the time order in which I find myself compelled to think of these events as occurring anything more than a law of my thinking? The sequence of events which I remember as making up the play of Hamlet comes in a determined order; so does the sequence of events which I remember as making up the story of Napoleon or of the Decline and Fall of the Roman Empire. But why should I take this compulsion of my thought, either in the one case or in the other, as showing that the past in which I picture these events as happening was a real past? May not these supposed episodes of history and the whole historic past in which they are episodes be only a sustained romance that I tell to myself? The story which I call 'history' is longer than any of the other stories, but is this any reason why I should suppose that it really happened while they did not?

This line of cleavage among events, between the real and the imaginary, is of primary importance for the sciences, for history, and for common sense; but if I suppose myself not to have yet reached the standpoint of common sense, but to be still wondering how I may get there, I find another line of cleavage, which cuts across the first and seems logically prior to it. This is the line of cleavage between the events which I believe myself to know at first hand as parts of my own personal experience, and the events which I believe myself to know only by description or at second hand as parts of some other experience, either real or imagined. The events in this second class may be real, or they may be imaginary, but so far I am without a criterion by which I may distinguish them as one or the other; for why may they not all be imaginary? All of them in their intrinsic quality seem to be so far alike that they are known to me by report and at second hand; if

I am to know that some of them really happened and others did not, this distinction must be reached in some other way. By their coherence, perhaps; but coherence with what? Here internal coherence is not enough, for the longest and best sustained story may be no more than a story, if all that I can say about it is that it is consistent with itself. A series of events which I am to accept as true, in the sense that it really happened in a real past time, must be coherent and continuous with some event which has the quality of being known directly, and not merely by report at second hand. And for this purpose it is not enough that it should be linked with the experience of the present moment in that general sense in which the contents of all my beliefs are linked with it as being logically compatible with it. It must be linked with it in the more specific sense that the events believed to have happened in the past and the present moment cohere together as parts of a single temporal series. And the link which can establish this connection is supplied by personal memory. This first gives the assurance that certain events, those events remembered from my own past experience, really happened in a real past; and this assurance once given, the whole historic past, in virtue of its coherence with the past of my experience, can take on the character of something that really occurred, that is not merely consistent romance, but history. But all hangs on personal memory as its original guarantee.

What now is the mark by which I recognize the events of my own past as different from the events of either history or imagined story? We may be tempted to answer first, they come with a feeling of pastness. But this is not the whole account; for the events either of Hamlet or of any episode of history also present themselves as having taken place in some kind of past. The feeling of pastness on which personal memory depends is a feeling that certain events appear to me as coming from my own past; from a past that has a peculiar relation, which the events of Hamlet have not, and the events of history need not have, to the moment of my immediate experience. And when I ask, What is this peculiar relation, this special feeling of pastness? I am led back to the main problem. If we ask how philosophers have tried to describe this quality which is possessed by the impressions of personal memory, we may find that they speak of it as consisting in a special force or vivacity or vividness or warmth. And these words seem to bring us near the right answer, yet none of them quite to reach it. For

while it is true that the events which a man remembers out of his own past have for him a greater force and vividness than those which he, in the wider sense, remembers as belonging to some history or romance, yet here again we must say that this is a force or vividness of a peculiar and unique kind. The events of an imagined story may in their intrinsic quality be such as would strike his mind with a greater force or vividness than most of the incidents that have happened to himself; probably they will be, for the aim of story-tellers, at least their oldest and most general aim is to invent something that will seem more moving and exciting than the events of common life. But this greater objective force or vividness that belongs to the events of the story in their intrinsic quality is something that we distinguish quite well from the subjective force or vividness, so to call it, that marks out events for personal memory. We do not, because the events of a story or a play strike us forcibly, find ourselves led to view them in memory as having happened to ourselves.

Here then comes the essential problem of memory: that I may remember some incident from my past, something of no apparent intrinsic interest, having no apparent resemblance to anything in my experience of the moment, and which I may not have recalled for years; and yet at once I recognize it as something which was not merely part of what I have come to know by hearing or reading about, but as something which was a part of my own past.

I recognize it as part of my own past: here we seem to come on the distinguishing mark. And with this we may find ourselves nearer to the centre of the problem which we have so far been skirting round without reaching. The point is one which it is difficult to express, yet useless to labour; it belongs to that most intimate part of our emotional life for which words are wanting. Our failure to express it, we may plead, arises out of the very nature of the problem; writers who set themselves to elucidate this question of memory, even such acute and subtle explorers of the psychological field as Hume or William James, leave us feeling after they have said their best that the answer has somehow slipped away through the phrases in which they are trying to describe it. The quality of personal memory must be known by taste, not by description; and the problem may best be answered by stating this baldly, without attempting a pretence at explanation that might blur the simplicity of this taste.

Let me say then simply that I recognize the remembered past incident as a part of my own past; I recognize it as belonging to

me, to a feeling and thinking I or self in the past that was somehow the same as the I or self which feels and thinks in the present moment. How this self of the present and that self of the past should be identical will remain a puzzle hard to explain. There may be no apparent continuity of resemblance or identity of quality; the nature of the past self may to the present self be something strange or alien or repugnant; how or why the past self should have been able to feel or think or act as it did may to the present self seem quite unaccountable. Yet the past self was, I feel, my own, and my own in a sense with which likeness or unlikeness of quality have nothing to do. The more I recognize it as being in its quality strange to me or repugnant, the more I must admit the force of that feeling which makes me recognize it as my own. This thought of an identity not depending on any evident likeness would seem to have been one of the things that the traditional philosophy sought to express by its conception of substance; and however that conception may be open to challenge for vagueness and ambiguity, the problem which it was here attempting to answer will remain to be dealt with.

Once this identity of the past self with the present is recognized, it is natural to look for threads of continuity or resemblance by which the two may be connected; and such threads when searched for may be discoverable, points of qualitative resemblance often, lines of continuity (given certain assumptions, such as that of a persistent material world) always. But the sense of identity is prior to them, and must be there first, if the search for threads of continuity or resemblance is ever to begin.

Memory then, we must say, rests on a sense of personal identity, and this again rests on a feeling for which the best name we can find is perhaps 'self-love'. 'Self-love', as we here understand the term, signifies neither a vice nor a virtue, but the field in which either vice or virtue can exhibit themselves. We employ it as the best term we can find for that whole feeling which makes a man's experience, past or present, something to which he is not indifferent. It is present in martyrdom or in suicide, no less than in the pleasures or activities of ordinary life. When it looks at the past, it may express itself either as liking or as disliking, as pride or triumph or remorse or self-disgust. It is an emotion, itself almost colourless and invisible, which makes possible the variegated emotions that we see and know. And the reason why we have been at pains to isolate it is its importance for knowledge, which is this: that only its presence seems able to explain how in the confusion

of thoughts and images present to awareness at any moment memory can find a way to single out those past events which it recognizes as its own. Belief in a material world depends on belief in a real past time, belief in a real past time depends for each of us on belief in the reality of his own past, belief in his own real past depends on self-love.

From these reflections as to the significance of the self for the problem of knowledge, we may turn back for a moment to look again at the Behaviourist position. This position, as we were led to restate it in our attempt to make it logically consistent, may seem to have about it a flavour of egotism and arrogance. But if it is taken in this way our restatement will have done it an injustice. In trying to make it hang together we found ourselves compelled to add to the Behaviourist world the assumption of an ideal percipient or witness, and we supposed this ideal percipient to be located at that point which must for any philosopher, whether Behaviourist or not, provide the centre from which he views the physical world, namely, the philosopher's own body. At this one point the presence of a mind, or an I or an inner witness, appeared indispensable for the Behaviourist doctrine, as it must be for any philosophy; at all other points we admitted that it might be held logically superfluous. But such a distinction of himself from other human beings is something quite foreign to the Behaviourist's own thought; he is so far from any Subjectivist or Solipsist leaning that the idea that he might be in danger of falling into this position, which haunts or ought to haunt any Mentalist thinker, does not suggest itself to him even as a possibility. His peculiar cast of thought is a sign, not that he thinks of himself exclusively or pre-eminently as I, but that it has not occurred to him to think of himself as I at all.

He recognizes in his own experience, and assumes in other organisms, the presence of pleasures and pains; so much, when we study his language carefully, we seem to find him admitting; and in recognizing these he would seem by implication, though not avowedly, to recognize the presence of feelings and desires. But to recognize these is not to recognize the self. The I that feels and desires implies behind it the presence of an I that witnesses as the ultimate condition without which neither desire nor sentience could take place; but pleasures and pains, wants and desires, may present themselves, and for the most part do, without calling up any thought of the I that is behind them and that makes them

possible. It might be said indeed that the more the mind is caught up in some particular desire or in some particular pleasant or painful feeling, the less room there is likely to be in it for the thought of I. What the mind is then aware of is not I, but the pleasure or pain that is felt or the thing that is desired. And this is not less the case at those moments when the activity with which the mind is concerned contains no clear picture of anything wanted for its immediate presence, but is only directed to something that is vaguely felt to be wanted in the future. The man hurrying to catch a train or intent on the moment's occupation or the day's work, whatever it may be, need no more think to himself, 'I am doing this because I want this or that', than the ant running along the pathway need be supposed to have such a thought. And as so much of the lives of most of us is taken up with these ant-like scurryings to and fro, it is easy to see how the Behaviourist comes by his view of human activity. Looking within he sees himself as a succession of feelings and desires; or rather he sees no self, but a series of feelings and desires, and along with these a series of physical activities in which they express themselves. Looking at other human beings he sees the activities, and behind them he dimly guesses or takes for granted feelings like those which he is aware of in himself, but he does not see even dimly behind these the witnessing I that makes them possible nor guess its presence. And as his doctrine is that knowledge is to be gained, not by looking inwards at oneself, but by looking outwards at other persons, he interprets the coincidence of activities and feelings in his own case after the manner suggested by his observation of other persons, taking the activity as the substance, the feeling or desire as at most its shadow or reflection and perhaps not even that.

The Behaviourist thus has made an unintentional contribution to psychology which is not less instructive than the one which he intended: it is to show us by an example that it is possible for a human being to grow to manhood, study and reflect, write books and very intelligent ones, frame theories that are in their way very fruitful ones, and yet never in all this have any sense of the self. How far is this phenomenon to be supposed a new thing? It may be that the sense of the self is rarely present, at least in any clear realization, and that in most times and countries many people have lived their lives without it. Yet ethics and religion, and not only these, but poetry and drama in their most essential moments, appeal to this sense and count on something in their

hearers that can respond to such an appeal. And when a view of the world that ignores it altogether can be put forward and find acceptance, we may read this as the appearance of a new type of mental attitude, as a sign that one of the main pillars on which the metaphysics of historic common sense has rested is being cut away.

CHAPTER XX

BELIEF IN THE MATERIAL WORLD

HERE then are two points at which beliefs about reality appear to be grounded in the emotions. On the emotion which we have called 'sympathy' depends the belief of each of us that some of the material bodies round him are animated by thought or sentience like his own. On the emotion which we have called 'self-love' depends the still more fundamental belief of each of us that he has himself an existence beyond the present moment. These two main pillars of the emotional life, self-love and sympathy, are also the main pillars of our knowledge of reality.

We have now to ask, can we carry this conclusion further? Can we find yet another instance in which such a dependence of knowledge on emotion appears to hold? We suggested earlier that belief might be conceived as widening out in successive circles from the most limited certainty to the full range of common sense; and how the transition is to be effected from each one of them to the next is the problem that we are now seeking to examine. Emotion, we have found, plays a decisive part at two points: does it at any other?

Let us begin by asking how the case stands with the most fundamental belief of all, the belief of each of us in his immediate experience. Here the kind of argument that we have used in our last two chapters cannot be applied. The line of reasoning by which we came to hold, first that the belief of each of us in the existence of other persons depends on sympathy, then again that the belief of each of us in his own past experience depends on self-love, was this: that either of these beliefs could consistently and rationally be doubted, and that a sustained attempt to doubt either of them showed that what compelled the belief was not any intellectual process, but the emotion which, in the one case or the

other, we have named. Such a line of argument is not open here; immediate experience must be accepted as real by reason even at its most sceptical, for if this is doubted, the foundation even of sceptical reasoning is cut away. Yet it seems natural to hold that here too a part is played by emotion; not by any particular emotion that can be isolated or distinguished, but by the whole emotional nature. Unless my immediate experience is real, unless here and now I am aware of the present moment and its content, neither emotion nor thought could begin for me. Thought and emotion unite to assure me of this; and if it is thought rather than emotion which assures me of the particular content that I am aware of, it is emotion rather than thought which assures me of the reality of my act of awareness.

Our inquirer, we have now argued, can hold himself entitled to a belief in three realities: his own immediate experience; his own experience as persisting through time; and the existence of other minds. He will be certain of all these three, but not with the same order of certainty. The three cases have this in common, that in each of them the certainty is not based on reasoning, but on a kind of direct perception. But there is also a difference. The first certainty is one that he cannot doubt, if he is to think at all. This we shall call 'immediate certainty'. The two others he can doubt, if he makes the attempt, and doubt consistently; yet he returns to them again and again after the attempt to doubt them, because they respond to a fundamental need of feeling. This we shall call 'direct certainty', and direct certainty so understood is in a weaker position than immediate certainty, and it needs to get what confirmation it can, though it has to trust itself as a certainty before it can find itself confirmed. And so it is for the inquirer who, starting from his own experience, trusts himself to the certainty that other minds exist. As long as he doubted their existence, as long as he supposed that what appears to him as other minds might be no more than sensations or thoughts or fancies of his own, these sensations or thoughts or fancies, if that was all they were, could not help him out of his state of doubt. But once he trusts himself to the certainty that there are minds other than his own, his certainty is confirmed by the discovery that each of these other minds shares this certainty, that they too are all sure that minds other than themselves exist. And again his belief in his own persistence through time is confirmed, if confirmation of it were needed, by his finding that all these other minds have a like belief.

Belief in these three realities, the first known by immediate certainty, the two others known somehow directly, is part of the universal heritage of common sense, and is assumed by all philosophical schools as a foundation, when they seek to build up their world picture. And if we ask how such a consensus is to be accounted for, what possible principle there might be that would justify it, the only answer we have been able to find is this: that there is a kind of knowledge of reality which is given by the presence of emotion and can be given in no other way. Further justification it does not seem possible to ask for; all we can say is that there are some principles which must justify themselves, and this is one of them. But we have still to ask whether we can apply our principle to a problem in which there is no consensus of philosophical opinion, but a controversy. And in particular, can we apply it to that most controversial problem as to the reality of a material world?

Is there a real material world, that is, a world of things which persist through time, which possess the qualities, or at any rate some of the qualities, revealed in sensation, and which possess them independently of being thought about or perceived? And if there is such a world, how are we assured of its existence? To this problem there seem three possible answers. First, that there is such a real material world, and that its existence is known to us by direct certainty. Second, that there is a material world, but that its existence is not known directly; it is inferred by some process of reasoning from our knowledge of some other reality that is more certain. Third, that there is no reason to believe in such a world, and that the supposition of its existence can be dispensed with altogether. Which of these alternatives are we to accept?

The Phenomenalist doctrine will here present itself as following the line of least resistance. It assumes as its data what we all suppose ourselves to be sure of; it commits itself beyond this no further than it can help. It assumes the three metaphysical beliefs which are taken as direct certainties by everyone; it declines to make any metaphysical assertions beyond these. And from the standpoint we have now reached its procedure may seem more intelligible, if not in the end more coherent, than it did when we considered it earlier. Our theory of knowledge in a way justifies this procedure by arguing that each of us is compelled to these three certainties by a fundamental need of feeling; it may seem then to make out for Phenomenalism a better defence than this

doctrine had been able to supply for itself. And the refusal to go further into metaphysics may in turn be defended, if we take it that what Phenomenalism is most concerned with is to provide a framework for the sciences; for it is possible in this direction to go a long way by assuming as data the thoughts and percepts of a society of observers and no reality beyond these. And yet this set of assumptions is not in the end self-consistent. Questions arise, such as that of whether the earth existed, and how, before human observers began to perceive it or think about it; with other difficulties which we suggested in an earlier chapter. And behind all these lies the more fundamental problem: How, if there is supposed no reality beyond the separate human minds, is it to be explained that the thoughts and percepts of the separate minds so far agree with one another that a common body of belief can be constructed out of them by common sense and by science? This agreement is surely something that any philosophy should seek somehow to account for.

In face of these difficulties, the line of thought which starts from the Phenomenalist assumptions easily passes on to the view that we shall call 'Materialism by Inference'; and it does so by an argument to this effect: if the separate minds which we, somehow, know to exist, exhibit this amount of agreement in their thoughts and percepts, it is reasonable to infer that there must be a material reality outside them which accounts for this agreement. And to anyone who is not prepared to challenge either assumption, either that a society of observers exists, or that the percepts of these observers agree, the inference is likely to seem good enough.

Something of this kind seems to be the mode of thought underlying much of the philosophical discussions of the last two centuries. It is assumed that I, the speaker, know that other human minds exist, these other minds know that I exist. We assume, or we observe, that our percepts and our thoughts about them agree sufficiently to afford a basis for the physical sciences. It is asked, Can we from these data infer the existence of a material world? To this question the strict Phenomenalist answers, No, we cannot; the Materialist by inference answers, Yes, we can.

But this way of thinking can surely not be held tenable as a final philosophy, or as an approach to a final philosophy, whether it stops at Phenomenalism or goes on to infer the existence of a material world. How, we must ask, could such an approach to philosophy justify its first assumption that other human minds can be known to exist? Its answer would have to be, that their existence

can be inferred from the way in which human bodies behave. It must suppose itself then to know somehow that human bodies exist; and amongst the characteristics of bodies, human or other, are included those of having sensible qualities and persisting through time whether they are observed or not. But these are just the characteristics of that world of material objects which we were seeking to infer the existence of from our assurance of the existence of minds. We seem then both to infer the existence of minds from our assurance of the existence of bodies, and to infer the existence of bodies from our assurance of the existence of minds. The argument thus goes round and round without finding any starting point.

If we are to escape from this entanglement, we need to restate the argument so that for each observer it runs thus. I believe in the existence of other human minds because I infer it, under the guidance or impulse of sympathy, from the behaviour of human bodies; and I believe in the existence of human bodies, as of other material objects, because I infer it from the behaviour of my own mind, from the percepts and thoughts which my experience presents to me. Here, whether 'inference' is the right word to use or not, we have a sequence of thought which is not inconsistent with itself.

But what then are we to say of the belief in a material world, which to our ordinary common-sense thinking seems to underlie and support the belief in other minds? This too, we must think, if it is to fill the place we should expect in the fabric of our beliefs, ought to be known to us by direct certainty; the same in kind, if less perhaps in degree, as the certainty which assures us of the reality of other minds; and if it is not so known, our hope of discovering a logical order in the connection of our primary metaphysical beliefs seems to disappear. Yet if it is known by direct certainty, why has it proved itself so little able to resist the attacks of the critical reason? Our answer will have to explain both how it is that the belief in a material world has appeared so certain to historic common sense, and how it is that it appears so much less certain to philosophy and even to common sense today.

The world of his own experience of which each of us is immediately aware may, for all that reason can tell him, be a self-contained reality with nothing outside it. Yet the sensible contents of this world carry with them a feeling that they manifest a reality beyond them, and this feeling, present in some degree in all sensation,

is most convincing in the sense of touch and the feeling of resistance. This is the point which we have tried to bring out in the doctrine that we have called 'Johnsonian Realism'. What Johnson meant to express when he kicked the stone was surely this, that man's sense of the reality of a material world, and of himself as part of it, is most alive when he feels his own body in contact with some other material object. The argument, as has been abundantly pointed out, was a bad one if it was supposed to establish as certain the reality of the material world. The belief of the natural man that he is a material object in a world of material objects nowhere attains perfect certainty. It is not an immediate certainty, for it can be doubted; nor is it a demonstrated certainty, for we cannot see how to establish it by inference from some belief more certain than itself. But in so far as the belief approaches certainty, it comes nearest to it in the sensation of contact, and in so far as he meant this Johnson had in mind something worth saying.

With the senses other than touch man is an observer only. With the sense of touch he is, or at least he seems to be, a participant; he is aware of pain and pleasure, of influences that may preserve his life or destroy it, coming to him from a world of material objects in which he himself is one small part. Pain and pleasure in themselves, in their pure immediate quality as sensations, might be no more than states in the experience of a bodiless spirit, for which there was no reality beyond its own experience. But pain and pleasure, as we find it natural to interpret them, appear to each of us as bound up always with a particular material object, his own body, and as aroused for the most part by contact with other material objects which are parts of the same real world as his body is. Man feels this world as something in which he is included and on which he depends; something which is vastly stronger than himself, which may at this moment appear friendly or at another moment hostile, but which in the long run goes on its way indifferent to his wishes. Such is the feeling which underlies and supports the natural belief in a material environment, a belief which man, we may further suppose, shares with the higher animals, perhaps with all animals.

The feeling of a material environment that is given in the sense of contact may seem little when we compare it with all the knowledge added later by the other senses. If we conceive a simple organism that knew of the outer world no more than what was given in the sense of contact, its inner life would be meagre in the extreme; a limited sense of the present, with little faculty of

memory, and even less of anticipation. Yet this limited awareness is the starting point which the more special and elaborate modes of sense need as their foundation. It is in the contact of one material body with another that things happen in the material world, and in the sense of contact that a sentient being becomes aware of the surroundings which can cause it pleasure or pain. The more special senses, sight, hearing, or smell, act as the skirmishers or outposts of touch. They contribute to the building up of the inner life, add to the sense of the immediate environment a sense of distance, add to the awareness of present contact a memory of past contacts and expectation of future contacts. But all this is an extension of that sense of the material environment which touch gives, rather than the introduction of an essentially new element. Man's attitude to his environment would, so far as this goes, be no more than a sense of dependence on it for his physical needs.

In the building up of the inner life the most important next step is taken when man discovers by sympathy that some of the material objects round him are animated by thought and sentience like his own. We have already spoken of this at length, but there is one further reflection which may here be in place. This discovery by sympathy that other material objects may be sentient is not made by man alone, but extends far down into the animal kingdom. How far down we can only guess vaguely, since our own powers of sympathy are so limited, but we feel sure of it at least in the higher animals, in beasts and birds. And if we realize this, we may find here a confirmation of our view that for each sentient being the assurance of the material world comes first and the assurance that there are other minds must follow on that. If we watch a pair of thrushes nesting in the spring, we are sure that what we see is not merely the juxtaposition of two bits of insentient matter; we are sure, limited as our powers of sympathy can be, that they have some inner life of their own. Yet we may be equally sure that what takes place in this inner life of theirs is not that they first recognize one another as minds and then wonder whether they have bodies. They do not, to take one possible way of describing the position, each envisage the other as a bundle of percepts, and then from the correspondence of the percepts in these two bundles conclude that there must be a common physical world, in which they as a pair of birds nesting have some kind of physical existence which ornithologists might study and record. They know one another by direct certainty as bodies which live and feel; so much we may

guess, for if they did not know one another in this direct way, we cannot see how they could know one another at all. And when we have realized this in the case of birds, we may go on to realize that nine-tenths or ninety-nine hundredths of the lives of human beings, all the lives of most of them and most of the lives of all of them, are in the same case; that if we suppose that each of them has a direct certainty, first of the world of material objects and then of some of those objects as sentient, the nature and growth of his inner life and his outlook on the world can be understood; if we do not suppose such a direct certainty present, the more we think about the problem, the greater the puzzle becomes.

We must return to the question more immediately before us: of what kind was the emotional need which underlay the belief of historic common sense in the material world? One root of this belief, the most primitive and shared by man with animals, was the sense of dependence on a material environment, revealed first in a gross way by touch, then gradually in a more subtle way by the other senses as emissaries of touch. But one of these emissaries, sight, far outran the others in importance. First, in respect of its knowledge-giving power; instead of the limited space which was explored by touch slowly and piecemeal as the hand or foot moved over it, sight disclosed at a glance a space in which what was absent for touch became in a way present. It united and expanded the material environment into a material world. And to its intrinsic power of giving knowledge sight added the power, possessed hardly at all by the other senses, of employing instruments of precision, and thus came for science, and in the end for general thinking, to rank as the chief, if not the only, knowledge-giving sense; with results, as we have suggested, not altogether fortunate for a right understanding in the theory of knowledge of the function of the senses.

What however concerns us here even more is yet another way in which the sense of sight enriched human life. At some point of time, it may have been in the experience of the first man, it may have been only much later, sight revealed to men that the material world was beautiful. First, that there was beauty in particular material objects, trees and flowers, animals, human bodies; then that the material world was beautiful as a whole. And not only beautiful, but something more; for beauty might be seen in numberless little things, whether natural or made by man. The material universe as revealed by sight seemed to historic common

sense to possess a quality, akin to beauty but going beyond it, which our ancestors tried to indicate by the word 'sublime'.

But what did they mean by this word 'sublime', or what was meant by the other words not less vague in which historic common sense sought to express the same idea? We cannot expect precise answers here, where we are speaking of something that differed from one time or country to another, and that was felt rather than clearly formulated. Yet it is worth while to give some thought to this vague conception, since here is one of the points in common thinking in which we seem to come on some recognition of the idea that knowledge may be given by emotion. Let us ask then, was the sublime supposed to be present in the outlook of the spectator or in what he contemplated? The answer would seem to be that it was present in each of them, only in a different way, or perhaps we should say, present in the union of the two. But when we say 'present in the union of the two', this must not be supposed to imply a doctrine like that of Idealism, that the object experienced exists only as part of the experience. It was not this, but quite the opposite. An emotion, the sense of the sublime, was felt present in the mind of the spectator; a quality, again indicated by the word 'sublime', was felt present in what he contemplated. The emotion and the quality it revealed were evidently not the same thing; but the two things, the emotion and the quality, were inseparable for description, in the sense that one could only be described in terms of the other. The quality had only significance for a mind that felt the emotion, the emotion again could only have significance for a mind that believed the quality present. And what this indicates is that the nature of the knowledge given by the emotion might be felt as vague enough to pass beyond the reach of language, yet still remain definite enough to be knowledge.

The point here touched on will become clearer if we compare this case with the case discussed earlier, where we saw how the belief in the existence of other minds depends on the emotion of sympathy. The two sides of the relation, the belief and the emotion, are in that case each describable apart from the other. The word 'sympathy' is vague, but we can understand what it means, and we can understand still more clearly what is meant by its particular expressions, 'love', 'hate', 'anger', 'fear'; and again we can understand what is meant by saying that other minds may either exist or not exist, that human bodies can be supposed either to be sentient or not to be sentient. The meaning of the emotion, the

meaning of the belief in question are each clear; and whether our suggestion that the belief depends on the emotion is accepted or not, it can be understood what the suggestion means. But when it is said that the belief that the material world is sublime depends on a feeling of the sublime, is this more than words?

Our contention is that it is something more, and this something more can perhaps be expressed if we say that the people who had this feeling felt along with it the presence of a reality which justified the feeling. This way of putting the matter covers the two different cases of which we are speaking. Just as the man who feels the emotion of sympathy in presence of another human being believes that this emotion would deceive him if that other were only a physical automaton, that it is justified by the fact that the other is a sentient being like himself; so those who felt this sense of the sublime believed that the feeling was justified by its revealing a quality present in the material world, though as to what that quality was they might be able to say no more than that they felt it to justify the emotion. Only we must repeat that this does not mean that, as a modern Idealist might put it, the emotion and the quality are inseparable elements in a single whole. What this belief maintained was that the emotion present at this moment in the experience of this particular spectator revealed a quality persisting beyond that moment in a reality beyond his personal experience, perhaps beyond experience altogether.

But could anything further be said about that quality in the material world which was felt to justify the sense of the sublime? Here the insight springing from emotional need gave no single definite answer. It assured man of something which he felt to justify the emotion; but what it assured him of was not evident, and the answers given by the common sense of different times and countries differed. We touched on some of the main lines of answer earlier when we sketched the history of the notion of cause. One, perhaps the earliest and the most widely spread, felt in its outlook on the material world a sympathy, different from, yet analogous to, the sympathy by which man recognized a mind like his own in other human bodies; and supposed itself to discover, in this or that portion of the material world, the presence of an inner life, different from man's, for it was not human, but like his, in that it too was an inner life. Another line of answer was that which saw the whole material world and its contents, whether animate or inanimate themselves, as the creation of a supreme mind or purpose. And there was again a third line of thought, which saw the

non-human material world neither as animated by mind nor as created by mind, but as producing movement and change by a force of its own, without the need of mind either to animate it from within or to control it from without. We may take as illustrations of these three modes of feeling: for the first or Animist, the whole rich variety of Greek myth as embodied in poetry or in visual art; for the second or Theist, the Book of Job, the 104th Psalm and the fifth book of *Paradise Lost*; for the third or Atheist, the epic of Lucretius.

These three modes of viewing the material world are presented to us in the history of thought as influences opposed and hostile to one another, and so no doubt they often felt themselves to be. Yet the thinkers who approached the problems of philosophy from any one of these standpoints would have agreed with one another and disagreed with much modern thought in this, that they believed in the reality of the material world as simply and directly as they believed in the reality of human beings. They would, we may guess, have found strange that method of approach, now so common, in which a group of philosophers, while never doubting the existence of one another's thoughts and percepts, set themselves to speculate whether there is any reality beyond these. And if there should be a reality beyond the material world, the knowledge of such a further reality must be attained, they would have believed, by building on our knowledge of the material world, and not by trying to prove that worthless. Whatever they were, they were not Idealists, in the modern sense of the word, and they were not Phenomenalists.

Here then are two roots from which we may conceive the natural belief in a material world to have sprung. First there is the feeling of each human being that he is himself a material object in a world of material objects, which is immensely more powerful than he, which has produced him, sustains him, and can destroy him. And second, there is the recognition that this material world, which seems so supreme over his pain and pleasure and so indifferent to them, has also a quality in it that can waken emotions in him concerned with something quite other than his own physical safety or comfort. These two modes in which men reacted to the material world, at once feeling it in their daily needs as present and formidable, and contemplating it as beautiful or sublime, were blended in a complex emotion, strong and pervasive enough to give to man the confident assurance of its reality; to convince him that this material world which he seemed to apprehend round him

was as real as he himself and as other human beings. This complex emotion we may call the 'sense of nature'.

Why then is it that the belief in a real material world, which appeared so certain to historic common sense, seems doubtful to philosophy and perhaps even to common sense today, while the belief in the reality of our own and other minds, which, as we have seen, is no less open to philosophical criticism, is one that we are not prepared to dispense with? Only, it would seem, because the belief in the reality of other minds appears today, as always, to meet a fundamental need of human feelings, while the belief in the reality of the material world does not. And so we are led back to the question, How is it that the need behind this second belief, which for historic common sense was hardly less strong than the other, has become so much weaker for common sense today?

One cause of this weakening of the natural belief in the material world is likely to have been the separation of the apparent qualities of matter into primary qualities and secondary. The complex emotion with which historic common sense apprehended the material world fell apart into two halves. The world of the primary qualities, of tangible shape and extension, could still be conceived as existing independently of human organisms; as capable of being affected by them in the way in which one material object can be acted on by another, yet as not depending for its qualities on being perceived. But the visual world with its sensible qualities of form and colour, and its quality of sensuous beauty that was bound up with these, was now conceived as depending for its existence on human percepts; as caused by something outside them, but as not having itself existed before human beings existed, and since the blended emotion which we have called 'the sense of nature' owed something of its strength to the assurance that the tangible world of power and the visible world of beauty were one and the same, the simple union of the two which common sense had believed in became untenable in the light of this new development.

But the general atmosphere of feeling was affected also by other more pervasive influences, due not to anything in thought, but to the changing conditions of life. These conditions, as they are today and as they have been developing during the last two centuries, are very different from the conditions under which the beliefs of historic common sense grew up and persisted. Man's feeling that he depends on nature for the satisfaction of his physical

needs could not but grow weaker as civilization became more complex. The aim of technical advance has been to release man from his dependence on nature and to substitute for this a dependence on his fellow men. Not that this aim could be achieved completely. In the end no doubt man depends as much as he did in the beginning on the material world; he needs to be fed, clothed, and sheltered, and these needs must be met by material things, by food and drink, by clothes and houses. But the effect of technical advance has been to interpose between the individual man and the material world an immense complicated web of human thoughts, plans, and systems. Throughout most of history most human beings got the material things they needed by direct contact with the material world. What a man lived on was the game he had himself shot or snared, the corn he had himself sown and reaped, the cattle he had himself reared. Some division of labour there may have been even in early days, and more of it as time went on. But most men had done some of these things themselves, or if they had not done them themselves they had grown up among people who did them. And working under these conditions a man would feel his body in direct contact with other material objects, and would seem to understand how in this contact he acted on them or how they acted on him. We can say only, he seemed to understand; for the actual process by which thoughts and desires act on the muscles and through these on the limbs and through these on external objects was as much a puzzle for him as it remains in the end for us. But it seemed understandable because it was habitual and familiar, and this kind of contact repeated day by day through life would be likely to make his relation to material objects seem no less real than his relation to persons; as even a man of the present time may remember it used to seem to him in childhood.

So things were in the earliest societies we read about, and so on the whole they went on throughout most of history, with variations in detail, as man passed from the life of the hunter to the life of the shepherd, and from this to the life of the farmer, and as villages grew into towns and towns into cities, yet with no essential change. But in western Europe somewhere in the eighteenth century there set in a change of a radical kind, which has spread more and more widely and worked more and more quickly, and which has brought about the new relation of humanity to nature that prevails at the present time. A man living in an industrial civilization today does not, for the most part, make the things he

needs for his daily life, nor see them made, nor know the people who made them. His food and clothing he gets from a shop; water, light, heat, perhaps housing, are supplied to him by a local authority or a public utility company. The complex machinery by which all this is provided is something that he very likely does not trouble himself at all to understand; or if he tries to understand it, he is led on into an elaborate study of human designs and arrangements, of how the steam engine or electric light was discovered, of how the world's trade is linked together by a network of supply and demand. And as in the details of his life, so in the whole process by which he gets his livelihood, each unit in a modern industrial civilization feels himself dependent not on the material world, but on society; he depends on an employer for his salary or his wages, on the state for help when he is ill or out of work and for support in his old age. Everywhere human contrivance becomes more prominent, nature recedes into the background. True that this is not enough of itself to do away with the historic belief of common sense in the material world. That belief, for the majority who are not troubled by philosophic doubts, remains as unquestioned now as in the past. But it is no longer, as it was in the past, fed from day to day by natural feeling; and when the question is raised whether a material world exists, and the doubt is driven home by what seem forcible arguments, the belief has no roots in natural feeling strong enough to resist this doubt.

And there was a small and important minority with whom this change in the intellectual atmosphere worked more strongly. Technical progress led at a certain point to the appearance of a class of thinkers and observers who, more than any of their predecessors had been, were released from the direct struggle with the material world, and set free to live a life of observation and thought. The philosophers of Greece and of the Middle Ages, however much their thoughts and emotions might have been directed towards an ideal or spiritual world, were recalled all the time to the world of matter by the daily habit of their lives. They might hold it as their chief concern to prove that man was, or had, a soul; it never occurred to them to think that perhaps he was not, or had not, a body. But the thinkers of the new era, even when their main attention was directed on the world of matter, were enabled by the conditions of their lives to look at it from a distance, and to see it, not as something of which they were a part, but as something set over against them which they and other human

observers could study and speculate about. And thus when the question presented itself, as with the growth of science it was bound to present itself, which of the beliefs handed down from the common sense of the past could justify themselves to reason, the belief in the reality of matter and the belief in the reality of other minds appeared not to stand on the same footing. The sceptical arguments which, if they had been applied on any strict principles of reasoning, should have shaken both beliefs equally, were allowed to demolish the belief in matter, while it was not thought even possible that they could tell against the belief in the reality of other minds.

The connection that we are here tracing may seem unexpected. The industrial civilization which has grown up in western Europe during the last two centuries has been praised by its admirers for the material benefits it has brought, is denounced by its critics as concerned only with material ends. Is not then its temper rightly summed up as materialist? And if so, how can the temper of the age be supposed to account for the decay in the belief in a material world? But two tendencies which seem in their operation conflicting may very well spring from a common origin. And even if we cannot see clearly how the causal connection operated in this case, the coincidence in time seems definite enough to suggest strongly that a connection was there. It was at the place and at the time when the industrial civilization began to develop, in England in the eighteenth century, that we find developing along with it that sceptical attitude towards the material world which announced itself as the philosophy of the human mind. The speculations of Locke, Berkeley, and Hume, different from one another as these men were in their outlook and their aims, had two important things in common: they looked to the investigation of the human mind for an answer to the main problems of philosophy and the sciences, and they questioned or in the end rejected the historic belief of common sense in material substance.

Our suggestion is put forward to explain something that has happened and that calls for an explanation. It implies no claim to predict the movement of human thought in the future. The belief in a material world is too inveterate an element in common sense to be easily uprooted. In the end man must depend for life and sustenance on the material world, at however far a remove; and even in an age of advanced technical knowledge a large part of humanity will still be engaged in some kind of daily contact

with nature. We may guess then that under somewhat different conditions the development of industrial civilization might have led to a different turn in our thought. It is possible that a determining factor in the growth of the Mentalist attitude was supplied by the growth of that detached class of observers of whom we have spoken. We can imagine a state of society in which the tone of opinion would be set, not by philosophers or pure scientists, but by engineers and technicians, and Materialism might then reappear as the type of philosophy natural to common sense. It may be indeed that we do not need to imagine it, that we can watch it beginning to happen. But our business is with explanation, not with forecast.

Let us come back then to our main point, that the doubt as to the reality of the material world which has shown itself in the philosophy of the last two centuries is a phenomenon unknown in earlier times, and that the whole explanation of the doubt cannot be found in the reasoned arguments which have been used to justify it. These arguments, or arguments sufficiently like them, would have led on to doubt about the reality of any mind or thought beyond the thinker's own. And if it is answered that the philosophers who used those arguments rightly refrained from drawing this conclusion because they rightly felt it impossible to doubt the reality of other minds, we are led back to the question, Why did they not also feel it impossible to doubt the reality of the material world? For this doubt would have appeared to historic common sense hardly less preposterous, perhaps hardly less inhuman, than the other.

Here then is a tendency in thought, the growing doubt as to the real existence of a material world, which needs to be explained. Is it not reasonable to look for the explanation in the growing lack of contact with the material world, which has come about in general life during the same period? Some connection between the two it seems natural to suppose; and if we have come on a real connection here, may not this help to throw light on a yet larger problem, as to how it is that the metaphysical temper of one age gives place to the temper of another? Our inquiry has convinced us that the foundations of metaphysical belief do not depend on reasoning, but go down below the level at which reflective thought can operate. Some of them go down to a deepest element in feeling which a man could not lose without ceasing to be human; it is this element that compels each of us to believe in the reality of his own past experience and in the reality of other human beings.

From the study of these beliefs we have derived our conclusion that what justifies our deepest and most universal beliefs is perception based on feeling. But now we want to pass on, if we can, to find a criterion by which we may discriminate between beliefs that are not universal. The common sense of one age or society accepts without questioning beliefs which to another age or society seem groundless; and each age seeks to defend by reasoning its choice as to what beliefs it shall accept or reject. But when these reasonings are probed we find that it is feeling rather than reason which in fact decides the choice. We want then to ask, What are the kind of conditions that bring about these profound underlying changes of feeling, and mould or dissolve the metaphysical temper of an age? And viewed in this way the decay of the belief in a material world which has shown itself in the period of modern philosophy takes on a wider significance. We can regard it as a particular case in which it may be possible to study the conditions that govern the growth or decay of metaphysical belief in general. And what such a study seems to make evident is that the Mentalist doubts of the last two centuries came to be felt, not so much because the philosophers of those centuries were alive to reasoned difficulties which had not occurred to their predecessors, as because they were less alive to certain modes of perception. It was not only that their powers of reasoning had grown stronger and clearer; it was partly too, and perhaps more, that their powers of perception and of feeling had become fainter and more confused.

CHAPTER XXI

MODES OF KNOWLEDGE

We must at this point take up a question which we touched on earlier and reserved for later discussion: the question as to what we mean by 'knowledge'. That this word is used with various meanings is evident and agreed; what is not so evident is how the various meanings are to be defined. Different writers distinguish along different lines, and it is often hard to see how these distinctions should be related to one another. Is this or that distinction that may be put forward to be conceived as logical, grammatical, or metaphysical? Does it turn only on a question of language, or does it go down to a fundamental question about reality? Is it a distinction which all philosophical views should recognize as helpful for clear thinking, or is it a distinction which marks off one philosophical view or attitude from another? Where so much is doubtful, we may suspect that a metaphysical system can very well be intruded in the guise of a necessary logical distinction. For this reason the attempt to define the term and to distinguish its various senses, which might seem to have come properly at the beginning of our inquiry into the theory of knowledge, is a task that is in fact more likely to shape itself rightly now that our theory has begun to take definite form.

The aim of this chapter then will be to examine some of the views as to the meaning of knowledge which have been prominent in recent philosophy, and to ask how these are related to the way of looking at the problem which emerges out of our inquiry. And for this purpose we must try to indicate as clearly as we can how the language we have been led to use fits in with the language of the views which we are now to examine. Let us take as our text for this discussion two passages, each of which formulates a distinction that is important for our purpose.

The first is a distinction between knowledge of things and

knowledge of propositions. We may cite for this a passage from John Grote's *Exploratio Philosophica*, which was perhaps the earliest statement of it in English philosophy.

'Our knowledge may be contemplated in either of two ways, or, to use other words, we may speak in a double manner of the "object" of knowledge. That is, we may either use language thus, we *know* a thing, a man, etc.: or we may use it thus: we know such and such things *about* the thing, the man, etc. Language in general, following its true logical instinct, distinguishes between these two applications of the notion of knowledge, the one being γνῶναι, noscere, kennen, connaître, the other being εἰδέναι, scire, wissen, savoir. In the origin, the former may be considered more what I have called phenomenal—it is the notion of knowledge as acquaintance or familiarity with what is known: which notion is perhaps more akin to the phenomenal bodily communication, and is less purely intellectual than the other: it is the kind of knowledge which we have of a thing by the presentation of it to the senses or the representation of it in a picture or a type, a "Vorstellung". The other, which is what we express in judgments or propositions, what is embodied in "Begriffe" or concepts without any necessary imaginative representation, is in its origin the more *intellectual* notion of knowledge. There is no reason however why we should not express our knowledge, whatever its kind, in either manner, provided only we do not confusedly express it, in the same proposition or piece of reasoning, in both.'

We need not consider in detail all the expressions used by Grote in this passage, some of which, clear and consistent in his usage of them, are not altogether in line with the language employed in our inquiry. What matters for our purpose is the main principle of the distinction that is here drawn. It is one which may be called logical or grammatical rather than metaphysical. It is not that one of these modes of knowing is appropriate to one piece of knowledge or to one philosophical attitude, the other to some other piece of knowledge or to some other attitude; but that any philosopher may find it convenient to express any piece of knowledge in either mode. Perhaps we should limit this last statement so far as to say any piece of knowledge about a thing that can be conceived as existing; for it might be argued that some knowledge, such as knowledge of the mathematical order, is a knowledge of propositions only, not an acquaintance with things. But this qualification does not affect the main point, which is that we are here trying to distinguish two modes of the mind's working, two

indispensable mental tools, as we may call them, each of them serviceable in its place, but not to be confused with one another. So far then we do not appear to be involved in any metaphysical implications.

But now we must ask, What is to be understood by the 'things' which are the objects of one of these modes of knowing, and again by the 'propositions' which are the objects of the other mode? And here more complicated questions arise.

When we ask what is to be understood by 'knowing things', we come upon a further distinction, which is often expressed as a distinction between knowing by acquaintance and knowing by description. Here again we may refer to what may be called a classical statement of the question; it is to be found in Bertrand Russell's *Problems of Philosophy*.

Russell, after referring briefly to the distinction mentioned above between knowledge of things and knowledge of truths or propositions, goes on to draw a further distinction between knowledge of things by acquaintance and knowledge of things by description; and this last distinction he explains as follows:

'We shall say that we have acquaintance with anything of which we are directly aware, without the intermediary of any process of inference or any knowledge of truths. Thus in the presence of my table I am acquainted with the sense data that make up the appearance of my table—its colour, shape, hardness, smoothness, etc.; all these are things of which I am immediately conscious when I am seeing and touching my table. The particular shade of colour that I am seeing may have many things said about it—I may say that it is brown, that it is rather dark, and so on. But such statements, though they make me know truths about the colour, do not make me know the colour itself any better than I did before; so far as concerns knowledge of the colour itself, as opposed to knowledge of truths about it, I know the colour perfectly and completely when I see it, and no further knowledge of it itself is even theoretically possible. Thus the sense data which make up the appearance of my table are things with which I have acquaintance, things immediately known to me just as they are. My knowledge of the table as a physical object, on the contrary, is not direct knowledge. Such as it is, it is obtained through acquaintance with the sense data that make up the appearance of the table. We have seen that it is possible, without absurdity, to doubt whether there is a table at all, whereas it is not possible to doubt the sense

data. My knowledge of the table is of the kind which we shall call "knowledge by description". The table is "the physical object which causes such and such sense data". This describes the table by means of the sense data.'

The distinction that is here presented as one between knowledge by acquaintance and knowledge by description is in some form or other constantly expressed or implied in discussions about the theory of knowledge. One way, and perhaps the most obvious, in which the distinction presents itself, is with regard to the status of sense data in problems of perception. But the question, What is there, that in the manner here described, we know by acquaintance? arises in other fields as well; and Russell goes on to specify some of these. Among the things we know by acquaintance must be included, he says, what we remember, our thoughts and feelings, and generally the events which happen in our minds. He adds further in the chapter from which we have been quoting, that among the things which we know by acquaintance are to be numbered certain universals or general ideas; but this last addition is not essential to the point for which we are quoting him, and it raises a separate problem of great complexity, into which we need not at this point let ourselves be drawn.

Leaving then for some other occasion this problem as to universals, we may say that the distinction here drawn between knowledge by acquaintance and knowledge by description is in accordance with a view which has been forced on us by the whole course of our inquiry. We came upon it first as a distinction between the perceptual object which each observer is aware of in his private world, and the material object which he believes to exist in a public world common to him and to other observers. We were led to the conclusion that each observer, while he must admit that the reality of the public world and the material object might be doubted, could retain complete certainty as to his private world and the perceptual objects or sense data which are contents of that world. Going on to consider more closely the extent of the region to which this complete certainty attached, we found that we needed both to restrict our first conception and to extend it; we had to restrict it so far as to say that what is certain in this way is not the whole private world as we seem to know it through the help of memory, but only the world of immediate momentary experience; we had to extend our conception so as to cover not percepts or perceptual objects only, but all the contents of this momentary world. And thus the essential distinction

emerged for us as a distinction between two ways in which we may be said to know things; one of these being the way in which each of us knows what is in or before his mind at the moment of knowing, the other being the way in which he knows any of the realities which he believes to exist beyond that moment, whether his own past, or objects in the material world, or other minds.

This seems to be the real line of cleavage that we come to along such a line of thought; but can we say that it is best expressed by the phrases 'knowledge by acquaintance' and 'knowledge by description'? The word 'acquaintance' suggests a knowledge which lasts through time and grows with time; we speak of 'old acquaintance' and of 'becoming better acquainted'; but how can I have old acquaintance with, or become better acquainted with, the shifting momentary sense data which I am aware of for a moment only? This shiftingness and momentariness of our sense data is perhaps not brought to mind by the instance we have just been considering as vividly as it might be. The brownness, smoothness, and hardness of the table are entities which at least seem as though they might persist from one moment to another; it needs reflection to show us how they vary with the act of perceiving. But many, perhaps most, of the sense data on which our knowledge of material things is founded, do not even seem to have this persistence; it is not these sense data that we suppose to persist, but a material thing that we know by means of them. With the tree that stands outside my window I can in the natural sense of the word become acquainted; I can watch its changing states, whether momentary or seasonal, and by observing their likeness and their difference, I can come to believe in a material thing which I recognize as persisting through them. But I cannot in this natural sense be acquainted with the particular patch of colour which the sunlight brings out on this or that leaf as the wind moves it; this is something which presents itself to me for a moment, which I probably never saw before and shall never see again in its full particularity, in the tone, shape, and surroundings which make it what it is, and which, if it did by chance reappear in this particularity, I could certainly not identify with any patch of colour seen at some moment in the past.

Nor again does the term 'knowledge by description' seem apt to express the way in which I know either the tree or the table, taking these as instances of all those material things which in my common-sense thinking I suppose myself to know in an act of sense perception. It is possible that such material things do not

in fact exist, and that our belief that they exist and we can know them is no more than a delusion. But if they exist, the manner of our knowing them seems to have something direct about it, which we could express naturally if we name it 'knowledge by acquaintance', but for which the term 'knowledge by description' is not well suited. We should surely be expecting the ordinary Englishman to break too violently with common thought and common language, if we ask him to admit that he knows his pipe, his motor car, or his fox-terrier only by description. And this last instance brings us to a further point; that we have to give an account of knowledge from the side of the fox terrier too. If we dogmatize so far as to suppose that he has an inner life of his own, and that he is more than a bundle of percepts in his master's mind, we must suppose that he knows his master somehow; but how? The master, we can perhaps conceive, might be sufficiently philosophical to know the dog by description only; but for the dog a cruder manner of knowing is all that can be thought possible; he must know his master by direct acquaintance, if he knows him at all.

This criticism of the terms in question may seem rather captious and verbal; but we have to add here a further reflection: that the pair of expressions, 'knowledge by acquaintance' and 'knowledge by description', cannot well be spared to express the fundamental distinction that we have been trying to get clear about, because we need them to express another distinction, less fundamental but still important, within our knowledge of what common sense looks on as material things. This is the distinction between the portion of that knowledge which is founded on direct sense perception and the portion which is not so founded. I may know a thing or a person or a place because I have myself seen them; and again I may know things or persons or places, not because I have seen them or had any sensuous acquaintance with them, but through having read about them or heard about them from other people. This is surely the distinction which the terms 'knowledge by acquaintance' and 'knowledge by description' naturally suggest; and it is a sense in which we need to use them, because for this purpose no other terms are nearly so apt. And if we use them in this sense, they will still serve to bring out an important point to which Russell draws attention, that knowledge by acquaintance must come first if knowledge by description is to be possible. This is not to say that knowledge by acquaintance need be fuller or clearer than knowledge by description; either kind of knowledge

may range from something very vague and scanty to something very detailed and precise. My knowledge about Napoleon or about the Great Pyramid, if I happen to have been reading about either of them, may easily be more extensive and exact than my knowledge about my next-door neighbour, or about a street through which I have walked many times. Only it must be remembered that all knowledge by description has to be based on knowledge by acquaintance; and that unless we first know some things by acquaintance, we could never know anything by description, because we could not understand any of the terms in which the description might be conveyed.

We are not however at present further concerned to follow up the distinction drawn in the last paragraph, important as it is in its place. We have referred to it here only to plead that the pair of contrasted expressions, 'knowledge by acquaintance' and 'knowledge by description', are needed to draw it and should be reserved for that purpose. But now we need somehow to express that other more fundamental distinction for the sake of which this pair of expressions was introduced into philosophy; and how are we to do it?

One solution of the problem would be to decide that, when we speak of 'knowing a thing', we mean by those words 'knowing a material object', and that if we want to go back to something which is logically prior to this, and to talk about sense data, we must find another word than 'knowing' for the purpose. If we take this line we should be following a strong lead given us by ordinary language. For it is clear that common sense, when it speaks of 'knowing things' without any qualifying words, refers in nine cases out of ten, or in ninety-nine cases out of a hundred, to what, in Russell's language, should be called 'knowledge by description'. It refers, not to the knowing of momentary sense data, but to the knowing of a material object, which it conceives in its earlier unreflective mood as being somehow the aggregate of the particular sense data, and in its later more reflective mood, as being somehow their cause, but in either case as being permanent and operative in a way in which the sense data need not be and perhaps cannot be. It is this permanent and operative material object that common sense wants to know, in the sense in which there can be knowledge of things, or to have knowledge about, in the sense in which there can be knowledge of propositions; and what may be called 'knowledge of' or 'acquaintance with' sense data is taken

by it as only ancillary and instrumental to this end. When a traveller looks at a distant peak, first with the naked eye, then through a field glass, and then perhaps through a more powerful telescope handed him by a friend, he is concerned with the different visual fields thus presented to him not for their own sakes, but for the sake of the material object which he believes them in their different ways to reveal; and when at the end of his scrutiny he concludes, 'Yes, that is the mountain that I know', what he is thinking is not that he knows any particular sense datum, or set of sense data, but that he knows the mountain.

And thus it comes about that common sense does not think of its acquaintance with sense data as knowledge of things; this only begins for it when it penetrates through the sense data to the material object, which it believes in some undefined sense to be behind them. Even in philosophical writings when there is talk of 'knowing things' the phrase seems usually to be intended in this common-sense way, as for instance in the passage cited above from John Grote. And in any literature that is not strictly philosophical we should have to look a long way before we find a writer speaking of 'knowing' a colour or a shape or a hardness or a smoothness, or any of the entities which are mentioned by Russell as examples of the things that we can be acquainted with. Might we not then do well to follow this lead of common sense and of ordinary language, and to drop the notion of two ways of knowing things? Knowledge of things begins, we should then say, when a man knows the outer public world, and if he wants to go further back and to explore his inner private world, he should find some other word than 'knowing' for that kind of exploration. This appears to be the view taken in a good deal of recent philosophy, and passages in Russell's later writings suggest that he might himself now be inclined to accept it.

But to seek simplicity along this road would be too drastic a way of cutting loose from our tangle. Several cogent reasons tell against it. First, we must recognize that even ordinary language, though it seldom speaks of 'knowing' such entities as sense data, finds the verb 'to know' one that it cannot altogether dispense with when it seeks to explore the inner world. 'The heart knoweth its own bitterness'; phrases such as this are good English, and we need not rule them out as bad philosophy. And even when we are concerned with sense data, it is difficult to hold that the notion of knowledge is philosophically inappropriate. If we believe that there is a world of material objects and that we obtain knowledge

about them by means of our sense organs, it must surely be worth while studying the question, What is the point we have to start from in trying to formulate this knowledge that comes to us from the outside world, what are the elements in the inner perceptual world that correspond most purely to the outside stimulus, with the least admixture of hypothesis, interpretation, and possible error? And if this question or these two related questions are to be rightly studied, we seem to need a theory of sense data, or something that will in rather different language come to the same result. We have to recognize then that the antithesis between what Russell calls 'knowledge by acquaintance' and what he calls 'knowledge by description' is vital for the problem of sense perception, and that knowledge by description (in this sense) grows out of knowledge by acquaintance (in this sense), and must be founded on it. And if the title 'knowledge' is allowed to the superstructure, by what right can we deny it to the foundation? To say that our study of knowledge begins with the knowledge of material objects, and to refuse the name of knowledge to anything prior, seems to deprive us of the most suitable language for inquiry into that more primary kind of knowledge out of which our knowledge of material objects must grow.

We need then to make our conception of knowledge wide enough to cover all the activities of the mind in so far as they provide material for anything that we can suppose ourselves to know; and if we are to do this we must allow that knowledge by acquaintance and knowledge by description, so for the moment still to call them, are both forms of knowledge. But should they both be called 'knowledge of things'? This is perhaps more questionable. The word 'thing', no doubt, is about as wide and loose as any word can be, and we should have no call to quarrel with a writer for using it of any kind of entity, whether mental or material, fact or fancy. But when it is used with an approach to strictness, it carries with it an implication of something that is at any rate persistent, perhaps also material; and it may be safer to avoid it in philosophical discussions if we mean such implications to be definitely excluded. And surely one of the suggestions that ought to be excluded at the beginning of a discussion about sense data is a suggestion that sense data can be assumed to persist beyond the moment in which they are perceived. Might we then not do better to say that the knowledge we can have of sense data does not amount to a knowledge of things, and that knowledge of things

only begins when we feel that behind the sense data, or by means of them, we have knowledge of some such permanent entity as a table or a tree? At any rate, if we prefer to retain the expression 'knowledge of things' as a short and convenient counter-concept to the expression 'knowledge of propositions', we must remember that 'things' in this connection covers much more than 'things' as generally understood by common sense.

Language, we must recognize, is all the time suggesting to us unwarranted implications when we try to find words for ideas of this fundamental order. The words 'acquaintance', 'description', even 'things' can all mislead in this way. And perhaps we may come nearest to an unambiguous expression of the distinction we are trying to formulate, if we choose words as colourless and as free from associations as possible, and speak of it as a distinction between an internal mode of knowing and an external mode of knowing. The internal mode of knowing will on this way of speaking, when we consider first the distinction as it applies to sense perception, be the manner in which we know those entities which are given in the moment of perception. The external mode of knowing will be the manner in which we know, if we can know them, entities such as material objects, which must by their definition, if they exist at all, exist outside that perception. And in a wider view internal knowing will be the mode of knowing in which each of us knows the contents of that smallest circle which we have called the 'world of the moment'; external knowledge will be the mode in which he knows, if he ever does know, any reality outside that circle, whether it be a part of the material world, or some mind other than his own, or some portion of his own past experience. And here a point that we need to bear in mind is, that internal knowing is a mode of knowing which any inquirer must recognize that he has to start from, if he thinks it worth while to go so far back, and which he cannot doubt that he possesses, though he may perhaps doubt whether to call it 'knowing'; but that external knowledge is a mode of knowing as to which he may logically doubt whether he possesses it, and which indeed he ought to begin by doubting if he wants to explore fundamental questions at all.

Now that we have for the sake of clearness formulated the distinction in this way, we may find it useful to ask what other terms are commonly used, or might be used without confusion, to express the conception that we have called 'internal knowing'. If we turn back to the passage quoted from Russell's *Problems of Philosophy*,

we shall find there two expressions which are plainly intended in this sense: 'directly aware' and 'immediately conscious'. Here are a pair of adjectives and a pair of adverbs; what are we to say about each of them? Let us take first the adverbs. 'Directly' and 'immediately' are used in this passage, as they are often used by philosophers, with no apparent difference of meaning. But we suggested earlier, and we may repeat in this connection, that they could properly be used to express an important distinction for which no other pair of words seems so well suited. If we adopt this usage, we should say that we have immediate knowledge or immediate certainty as to what we know by the internal mode of knowing; as to what is contained in the circle of immediate momentary experience, and as to this only. But we should give to the word 'direct' a wider significance. We should say that we have knowledge or certainty that is direct, though not immediate, as to some of the things that we know in the external manner of knowing; as to those things, if there are any, which we are at once convinced that we can know in this manner and convinced that we do not come to know by means of a process of inference. And if we must accept the position, as it seems we must, that we can have some knowledge which is not immediate, and yet which is not derived from our immediate knowledge by any process of logical inference, the distinction here proposed between immediate and direct knowledge should be one that is worth making.

Let us now turn to the adjectives, 'conscious' and 'aware'. The term 'conscious' or 'consciousness' is one that is often used by philosophers to express what Russell calls 'knowledge by acquaintance' and what we have called 'internal knowing', and we might be tempted to take it as sufficiently expressing what we intend by that phrase. 'Consciousness', however, is one of that dangerous class of philosophical terms which are sufficiently remote from ordinary language to give an impression that they have a precise technical meaning, but which in fact remain vague and ill-defined. In so far as the word is used with an attempt at precision, what is intended by its use is to indicate the immediate awareness from which all knowledge must start and to exclude supposed knowledge of anything beyond this. But it is also used in a looser way, in which it may stand for any of the various senses of the word 'knowledge' that we have been trying to distinguish, for either knowledge of propositions or knowledge of things and for either the internal or the external mode of knowing things; and just because of its air of precision these ambiguities are in its case less

likely to be challenged. There is too another perplexing ambiguity even in the more technical use of the term. We may find it used in philosophical writings to express on the one hand a high degree of concentrated thought or attention, or on the other hand the whole scale of the inner life ranging down from consciousness in this full sense to the bare awareness of pleasure and pain, to that condition of mere sentience which a philosopher might be supposed to have in common with a worm or an oyster. And along with this ambiguity goes an uncertainty as to whether 'consciousness' does or should imply self-consciousness, or whether it carries no such implication. Here again is a fertile source of confusion; and we may be tempted to suspect that some of the most striking doctrines of idealism, centering as they do largely round the notion of consciousness, spring from this source and are coloured by this confusion. We need not, however, enter into such questions here, further than to plead that 'consciousness' is a word which philosophers would do better not to use, unless they have first undertaken a searching analysis of what is to be understood by it. The second of the two adjectives we proposed to examine, 'aware', is again vague, and may be used perhaps in as many different senses as the word 'conscious'; but it is a less dangerous word, because it has not the same misleading appearance of precision. It seems well suited to the purpose for which Russell has here used it, to express what he calls 'knowledge by acquaintance' and we have called 'internal knowing'; and it might be useful and convenient to limit its philosophical use to this purpose, and refrain from applying it to a case of external knowing, whether this is inferential or what we have called direct.

At this point we ought perhaps to consider more closely a question which we raised earlier, but then only touched on briefly. What is the justification for the distinction that we suppose ourselves able to draw between one and another region in the mental world or world of experience? Common sense and philosophy and psychology all assume confidently that we can discover within this world different regions or faculties, which we distinguish by such names as 'thought' or 'feeling', 'sensation' or 'emotion' or 'desire'; that we can mark these off from one another by limits which can be defined, or at any rate described; and that we can assign to each of them its own special characteristics or powers. But it must be admitted that to find where the dividing line should be drawn between different faculties or regions of the mind is a difficult business. Psychology has no sooner drawn them

on one pattern than it begins to feel their inadequacy and to replace them by others; and the psychologists who impress us as most alive to the complexity of the problem are the most ready to admit that sharply cut distinctions are here out of place. The ideal terminology would be one that would do justice to the way in which the various elements of the inner world interpenetrate and colour one another; and would yet provide a definite scheme, in terms of which the relative value of these elements either for knowledge or for conduct could be assessed. But such a terminology is not easy to find.

In this predicament the best that we can do may be to note some of the main distinctions which seem to present themselves as we look at the facts, without feeling too confident that we can bring them together in a symmetrical view of the whole field. One such broad distinction has already confronted us in our study of the problem of sense perception. We distinguished between an outer and an inner region of the mental world: an outer region containing those elements which provide the data for our picture of the public physical world, our sensations or our perceptions; and an inner region, about which we found it then sufficient to say that it contained the mind's activities or contents other than these, and that it appeared in its nature more private, personal, and subjective. We have now to consider a second distinction which cuts across this first one, and which is no less important for that part of the problem of knowledge that now lies before us. There is a region in the field of awareness, or a mode of the mind's activity, in which the mind has before it beliefs or propositions, and views its knowledge in terms of these; there is another region within this total field, another mode of the mind's activity, in which knowledge means immediate awareness of a mental content that does not seem to consist of propositions or to depend on them. In contrasting the terms 'thought' and 'feeling' we mean to express the distinction between these two regions or modes of activity.

Where then are we to draw the boundary between these two regions, and how are we to conceive their relation to one another?

A first answer might be that thoughts are those contents of awareness which are expressed in language, feelings are those contents which are not thus expressed. This answer seems to put us in the right direction, and yet perhaps it hardly takes us far enough. Language is only an instrument, though an immensely powerful

one; what we want to get at is the purpose for which this instrument was forged, the aim which language helps us to achieve; and this we may define as the representation of the absent by the present. Thought is the function of a present feeling by which it represents or stands for something beyond itself; perhaps for other feelings remembered or supposed in past or future experience, perhaps for entities conceived to exist beyond experience; but as those conceived entities must themselves be understood in terms of feelings remembered or imagined, all comes back in the end to the representation of absent feelings by present feelings.

This representation of the absent by the present can be effected apart from language, as happens when a sight or a scent apprehended in the present can call up, without the need for words, the memory of an occasion when a similar sight or scent was apprehended in the past. In such a case we might naturally be said to think of the past occasion, though no words should come into the mind; and memory of this kind may be placed on a border line between thought and feeling. And the same may happen in moments when we anticipate the future, or in the play of fancy or imagination. But all this is the border line of thought and no more; and we shall probably draw the boundary in the most serviceable way for our present purpose if we keep to our first answer, and restrict the sphere of thought to those moments when the memory, or the feeling whatever it may be, clothes itself in words, or has at least reached the point of seeking for the right words in which to clothe itself.

If we use our terms in this way, feeling appears as the wider category within which thought is included. Every element of experience is a feeling, in so far as it is itself; a thought is a feeling which stands for something beyond itself, and more particularly a feeling which takes the form of words. So far we seem to have come on a clear line of distinction between the two; but here, as so often when we seek to explore the inner world, we find that a distinction which at first looks clear slips through our hands as we try to grasp it. The two elements of the inner life which we have been contrasting appear when we examine them more closely to turn into one another. It is plain to begin with from what we have said, that thought has to be interpreted in terms of feeling. To express a thought in words we must understand what the words mean, and our understanding of this must be derived from our knowing or having at some time known by direct awareness, or by sentience, or by taste, some sensation or other feeling in

immediate experience. And if we look at the problem from the other side, we may say with no less truth that our feelings, or many of them, include an element of thought, in so far as they bear in themselves the results of past thoughts and have a quality which they would not have if those thoughts had never been. Our sensations, which are the class of feelings most susceptible of analysis, seem to range themselves naturally in a scale according to the proportions of thought which they contain. Such a scale would have at one end the feeling of physical pleasure or pain, which may be pure sensation, having its being in itself and speaking of nothing beyond; and it would rise from this through crude massive sensations such as those of contact and resistance, which speak of an outer world though they inform us about it vaguely, up to the refined discriminating sense of sight, which exhibits a visual world minutely articulated into distinct objects. And this articulation into objects, though it comes to us as given in the immediate sensation or feeling, is in fact dependent on a long series of other sensations in the past and of thoughts which have interpreted those sensations.

When then we try to analyse a feeling, we find that the work must be done in terms of thought; when we try to analyse a thought, the work must be done in terms of feeling; and either process can be carried indefinitely far back. Something contributed by each of them is to be discovered in every moment of experience, or, we may almost say, in every portion or element of experience that can within any moment be distinguished. Yet there is a difference of emphasis, according to whether in a particular moment or portion of experience the aspect of thought or of feeling is the dominant one; and it is this difference of emphasis which perhaps corresponds best to the contrast which the two terms are commonly used to express, either in everyday speech or in philosophical discussions. When in this sense we speak of a feeling, we mean to indicate a moment or an element of experience in which the aspect of feeling is dominant and the function of thought is ancillary, helping us to understand the feeling inasmuch as we compare it or classify it or distinguish it from other feelings. And when we speak of a thought, we mean to indicate a moment or an element of experience in which the feeling represents or stands for something beyond itself, and attention is paid not to the feeling in its own quality, but to what it stands for.

This representative quality of thought is what will concern us

when we come to consider the second of the two main modes of knowing which we distinguished earlier, the knowledge of propositions. Looked at from one side this mode of knowledge is a form or type of internal knowing; it is awareness of a particular class of contents of the inner world, of words, of the combinations of words into sentences or propositions, and of their meanings; together with a belief that some of these propositions have that peculiar quality called 'truth' whose nature we are shortly to examine. Looked at from another side, this mode of knowledge is the means of access to a second and more extensive world; a world which far outranges, or seems to outrange, the small inner world of the individual inquirer; a world in which multitudes of things and persons, vast expanses of space and time, seem to be revealed to him. But are these vistas and the forms that people them real existences outside himself, or are they all imagination? Here is one of the great questions bound up with the problem of truth. While the sceptical attitude is maintained, the whole content of this world of propositions may be imaginary only, as indeed much of it will be recognized to be even after the return to common sense. The world of propositions, if it is that and no more, cannot guarantee existence or reality as common sense understands these; the words 'existence' and 'reality' may be found in it, but what they signify need be only a place in a system; they leave open the question whether the whole system has a reference to anything outside it.

Existence in the true sense has so far not come within the sphere of awareness; whether there is existence, as opposed to thought about existence, is still problematic. It is implied in the background to this extent, that a soul or mind must exist, if for a moment only, for awareness or sentience to be possible, or for any proposition to be conceived or understood. Yet the soul or mind, which exists, need not be thought of, probably will not be; what is thought of need not exist. But a new factor is introduced if the inquirer assumes a trust in personal memory. It is only the world of the moment, the content of the first circle (to use our earlier analogy) that is known by the mode of inner knowing in the full sense of that term; and as we have seen, it is possible to hold that this world alone is knowable and that all else is doubtful. But anyone who trusts memory, as even the most radical sceptic trusts it except in a mood of sustained philosophical doubt, believes himself in the act of remembering to have access to a circle wider than this, to the world of his whole past experience; and when he

attempts to view his inner world by introspection, it is this total experience, not the moment's experience only, that he conceives himself as able to survey. The knowledge of the past given in personal memory thus has a double aspect. It has the quality of external knowing in that it claims to reveal a world beyond immediate experience, and thus carries with it a belief which it is possible to doubt. It has the quality of internal knowing in that the world which it claims to reveal is continuous and homogeneous with the world known in immediate experience, and possesses contents of the same order, percepts, feelings, thoughts, emotions.

It is this second way of looking at memory, as a form of internal knowing, that is likely to be more prominent in discussions on the theory of knowledge, since introspection conceives itself to draw its material not from the moment only, but from the whole of remembered experience; it is natural to look at the question in this way, and it need not be misleading. We cannot, if we are attempting a serious discussion of the theory of knowledge, take for granted the belief that a material world really exists, since questions as to this have for the last two centuries formed a central problem of philosophy; we ought not to take for granted the belief that other minds or selves really exist, since this belief depends for common sense on the belief in a material world and is inextricably bound up with that. But the belief of each of us in the reality of his own past may be assumed valid without prejudging the question as to those other two beliefs, since it is logically prior to either of them. We shall not then confuse the main issue now before us, if at this point we take the essential trustworthiness of memory for granted and treat memory as a form of internal knowing. Only let us bear in mind that, if we probe far enough, memory too must rank as external knowing; so that a Realist philosophy, which has faced the fact that it must go beyond immediate experience when it trusts the belief in a remembered past, need not find itself too much at a loss when it has to face the further step to the belief in a material world.

It is this further step that we have next to consider; the step by which the inquirer passes from the second circle to the third circle, from the belief in his own experience to the belief in a material world beyond that experience. At this point he comes upon a break, abrupt and sharp; on one side of it lies the mental world, whether momentary or persistent, on the other side lies the material world, not homogeneous with this and not continuous

with it. This at least is how the position looks, and has always looked, to historic common sense; but we are here met with the paradox that the dividing line, which for common sense appears so clear and definite, becomes under the scrutiny of critical thought more and more difficult to discern, and may seem in the end to vanish altogether. Reflection on this paradox will bring us to the problem, which we must reserve for later discussion, as to the relation of the three worlds that we have termed 'perceptual', 'material', and 'physical'; but we have some further ground yet to cover before we are in a position to attack this. We must be content for the present to note that it is at this point of transition from the second to the third circle of belief that the problem of knowledge becomes most entangled. On the hither side of it lies the world of experience known by internal knowing in the wider sense of that term; on the further side lies the world of outside reality, which must be known by the external mode of knowing, if it is to be known at all; and whether this mode of knowing is possible and if so how, are questions that must at this point be faced.

The question as to how is still before us. But an inquirer who has followed the line of thought we have traced will be content at this point to say that, however a power of external knowing is to be justified, he is sure that he in some measure possesses it; he is sure that he can know by direct acquaintance persistent and independent material things, among which for the present he may be content to include other persons. The awareness of sense data or sensibles, when supplemented by the memory of similar acts of awareness in the past, does not terminate, as it logically might, in a certainty about the content of his own experience; it gives rise to an assurance, entertained at first in the form of taking for granted, and later in the form of explicitly believing, that the sense data somehow are, or are part of, or indicate the presence of, a material thing, and in some cases, of a person existing independently of its being perceived or thought about. The details of this have been discussed earlier and need not now be repeated. What may be noted here is that this kind of knowledge is at once complex and, as we have termed it, direct. It is complex in that it includes a belief about a reality outside experience, and that its quality depends on this belief; it is direct in that this belief neither is arrived at by inference nor can be justified by inference, but must be accepted as justifying itself. And a further point to note is the way in which this knowledge, once it is accepted as valid,

modifies the nature of the knowledge which the mind already conceives itself to possess as knowledge of a system of propositions. The particular beliefs included in that system retain their content, and their order and coherence within the system; what is added is that the background on which the system is displayed is now not merely the thought of the individual inquirer, but a material world independent of his thought.

In what we have been saying so far as to knowledge of persons and things we have had in view a knowledge arising directly out of sense perception. If however each of us were confined to knowing those portions of the material world, whether things or persons, with which he could in this sense have direct acquaintance, his knowledge of that world would be very meagre. And any philosophy which goes beyond Subjectivism assumes that he is not so confined. What carries him beyond those limits is the kind of knowledge which in contrast to knowledge by acquaintance we may call 'knowledge by description'; using the terms 'acquaintance' and 'description' here not in the sense given to them by Russell, but in the alternative sense in which we defined them a few pages back. The particulars comprised in this knowledge are drawn from the knowledge of propositions, which the inquirer found himself possessing even while he still supposed his knowledge confined to his own inner world; but they present a new aspect in the light of what he has come to regard as knowledge by acquaintance. In the system of propositions, taken as that and no more, the true notion of existence was not contained; if the words 'existence' or 'reality' appeared there, all that could be meant by them was that the entities to which they were applied fitted coherently into a certain place in the system. But once he has determined that he knows some things by acquaintance and that he can trust his belief in their existence, the true notion of existence is introduced into the system; and once it is there, it will extend itself by analogy, if the system is to be coherent. If the mountain which he sees in front of him and which he finds marked in his map is a real object in the material world, so too, he will suppose, is the mountain which he has not yet seen, but which is shown in his map as lying a little further off. So again with persons; the reality of the persons whom he has met and known by acquaintance guarantees a reflected reality in the persons he has only heard or read about. And thus things and persons known by description take their place side by side with things and persons

known by acquaintance on an equal footing in the world of common sense.

They differ only in their mode of being known, yet this difference is important enough to justify us in finding different names for the two modes. The difference is important, because the assurance given in direct acquaintance is the ultimate guarantee for our belief in the reality of the material world and of other persons; it is important again because knowledge of things by acquaintance springs out of an immediate awareness of sensibles, and can thus supply the foundation on which knowledge of things by description needs to rest. Knowledge of a thing by acquaintance carries with it a knowledge, arising from immediate awareness, of the qualities of the thing; part of this knowledge, though hardly the whole of it, may find expression in propositions at the time when it is gained; but whether or not it is so expressed, it can provide a reservoir or storehouse in memory, from which propositions about the thing may later be drawn. In knowledge of a thing by description the first stage is absent; such knowledge begins as a knowledge of propositions, though this too may go to provide a storehouse in memory, from which it is possible again to draw propositions corresponding more or less closely in their general effect to the original ones.

Language makes a distinction between these two modes of knowing, by saying in the one case that we know a person or a thing, in the other case only that we know about them; know perhaps a great deal about them, yet not in such a way as would entitle us to say that we know them. The biographer who has written the life of someone he never met in the flesh may have studied all that he could find out about that life, and may know in detail the appearance, habits, thoughts, likes, and dislikes of his subject so far as they could be learnt from the records. Yet he would hesitate to say that he knew the man, while this might be said naturally by the dead man's grandson, who may have seen him only for a few times in early childhood, and who may never have troubled to learn the story of his life. And so too a claim to know a city or a countryside might be justified by a brief visit, but hardly by the most careful study of books and maps alone.

Yet the distinction drawn by common language between knowing a thing and knowing about it is not quite clear cut. If a man were said to know France we should expect this to mean not merely that he had visited the country in person, but that he had taken pains to find out something of what men and books could

tell him about it; that he knew it, that is, not merely by acquaintance, but by description too. And this tendency may go still further when it is a question of entities which in their nature cannot be known by acquaintance; these can be said to be known, not only known about, as we may say that a man knows the history of the later Roman Empire or the zoology of the Crustacea.

With this we have concluded our summary of the chief modes of knowing as an individual inquirer might pass them in review, looking at his knowledge from the inside. We need only repeat here that the order of this review is not put forward as an account of the way in which knowledge may be presumed to grow in fact; it is an account of the way in which an inquirer, taking the total system of his beliefs as he finds this at any moment, might attempt to justify some of its main features to sceptical questioning. But now that we have supposed him to return in this way from his sceptical inner journey to the attitude of common sense, we may consider the problem of knowledge from a different side. We may ask, How does this knowledge which he conceives himself to possess look from the standpoint of another person inhabiting the same common-sense world, or what supposition can he himself frame about the knowledge possessed by other persons? And here we come on still a further sense of the word 'knowledge', which we touched on earlier, but which in the present connection we have so far not mentioned. 'Knowing' means knowing how to do.

This side of knowing has received a good deal of attention in some of the more recent discussions in the theory of knowledge. By several schools of thought, such as the Behaviourist, Instrumentalist, or Pragmatist, it is presented, with varying degrees of emphasis and prominence, as the most important aspect in which knowing can be thought about. This marks a sharp break with the older philosophic view, in which knowledge was regarded as a faculty to be studied from the inside by introspection. Yet this view of knowledge from the outside, while it may be new to philosophy, is not new to language. Common sense has recognized all along that there is a sense of the verb 'to know', in which it can be applied to beings which need not be supposed to have a capacity for introspection nor perhaps even for sentience. 'The ox knoweth his master's crib'; 'the sun knoweth his going forth'; this usage of the word has its place in English, and we need not be surprised that a place should be found for it in philosophy too. This sense of 'knowing', natural to common-sense thinking, was

not much taken account of by the traditional philosophy, which for the most part carried on its inquiry into knowledge from the introspective side; but it becomes important when the attempt is made to study the phenomena of human or animal behaviour. The thought implied in it is that knowledge is attested by, may perhaps even be held to consist in, the power to achieve successfully a course of action. And this way of conceiving the phenomenon of knowledge, as viewed from without, links up with the way of speaking about knowledge, which we came to at the end of our survey of knowledge as viewed from within. A man is said to know a subject, such as the history of the later Roman Empire or the zoology of the Crustacea, when he shows that he can do something about it, pass an examination or give a lecture or write a book.

The account of the various modes of knowing or senses of the word 'knowledge' which we have here given is complicated and unsymmetrical, and we may seem to have paid in it too much regard to accidents of language. Ought we not, it may be asked, to have been able to find some single clear principle which should guide us through the tangle? Is it possible to disengage some primary sense of the word to which all forms of knowing may be reduced or from which they may be derived? So philosophers are often inclined to argue, following that propensity of thought which seeks to simplify at all costs. We may reply that here as elsewhere the accidents of language may in some ways fit the complexity of the fact better than does the drastic simplification of philosophers; and this reflection may be confirmed if we consider briefly two of the main lines along which the attempt to simplify has been made.

On one side we have the drastic simplification of the Instrumentalist way of thought and the still more drastic simplification of the Behaviourist. The Instrumentalist view would tell us that knowing as a mental function shows itself to external observation as a power to do; when the power to do can be observed, knowledge as a mental function may be presumed to be at work; where no such power is observable from the outside, there can be no case for speaking of knowledge. Outer knowing, in the sense of successful action, is the sign, and the only sign there can be, of inner knowing. And the Behaviourist view, going still further, would tell us that outer knowing in this sense is all the knowing there is; that the only meaning which can be assigned to the word 'knowing' is the power to carry through a course of action successfully.

A drastic simplification of an opposite kind is proposed by the Idealist philosophy, or by one leading form of it. The only true meaning that can be given to the conception of knowledge is for it a knowledge which finds expression in propositions or, to use a term which this philosophy prefers, in judgments. Whatever else appears to be knowledge is an imperfect or confused form of this. Immediate awareness, whether of sensation or of percepts or of any mental content other than judgment, is essentially imperfect; it is something that aims at the judgment form without being able to attain it. Knowledge of things, whether the things are what common sense would call 'material things' or what it would call 'persons', is essentially confused; it entails a grouping of judgments round appearances that are in their nature unreal, instead of by the logical connections which go to make up wider and wider systems of coherent thought. This side of the Idealist doctrine, in which the unreality of things and persons is emphasized, is not equally prominent in all the expositions of that philosophy; but it is plainly present in the arguments of some of those writers who have been best able to display the articulation of Idealist thinking; and it seems essential to the Idealist view of the meaning of truth, which we shall come to a little later.

With the simplification proposed by the Behaviourist or Instrumentalist line of thought we need not at this stage of our inquiry further concern ourselves. Either of those views may have something relevant to say, at least as indicating a problem, perhaps as suggesting a real though partial solution to it, for a philosophy which has advanced so far in its metaphysical construction as to hold itself entitled to the belief in a material world. They depend, however, on this belief for any significance they have; and we must rule them out of our discussion at this stage, if only on the ground that we ought not to build our theory of knowledge on a controversial metaphysical dogma. But the Idealist theory of knowledge goes further back; it claims and it intends to go back as far as it can; and when it tells us that the only knowledge worth the name is the knowledge of propositions, it is raising a question that is primary not only for metaphysics but for theory of knowledge. And we are thus brought back to the problem of what we mean when we speak of 'knowing propositions', and to the further problem which is bound up with this of what we mean by 'truth'.

CHAPTER XXII

THE WORLD OF PROPOSITIONS

How is the knowledge of propositions, which we are now to discuss, related to the knowledge of things which we have been considering? Knowledge of propositions is knowledge about things, or at any rate it is for the most part this, if we allow a possible exception for the propositions of pure logic or of mathematics; and the things which it may be about are things in a wide and general sense of that word. A proposition in its commonest and most typical form asserts about a thing that it possesses some quality or characteristic; asserts, as the traditional logic puts it, a predicate of a subject. Whether all propositions can be reduced to the form of subject and predicate, as that logic was disposed to assume, or whether there are propositions not so reducible, is a question as to logical form, important in itself, but not needing to be considered here. It is enough for us here to take this form as typical, and to note that the things about which we conceive ourselves to know propositions may be either things, such as material objects or persons or places, which we conceive ourselves to know in the external manner of knowing, or things such as sense data or feelings, which we know in the internal manner of knowing. Thus the contents of the two worlds, inner and outer, or private and public, which if we think of ourselves as knowing things we seem to know in two such different, though such closely connected, manners, appear, if we think of ourselves as knowing propositions, to stand side by side on an equal footing in what we may call a 'world' of propositions.

When we look further into the relation which holds between our knowledge of propositions and our knowledge of things, two main points seem to emerge. One is that any proposition that we know is itself a thing, in the wider sense of the word 'thing', which we know by the internal manner of knowing. A second is that all our

knowledge of propositions is derived from and rests upon a knowledge of things which are not themselves propositions. A proposition, as the term is commonly used, is something that is expressed in words; or if we use the term more loosely, as perhaps we may, we must at least mean by it something that can be or might be expressed in words; for it is only if it is expressed in words that we can usefully talk about it or can be said to entertain it. To entertain a proposition we must be aware in some sense both of the words that compose it and of the meaning of those words; and our knowing what the words mean must be derived from our knowing or having at some time known by direct awareness or by sentience or by taste some feeling in immediate experience. It is only in virtue of this kind of knowledge that the proposition as a whole can be said to have a meaning for us.

We have been led at this point to use the word 'knowing' as applied to propositions in two different senses, which must not be confused together. To know a proposition, in the sense in which knowing propositions is contrasted with knowing things, means to have a justified belief that the proposition is true. But this kind of knowledge rests on another kind of knowledge in which the proposition itself is known as a thing; that is, it is entertained as significant and is understood, though it may be left uncertain whether it is affirmed or doubted or denied. To use the word 'knowledge' in this last sense, when what is meant is that a proposition is entertained and nothing more, may seem confusing, but it may help to bring out a point worth remembering: that the fact of being entertained and understood is the necessary foundation for anything further, if the words which express a proposition are to be more than a set of meaningless noises or an echo of what other men have said. If we are to give an adequate account of knowledge of propositions, we must understand what it means to question a proposition or to doubt it or deny it, as well as to affirm it. In our dealings with the world of propositions there is then much ground to be covered, which may be said to need knowing of a kind, before we come to that reasoned and justified form of belief, which deserves in the full sense to be called 'knowledge of a proposition'.

It is in this full and more proper sense, as meaning 'justified belief', that we shall understand the phrase 'knowledge of propositions' when used without qualification. Knowledge of propositions is thus a more complex notion than that primary knowledge of things which we have called 'awareness' or 'internal

knowing'. When we speak of anyone as 'knowing a thing' in this primary sense, when we say that he is aware of a sense datum or a feeling, we employ a simple notion which it does not appear possible to analyse further. When we say that he knows a proposition, that he knows this or that about a thing, we imply the fulfilment of several conditions, which are themselves not simple, but introduce some further difficult notions. The conditions which are implied seem to be of this kind. We mean first, that he entertains the proposition, in the sense that he is aware of it and attaches a significance to it; second, that he believes the proposition to be true, or to put the same meaning more shortly, that he believes it; third, that he believes the proposition for a sufficient reason; fourth, that the proposition is in fact true.

The first of these conditions relates the complex notion which we are here considering to the notion of simple awareness. When we say that a man entertains a proposition, we mean that he is aware of a sentence or set of words, and that he is aware of them not merely as sounds or as marks on paper, but as having a particular significance; that he knows by taste their meaning, or the feelings which are associated with them and which they call up. But to entertain a proposition is not to know it, or even to believe it. We have to distinguish knowledge of a proposition from various other forms of mental activity with which it may be contrasted, in respect of their degree of certainty or their justification, such as belief or hypothesis or questioning or doubt or fancy. Something has to be added to the act of entertaining a proposition to convert it into believing; something more has to be added to the act of believing to convert it into knowledge. And with this we are brought to the other conditions mentioned above.

When we introduce the notion of belief, we come to more difficult questions. Belief in itself seems to be one of those simple notions which we must understand by instances, not by defining them in other terms. But the notion of belief carries with it in some measure the notion of truth; to believe a proposition and to believe it true are surely one and the same thing; and the notion of truth is not one that a theory of knowledge can dispose of by calling it simple and indefinable. Here seems a clash of conflicting considerations; but perhaps we can as a first step reconcile them by distinguishing between belief as a psychological fact and belief in its logical implications. We all feel sure that we know what is involved in the state of believing a proposition to be true, and we

continue to feel sure of this even when we have realized that what is meant by 'truth' is one of the most vexed questions in philosophy, and that the more we think about it the harder it is to find an adequate answer. We know by taste the feeling of belief as a fact of experience; we may try to describe it as an absence of unrest, a state of quiescence or finality in a certain region of our thought; a state of quiescence which seems to bring with it an implication that it is somehow justified. Looking at the problem in this way, we may perhaps conjecture that believing is the natural and primary mode of entertaining a proposition, from which the other modes, such as doubt or questioning or hypothesis, are derived by criticism; and that the notion of a proposition as an entity which can be entertained in these various other modes is abstracted out of the primary notion of belief. What it is that can or should justify the state of quiescence we call belief may be hard to determine; but to understand belief as a feeling we need not know the answer to this question; we can wait for the answer till we consider what are the conditions which must be added to make a belief true in fact.

Belief as we have just described it is a vague notion covering a wide and indefinite range between the state of merely entertaining a proposition and the state of full knowledge. If we are to define it more closely, we must go on to consider what are the further conditions which are needed to justify belief and convert it into knowledge. With this we are brought to the third condition mentioned earlier: that if a proposition can rightly be said to be known, it must be believed for a sufficient reason. And here we may first ask whether this condition is necessary; might we not hold it sufficient to constitute knowledge that a proposition should be entertained and should be believed to be true and should be true in fact? A little reflection seems enough to show that, however hard it may be to say what should count as a sufficient reason, some such condition is required and cannot be dispensed with. A man may believe beforehand that some future event, a death or the winning of a race or a change in the weather, will fall out in a particular way, and this belief may accord with what happens and so turn out to be true; and yet we should not say, at least most of us would not, that he had known the truth about it all along, if he only believed this because he had dreamt it or been told it by a gypsy. And this is not merely because we should think it inappropriate to speak of knowing in regard to a future event; we should apply the same principle to a belief about some past or

present matter of fact, however true it might be, if the belief were held on no ground at all or on a ground that we conceived to be quite inadequate.

What, for instance, should we take to be a sufficient reason for holding the belief that the planet Mars has two moons? We should feel safe in saying that an astronomer knew this, if he had come to believe it through making the observations and verifying the calculations which have led other astronomers to accept it in the past; we might allow that a man knew it, if without studying the evidence for himself he has come to believe the statement because he found it in a recognized scientific text book; we should not say that he knew it, if his only reason for believing it was that he had read in *Gulliver's Travels* that it was a fact known to the astronomers of Laputa. What would amount to a sufficient reason for any particular belief might often be hard to determine, and the inquiry pursued into detail would take us far into the methodology of the various sciences. But we seem able at this stage to say broadly that the reason must fall within some class of reasons, which we accept in general as sufficient reasons for that kind of belief; and our general reason for so accepting them must be that we have somehow satisfied ourselves that as evidence for that kind of belief they are more likely to lead us right than to lead us wrong.

We must note that the phrase 'sufficient reason', as we have here used it, is to be taken in a different sense from what the phrase has sometimes stood for in the history of philosophy. The Principle of Sufficient Reason, as this was formulated by Leibnitz, who was its first or at any rate its best known exponent, was a principle about being. 'We judge', he says, 'that no fact can be proved true, unless there is a sufficient reason why it should be so and not otherwise, although those reasons usually cannot be known to us.' Here we are presented with a proposition of metaphysics, which rests directly on Leibnitz's central metaphysical doctrine, that this world is the best of all possible worlds, and that everything that happens in it is ordered by the idea of the good. But the principle of sufficient reason, as we have used the phrase above, is not a principle about being, about the conditions which made a fact to be so and not otherwise; it is a principle about knowing, about the conditions which may justify belief. It depends on no metaphysic, but has its place in a theory of knowledge. It says only that if a belief is to rank as knowledge, it must be held for a sufficient reason; that to be justified in asserting any proposition to be true, we need to have a sufficient reason for making the

assertion. And this principle is one that seems so reasonable in itself, and so important to keep in mind, that we want a short phrase to express it; and as it is hard to find other words that will express it so well, we have ventured to use the phrase in this sense, though it is different from the usage more commonly accepted in the past.

The fourth condition which must be satisfied, if a belief is to rank as knowledge, is that the belief must be true. But before we are in a position to discuss this and to ask how we are to understand the notion of truth, we must say something about the notion of meaning or significance. If a belief or proposition is to be either true or false, it must first have meaning or significance; in what does this consist?

We seem obliged to think of the meaning of a proposition in two different ways, which we may distinguish as psychological and logical. The psychological meaning is the sum total of the associated thoughts, images, memories, expectations, which the proposition, on any occasion when it is stated, arises from in the mind of the particular person who states it, or which it may call up in the mind of a particular person who hears or reads it. This psychological meaning is peculiar and unique for each individual at each moment. But if this were all we could say about meaning, we should be left with the question whether it is possible for two individuals ever to mean the same thing by a given form of words, or for a single person ever to mean the same thing when he uses this form of words at two different moments; whether in fact communication or even consistent thought is possible. And this question brings us to the notion of logical meaning.

Logic is the mental activity in which we think about thinking; it has to begin by assuming that consistent thought is possible, and it does in fact commonly assume, though logically it need not, the existence of a society of thinkers between whom communication is possible. It assumes then that inside this vague and shifting psychological meaning, which varies for each person and for the same person at different moments, there is or there may be a core of meaning which is identical and which can be communicated from one person to another. This core of identical meaning may at times be absent, as when two persons use the same words in such different senses that their minds entirely fail to meet. But unless and until reason is shown to the contrary in a particular case, it is assumed to be present; it is assumed that, however much the more or less

irrelevant fringe or context of associations is bound to vary, the relevant core of meaning may be supposed the same. It is this relevant core of logical meaning which is intended in the use of the word 'proposition', and it is essentially in relation to this logical meaning that propositions are said to be true or false.

We must try then to give an account of the nature of propositions which shall do justice to their twofold significance, logical and psychological. When we attempt this, difficulties and obscurities crowd upon us. The terms we have to use are vague and ill-defined. 'Propositions', 'judgments', 'assertions', 'statements', 'beliefs'; do all these terms mean the same thing or different things? Not precisely the same thing, it is clear, for they cannot be used interchangeably; yet they seem in their use to merge into one another, and to have a core of common meaning in so far as they are all conceptions to which the notions of truth and falsehood are relevant. The vagueness of the language we have to employ comes in part from the twofold sense in which a proposition or, to use an alternative term that here naturally suggests itself, a judgment, can be said to have meaning. On the one hand a judgment has to be thought of as something that is entertained by a particular thinker at a particular moment and that is coloured by the whole content of his mind at that moment. On the other hand it has to be thought of as something that can be the same for different individuals or for the same individual at different times. The two conceptions are hard to reconcile, yet it is harder still to see how either can be dispensed with. If we deny the first or psychological meaning, the judgment seems removed into a purely logical region, in which it loses its connection with the world of actual happenings. If we deny the second or logical meaning, how is communication, or even consistent thinking, to be supposed possible? We must admit then this twofold aspect in judgment; it is not merely that the word is used, as words so often are, in two distinguishable senses with different applications; it is that there seems an inherent ambiguity in the sense in which we most want to apply it. We may hope that analysis will some day be able to clear up this tangle; we must doubt whether the most careful analysis has been able yet to do so completely.

Of the terms we have mentioned, 'proposition' belongs rather to the general or logical aspect of the duality, 'belief', 'assertion', and 'statement' to its particular or psychological aspect. The term 'judgment' has the advantage, or disadvantage, that in it the two aspects are about evenly balanced, and it came to us for this

reason as the natural word just now when we were trying to bring the two together. But the main purpose that we are concerned with at this point is the problem of the meaning or significance of propositions as bearing on the problem of truth; and for this purpose the logical aspect is the more prominent, and the term 'proposition' will be the more appropriate term to use. How then are we to think about the significance of the world of propositions taken as a whole? And first let us ask, Is there any good reason for speaking of a 'world' of propositions, as though it were another world side by side with the world, or the several worlds, of reality or of real things, which we have so far had in view?

The answer must be that the world of propositions is not to be thought of as a further world of reality, co-ordinate, say, with the worlds of mind and the world of matter; it is not an additional world standing side by side with these, it is an alternative way of knowing their contents. Those other worlds, all of them, exist in time. The inner world of each thinker exists for him indubitably in the moment in which he is aware of it. The outer world of things, including both the world of material things, which he supposes himself to know by means of sense perception, and the other minds, which he supposes himself to know by means of that and of something more, must be conceived by him as persisting through time, if it or they are to be more than a fancy of his own. And at the point we have now reached it may be useful to think of these several worlds, mental and material, as included in a larger whole which we may call the 'actual' world; a whole which may be regarded either from the standpoint of each individual, as including both the inner world of his own awareness and the outer world which he believes to exist beyond this, or from an objective standpoint as including both the material world and the several mental worlds.

The world of propositions then is something of a different order from the actual world, or from any of the worlds which that includes. Yet it is hard to avoid speaking of it as a 'world', and we have already more than once in the course of our inquiry been led into using such language. We were led into this way of speaking on an extended scale when we tried to envisage the position of an inquirer who should carry to its furthest point the method of philosophic doubt; such an inquirer, it seemed, would find himself in face of two worlds, a world of reality, now reduced to the content of his immediate experience, and a world or system of beliefs and ideas, in which all other supposed realities must find a

place as ideas, if it was to be possible for him to estimate their claim to be real. This system of beliefs and ideas provides the setting within which the mind's activity in affirming or questioning or doubting propositions has to be carried on; it is a whole within which thought can pass from one proposition to another and from one great region of propositions to another, and there is room in it for all that can be said about anything that can be either known or imagined. And this whole, in which all the work of discussion has to be done, and which is in this manner continuous, may naturally be thought of as a world of propositions.

But this world of propositions, if it can be said to exist at all, must be conceived as existing in a different way from the actual world or worlds, of which it is a counterpart. How are we to express this difference? To begin with we can say that all these different worlds and their contents are alike in that all have being; this most general of all predicates we seem bound to ascribe to any entity whatsoever that can be spoken or thought about. Should we then say that the world of propositions and its contents merely have being, or that they merely are, while the actual world exists? To phrase our distinction in this way however seems on the one hand to assign to the verb 'to be' a more specific sense than suits well with common usage. And on the other hand, it is doubtful whether we can altogether avoid the word 'existence' in speaking of the world of propositions; and this for two reasons. First we have to bear in mind the double aspect of propositions; in their psychological aspect, as entertained at particular moments by particular speakers or thinkers, they exist in the sense in which any events in time or characteristics of events can be said to exist; it is only in their logical aspect, as making up a world of propositions independent of particular minds, that existence in this sense is to be denied them. And there is yet another reason; there is a manner of conceiving the world of propositions, with a long history in philosophic thought, that would ascribe to it, or to some of its contents, a mode of being which, if it is something other than actual existence, is something more than being in the most general sense of that word.

We have then two lines of distinction to find room for in our answer to this question. We have to distinguish first between the manner in which the actual world on the one hand and the world of propositions on the other hand can be conceived to exist; we have to distinguish secondly between two different manners in which the world of propositions or some of its contents can be

conceived to exist. And in trying to formulate these distinctions we are brought to the problem as to how these different modes of existence stand in relation to time. The world or worlds which we have called 'actual', the material world and the several mental worlds, exist at a particular moment or succession of particular moments in time. The world of propositions in contrast to these is to be conceived as timeless. But does its timelessness mean something less than existence in time, or something more? It is at this point that the two manners of conceiving it which we spoke of above part company.

According to the first of these conceptions, which may be taken as seeking to formulate the natural assumptions of common sense and to do no more, the contents of the world of propositions are thought of in some such way as this. Propositions exist in the actual world at those moments when they are entertained by some particular mind; at other moments they do not exist either in the actual world or anywhere else; yet they must be held to retain somehow their identity through these intervals of non-existence, so that we can say that a proposition asserted by one speaker today may be identical with a proposition asserted by the same or another speaker yesterday. How these assumptions are to be brought together in a consistent doctrine of propositions is a problem which this way of putting it states without attempting to solve; all we maintain here is that something like this is implied in the ordinary manner of speaking and thinking about propositions or about language. But there is a second way of viewing the problem which we must at this point briefly touch on, though any full discussion of it lies beyond our present purview. The world of propositions, or some part of the contents of that world, may be conceived as having a mode of existence or a mode of being that is not limited to particular times and is not dependent on the existence of particular human minds. If we speak of this as a single conception we can do no more than describe it in this negative language, for in so far as it seeks to be more positive it branches out into different forms. The entities thus conceived as possessing a timeless existence may be supposed to possess it, either as members of a self-subsistent ideal world, or as the thoughts of God, or as the contents of an objective or absolute mind. In one or other of these ways, or perhaps in some yet other way, they are conceived as existing or subsisting not in time, but through time and perhaps beyond it. These ways of filling out the conception, different as they are, provide the essential need which this conception aims at providing:

a habitation of some kind for propositions and concepts, outside the moments at which they are entertained by particular minds, and outside the limits of time within which the existence of human minds as we know them is contained.

How far this conception in one or other of its forms might solve the difficulties we have mentioned we do not here inquire; we may guess perhaps that it could solve some, but would raise others. The point relevant for us here is that this way of conceiving the problem brings us to a doctrine that is not merely logical but metaphysical. It may be presented as arising out of the logical difficulties we have mentioned; it may be argued for as the only adequate solution of these difficulties; and it is perhaps along some such line of argument that the most sustained and impressive attempts to derive a metaphysic from purely logical premises have been put forward in the past. Yet we must take it as a fact that none of these attempts have so far carried general conviction to logicians; and it seems likely that they have convinced only those who were disposed beforehand to accept the metaphysical doctrine on other grounds.

Leaving then for the present on one side any attempt to give an account of the world of propositions in terms of a disputed metaphysical doctrine, let us ask what can be said about it in terms of what we may take to be the minimum assumptions of common sense. And first, what is the most suitable or least unsuitable phrase that we can find to express the mode in which this world and its contents have existence or being? We find it sometimes said that they do not exist, they subsist; but this word, though it is often now used without any implication of the metaphysical doctrine mentioned above, seems to descend from some form of that doctrine, and to be not well chosen if that doctrine is meant to be excluded. It suggests by its sound and affinities the notion of a mode of being which is substantial or super-substantial, and this, if we are starting only from the assumptions of common sense, is just what we ought to avoid; what we want to indicate is a mode of being not more substantial than existence, but less so.

We have been led in default of anything better to use the term 'schematic existence' as the least unsuitable that we can find for the purpose in hand. 'Existence', it may be said, is a word that in strictness should not be applied, even with an adjective, to entities which we conceive as having only this mode of being; but it seems hard to avoid it altogether. We find the most precise

philosophers using on occasion such a phrase as 'there exist good reasons', or alternatively, 'no reason exists', for this or that supposition. Yet it seems clear that the word 'reason' is here to be understood as meaning a relation which holds within the world of propositions, and it seems clear again that, if we are to interpret language quite strictly, the first of these assertions must be called false and the second irrelevant; the first false because reasons so understood are not things that exist at all; the second irrelevant because, if reasons never exist, their non-existence in a particular instance can tell us nothing about that instance. The word 'existence', we must take it, is in such phrases given a loose and wide extension which goes beyond its primary philosophic meaning; yet this extension has so much authority in general usage that we cannot well ignore it; and we may deal with the question in the best way if we allow the word a double sense, as we did earlier, and speak of 'substantial' existence when we need to make it clear that we are using the word in its primary meaning, and of 'schematic' existence when we have in mind its extension to such entities as concepts or propositions.

When then we say that a proposition has schematic existence, we mean that it stands for a group or class of judgments or statements or beliefs, which we must regard as different from one another in respect of their actual existence, in so far as each of them is entertained by a particular mind at a particular time; and which we regard as identical in so far as all take the same place or fulfil the same function in a system or order of thought. Thus the proposition 'two and two make four' has its definite place in the system or order of mathematical thought; the proposition 'York is north of London' has its definite place in the system or order of geographical thought; the proposition 'Nelson was killed at Trafalgar' has its definite place in the system or order of historical thought. These are all propositions which we believe to have been entertained on many occasions by particular minds; but we may take a further step, and ascribe schematic existence to a proposition which we can conceive as filling a definite place in some system of thought, even though so far as we know it may never have been entertained by any particular mind, as for instance propositions about numbers or about events in the past that may never actually have been thought by anybody.

The notion of schematic existence as we are trying to describe it is intended to express something that is assumed in our ordinary thought about language, and to be neutral in regard to any further

account of propositions which more searching argument might show to be justified. It need not exclude, though it does not imply, either on the one hand a metaphysical doctrine such as we spoke of above as to the subsistence of a world of propositions or of elements in that world; or on the other hand a further analysis, if such is possible, which would exhibit the logical proposition as a set of psychological propositions and as nothing more than this.

Speaking more generally, we may say that an entity has schematic existence in the sense here intended, if to think of it helps us in the task of ordering our thoughts about entities which we believe to have actual existence. We believe certain entities to exist in the actual or primary sense of that word; for the purpose of ordering our thoughts and beliefs about these entities we find it necessary to conceive other entities to which we do not in the same sense ascribe existence; or if to say 'necessary' is to say too much, we find at least that by conceiving them we are helped to order our thoughts and beliefs better; these entities which it is necessary or helpful so to conceive we regard as having a schematic existence.

The property of schematic existence as we have here tried to define it applies to the world of propositions as a whole and to all its contents; to the concepts out of which propositions are built or into which they may be analysed, as well as to the propositions themselves. Existence in this sense belongs to the logical propositions which are conceived as supplying the common element in a set of psychological judgments or beliefs; to the ideal circles or triangles, which we may find nowhere in the natural world, but the conception of which is necessary or helpful for ordering our thoughts about the particular imperfect circles or triangles that we do find; to the laws of nature which, whether or not they exist themselves, are necessary or helpful for understanding the particular happenings which exemplify those laws. The conceptions to which we ascribe schematic existence are not, like our sensations or feelings, entities that compel us to believe in their immediate presence by a compulsion which we may call inevitable; nor are they, as material objects and other minds are, entities that compel us, by a mode of compulsion, which if not inevitable is still decisive for common sense, to believe in them as existing in an external world. They are entities which by yet another mode of compulsion compel us or persuade us to believe in them as instruments requisite for ordering experience: any one of them might drop out of our thoughts if we could find a substitute to do its work as well

or better; but something of the kind we must have. The notion of schematic existence, though it came to the front as a crucial problem in the early days of philosophy, was not first invented by philosophers. It must have been familiar to common sense long before, almost indeed from the beginning of language, in use though not in definition; and it arose for common sense out of a practical need. The world of propositions, we may say, has its existence in theory, but its function in practice.

What then is the practical need for the most general and comprehensive of all this order of notions to which we ascribe schematic existence, the notion of the world of propositions itself? How are we to think of it, and how does it help us to think about our acts of thinking? We may to begin with conceive it as containing in its widest extension all possible propositions whether true or false. But this widest extension is too general to be of much consequence for practice. What is more important is to observe that we can distinguish within this total system of all possible propositions two other main systems, each smaller than it, yet each of immense range, which are in part separate and in part overlap. The first of these is the system of all possible true propositions. This system has a purely schematic existence; we can feel sure that vast numbers of possible true propositions, and indeed the far greater number, have never actually existed, never been entertained in fact by human minds; all those, for instance, which relate to events in the past or in the future that are beyond the reach of human knowledge or inference. Yet it seems to impose itself on our thought as a conception that can hardly be dispensed with; we need it as setting up a standard to which the particular propositions that we entertain and that we believe to be true are conceived more or less closely to conform. A second great system that we may distinguish within the totality of all possible propositions is the system of all those propositions, whether true or false, which have at some time or other been entertained by human minds. This comes nearer to being actual than either of those yet mentioned; it is a sum or aggregate made up of entities which have existed as events or characteristics of events in particular minds at particular dates in the past; its components are actual, yet it is ideal or schematic in its totality, for this exists only in its being thought of as an aggregate.

The system of all actual propositions is, it may seem, not one that it can be very useful to think of as a whole. Yet the growth

of human knowledge is a topic to which thought may naturally turn, and if we try to give any definite expression to our thoughts about this, what we find implied in it is something like a relation between the two systems that we have just distinguished; we are supposing that we can form some notion, however vague and faulty, of the totality of all propositions which have at different periods in the past been believed by human beings, and of the manner in which these have come with time to conform more or less closely to the totality of possible true propositions.

Within these main systems we can observe again a number of smaller systems, one or another of which may have practical significance for our thinking. We may distinguish to begin with two main lines along which the business of classifying or subdividing systems of propositions may proceed. One of these lines, which we may call the 'psychological' line, will be to classify propositions in accordance with the particular minds or groups of minds by which they are entertained. Following up this line we come upon a group or system of propositions which has an important place in thought, as representing what we have in mind when we use such a phrase as 'the body of present knowledge'. This may be considered to be the system composed of those among the propositions entertained by the best informed scientists or thinkers of the present time, which we conceive to conform most closely to the system of possible true propositions. The notions here employed, 'the best informed thinkers', 'the present time', 'conformity to the system of possible true propositions', are vague in the extreme, and we should find it hard to attach a definite meaning to any of them; yet some such conceptions we seem to have in mind, however vaguely, when we speak of the knowledge of the present day and suppose ourselves to mean something by such a phrase. And similarly we may have occasion to speak of the beliefs or of the knowledge of some set of persons in the past; and what we have in mind will then be the system consisting of the propositions which we suppose to have been believed by that set of persons, or, as the case may be, of those among their beliefs which we suppose to have conformed best to the system of possible true propositions.

The second main line along which systems of propositions may be ordered, and which we may call the 'logical' line, classifies them not according to groups of minds but according to departments of knowledge. Along this line we may distinguish a number of departmental systems, constituting the main branches of human

knowledge, mathematical, physical, biological, psychological, historical, and so on. This line of division cuts across any of those that we have mentioned above. The system of all possible true propositions, or the system of all actual propositions, or the body of present knowledge, may each be thought of as made up of such departmental systems; or conversely any particular departmental system may be thought of in terms of any of those more general systems, as changing or developing in time or as approximating to the sum total of true propositions about that department of knowledge. And here we come upon a set of notions which are in constant use, loosely in much of popular thought, more precisely in the philosophy of history or of the sciences. We conceive the various branches of knowledge as systems of propositions, which in some sense exist in time each with its own coherent content. The mathematical knowledge, or the physical knowledge, or the historical knowledge of the present day, we may read, assures us of this, has established that, will no longer allow us to assert something else; and here it is assumed that a body of propositions as it is to be found somewhere today may be taken for certain purposes as conforming to the system of possible true propositions. We have again the notion of the development of a science through time; in a book dealing with physics we may find the writer speaking of the physics of the ancient Greeks, or of the Middle Ages, or of the seventeenth or the nineteenth century, or in contrast with these of the science of physics as it is conceived by him to stand at the present day. And we have again the notion of a further degree of certainty or completeness, not yet attained but which it is supposed possible that a science might arrive at in the future or at any rate might possess in theory; as when it is said, or was said, that physics if it were sufficiently perfect might be able to deduce the entire state of the universe at any time either past or future from a knowledge of its state at the present moment. All these notions seem to assume that we can think about the various branches of knowledge as self-consistent systems of propositions, which change and develop in time and which approximate more or less closely to a state of perfection or completion.

The logical line of classification, which orders systems of propositions according to the nature of their subject-matter, can be followed out indefinitely into detail; any one of the main departmental systems may be regarded as divisible into as many subordinate systems as specialists may find it convenient to distinguish

within them. But if we turn back to follow out the psychological line of classification, which orders systems of propositions in terms of the minds conceiving them, we come at last to a natural limit, in the system of propositions entertained by any individual mind or thinker. The limit is reached in two steps. We may think first of the system including all the propositions or judgments or beliefs that have been entertained by the thinker at any time during his life; these set out in order of their occurrence from childhood to death would take their place, along with feelings, sensations, and other incidents of his mental life, in an ideally complete biography. Such a biography in its fullness would be impossible to write and unreadable if it were written; but a highly summarized and schematized rendering of one side of such a biography is what is attempted by a writer who sets out to trace the development of the thought of any thinker. How did the thought of Newton about physics, of Darwin about biology, of Plato or Kant about philosophy, grow and develop until it reached its final shape? Here are questions which may deserve study, and which in a few outstanding cases may occupy the attention of generations and fill volumes. Yet even when the answer to such a question is attempted in the fullest detail for some pre-eminent figure, it must be, as we said, highly schematic; what can be given is not the record of his actual thoughts as it developed through life, for most of this will be unknown and most of what is known will be too detailed to record; it will be a summary of what the historian or biographer takes to have been believed by the thinker whose thought he is tracing at a few selected turning points or moments.

With this we are brought to the ultimate limit that can be reached along the psychological line of classifying systems of propositions: the system of all the propositions believed by a particular thinker at a particular moment. And here we have to consider a notion that is of high importance for right thinking about the theory of knowledge and of propositions: the notion of 'what I believe'. The notion is no less difficult than important; let us examine a few of the problems that arise when we try to conceive it. We have to try to make clear to ourselves certain assumptions which are in the mind of anyone who asks himself the question, 'What does he believe?' or 'What does he know?' or 'What did he at a certain time believe or know?' We may begin by taking it that an answer to any of these questions must be formulated in a set or system of propositions. There are modes of knowing or of believing that need not be, perhaps cannot be, fully

stated in propositions; but when we raise a question as to knowing or believing in the language used just now, we have in view an answer that can be given in a proposition, in a form such as 'I believe that so and so is the case' or 'I know that so and so is the case'.

First then, How are we to understand the relation of 'What do I believe?' to 'What do I know?' As the question is likely to be formulated in practice, 'What do I believe?' would probably refer to a few beliefs held to be both doubtful and important; 'What do I know?' would refer to a larger number of beliefs, which are taken to be certain because they are held to satisfy some objective test accepted as adequate by the speaker and his contemporaries; and as the question is likely to be formulated in practice, either 'What do I believe?' or 'What do I know?' would probably be asked not in general terms, but about some limited range of knowledge or speculation. But we may so far generalize our question here as to make it cover the whole range of the belief or knowledge of the person about whom the question is asked; we may use the term 'belief' to cover all the propositions held by that person to be certainly or probably true; and we may use the term 'knowledge' to cover a part only of this aggregate, the propositions which could be accepted as entirely true, or at least highly probable, on the strength of some test which we are prepared to regard as adequate. Thus the full answer to the question, 'What do I believe?' will be a set or system of propositions including all those which I believe to be true; and to the question, 'What do I know?' a narrower set or system including all those propositions within the wider system which I believe to satisfy some objective test.

We are here faced with a question, perhaps the most central and controversial in the theory of knowledge, as to the nature of this test. What test do I apply, what test ought I to apply, in deciding whether a belief held by me or by anyone else deserves the name 'knowledge'? To this problem we must turn presently; but before we do so we must consider one or two further questions, which may seem to make the whole conception we are seeking to examine one that it is difficult, if not impossible, to reconcile with fact.

The act or event of believing must take place, like any other act or event, at a particular moment or particular moments of time. And if we are right in saying that even what looks like an isolated particular belief can only be understood in the light of beliefs

which are adjacent to it in an order of thought; and that the more a belief contains of general or metaphysical significance the more it needs to be understood in the light of a whole system of beliefs; we seem led on, when we seek to give an adequate account of an act of believing, to say that the mind entertaining the belief must have somehow present to it a system of beliefs at the moment of the act. The system cannot remain unchanged from one moment to another; the particular thought or belief which occupies the centre of attention will not be the same now as it was a moment ago; one belief may at any moment be dropped from the system, another added; and there will be times when a particular belief dropped or added may be of such importance as to alter the structure of the system as a whole. These moments when an entire system of belief is recast no doubt come seldom; yet it is such changes that we think of as interesting and important, and the history of thought or the biography of a great thinker has significance, in so far as the historian or biographer can persuade us that there was present in the thinker's mind a whole system of thought at one moment, a different whole system at another moment, and that he can trace the passage from one to the other; can exhibit, to give a summary instance, the system of propositions about astronomy and physics that might represent Newton's state of belief at the moment before he watched the apple drop, and the system as it became transformed when there was added to it the belief in the law of gravitation.

But where is such a total system of beliefs to be found? This is the problem that now confronts us. Anyone who looks for it in his own experience will discover nothing of the kind. What he will find room for in the specious present at any one moment will be some one or two propositions and a transition from one to the other; he may remember that at an earlier moment he was thinking of some other relevant proposition, and if the connection of his thought is sufficiently sustained he may go on to remember a series of earlier propositions or beliefs; but he cannot by so doing increase beyond a certain point the material to which he can at any moment so far give attention, as to be able to say that it is now present to his mind.

The problem then which is now taking shape for us is to this effect. We find it natural to suppose that any one of us has at any moment before him a field or system of beliefs or propositions which he can survey as a whole, so that he can select out of it at will any proposition that the purpose of his thinking may need.

And not only is this supposition natural to common sense, but it seems to be assumed in the language we cannot well avoid using as to the knowledge or beliefs of particular persons at various times; and unless something like it is true, it is by no means easy to see how anyone can ever, as we may say, think round any large or important subject. Here then we are faced with a dilemma: have we or have we not this power to survey in a single moment a wide field of knowledge or belief? We seem in fancy to have it, common sense assumes that we have it, and our having it looks indeed like a necessary condition of our thinking being worth anything much. Yet when we try to scrutinize experience we do not find it; we find instead a limitation of our power of attention which seems almost conclusive as to its absence.

Thus the world of propositions reaches out in different directions into regions of thought that seem very diverse from one another. In one direction, as we have just seen, it brings us to the conception of 'what I believe', that is, the whole system of implicit beliefs that condition the thought of any individual at any one moment of time. In another direction it brings us to the conception of all the beliefs that have ever been entertained by all human beings throughout their history; in yet another direction to the conception of truth in the concrete, that is, the whole system of beliefs which satisfy the criterion, whatever that may be, that makes a belief true and not false. All these conceptions, along with others which we have mentioned, such as the system of mathematical or scientific knowledge, or the body of knowledge of any period, must have a place found for them in the world of propositions. All of them are conceptions which are constantly implied in our common thinking, and which we must be able to use consistently and to bring into relation with one another if our common thinking is to be justified. And if this is to be done some such account as we have tried to give of the world of propositions seems to be required.

CHAPTER XXIII

TRUTH: ITS TEST AND ITS MEANING

We must turn now to what may be considered the central problem in the theory of knowledge: the problem of truth. What do we mean by saying that a belief or a proposition is true? The answer which common sense finds it natural to give is that when we say that a belief is true we mean that there is some fact or reality to which it corresponds. Common sense would justify this answer by pointing out that in ordinary life we are constantly testing the truth of our beliefs by the criterion of correspondence with some fact outside the belief, and holding them to be true when we find that they correspond. The test may take various forms; it may appear as correspondence with our own perceptions, or as correspondence with what other persons tell us about their perceptions, or as correspondence with the record of what has been perceived in the past; but the notion which we have in mind as both the test and the meaning of a true belief is that it corresponds with fact. For instance, I may believe that the boat-train for Dover leaves London at nine o'clock; I may confirm this belief if I ask someone who travelled by it a week ago and find that my belief corresponds with what he tells me; I may confirm it further by looking up Bradshaw and finding that my belief corresponds with what is printed there; and finally I may confirm it by going to Victoria station and finding that the train in question starts at or about the time named. Or I may believe that the way to go to Dover is by a certain road which I can picture roughly in my mind, and I test the rightness of this belief by finding whether it corresponds with the record of the Ordnance Survey as shown in my map, or again with what, when I drive to Dover, I find to be the fact about the country I pass through. In the light of countless instances of this kind, correspondence with fact seems to be both the natural meaning of

truth and the natural test by which we decide whether a belief is true.

But when we try to make the notion more precise, troublesome questions arise. First, what exactly do we mean by 'correspondence'? If we mean something like 'exact resemblance' or 'copying', how can a belief, which is a mental fact, copy, or even in its main quality resemble, a fact in the material world? Clearly what common sense has in mind must be a resemblance less complete than copying. But this reflection does not dispose of the question, though some philosophers have seemed to think so, for copying is not the only kind of correspondence there is. A map can correspond to a stretch of country, or a catalogue to the contents of a library, though copying would not in either case be the appropriate word to use. And while such instances cannot show us precisely what we mean when we say that a belief corresponds to a fact, they can give us an idea of what 'correspondence' in a wide sense might mean. We might then perhaps accept some such conception of truth as this, that it is an indefinable idea which consists in a correspondence of belief with reality; the idea being said to be indefinable because the correspondence in question cannot be exactly described in terms of any other kind of correspondence.

Taking this for the present as an adequate general description, let us go on to ask how the correspondence holds in instances of various kinds. With what we may call a plain fact the conception seems easy to understand. If I believe that a particular event such as the departure of a train takes place at a particular hour, it can be understood how this belief corresponds point by point to a fact in the real world outside my belief; or to speak more generally, it can be understood how a relation between simple entities conceived in my mind corresponds to a relation between simple entities in the real world. But more difficult questions arise as the entities with which our beliefs are concerned become more complex. Let us consider to begin with the nature of our beliefs about historic fact, and let us take as an instance the fact of Caesar's crossing the Rubicon. The fact here in the simplest and narrowest sense of the word fact is that at a particular point in historic time a particular physical object, the body of Caesar, moved across a particular stretch of physical space, the bed of the river Rubicon. This is the fact as it was observed at the time by those who were present, and the observation of the fact at the time is what our records go back to and our history is founded on. But if we limit the fact to this definite content we miss its significance; we miss the

element in virtue of which the crossing of the Rubicon has come to stand as type and symbol of a crucial decision. To include this element we must widen our conception of the fact so that it takes in a multitude of surrounding facts, which together make up the significance of the Rubicon in Roman constitutional law, the significance of Caesar as a factor in the history of his age, the significance of Rome, its republic and its empire, as a factor in the history of the world. But when we enlarge our conception of the fact in this way, does it not look as though what we have in mind is not a particular fact or even a determinate group of facts, but a construction which has its being in thought, in the thought first of historians and then of their readers? If we conceive the content of our belief about the fact strictly, we can easily suppose that there is a definite feature of reality to which it corresponds, but the more strictly we take the fact, the less significance we allow it. If we conceive it more widely, we can go on adding to its significance, but the more we add the harder it becomes to see to what definite fact or facts in reality it can be said to correspond.

A problem which is in some respects different, but which perhaps goes down to the same root, arises over our beliefs in the fields of the physical sciences. Are these beliefs, in so far as they claim generality, to be understood as beliefs about facts or as beliefs about general laws? If they are about facts, what is the significance of the facts except as exhibiting some law? If they are about laws, can we still say that there is some definite feature in reality to which our beliefs correspond, or are we brought back to the notion that we are dealing with a construction of thought? The conception of a scientific law, we suggested earlier when we touched on this problem, has a twofold meaning: it expresses on the one hand a general feature of reality or of the physical world which the scientist discovers, and on the other hand the formulation in which he sums up his discovery; and his formulation is to be regarded as more true than previous formulations in so far as it corresponds more closely to the reality. This seems to be the conception of scientific law which common sense would wish to hold to if it can; yet we must recognize that the more scientific laws are generalized and widened, the more we seem driven back on the formulation and the harder it becomes to recognize any definite feature in reality as that to which they correspond.

These reflections, however, for all the difficulties that they raise, can hardly in themselves be held sufficient to dispose of the

correspondence theory of truth. The problems into which they lead us are perplexing ones, and we may not find it easy to know what to say about them, but they belong perhaps rather to the methodology of history and of the sciences than to the fundamental question of the meaning of truth; or at any rate they do not seem decisive as to this question. Common sense would still at the end of the discussion, if it had not been so confused as to lose sight of the main issue, remain convinced that a true belief in the field of physical science is a belief which corresponds to some real feature of the material world, and a true belief in the field of history is a belief which corresponds to some real event in past time.

We must turn now to a difficulty of a different and perhaps more decisive kind. Here again let us begin with our beliefs about history. How is anyone to assure himself that any of his beliefs in the historic order, say his belief that Caesar crossed the Rubicon, correspond to a real event in the past? He cannot go back in time and verify it by seeing the event enacted. Yet he conceives that he can verify it somehow: what can 'verification' in such a case mean? If he wants only to make sure that his thought about the event agrees with what we may call 'accepted history', he can verify this by turning to the account of it given by some recent historian of repute, say Mommsen, and finding that his recollection corresponds with what he reads there. But if he is not satisfied with this but wishes to know whether what Mommsen tells him is true, he will be led further back. For a certain part of the journey correspondence can still seem to serve. He can ask how far does Mommsen's account correspond with what was said by earlier historians, who wrote nearer the times and may be supposed to have received the story at first or second or third hand from eye-witnesses. But this correspondence with the original authorities is in the end not sufficient. For suppose him to ask what is the truth about some other famous story that has a place in the history of Rome, say the story of how the city was founded by Romulus; historians today, he will find, doubt this or reject it altogether, they are not content to repeat the story as given by the earliest authorities. Why is the one story rejected, the other accepted? For details of the answer we must look to the methodology of history. But the main point which concerns us here is that, in history at any rate, correspondence with fact cannot be the final test of truth. What the historian means by 'the truth' in history is not correspondence with anything recorded by earlier writers about past facts, it is correspondence with the facts

themselves. But here correspondence fails him as a test; he cannot get back either to the crossing of the Rubicon or to the founding of Rome to see whether his belief corresponds to what happened.

And if we think not of the particular facts but of the wider generalizations of history, the same conclusion is forced on us from another side. The question whether the decline of the Roman empire was due to the barbarian invasions or to some other set of causes is a question which we suppose to be significant, in the sense that one answer to it may be truer than another, even if we cannot be certain which answer is true. What is it then to which a belief as to the causes of the decline of the Roman empire can be said to correspond? Not to any particular statements made by the contemporary authorities, who may never have asked themselves the question, and whom, if they did ask it, we should certainly not trust to have answered it correctly. The belief does not correspond to any particular statements nor is it founded on them. What it is founded on is a mass of evidence of the most varied kinds drawn from the most varied sources, but there is nothing in this heterogeneous mass of evidence to which the belief can in any plain or simple sense be said to correspond. The only thing to which it can naturally be said to correspond is the complex fact as it happened, or some assemblage of the facts, and these facts are to historians now for ever inaccessible.

It seems then that we must give up the notion that correspondence with fact or reality can be the ultimate test of the truth of our beliefs; at any rate we must give it up as regards the facts of history. What is to take its place? Here the Idealist theory of knowledge meets us with a definite and persuasive answer. The test and the meaning of truth, it says, is coherence.

When we attempted earlier to formulate the main principles which should guide us in constructing an account of reality, we found that coherence must be one of these main principles. The proposition that coherence is evidence of the presence of truth is indeed only the converse of the proposition which we have assumed throughout our reasoning, and which any reasoning must assume: that absence of coherence, in the sense of inconsistency or contradiction, is evidence of falsehood or error. Coherence in this sense must on any view be a necessary test of the truth of a system of beliefs. But can we go on to say, as the Idealist theory would wish to, that it is not only a necessary test, but the sole and sufficient test, and not only the test of truth, but its meaning?

We must ask at this point, How is the notion of coherence related to the notion of correspondence which we have been considering? For correspondence itself must be understood as a kind of coherence; it is the coherence or consistency of thought with reality. Coherence or consistency appears then as the wider notion, of which correspondence with reality is one form. If we say that truth means correspondence, we have in mind what may be called 'external' coherence; the coherence or consistency of a belief or of a system of beliefs with a reality beyond itself. But when the Idealist theory of knowledge says that truth means coherence, it has in mind something different from this; it means internal coherence, the coherence or consistency with one another of the beliefs which make up a system. It is in this limited sense that the term 'coherence' has come to play a part in philosophical discussions, and it will be convenient to use it in this limited sense without any qualifying adjective. For it is needless and misleading, Idealism would say, to distinguish this form of coherence as internal, as though there could be some other; it is in fact the only form of coherence there is, since whatever appears as external coherence is in the end reducible to this. We cannot satisfy ourselves, not at least ultimately and in the end, as to whether the various beliefs which make up a system of beliefs correspond with anything outside the system; what we can do is to satisfy ourselves as to whether they cohere with one another.

Thus with the change from the notion of correspondence to the notion of coherence, the balance of our thought is shifted from the single belief to the system of beliefs. A single belief taken by itself can be understood to correspond with a fact; it is indeed our single beliefs about particular matters of fact that can be seen most readily so to correspond. But it is only a system of beliefs, or particular beliefs in so far as they are members of a system, that can claim to carry conviction on the ground of internal coherence.

Now that we have before us the conception of coherence as the test of true belief, and of a system of beliefs as the domain in which coherence can manifest itself, we can see that this conception removes the difficulties which our view of correspondence as the test raised in the case of history. The widest generalizations of history are beliefs which sum up a multitude of particular beliefs in such a way that these appear consistent with one another; the test of coherence within a system or order is the test by which we seek to determine the truth either of a belief about a particular

matter of fact or of the increasingly wider beliefs under which such beliefs are subsumed; and we thus reach a comprehensive conception which will apply to all our historical beliefs from the most particular to the most general. And this conception of the test will serve us not only in the field of history, but in mathematics or the sciences or any of the organized departments of our thinking. In all of these it is easy to see how we can vindicate the truth of our more general beliefs if we regard coherence as the test; much more difficult to see how we can do this if the test is to be correspondence with fact. And in the field of history coherence seems the only test that we can regard as applicable, because the test of correspondence with fact is one that from the nature of the case it is here impossible to apply.

Coherence then, the further we probe the problem, seems more and more to establish itself as the principal test of the truth of our beliefs. But common sense, even if it is driven to admit this as regards those more complex statements of belief which are organized in history and the sciences, would still wish to hold to it that correspondence is the ultimate test in one region, and that the most fundamental, the region of our judgments of perception. To go back to what we said at the beginning of this discussion, the way to know whether a belief that a train leaves a station at a certain time is true, is to go to the station and see whether it does; the way to know whether a certain road leads to a certain place, is to follow the road and see whether it takes you there. Here surely, in such simple instances as these, the test of a true belief is to see whether it corresponds with reality.

But if we look more closely, our trust in correspondence as the ultimate test of true belief cannot be sustained even here. I am driving, let me suppose, to Dover, and I find that the main details of the road which I perceive as I go correspond to the main details of the road as I pictured them to myself when I set out on the journey; and this shows, I conclude, that the belief about the way to Dover which I found in my mind when I set out was a true belief. But this does not take me to correspondence in the ultimate form that I am seeking, to correspondence of belief with a reality beyond it. For I have still to ask the question, Do either these beliefs or these percepts of mine correspond with objects in a material world or with any reality outside my experience, or does all that I can say about them come back to this, that they are elements in my experience which are consistent with one another?. And here I am brought up against the answer which the argu-

ments of Mentalist philosophy have already forced upon me: that I cannot get outside my experience so as to verify whether there is or is not a reality outside it, which it reveals to me and to which it corresponds. What I have been taking for the final discovery of correspondence between belief and reality is in fact only the discovery of a further case of internal coherence, the coherence between expected percepts and actual percepts in my own experience.

Here again then in this crucial case, as in the case of our beliefs about the past, we are brought up against the conclusion that correspondence with outside reality cannot be the final test of the truth of our beliefs. But this crucial case forces us to recognize another, and as it may seem an opposite, conclusion, that correspondence with outside reality is what truth means; at any rate what it must mean for common sense, and for anyone who holds to the common-sense belief that there is a material reality outside his own experience. And having recognized that this holds with our beliefs about sense perception, we shall go on to recognize that it holds too with our beliefs about the past. I cannot test the truth of my judgments about sense perception by comparing them with a reality outside sense perception, but I feel sure that what I mean by their truth is that they correspond with some outside reality and not merely that they are coherent with one another. I cannot test the truth of any judgment about facts in the past by comparing it with the facts, but I feel sure that what I mean by saying that the belief is true is that it corresponds in some sense with the facts, and not merely that my beliefs about the facts are coherent with one another. And to take a further instance, which is perhaps the most convincing of all, I cannot test the truth of my belief in the reality of other minds by comparing it with the fact that other minds exist, but I feel sure that what I mean by the truth of my belief about this question is that it corresponds with the reality; I do not merely mean that my various beliefs about it are coherent with one another.

Our argument then was too hasty when it assumed at the outset that the meaning of truth and the test of truth might be taken to be the same thing; when we look more closely we see that if correspondence with reality is what 'truth' means, these two things, the meaning of 'truth' and the test of truth, not only need not be the same, but in the end they cannot be. If what is meant by calling a belief true is that it should correspond with a reality outside experience, correspondence cannot be the ultimate test,

for any test, ultimate or not ultimate, must be something that is found not outside experience, but within it. At the level of ordinary thinking the test which we apply can often be, or can seem to be, correspondence: the correspondence of our thoughts or our perceptions with something that we take to be a reality beyond these. But all these cases in which correspondence appears to be the test will exhibit themselves under scrutiny to be cases in which the test actually employed is internal coherence within experience. The Idealist theory of knowledge then must be admitted to make out its contention in so far as it maintains that coherence, not correspondence, is the ultimate test of truth. But when it goes on to say that coherence, not correspondence, is the meaning of truth, does it leave to the conception of truth anything that common sense could regard as its true meaning?

We are faced at this point by a dilemma, which in one form or another recurs continually in discussions about theory of knowledge, and which our doctrine as to the circles of belief brings so plainly to the front that it cannot be evaded. Each inquirer must start with his own inner world, with the circle of his own immediate experience; he believes that beyond this world there is a world of outside reality; how is he to pass from one to the other? How is he to know that there is an outer world which corresponds to the inner one, that there is a reality which corresponds to his beliefs? If the final test that he can find by which to order the contents of his inner world is the test of internal coherence, any means of passing from the inner world to a world beyond it seems to be lacking.

The issue here seems to present itself as a choice between two main answers, the answer of Realism and the answer of Idealism, in one particular form of these diverse theories. We distinguished earlier two senses of the word 'Idealism': a wider sense in which it applies to any philosophy which concludes, along whatever line of thought, that the universe is in harmony with human ideals; a narrower sense in which it means that type of philosophy which holds that we can discover by considering the nature of knowledge that all reality is spiritual. With Idealism in the wider of these two senses, in which it applies only to metaphysical conclusions and not also to a theory of knowledge, we have not anywhere in this inquiry been concerned. A philosophy which is Idealist in this wider sense might at the same time deserve the name 'Realist', as has been the case in some of the great Idealist philosophies in the

past. It is only when we turn to Idealism in the narrower sense in which it imports a theory of knowledge, that the opposition between Idealism and Realism begins to have any clear or useful significance. But we must now go on, while keeping ourselves within the limits of this narrower sense, to draw a further distinction between two senses in which the term 'Idealism' may be used, two forms in which the contrast between an Idealist and a Realist view may present itself. In one of these senses the contrast may be said to be that an Idealist philosophy holds that it can be known by considering the nature of knowledge that all reality is spiritual, while a Realist philosophy maintains the belief in a real material world. In another sense the contrast may be said to be that an Idealist philosophy finds the meaning of truth in the internal coherence of a system of beliefs, while a Realist philosophy finds the meaning of truth in the correspondence of thought with a reality outside it. Idealism in this last sense, in which it maintains the coherence theory of truth, has carried with it in the history of philosophy the other doctrines that we have called 'Idealist'; the doctrine that all reality is spiritual, as well as the wider doctrine that the universe is in harmony with human ideals; but those other doctrines do not of necessity carry with them the coherence theory of truth.

These distinctions are needed here to link up our present discussion with what we said earlier as to the philosophy of Berkeley. We took Berkeley's philosophy as a typical instance of Idealism in so far as it denies the reality of matter; but his philosophy is not to be classed as Idealist in the narrower sense. Berkeley in his metaphysical doctrine as to the true nature of what we take to be material things was an Idealist, was indeed the pioneer of the whole modern Idealist movement. But his doctrine that to exist is to be perceived was not meant to be understood as applying to the thinker's knowledge of other selves or of God; as regards realities other than material objects he continued to assert, or to take for granted, a Realist theory of knowledge as involving the correspondence of thought with reality. Any such compromise with Realism is rejected by the whole-hearted Idealist theory of knowledge which we are now to consider.

How then are we to understand this thorough-going Idealist doctrine, for which truth means the internal coherence of a system of beliefs? In some such way, it would seem, as this. The thought or experience of the individual thinker is not to be conceived only, or even mainly, as his thought or experience; better

understood, it would be conceived not as his individual experience, but as part of a universal or Absolute experience, which includes all reality; better understood still, it would be conceived, not even as part of the universal experience, but as that very experience in process of perfecting itself.

The doctrine then is at once a theory of knowledge and a final metaphysic; the two are so fused together in it that they cannot be separated. This fusion, which as we saw earlier seemed to follow from the Idealist rejection of the concept of matter, appears now to stand out still more clearly as a consequence of the Idealist insistence on coherence as the meaning of truth. But if we accept this position, are we not being led round in a circle? We had hoped when we set out to inquire into the problem of knowledge that we might in this way reach some agreed conclusion, which could serve as a starting point for our attack on the more controversial issues of metaphysics. But now it seems that, if we accept the Idealist theory of knowledge in its thorough-going form, we must by the act of so doing commit ourselves to our final metaphysical conclusions. Is not this a circle, and a vicious one? Is not this imposing our foundation upon our superstructure?

Not, the Idealist spokesman may reply, if his doctrine as to coherence is a sound one. For if this notion is right, theory of knowledge and metaphysical conclusion must both take their place in a total system of belief about which all that can be said is that it coheres together, so that it is useless to try to distinguish one part of it as superstructure, another as foundation. Here is indeed at once the strength and the weakness of the Idealist position. Its weakness is that, when it asks us to accept its theory of knowledge, that coherence is the meaning of truth, it is asking us to accept a doctrine that is only tenable if we accept also its metaphysical doctrine about Absolute experience. Its strength is that, if coherence is really the meaning of truth, it is only by accepting a complete metaphysic that we can hope to entertain a right theory of knowledge.

Here we are confronted with a formidable dilemma, either side of which is difficult to surmount. The Idealist metaphysic which we have thus briefly and baldly summarized is far removed from any view of the world that could seem natural to common sense. Common sense might, and perhaps should, be prepared for philosophy to bring it in the end to some conclusion very different from its first uncriticized assumptions. But even the common

sense that is most willing to be instructed must feel resistance when it is asked to accept the Idealist metaphysic, not in the end as a result of long philosophical argument, but at the outset as an essential condition for a tenable theory of knowledge. Yet this is in effect what the Idealist theory demands, and at the point we have reached we must recognize that it can support this demand by plausible argument. For if we accept, as it seems we must, the Idealist contention that the ultimate test of the truth of our beliefs is to be found in their coherence within a system, by what test is Realism to satisfy us that there is outside the system a reality to which the system corresponds? We seem bound at least, before we come to a decision as to our theory of knowledge, to make some attempt to understand the Idealist contention as a whole. Not that we could claim any right at this stage of our inquiry to pronounce as to the truth of the Idealist metaphysic; there may be arguments for it in another region which we have not yet come in sight of. But we can ask, and we seem bound to ask, whether the Idealist metaphysic, supposing it to be true, would justify a theory of knowledge which takes coherence, rather than correspondence with outside reality, as the meaning of truth. Has a theory of knowledge which is thus defined the power to cover the whole journey, from the moment of immediate experience with which inquiry must start to the Absolute experience in which it is claimed that inquiry should find its end?

When we begin the journey, in the circle of immediate experience, we find ourselves in the position which we were led to before: that the ultimate certainty for each of us is that his thinking is controlled by a law or necessity to which it must submit. Whether this necessity should be held to be a necessity of law or one of fact may be questioned. Sometimes it seems to be the one, sometimes the other. When I find that I cannot help believing that two and two make four, this seems like a necessity of law; I reflect that I could not doubt it if I wanted to. When I find that I cannot help believing that York is north of London, this looks like a necessity of fact; yet this belief is for me hardly less a necessity than the other; I could by an effort bring myself to doubt it, but the doubt would only be a real one in so far as it would amount to a question as to the ground of the belief. How these and other seeming necessities of thought arise, whence they derive their binding force, whether they are of the same type or of different types, are questions to which various answers are possible; and the answers that I can in the end accept will depend on the philosophy

to which I am led. But at the outset of the journey what I must start from is the fact that I have these beliefs and that I feel them binding on me.

Yet even in this first stage of the journey it must be possible to discriminate degrees of bindingness, if reasoning is to begin, and a principle presents itself in terms of which discrimination is possible. This is the principle of coherence in a system. If I ask why I am so sure that two and two make four, the decisive answer seems to be that it is because this belief is a necessary part of the system of my mathematical ideas. If I ask why I am sure that York is north of London, it is because this belief is a necessary part of the system of my geographical ideas. And if I am able to discriminate, as I seem to be, between the binding force of these two types of necessity, the principle of discrimination which serves me is that the system of my mathematical ideas has a greater internal coherence than the system of my geographical ideas; the first seems to guarantee its particular elements in a way in which the second does not.

Any inquirer starts with a store of supposed knowledge, or of propositions which he believes to be true. All the propositions which he finds himself believing or assuming are propositions which in a sense he feels himself compelled to believe. Some of them he will after scrutiny reject as false or as lacking evidence, while others he will continue to hold true; and those which he continues to hold true he may classify in various ways, distinguishing some as necessary, some as contingent; some as certain, others as probable; some as demonstrable, others as self-evident or certain without proof. But all at the outset carry a feeling of compulsion merely in the fact that they are believed to be true. My belief in some fact of geography or of history that I suppose certain may not possess this compelling power in the same measure as my belief in a proposition of arithmetic, but in some measure it does possess it. And some initial probability, however slight, attaches to any belief from the mere fact that it has got itself believed. The process of constructing a valid system of knowledge is not a process, which would be in its nature impossible to carry out, of starting with a blank and finding or inventing propositions to fill it; it is a process of starting with a set of propositions which the inquirer believes in or takes for granted, eliminating some as false or groundless, and retaining those which can stand criticism. And what sets this process going is the appearance of contradiction or inconsistency; without this appearance there would be no

occasion to suppose error; so far we can accept the coherence principle as adequate.

When then the Idealist theory of knowledge takes its stand on the notions of coherence and system, as essential for understanding the nature of thought, we must recognize that it has strong arguments on its side. It adds to these another conception, also essential, but more doubtful in its application, the conception of growth. With the entry of this conception it passes beyond the first circle of immediate experience into the second circle, which is the whole experience of the thinker; in the circle of immediate experience, if that were all there were, movement could be distinguished, but hardly anything we could call 'growth'. The moment of thought then from which the Idealist theory of knowledge takes its departure is the thought of a thinker reflecting on the growth of his thought; and as the notions of coherence and growth are dominant for it, reflecting on the growth of some part of his thought which makes up a coherent system; and probably, as he is a philosopher, reflecting on the growth of his thought about philosophy. A theory of knowledge has to start where it can, and this is no unreasonable place for it to start from. But it is right to observe that this way of starting is likely to import a certain bias into the conclusion. The philosopher thinking about his thought about philosophy and the growth of it during his life-time can hardly fail to think that his thought has grown more complete, more coherent and nearer to the truth. So, if he has thought strenuously and sincerely, it probably has, at any rate along a certain line. And he may very well be justified from his personal experience in concluding that the process of thought is a process which, in moving towards its aim, shows an advance, as the Idealist language puts it, from incoherence to coherence, from the implicit to the explicit, from a self-fulfilment that is only partial to a self-fulfilment that is complete, or nearer to completeness.

So far then as the first step of the journey goes, the argument of the Idealist theory seems plausible. The task of this first stage is to show how the thought of any particular moment is related to and grows into the whole thought of the thinker, or rather, into his whole thought along a particular line or in a particular field; and it is in this study of the development of individual thought that the theory shows itself at its strongest. Let us consider an example often used by Idealist writers. How are we to conceive what passes in the mind of an historian when he entertains a belief about some

event in history? He believes, to cite our previous example, that on a certain date Caesar crossed the Rubicon. What does this belief amount to? What is actually in his mind at any moment, what carries the thought, may be just these words, along with some images which may be more or less relevant to some parts of the thought, but can certainly not be adequate to the whole of it. How then are we to conceive the thought? It may help us to do this, the Idealist argument says, if we compare what may be in the historian's mind now with what might have been in his mind when as a boy he first heard of the fact. Since that time a number of other facts bearing on this central fact have one after another been added to his knowledge, and the later thought differs from the earlier in virtue of all that those facts imply. The words in which it may be summed up are the same, but they are not the thought; the accompanying images are likely to be very different, but whether different or the same, these are not the thought; the context of beliefs which surrounds and colours the thought will again be very different. Yet there is a core or nucleus of meaning in the thought which in a sense we can feel to be the same; and this sense of sameness along with difference may be expressed by saying that the later thought has grown out of the earlier in such a way, that the meagre and fragmentary earlier thought is retained within the richer and fuller later thought as a partial element in a coherent whole.

The nature of thought, on this view of the problem, is to be understood as an advance from what is less complete and less coherent to what is more complete and more coherent; it is in terms of such an advance, and in these terms only, that thought is to be counted as more or less true. Thought begins with judgments which are scanty, disconnected and inconsistent; as it advances, these are supplemented by additional judgments, the inconsistencies are harmonized with one another, the gaps between them filled up; and in the end the result appears, or it would appear if the end could be fully realized, as the inclusion of all the separate judgments within a single harmonious system. Throughout the whole process the determining principle is the principle of coherence, and there is no room at any point in it for correspondence, in the sense of correspondence with external reality; at a particular stage the question may seem to arise as to whether some entity in thought corresponds with some entity outside thought, but the answer to the question always consists in showing that the two are coherent elements within a single system.

As regards the growth of thought in the individual this account seems in great measure to hold. True, it does so only by making some large assumptions which are by no means always fulfilled; it assumes that thought is all the time advancing, and even the best individual thought makes this continual advance along certain lines only, cannot perhaps sustain it to the end of life even along those. Still it may be urged that the true aim and the true conception of thought is that it should advance or grow in this manner, and that if we wish to understand thought we must keep our eye on instances in which it achieves its aim, not on those in which it fails partially or altogether.

But now we come to a further phase in the process, the phase by which the growth of thought in the individual is taken up into the growth of human thought as a whole. If the idea of the growth of thought is to be our guiding principle, we cannot stop at the point at which the thought of the boy grows into the thought of the man, the thought of the student into the thought of the historian. We must follow the principle out so as to conceive the thought of the historian growing into the whole historical thought of his time, and this whole historical thought again growing into a larger whole which shall include along with it other systems of thought, scientific, mathematical and all the rest. What analogy can we find in individual experience that would make us suppose growth of this order possible? The historian will no doubt do what he can to include in his system of beliefs the sum of the best historical thought of his time. Let us suppose that he succeeds in this so far as is humanly possible; this will still be no more than the growth of his own thought as we have already imagined it. But there must be much in his own field of study, or in other fields of study bearing on his own, that he fails to take in; he is a human being and not the incarnate spirit of history. His work, where it is right, and even perhaps where it is wrong, may help the work of later historians, but we cannot pass without a break from the growth of his thought to the thought of his successors and call this process 'the growth of historical thought'. And still less can we pass without a break from the thought of particular historians, particular scientists, particular mathematicians, to something that we can call 'the growth of knowledge in general'.

The language used by the Idealist theory of knowledge, when it speaks of truth or of thought as a process of self-fulfilment, assumes that the growth of thought as a whole in human society

can be conceived on the analogy of the growth that may take place in some particular region of thought in an individual mind. It assumes that there is a process at work in the collective thought of humanity, by which as time goes on more and more true beliefs will be accumulated, and the various departments of knowledge will be seen to be related by intrinsic connections; and that this process working in the collective thought is as much a law of nature as the process by which in the growth of the individual the thought of the boy develops into the thought of the man. And here are at least two large and questionable assumptions. First, there is assumed the belief in progress as a continuous and regular fact in human history. We are certainly not bound at the outset of our inquiry to dismiss this belief as an illusion. Let us hope that it is a true forecast, and let us admit that it derives some support from the growth of knowledge and reasoned thought along certain lines during the last three centuries. But have we a right to say that this is more than a fortunate episode, and is it at best more than a growth along certain lines, in which other possible lines of thought have been left on one side? And this brings us to a second question, Can the growth of knowledge, which in some sense no doubt is observable, be said to be bringing us nearer to a single coherent system which shall cover the whole domain of possible knowledge? One main factor in this growth has been the breaking up of the domain of possible knowledge into separate fields, each with its own particular subject-matter and particular method; and the further this process goes, the more difficult it becomes to discover in these separate fields the working out of a central principle. History, chemistry, mathematics seem so different in their nature that it is hard to see how they can in any full sense be held to form parts of a coherent whole. They can no doubt be said to be coherent with one another in the sense in which coherence means no more than absence of contradiction; they do not contradict one another for the very reason that their fields of inquiry are so separate; but can we think of them as being brought together so as to form subordinate systems within an inclusive system governed by a single set of principles? Yet something like this would be requisite if they are to form parts of a coherent whole, as the Idealist theory interprets the notion of coherence. Here again we can only say that the future may show this to be possible, but that we have no right to take it for granted on the evidence before us.

Here then are some practical difficulties, not perhaps fatal yet

certainly serious, which the Idealist theory of knowledge too easily overlooks, when it claims to interpret the growth of thought in human society on the analogy of the growth of thought in the individual. But behind them lies another difficulty which goes deeper still. Let us suppose that human beings are destined with time to develop into super-scientists, super-historians, super-philosophers such as the Idealist theory seems to contemplate; will these super-philosophers be anywhere nearer to the Absolute thought or experience of which the theory speaks? Will not each of them, however complete and coherent his thought may be, still find himself confronted with a world of apparent reality beyond his thought, still need to ask himself the question whether his thought corresponds to this reality? He may find arguments perhaps to convince himself that those portions of the world of apparent reality, which common sense knows as material objects, have their being for thought only, and that all he needs to ask about them is whether his thought of them is coherent with itself. But can he say the same about other human minds? And if he is left with other human minds as insistent realities, he is still confronted with the question whether his thought corresponds with theirs, and whether his thought of them as other than himself is true in the sense that it corresponds with reality. How then can he escape from the need for understanding truth as correspondence? Only, it would seem, if he can persuade himself that his thought not merely approximates to, but is, Absolute thought, and is not merely part of it, but the whole of it.

In trying to make clear to ourselves what such a conception could mean, we come on an ambiguity which seems to underlie much of the Idealist language about this problem. Is the relation of human thought to Absolute thought to be conceived as a relation of approximation to a goal that is aimed at, or as the relation of a part to the whole in which it is included? Is the Absolute thought or experience of which Idealism speaks to be conceived as truth or as reality, as a system which is thought of, or as an activity which thinks? Idealism would no doubt answer, As both. All reality, it would say, is one; it is a single experience thinking of itself; the reality which thinks, and the system of coherent truth which is the object of its thought, are not two different things, but one and the same. This seems to be the central notion of the Idealist myth or metaphysic, which we are at present trying to understand and do justice to, as the key to the puzzle of the Idealist theory of knowledge. And if we are to do justice to it, we must be

ready to conceive it possible that the Absolute experience may be a unity in which these two aspects are combined. Still we must insist that the aspects are two, and that they would have to be approached from different sides; and when we are talking about the method of approach we must keep the two sides distinct in our imperfect thought, even if we admit the possibility that a perfect thought which has reached its goal would see them as the same.

What concerns us at present is to estimate as well as we can the extent of the gap that must on this way of thinking separate ultimate truth and reality from truth and reality as they appear to us. There is a gap on either side, on the side of reality and on the side of truth. On the one side, what presents itself to us as reality is not a single all-inclusive mind or experience, but a multitude of separate limited experiences or minds or selves. On the other side, what presents itself to us as truth is not a single system, but the various and in part conflicting systems of belief which appear true and coherent to these various separate minds. And if we try to conceive how the approach is to be made from the partial and less coherent to the complete and fully coherent, the method of approach would need to be different along the two sides. Along the side of truth, the relation would be one of approximation to a goal; it would be the gradual advance of each of these different systems of belief along a direction on which it would more and more nearly approach the others, a passage through growing similarity to a complete similarity or identity; and of this approximation the Idealist theory may be said to attempt an account, if we can accept its confidence in a natural law of the progress of human thought. But if the Idealist philosopher keeps in view only this line of approach, which is exhibited in the growth of a system of thought, what he is envisaging must in effect be one or other of two things: either a growth that takes place in a particular human mind like his own; or a growth that takes place not in any concrete mind at all, but only in a system of judgments or propositions. And surely neither the Subjectivist conclusion implied in the first alternative, nor the logical development implied in the second, can justify him in speaking as he does of an Absolute experience.

He can escape from this dilemma only if he can find a way along the other line of approach, the line not of truth, but of reality, not of the system which is thought, but of the activity which thinks it. How is he to conceive the nature of the reality which thinks this

coherent system? And in particular how are those other experiences or minds, which he cannot but feel to be in some sense real, related to his own experience as it advances in completeness and coherence? The answer to which his theory points is that he can give a sufficient account of these, as he can of physical objects, by conceiving them as entities in his thought or experience about which he can think truly, in the sense of that word in which truly means coherently; but could such an answer do justice to what he feels about them? To do justice to this feeling he must recognize them at once as other than his own experience or thought and as not less real; but if so, is he not back in the world of Realism, in which 'truth' means 'correspondence'?

The central conception in the Idealist theory of knowledge is that of a continuous process by which thought grows in completeness and coherence and fulfils itself in so doing. But this process, when we ask how it is to be understood, falls apart into three separate modes or phases, which are drawn from different regions and differ widely in their natures. In the first mode or phase the process is conceived as taking place in the thought of a particular human mind; the self-fulfilment is the partial self-fulfilment of this mind as the system of judgments entertained by it grows in coherence and completeness. The final mode or phase is conceived as one in which the Absolute experience or universal mind expresses its perfect self-fulfilment in a system of judgments that is perfectly coherent and perfectly complete. In each of these modes or phases the conception presented is of a reality that is two-sided; on the one side there is a thinking activity that knows, on the other side a system of judgments that is known. But the intermediate phase, which links the other two, has a place only for one of these aspects, for the system of judgments. This system, if we accept the belief in a natural law of progress, can be conceived as growing continually in coherence and completeness; and its growth can in a sense be described as the growth of thought. But thought, when the word is used in this sense, must be interpreted not as a concrete activity of thinking, but as the system of judgments which is the object of thought.

We must no doubt understand that the three modes or phases are not to be conceived as succeeding one another in time; the growth of thought in individuals, the growth of thought in human society or in the human race, the perfection of thought in the Absolute, are to be thought of as persisting side by side with one another. Yet they must be conceived as succeeding one another in

an order of self-fulfilment if this order is to hold together and to have a meaning. And when this is recognized, the Idealist doctrine cannot sustain throughout the course of its argument the claim to be describing a concrete activity of thinking, which it derives from its study of individual experience in the first phase and which it returns to in its myth of the Absolute experience in the final phase. The only entity which can be conceived as present in all phases of the process and as showing a continuous growth is the system of judgments; it is this alone which the coherence theory of truth can plausibly be said to take account of and to explain. But between the individual experience from which the process sets out and the Absolute experience in which it is declared to end, no intelligible connection is shown, nor does it appear how any connection could be established except by bringing back the notion of correspondence with which the doctrine has professed to dispense.

The Idealist metaphysic claims to offer a way out of this dilemma by its conception of a supreme reality which includes all selves in a single experience. But even along this road the dilemma is not so easily evaded. If the argument followed by the Idealist philosopher is not to lead him merely to a Subjectivist conclusion, he must be able to conceive the Absolute experience as a reality which is at once himself and not himself. For this to be felt as actual there would be needed a transmutation of feeling that would carry him into a region which, if it exists at all, is far beyond the reach of ordinary common sense. But for it to be felt even as possible, he would need to recognize the supreme reality as something other than himself, and he must recognize the sharpness of the difference most clearly just at the moment before the transmutation of feeling could take place. For if there is not such a preceding moment, at which the supreme reality is recognized clearly as other than himself, how is he ever to be sure that it is not, what so far as the Idealist logic can show, it very well might be, his own particular petty self swollen monstrously in imagination?

If the Idealist philosopher conceives the relation of his own experience to the Absolute experience as that of part to whole, must there not be a sense, and a most important sense, in which he recognizes the Absolute experience as a reality outside him? And must he not then conceive his thought of it as corresponding to its reality, his imperfect knowledge as corresponding to its perfect knowledge? If he rejects altogether this way of stating the problem, if he maintains that there is nothing outside his own thought and knowledge to which his thought and knowledge may be said to

correspond, he must in effect be claiming that he is not merely part of the Absolute, but the whole of it. No doubt when we study what he has written we find him ready to admit that his thinking is far from perfect. But could that, on this last supposition, mean more than an admission that the Absolute, which is himself, is at present thinking imperfectly, though he hopes, for some reason he does not clearly explain, that it is on its way to think better?

We seem then bound to say that up to the last moment at which anything like ordinary thought or feeling can suffice for us, truth must mean correspondence with outside reality, and it must mean it as certainly and definitely at this last moment as at any time before that. Beyond this there may perhaps be, if the Idealist metaphysic truly presents reality, another kind of experience or knowledge in which truth means nothing but coherence. But if such an experience exists, and if it is possible for a human inquirer to reach it, he will have passed beyond the final point at which he will need any theory of knowledge. And if that point is ever to be reached, the mode of knowledge by which it might seem possible to reach it will surely not be the progressive building up of judgments into a more and more coherent and complete system, which is the mode of knowledge that the Idealist theory seems alone to take account of; or at any rate not this only. It would have to be a mode of knowledge more like in its general nature to the mode of direct knowing by which he knows such lesser realities as material things or other selves, however much it might differ from this in its degree or its particular quality.

But was it not the problem of knowledge, the reader may here impatiently ask, that was the subject for inquiry, and what have these metaphysical fantasies to do with that? We share his impatience. In attempting to understand the theory that truth means coherence we have been diverted, it seems unavoidably, from our professed subject and carried off into the most profound speculations as to the ultimate nature of reality. Ought we, in seeking to do justice to the Idealist theory of knowledge, to have been compelled thus to anticipate what should be reserved for the final task of metaphysics? For surely while our theory of knowledge is still unsettled, anything we may have to say about these remote possibilities will be out of place.

We must recognize that whatever criticism we have put forward of the Idealist metaphysic can at this stage be only tentative and one-sided; there may be arguments in support of it in another

field which our inquiry has so far not come in sight of. What, however, we can claim to have brought out by the foregoing discussion is that the Idealist theory of knowledge, so far as this has nailed its flag to the coherence principle, can only justify itself by taking for granted the Idealist metaphysic. The doctrine that truth means coherence thus involves the acceptance of a theory of knowledge and a metaphysic, each of them highly controversial. The metaphysic, while it has behind it a serious tradition in religious and philosophical thought, is far removed from the outlook natural to common sense. And the theory of knowledge is opposed, not only to the natural outlook of common sense, but to the tradition of all philosophical schools in the past, excepting only this particular form of Idealist thought. What we had hoped to find in a theory of knowledge was an agreed starting point, from which all types of philosophical thinking would go with one another as far as they could, and would do their best to find a common ground on which they might try to understand one another's differences. But the Idealist doctrine of coherence, it seems, will go no part of the way with any other philosophies, unless they renounce at the outset the belief of common sense that truth means correspondence with reality.

What can be the grounds on which so many able philosophers have come to think that this is the only tenable theory of knowledge? They seem in essence to be two, one positive, the other negative. The positive ground is the parallel that may be drawn between the individual experience, from which Idealism sees that all knowledge must start, and the Absolute experience, to which it is claimed that all knowledge aspires; if either of these standpoints is envisaged, the principle that truth means coherence and that all knowledge is internal may seem sufficient, and it may be tempting to overlook the difficulty of comprehending on that principle alone the transition from one standpoint to the other. But this parallel, if it were all, could hardly pass for more than a possible analogy. What is held to establish it as the key to theory of knowledge is a negative line of argument, which claims to rule out as untenable any alternative principle, and in particular the principle which is the doctrine of Realism and of common sense, that truth means correspondence with reality.

And this negative argument may seem a forcible one, when we recognize two things that we seem driven to recognize: one, that the situation which philosophy must start from is a mind knowing its own thoughts; the other, that the test which the mind has at its

disposal for ordering its thoughts is the test of their coherence with one another. If the situation which philosophy must start from is a mind knowing its own thoughts, how is it ever to know that they are more than its thoughts? Ought not the philosopher to accept the position that it springs from the nature of reality that thought is what mind knows and is all that mind can know, and be content to make the best of this position? And when the Idealist philosopher sets himself to make the best of it, he finds that what his metaphysic claims to establish is just this, that thought and reality are the same, or at any rate coincide so that the two are inseparable aspects of a single identity. Looked at from this point of view, Realism is a fruitless attempt to do what cannot be done; by setting up its false doctrine of correspondence it claims to know particular selves and material things, not merely as entities about which coherent judgments can be formulated, which is the only way in which true knowledge is possible, but in a way in which they never can be known, as independent realities. When it supposes a world of independent realities to which thought corresponds, it is imagining an impossible dualism; between thought and reality thus conceived there must be a gulf which in the nature of the problem cannot be bridged. How can we suppose that the pursuit of internal coherence can achieve external correspondence, that in so far as the individual thinker performs the task of ordering his ideas and thoughts coherently in his own inner world, he is performing the quite different task of making his ideas and thoughts correspond to a reality beyond that world? Must we not here either admit an incredible coincidence, or recognize that these seemingly different achievements are not in fact two different ones, that the second is no more than the first seen from another side in a disguised form? And thus the Idealist argument comes to its conclusion that the individual can know only as representative of a universal knower or universal knowledge for which all knowing is internal, and that the conception of external knowing and of truth as correspondence with outside reality is neither necessary nor possible.

What answer can a Realist theory of knowledge make to these criticisms?

CHAPTER XXIV

PROBLEMS OF A REALIST THEORY OF KNOWLEDGE

A REALIST theory of knowledge will differ from an Idealist theory of knowledge in several respects. The Idealist view takes the essence of a true judgment to be coherence within a system of judgments; the Realist view takes it to be correspondence with a reality outside the system. The Idealist view thus regards as its main concern the entire system of judgments or propositions which as a whole constitutes the truth; the Realist view is concerned more with particular propositions as corresponding to particular pieces of reality. Idealism takes the system as primary, the particular beliefs as derivative in the sense that they may be inferred from the system; and it is enough for it to ask whether any particular belief coheres with the system. Realism takes the particular beliefs as primary, the system as derivative in the sense that it may be constructed out of them; and it asks what is a sufficient ground or reason for holding any particular proposition to be true. And thus coherence will not be for Realism, as it is for Idealism, the sole and all-sufficient test of truth. It must, as we have seen, be the final test, in the sense that a proposition cannot retain its place in the system of true propositions if it is shown not to be coherent with that system. But some other test or evidence will be needed to show why any particular proposition should be entertained for its own sake in the first instance, apart from its being viewed as a member of a system. A Realist theory of knowledge is thus led on to ask a further question, or two further questions, which for an Idealist theory of knowledge do not arise. The first question is, What is a sufficient reason for believing any particular proposition or class of propositions? The second question, arising out of this, is, What are the particular propositions which supply the ground or foundation for the whole system of

propositions believed to be true, and what sufficient reason is there for believing these?

The answer given by Realism to this second question is that the construction of the system must start from propositions which are self-evident. We have to ask then, What is meant by 'self-evidence'? And what are the kinds or classes of propositions for which self-evidence can be claimed? A self-evident proposition to begin with must be a proposition which we feel ourselves compelled to hold certain by its intrinsic persuasive force, and not because it can be derived from any other proposition that is more certain than it. But we must give the term a narrower meaning than this. The inquirer who sets himself to criticize and order his thoughts starts, as we have seen, with a store of beliefs of very various kinds, many of which seem to him certain in as much as he takes them for granted, and which in so far as they seem certain may be said in a wide use of the word to seem self-evident. What then is the property which marks off, out of the whole class of propositions which we regard as binding on us in the general sense that we believe them to be true, that much smaller class of propositions which we regard as binding on us because we hold them to be self-evident in the special sense of that term? The test here must be that we should ask ourselves whether we are able to doubt them and should find in the end that to doubt them is impossible; and if we ask, why and in what sense impossible, the answer seems to be that unless we hold them to be true it would be impossible for us to think coherently.

We come back thus to coherence as being the final test for Realism, as it is for Idealism. Any philosophy, Realist or Idealist, which attempts to get anywhere by reasoning must assume some fundamental postulate of this kind: that the nature of reality is such that coherent thinking about it is possible. Even this may be doubted, and there can be moments of bewilderment when perhaps it is; but doubt carried to such a point would fall outside the region of philosophy or of sustained thinking. If this first postulate of reason is not accepted, life may go on, but argument must stop.

The notion of self-evidence seems then to contain three elements. For a proposition to be self-evident we must, first, believe it to be certainly true; we must, secondly, believe that its certainty does not depend on proof; and we must, thirdly, be convinced on reflection that unless we go on believing it to be true coherent thinking would be impossible. Accepting this as an adequate

definition, let us try to distinguish certain main classes of propositions which can be held to be self-evident in this sense.

One main class is constituted by propositions of the type which we have from time to time appealed to as instances of certainty that cannot be doubted: the proposition that two and two make four, and the whole system of mathematical propositions that is bound up with this. The propositions of formal logic will constitute a second main class; or rather, if we accept the conclusions of the modern school of mathematical logicians, both these classes will take their place in a single logico-mathematical system. What then are the leading characteristics that distinguish this class, or these two classes, of self-evident propositions? They seem to be of this kind.

First, such propositions are coherent with one another, not only in the weaker logical sense that they do not contradict one another, but also in the fuller logical sense that they have a necessary connection with one another. What exactly is to be understood by 'necessary connection' in this sense is a difficult question, for which it is a main task of logic to find some answer. The most important point perhaps is this, that given a small number of initial propositions, and given further certain principles of connection, all the remaining propositions of the system, which may be infinite in number, can be deduced or can be seen to follow of necessity from the initial propositions in virtue of the principles of connection.

Self-evidence then is self-evidence within a system, or at any rate the clearest instance of self-evidence is self-evidence within the logico-mathematical system. And thus we arrive at a further thought about self-evidence, which is, that it is a matter of degree. If we can take it as plainly self-evident that two and two make four, what are we to say about other propositions of arithmetic that deal with larger or more complex numbers, such as 'two and four make six', or 'five and seven make twelve'? These as they diverge from our standard example in the direction of greater complexity cannot be said to lose the quality of self-evidence all at once, but they seem to possess it in a diminishing degree. And in another direction our standard proposition itself might be shown as derivable from other propositions logically prior to it, some of which to common sense might seem less certain or perhaps not certain at all, but which to the trained mathematician would appear equally certain, and as logically prior more truly to be called self-evident. The conception of self-evidence is thus not in conflict with the conception of coherence; each helps to

support the other. Coherence helps self-evidence because self-evident propositions with varying degrees of self-evidence can be seen to imply one another. Self-evidence helps coherence by providing the initial certainties without which the whole of a coherent system might be no more than a coherent illusion.

Taking now the logical and mathematical systems as types of systems vouched for by self-evidence, we may note that they have another characteristic, or two related characteristics, which are of vital importance for the theory of knowledge. They are independent of experience, and this in a double sense. Our belief in them no doubt arises from experience in the sense that some particular experience must be the occasion for it. But they are not logically dependent on particular experience as are the propositions of the physical sciences. The proposition that two and two make four imposes itself as certain once it is seen; it does not require to be confirmed by repeated examination of instances; and the mathematical propositions that lack this quality of immediate self-evidence are again not arrived at by examination of instances, but are established by inferences from those that are self-evident. And along with this, whether as a necessary consequence or only in fact, goes a further characteristic, that propositions of this order cannot give us information about any particular event or any particular existence. They are concerned with the relations between general terms or universals; they can assure us that if an entity exists or an event occurs with such and such a characteristic, it will have such other assignable characteristics; but as to whether the entity exists or the event occurs, they can say nothing.

The kind of knowledge that is guaranteed by self-evidence in this the most specific sense of that term is thus definitely limited. It provides in the system of mathematical propositions a machine of immense scope and power, by which the data of sense perception, once they are accepted as in some degree veridical, can be combined and manipulated into the structure of physical science. It provides again in the system of formal logic a machine, of less concentrated power but of even wider scope, by which entities of any kind can be sifted and their relations explored. But if this machinery is to play its part in building up a fabric of knowledge about the existing world, it must be fed with some primary beliefs about existence. Whence are these to be derived, and how guaranteed?

Here a second root or starting point for knowledge is needed,

different in kind from the one we have so far considered. To the premises which provide the starting point for thought about logic or mathematics must be added the data which provide the starting point for thought about the physical universe. To the kind of knowledge typified by the proposition 'Two and two make four' must be added the kind of knowledge typified by the proposition 'Here is something round and white'. Whether this second kind of knowledge is properly to be called 'self-evident' may perhaps be questioned; the term is not so regularly applied to this as it is to the kind of knowledge we first considered. Yet this knowledge too seems in a sense to deserve the name, or at any rate it deserves to be ranked along with our knowledge of propositions which are in the stricter sense self-evident under some such generic title as 'primary knowledge'; for this, no less than the other, is needed to carry out the first postulate of reason, that coherent thinking must be possible. Here, we can say, is a second class of beliefs which are primary in the sense that we feel certain of them without asking for proof, and which are of such a nature that it would not be possible to prove them nor reasonable to expect them to be proved.

What now is the scope of this second class of primary beliefs? Common sense is confident, as we began by assuming earlier, that they are beliefs about the nature of an independent world of material things which is revealed to us in sense perception. But this confidence, as our inquiry following a well-worn line of argument has convinced us, is one which, even if we may hope in the end to recover it, we can have at the outset of a sceptical inquiry no right to take for granted. Unless we start with a dogmatic assumption, we are not entitled to say more than that they are beliefs about sensibles or sense data which present themselves in experience, and which share an immediate certainty that belongs to the contents of the moment's experience as such. Among these contents, it is true, they stand out as having a special character. They claim, more definitely than the rest, to give us knowledge of a reality beyond our own experience; they permit themselves, more definitely than the rest, to be combined into a coherent system; they lend themselves in particular, more definitely than the rest, to manipulation by the machine of mathematical thought. These differences are plain reasons why common sense and science should single them out as of special importance for the building up of our knowledge. But in themselves they possess no greater certainty than the other contents of immediate experience, however much they may hold out, as compared with those others, a

promise of greater probability for the conclusions we may seek to base on them.

Here then are two classes of primary or self-evident beliefs, two kinds of original certainty, which seem essentially different from one another and independent of one another. The certainty of the contents of immediate experience does not depend in any way on the certainty of the propositions of mathematics or of logic; the presence to awareness of a sound or a colour, of a pleasure or a pain, may be certain without any thought of its logical connection with any other entity. The certainty of any proposition of logic or of mathematics may be said to depend on the certainty of immediate experience, in one sense: in the sense, that is, that unless that proposition were to appear at some particular time within the experience of some particular thinker, it would remain for ever unaffirmed and unknown; but this dependence is only accidental; once affirmed, the proposition is seen not to depend either for its truth or for its certainty on the accident of its affirmation.

What these two classes of self-evident beliefs have in common is first, the fact of their original certainty; second, the fact that they cannot be proved; third, the fact that, try as we may, we cannot doubt them. The inquirer starting on his philosophical journey, who does his best to unload himself of all beliefs that can be doubted, will find that after carrying doubt as far back as he can he remains certain of these. Or if it is possible to feel or to imagine a state of perplexity in which even these could be doubted, at any rate such a state of mind would be a state beyond argument. Self-evident beliefs of both classes are guaranteed by the recognition that without them coherent thinking would be impossible.

But apart from what we have just said as to the nature of their certainty, these two classes of beliefs have almost nothing in which they resemble each other. If I consider a self-evident proposition falling within the logical or mathematical orders, the conditions of the belief appear to be of this kind: the proposition presents itself to my mind, I have an unquestioning belief that it is true, and this belief that it is true seems to me to imply that it is true, not only for me at this moment, but for me at any other time, or for any other mind at any time. If I consider a self-evident belief falling within the order of sensory experience, such as the belief that I am now seeing this patch of colour or hearing that sound, the conditions of the belief appear to be more like this: the particular

sensible presents itself to my awareness. I have a belief, which I cannot doubt, that it is present to me here and now, but this belief carries with it no belief as to its being present to me at any other time or to any other observer at any time. And though it is true that I can, and in my common-sense habit of mind often do, proceed directly from this belief to a belief as to the existence and nature of a physical object, which further belief I should judge to be true, not only for myself at the moment, but for my whole thinking or for the thinking of any other observers; yet the passage to this further belief is one which I can only justify by supposing myself to have assurance of a real material world or of some other reality that lies beyond my own experience. Apart from some such metaphysical assumption, the beliefs of sensory experience must be held to present themselves as isolated, transitory, true for a single observer only, not connected in any system; while on the other hand beliefs of the logical or mathematical order present themselves, apart from any metaphysical assumption, as members of a coherent system and as true for any possible thinker at any possible time. The two kinds of self-evident belief, if we allow ourselves to call them both by that name, are in fact so different in their nature that in calling any belief 'self-evident' we seem to imply no more than this: that we feel it to be so certain that it is impossible to doubt it, and that its certainty does not depend on its being demonstrable from any other belief.

The two classes of beliefs which we have now considered must rank for any philosophy as two main original roots or sources of knowledge. But are they the only sources which should be ranked as original? or do we find that, if coherent thinking is to be possible, we must add to these other sources of knowledge, which are independent of them, but which share with them the same quality of original certainty; share it, not perhaps to the same extent, but sufficiently to deserve the name 'self-evident'? Here is a question that a Realist theory of knowledge is bound to face. It will not arise, or not with the same urgency, for an Idealist theory of knowledge, for which the essential test of all beliefs is the test of mutual coherence within a system, and for which the analysis of beliefs into those which are original and those which are derived is thus of minor significance. But for a Realist theory which seeks to trace back particular beliefs to their particular grounds, the question must be a real and pressing one.

What answer to it then has been given by Realist philosophers,

either those of today or those of the past? Here we enter upon a wide and obscure region, in which the confines of metaphysics, of theory of knowledge, of logic, and of psychology meet. And here we find carried on an age-long controversy turning on a distinction which seems in its essence to be a single one, though it is described in various terms: as a distinction between analytic and synthetic propositions, or between knowledge that is a priori and knowledge that is derived from experience, or between truths of reason and truths of fact, or between the Rationalist and the Empiricist approach to knowledge. Are these various pairs or opposites really aiming to express one and the same distinction, or is their significance different? And is this distinction, or are these distinctions, conceived to hold between different sources of portions of our knowledge, or to be different ways in which all knowledge might be regarded? And if it is a distinction between different portions, where is the line between these portions to be drawn? Such are some of the large questions which arise, and to attempt any complete answer to them would mean attempting to summarize a great part of the history of philosophy.

But without any attempt at fullness, we must try to indicate briefly how the line of thought that we have been following stands in relation to these discussions. First then it seems safe to say that the main line of cleavage envisaged in this controversy runs along the distinction between the two sources of knowledge which we have just considered. 'Truths of reason' or 'truths known a priori' stand for knowledge of the kind typified by our instance, 'Two and two make four.' 'Truths of fact' or 'empirical truths' stand for knowledge of the kind typified by our instance, 'Here is something round and white.' The distinction then is primarily a distinction between two separate sources of knowledge. It may be hard to say just what is meant by calling them 'separate', and it may be only in simple instances such as those we have taken that it is clear that they are separate. Yet in simple instances this does seem clear, and none of the attempts which have been made to reduce one type to the other can be called successful. But beyond this point the difficulties of the problem increase on us. To construct a system of philosophy that shall be at all adequate to the demands of common sense there seems to be needed some further source of knowledge which does not fall under the head either of truths of reason or of empirical truths as clearly as do the instances we have cited; and all philosophers appear, when we scrutinize their starting points, to have started by making some further assumptions.

Are they entitled to these additional assumptions under the head of truths of reason, or under the head of empirical truths, or under the head of some other class of self-evident truths whose claim to that rank we have yet to consider? Or are they not entitled to them at all? Here seems to be the central problem at issue in this controversy.

In the approach to this problem it may be of service to keep in view two questions, which our inquiry shows the need to distinguish. First, Is it possible for an inquirer, starting from the two classes of beliefs which we have accepted as self-evident, to construct on this basis alone a system of beliefs which shall reach the lowest level requisite for coherent thinking? Second, Is it possible for him, starting from these two classes of beliefs, to construct on this basis alone a system of beliefs which shall reach the level of generally accepted common sense, or which shall at least support so much of the common-sense fabric as he himself claims to retain? We are not to suppose that either of these questions indicates the ultimate task of philosophy. Philosophy, we are hoping, if we can discover its right method, will be able to show us how to add to the beliefs of common sense or go beyond them. But what we are concerned with at present is the method by which the inquirer may be able to pass from the lowest level requisite for coherent thinking to the level of ordinary common sense. If we can work out a theory of knowledge that can tell us this, we may look to it to tell us further how by this method, or by something similar, it may be possible to pass from the level of common-sense knowledge to a knowledge beyond it. But this possibility is for the future.

The answer to the first of these questions seems to be that an inquirer, starting from the two classes of self-evident beliefs, will be able on this basis to construct a system of beliefs which will be sufficient for coherent thinking, inasmuch as it will be able to find room for all the particular beliefs that make up what he conceives to be his knowledge about reality, in so far as these involve no metaphysical assumption. The notion of construction must here be taken in a restricted sense; what we are speaking of is a logical construction, not a temporal one. It is not meant that any of us in fact builds up his system of beliefs on this basis during the course of his life from childhood onwards; what is meant is that, accepting the sum total of his beliefs as he finds them at any moment, he will be able to see how he can on this basis construct, in the sense of justifying, those of them which he feels entitled to regard as

certain. The contents of immediate experience will supply the material; the concepts and propositions of logic and mathematics will supply the principles of reasoning in accordance with which this material is built up into an ordered system. The material, it is plain, he must draw, and can only draw, from the contents of immediate experience; he will hope, no doubt, that his philosophy, if he in the end can reach one, will be able to tell him whether and how these elements that he finds in his experience are supplied to it by influences from without; but it is as contents of experience that he must take them to begin with. As to the logical concepts and propositions that he will have at his disposal for ordering this material there is plainly room for much discussion. Whether all that he needs for this purpose can be found within the scope of the logico-mathematical system, which we have so far taken as the type of truths of reason, is a complex question into which we do not here enter; it belongs rather to the special field of logic than to the main question that we are concerned with now. It seems at any rate not unreasonable to say that whatever concepts or categories or logical assumptions are needed for reaching the lowest level of coherent thinking have a title to be regarded as falling within the range of truths of reason or of a priori knowledge, in virtue of the very fact that they can be recognized as essential for coherent thinking.

Let us suppose then that our inquirer has constructed such a system; how far will this provide him with all that he needs to reach the level of common-sense thinking? The logical and mathematical apparatus which he uses for ordering his material can give him no assurance that anything exists, except in so far as his own existence at the moment is implied in the fact that he is aware of this apparatus and uses it; and whatever logical concepts or categories or assumptions he may be justified in putting into this apparatus, he is justified in putting them there only as necessary conditions of coherent thinking; he cannot then appeal to them as having any bearing on the question of existence. Yet neither can the material which he has at his disposal, the content of immediate experience, give him of itself any assurance of an existence beyond it. The system of beliefs that he has constructed will then be a system such as we envisaged and sought to describe in our discussion of the World of the Moment; a system that is coherent and complete in itself in so far as it finds room for all his particular beliefs, and incomplete only in so far as it takes no account of the metaphysical background which is assumed for

these beliefs by ordinary common sense. The main conceptions which make up this metaphysical background, such as historic time, the world of material things, his own self and other selves, will appear as conceptions in the system that he has constructed; only the question is left open, Are they more than conceptions, is there beyond the system of his beliefs a reality to which they correspond? How is he to assure himself that the world of beliefs or of propositions, which has a schematic existence in his thought, corresponds to a real world having a substantial existence outside it?

Here then is the fundamental question for a Realist theory of knowledge. How is a passage to be effected from the lowest level requisite for coherent thinking, which assumes only the world of immediate experience, to the level of ordinary common sense, which assumes at least a real past time, real selves, and real material things? The way in which it will be natural for a Realist philosophy to answer this question is by widening the notion of self-evidence. It is hard to see what other line of answer is available; and this is at any rate the answer that would have been given by those Realist philosophers of the past who claimed to found their metaphysical systems on a basis of a priori knowledge, the Rationalist philosophers, as they are sometimes called. The category of self-evident propositions, such a philosopher would hold, does not consist only of self-evident propositions as to the relations of logical concepts and self-evident propositions as to the content of immediate experience. There are other propositions as to the nature of existence which are equally self-evident, which are known a priori, and which need no demonstration. Among these further self-evident beliefs he would include, no doubt, his beliefs as to the reality of his own past, of other selves, and of a material world. But he would draw the boundary more widely than this, and would include as self-evident those main beliefs about the nature of reality which seemed to him essential as the foundation of his world picture in its main aspects, scientific or ethical or metaphysical: beliefs as to universal causation or the uniformity of nature; as to the fundamental notions of good and evil, right and wrong, duty and obligation; as to human free will and immortality; as to a supreme purpose and the existence of God. It is on assumptions of this kind about the nature of reality, taken as known a priori and as self-evident, that the great metaphysical systems of the past were founded.

But is not such an extension of the notion of self-evidence

dangerously wide? Were not the philosophers who so far extended it ascribing self-evidence to beliefs, which seemed certain no doubt to them, but might seem so for no better reason than that they had grown up in the presuppositions of a particular period or a particular country or a particular religion? Was not the notion of self-evidence thus conceived liable to degenerate into something no more conclusive than the mere feeling of personal certainty, so that the claim to it need mean as little as if it had been claimed by thinkers of a time before modern science that it was self-evident that the sun went round the earth or that men could not stand upright at the Antipodes? This was the kind of criticism that could be brought against the Rationalist school of philosophy in so far as it asserted a priori knowledge about the nature of existence; and the effect of this criticism was summed up in the challenge which Hume laid down at the end of his *Inquiry into Human Understanding*.

'When we run over our libraries, persuaded of these principles, what havoc must we make? If we take in our hand any volume of divinity or school metaphysics, for instance; let us ask, Does it contain any abstract reasoning concerning quantity or number? No. Does it contain any experimental reasoning concerning matter of fact or existence? No. Commit it then to the flames; for it can contain nothing but sophistry and illusion.'

This passage may serve as a convenient summary of the main doctrine of the empirical school. What is implied in it is that the valid starting point for knowledge is to be found in the two classes of self-evident beliefs which we considered above, and in those only; and the position here taken up is one which later statements of the doctrine do not seem in substance to have departed from. Some of the more extreme empirical thinkers, it is true, carried their attack on the possibility of a priori knowledge so far as to deny this source of knowledge altogether; our knowledge even of logical and mathematical propositions was, they maintained, derived from experience. This view, it would generally now be agreed, they failed to establish. The proposition that two and two make four does not, we feel, depend for its certainty on multiplication of instances; it is one which we are sure must hold good, not only in the world we are acquainted with, but in any possible world. And the same kind of certainty which attaches to this proposition attaches to mathematics in general, and to some at any rate of the propositions of logic. Whence this peculiar certainty is derived is a difficult question, into which we need not

go further here. What we are at present concerned with is the problem whether, beyond the two classes of self-evident beliefs which we have considered, any further original beliefs must be presupposed to make knowledge intelligible.

The main empirical position, as it was conceived by Hume and as it would generally be conceived by empirical thinkers of today, would accept these two sources as independent sources of knowledge, but would limit the scope of a priori knowledge to what Hume calls 'abstract reasoning': to the sphere, that is, of mathematics and logic. The position then is to this effect. There are two valid modes of reasoning or approaches to knowledge: one of them starts from self-evident principles of reasoning, and develops these in accordance with their own nature into the systems of mathematics and logic; the other starts from the data of experience and constructs from them with the help of those self-evident principles the fabric of the sciences and of ordered knowledge about existence. The first of these gives knowledge that is certain, but is hypothetical; it is concerned, not with facts, but with relations between universals. It is only by the second mode, by starting from the data of experience, that we can reach knowledge as to the fact or existence.

How far now does the empirical doctrine, thus understood, carry us? It argues with force that these two classes of self-evident beliefs, the principles of reason and the data of experience, have a paramount claim to be recognized as the starting point of our knowledge; they have it on the ground that they, and they perhaps alone, are accepted by all inquirers as beyond question; they have it again on the ground that they, and as it seems they alone, are necessary even for the lowest level of coherent thinking. And on both these grounds the empirical school could make out a strong case for drawing a line within what had been regarded by rationalist philosophers as the region of a priori knowledge; and for setting on one side of this the necessary principles of reasoning, on the other side of it the beliefs about existence for which those philosophers had claimed a similar self-evidence. These a priori beliefs about existence were not, it appeared on scrutiny, indispensable for coherent thinking; if then a place in the system of knowledge was to be claimed for them, the claim must not be based on the ground that they were self-evident to reason in the way that the propositions of mathematics or logic are self-evident.

So far the contentions of the empiricists went to clarify the

problem, but there was still a part of it which they left obscure. When they rejected most of the a priori beliefs of the Rationalist philosophers about existence, they retained a few which they felt themselves not able, or not willing, to part with. They retained in particular the three metaphysical dogmas of common sense: the belief of each thinker in the reality of his own past, the belief in the reality of other selves, and also (though this in a more doubtful and half-hearted manner) the belief in the reality of a world of material things. But how could these beliefs be brought within the scope of their avowed premises? Clearly, being beliefs about matters of fact and existence, they could not be justified as truths of reason. The justification assumed for them then must be that they were of necessity implied in experience. But this contention could only appear plausible under the cover of the ambiguity inherent in that most ambiguous term. The varying interpretations to which it lent itself came partly to the surface in the discussions as to our knowledge of an external world. One school of empiricist thought, the Materialist school, argued, or took it for granted without arguing, that the existence of a material world is guaranteed by experience beyond a doubt. To another way of thinking, the Phenomenalist, it seemed clear on reflection that the existence of a material world, whether or not it might be rendered probable by argument, is at any rate not given in experience. But the ambiguity of the term 'experience' goes down below the level on which these differences of interpretation showed themselves, and it was present as a source of confusion behind other presuppositions which the Materialist and the Phenomenalist alike took for granted. Each of them assumed as beyond discussion the real existence of other selves and of his own past; yet neither of these assumptions was included in the avowed starting point, the self-evidence of the data of immediate experience. The step here assumed would seem to be that the individual thinker must be justified in concluding from the data of his own experience to the existence of other experiences on the ground that, if these other experiences should exist, he would be justified in calling them 'experiences'. But for this step there could surely be no warrant. The other experiences which he supposes to exist outside his own would no doubt, if they should exist, resemble his own in the fact of being experiences; so too the material things which he may suppose to exist would, if they should exist, resemble his experience in the fact of existing; but neither of these hypothetical resemblances can place it beyond logical doubt either that the material

things exist or that the other experiences exist and are experiences. And the same degree of logical doubt must attach to the thinker's belief in the reality of his own past. The content which presents itself as memory in immediate experience carries with it a belief in a real past, just as the content which presents itself as sense perception carries with it a belief in the reality of a material world; but what is self-evident in either case is the content of immediate experience, and not the existence beyond that experience which the belief asserts.

These three beliefs then fall within a category of beliefs about the nature of existence whose position in the theory of knowledge is hard to determine. They cannot be said to be self-evident in any generally accepted sense of that term; they do not fall within either of the two classes of self-evident beliefs that we have considered above, nor do they appear, as the beliefs of those classes do, to be indispensable for coherent thinking. Still less does it appear that they can be deduced from other beliefs more evident than themselves. Yet common sense assumes them without question as certain, and all philosophers seem to take at any rate some of them for granted. The Rationalist philosophers of the past assumed a good many beliefs which they took to belong to this class, though without ever defining clearly the principle on which the limits of the class should be fixed. The empiricists assumed fewer, but again without defining clearly the limits of the class. Is there not here a problem which a theory of knowledge ought to consider more closely and attempt to find an answer for?

How can external knowledge be possible? How is it possible for the individual through knowing the contents of his own experience to know that there is a reality beyond it and to know something about the nature of that reality? The question can be understood in two different though connected senses. One way in which it may be taken is as asking, Can knowledge of this kind be conceived possible at all? Can we, supposing ourselves to be able somehow to survey the relation between individual experience and reality from the outside, as an ideal percipient might view it, form any consistent idea of this relation such that it might be possible for the experience to correspond with the reality? And the second way in which the question may be taken is, Supposing knowledge of this kind to be possible, in what way is it possible? How is the individual, if we conceive him not as an ideal percipient able to view this relation from the outside, but as a fallible human percipient confined within his own experience, to discover the element

or quality in that experience which he can trust to carry him beyond it?

We ask then first, Can knowledge of a reality beyond experience be supposed possible at all? The question is sometimes asked as though its very statement implied an answer in the negative; in the mere act of asking how it is possible the questioner, it is assumed, ought to recognize that it can be seen to be impossible. This assumption as to the conditions of any possible knowledge has no doubt a certain plausibility so long as it is stated in general terms; if all knowledge must start from immediate experience, it is hard to see how, that is, by what evident title, belief can pass beyond experience and still claim to be knowledge. But if we look at the question, not in general terms, but in terms of the knowledge we all suppose ourselves to possess; and if we postpone for the moment the point as to how our supposed knowledge can be justified, the natural assumption will appear to be not what we have just stated, but its opposite. How, by what title, we can claim to have knowledge of a reality beyond immediate experience may be difficult to see, but it is still more difficult to suppose that we cannot have it. Anyone who holds that it is possible to pass beyond Subjectivism of the Moment accepts in so doing the essential article of the Realist doctrine and its main difficulty. Other difficulties remain and are serious enough; but they relate to the manner of the possibility of such knowledge, rather than to the fact of it.

What then are the assumptions that may be taken as essential to the Realist position, as this is held implicitly by anyone who believes in the reality of a material world or of other selves or of his own past? He assumes in so believing that he knows at least that there is a reality beyond his own thought and perception of the moment; and it is surely no unreasonable further assumption, it seems indeed part and parcel of the first, that he should believe that something in or behind this reality can so determine the course of his thinking and perceiving that they in some measure correspond to the reality.

It would, we may admit, be a drawback for our theory of knowledge if this belief in a correspondence of thought with reality were to be bound up with a too hasty dogmatism about reality's nature; if the correspondence had to be presented as a fact which could only appear intelligible in the light of some one particular view out of various disputable views as to what that

nature might be. Such a result would bring us up against the objection which we felt before must count as a strong argument against the Idealist logic: that a metaphysical doctrine as to the ultimate nature of reality ought not to be presented to us as being of necessity implied in a right theory of knowledge. The objection, we recognized, though strong was not conclusive; we must allow it possible that a right metaphysic and a right theory of knowledge are thus inseparably implicated with one another. Yet it does seem hardly probable, if we can be justified in speaking at all of probability in this region of initial assumptions, that when opposing metaphysical beliefs as to the nature of reality are held with equal conviction by equally able thinkers, reason should be able to show that only one of these beliefs is compatible with what we want to get from a theory of knowledge; with the starting point, that is, for any possible sound thinking.

But whether this objection is to be held weighty or not, we can say that it does not tell against the assumption which we have here put forward as what is needed to justify a Realist theory of knowledge. For that assumption would be compatible with very divergent views as to the nature of reality. And in particular it would be equally compatible with either of the two views which we distinguished earlier as the two opposing sides of the main line of cleavage in metaphysical thought: either with the view that the world and the events in it are determined ultimately by mind and by purpose, or with the view that they are determined entirely by physical laws to which purpose is irrelevant.

We must not simplify so far as to think of these two contrasted views as a pair of clear-cut alternatives. Each of them includes within itself many possible variants; in some of these variants they may be said to approach and run into one another; and there are views or attitudes of thought which cannot be brought under either of them. Among these last there is the Subjectivist view, for which the question that here concerns us as to the correspondence of thought with reality does not arise, because it claims no knowledge of any reality beyond the thought or experience of the individual thinker. And there is the Phenomenalist view, which accepts what we may call the least common measure of common-sense thinking and confines itself to that; which assumes, that is, the reality of a multitude of human thinkers whose thought and experience correspond in some measure with one another, but disclaims any conception of a further reality whether mental or material; and for which accordingly the question as to the ground

for the correspondence of each of these experiences with the rest arises, or ought to arise, but has to be dismissed as unanswerable.

Leaving however on one side these and other approaches to philosophy which find themselves able to ignore the question, we may say that attempts to speculate about the nature of the universe will for the most part conform to one or the other of the two main types we have distinguished. And this means that, however far they may in the end diverge from one another, they will take their departure from a common starting point. They will, if they are seriously meant and are likely to find serious acceptance, take for granted that least common measure of common-sense belief, the belief in the reality of a multitude of human minds, of different thinking and perceiving entities whose thoughts and experiences in some measure correspond with one another; and they will add to this the belief that there must exist, behind and between these different thinking and perceiving entities, some other reality which, whatever its nature may be, can at any rate determine the course of their thinking and perceiving in a way which accounts for their mutual correspondence.

Beyond this starting point the lines of metaphysical speculation diverge, but their agreement up to this point is enough to supply an answer to the question now before us. If each of us is sure that he is one of a multitude of minds, which in part differ as regards their content and in part agree, and is sure too that there must be some reality beyond them to account for their partial agreement, he conceives himself to know at least so much as this about the nature of that reality: that it can determine the course of his thinking and perceiving so that they shall in some measure correspond with it. This at least will be a reasonable conclusion as to its nature, even if he can conclude nothing more; and this main conclusion will continue to hold good if he believes himself to see ground for carrying conjecture further, though its details will differ according to the particular form which his conjecture may take.

Let us suppose first that this reality is conceived, in the manner in which the traditional philosophy has for the most part conceived it, as determined by mind and by purpose. Must not the purpose which designed the world, and human minds as part of it, be supposed to have so made these minds, so contrived the powers it has given them of thinking and perceiving, that their thoughts and perceptions will correspond in some measure to the reality surrounding them? How far this correspondence should be conceived as extending, is a question to which very different answers may be

given. The limits of possible human knowledge may be extended, as the more ambitious metaphysical systems of the past extended them, so as to include a knowledge of ultimate reality and of the purpose behind the world, or they may be confined within a much more modest compass. And whether the range of possible knowledge is conceived widely or narrowly, it will have to be recognized that at every level in it the correspondence of thought with reality is liable to be partial and imperfect; the inescapable facts of error and contradiction are proof enough of this. But some measure of correspondence, however imperfect and partial, must on this way of thinking be presumed; we cannot suppose, if the world is in any way the expression of purpose, that human thought was called into existence merely to delude itself.

How on the other hand does the position stand for an inquirer who rejects the belief in a world determined by purpose as insufficiently evidenced, and looks for the explaining cause of the existence of partially agreeing minds in the alternative hypothesis which physical science might suggest to him? The world as he conceives it will be a material system determined by physical laws, and human organisms will be among the material objects so determined. In such a world there will be no ground for ascribing to the human mind those wide powers of knowing reality which might be claimed for it in a world determined by purpose; the conceptions of purpose and of ultimate reality will be looked on as perhaps meaningless and anyhow beyond the reach of human knowledge. But here too some correspondence of thought with reality is to be presumed as natural. If it is supposed that physical laws have brought into existence the various types of living organisms with a structure and behaviour fitted to their material environment, and if it is supposed further that the behaviour of those organisms which are called human beings includes acts of perceiving and thinking, it will be reasonable to believe that those acts of perceiving and thinking will conform to the nature of the physical world so far at least as to make survival in it possible; this measure of correspondence may be taken for granted, if nothing more.

Here then are two different ways in which the constitution of the world may be so conceived as to make it natural that immediate experience should be able to give knowledge of a reality outside it. And we may even add to these as a third the Idealist metaphysic, which claims to tell us that human minds know reality, not in virtue of having been created by a supreme mind, but in virtue of being parts or manifestations of that mind; for

this too, when it is deprived of its illegitimate foundation in a Subjectivist theory of knowledge, must be based, as other metaphysics are, on a confidence in the power of the individual human mind to achieve knowledge of a reality beyond itself. Such a confidence, we have then to recognize, is implied in any of the main types of world picture which have commended themselves either to philosophers or to historic common sense. Various as these are, they agree in one point, in so conceiving the relation between individual experience and reality that a correspondence between experience and reality may be expected in some measure to hold. The variety of the types of world picture shows that no particular way of conceiving the relation and the correspondence is to be accepted without question; their agreement on this one point goes to show that in the nature of the case there is likely to be some correspondence, however limited and imperfect.

The first then of the two questions which we raised a little way back, Can knowledge of a reality beyond experience be supposed possible at all? seems here to find an answer. If it may be supposed possible that there should exist a plurality of knowers, and that there should exist too some larger reality outside them which determines the conditions of their existence, it may with equal right be supposed possible that this reality will have so determined their powers of knowing that they can in some degree know its nature; the second possibility is no more than a natural accompaniment of the first. Looked at in this way the sceptical argument which has appeared so formidable loses its destructive force. What the knower knows, that argument urges, is his own thoughts, his own experience; this must be accepted as the starting point for any theory of knowledge; and if this is accepted, it must be impossible for him to know a reality beyond his thoughts and his experience, or even to know whether such a reality exists. This seems to be the presupposition behind the destructive criticism which has been brought with such apparent force against one Realist theory of knowledge after another, and which could be brought in some form against any theory which interprets knowledge as a correspondence of thought with reality. But this sceptical argument, which passes itself off so modestly as a confession of ignorance, turns out when we examine it to be a tremendous piece of dogmatism put the other way round. What the philosopher who urges it as conclusive is in effect saying is that he knows that there is no possible set of causes which could bring into existence a finite mind having the power to know anything beyond its own states.

And in saying this he claims a knowledge about the ultimate nature of reality that is far more sweeping and ambitious than the knowledge claimed by common sense about portions of reality, which he dismisses as beyond its reach.

We need not then perplex ourselves further with a theory of knowledge which would deny in general terms that the mind can have a power to know a reality beyond experience; such a denial rests on a presupposition which is arbitrary and seems when formulated almost to refute itself. Doubt as to whether the mind has this power and how far the power extends remains always possible. But when we have recognized that we have to do, not with a general denial, but with particular doubts, the problem before us changes its character. The question which the inquirer now has to put to himself is whether he can find within his experience any element with an intrinsic force that can carry him beyond it; and once he recognizes that this is the right way in which to frame the question, he is not likely to be altogether at a loss in finding an answer to it. There is a kind of certainty that must be its own guarantee, and the certainty that there is some reality beyond experience is a certainty of this kind.

Here then he will have at least the beginning of an answer to our second question: Supposing knowledge of a reality beyond experience to be possible, in what way is it possible? If he accepts it as possible that he should have been given the power to know something beyond the contents of his own experience, the elements in experience through which this power is given him must reveal themselves by the quality of the certainty they bring. The inquiry into the grounds which can justify any inquirer in believing anything has to start somewhere, and when it goes back as far as it can, what other starting point can it find than in asking how it is that we come by those beliefs of which we are in fact most certain?

When then we try to put into shape our general theory of knowledge, we may formulate its leading principle in some such way as this:

If I am certain that a particular belief is true;
And if I am certain again that I hold the belief for a particular reason;
And if I find no other reason than this particular one for supposing the belief to be true;
Then I may conclude that this reason is a sufficient reason for holding the belief.

This conclusion will no doubt in any particular case fall short of full objective certainty. The supposed certainties from which it starts, as to the truth of my belief and as to my reason for it, may both be delusions, and even if both are true, the right reason for my holding the belief may be some other reason that I have never thought of. But it seems reasonable to say that the conclusion we are here putting forward comes as near to certainty as any conclusion about principles of knowledge can be expected to come.

We must recognize that we are here using the word 'reason' in a looser and less precise sense than that which we have so far assigned to it; it has now to include something wider than logical reason or logical ground, it has to cover the causes, or conditions, or accompanying facts, whatever these may be, under which or among which beliefs arise. Beliefs do not come from nowhere or without causes or conditions, at least we suppose not; and what we want to do if we can is to examine the conditions under which true beliefs arise, the logical conditions or grounds, if these can be found, and where none such are to be found, then the non-logical conditions as well. This wider use of the word 'reason' seems then imposed on us by the nature of the problem before us; but we must distinguish it from the stricter use which we have previously been keeping to. In the formulation given just now we are extending the category of beliefs for which there is a sufficient reason, so that it will include not only those beliefs which we found to be requisite for the lowest level of coherent thinking; self-evident beliefs, that is, of the logical and the empirical orders, as we defined these above, and beliefs which can be derived from these by self-evident methods of reasoning. We are opening the doors now to beliefs of another order, which are not indispensable for coherent thinking; which are neither themselves self-evident in the sense defined nor derivable from other beliefs more evident than themselves; and which must rank as self-evident, if we are to allow them that title, on the ground of their intrinsic certainty.

But we shall not be helped to understand how beliefs of this order arise, unless we can discover in them some common quality or mark other than merely their certainty. And when we examined the beliefs of this order which impose themselves on us most strongly as certain, those which we have called the three metaphysical dogmas of common sense, we found that besides their certainty they seem to have another common quality, in that each of them has its source in emotion or feeling. This conclusion, which we were led to because, examining each of these beliefs in

turn, we could find no other reason able to justify or account for them, will now, in the light of our discussion as to the meaning of knowledge, appear no longer surprising, as at first it did, but natural, perhaps almost inevitable. If human knowers are to possess the power of knowing a reality beyond their own separate experiences, that power needs to be given them through some element in experience bringing with it a certainty to which it has no logical right; and the element or activity in experience that can best claim to meet the need is emotion or feeling. This will hold good whatever form our ultimate metaphysics is to take; whether we are to conceive the human knower as a soul created by divine purpose, or as a manifestation of the Absolute, or merely as a psycho-physical organism called into existence by physical laws for a limited time with a limited capacity for adjusting itself to its material environment. In any of these cases the primary metaphysical bias must be entrusted, not to the logical reason, which before believing demands adequate evidence, but to feeling, which can believe without it.

CHAPTER XXV

PROPOSITIONS, EXPERIENCE, AND REALITY

We may turn back at this point to consider further the question how the three worlds which we have called 'perceptual', 'material', and 'physical' are related to one another. To begin with we may note that there is a relation of correspondence between these three and the three main modes of knowing which we have distinguished; each of them is a part, though only a part, of the whole reality that is known by one of those modes. The perceptual world is a part of the whole inner reality or inner world, which is private and peculiar to each knower; which is known to him by the internal mode of knowing, and which includes, besides his perceptual world, his thoughts, desires, emotions, and feelings. The material world is part of the whole outer reality or outer world, which must be known to him, if it can be known at all, by the external mode of knowing; and which he will take to include, besides the material world, other minds or selves, each with its own private world. And the physical world, in the special sense which we are now assigning to that term, is a part of the whole world or system of propositions, which includes, besides that great subordinate system which constitutes the physical world in the narrower sense, many other subordinate systems organized more or less closely or loosely in their various degrees.

We have then to examine further the mutual relations of these three worlds in the light of our discussion as to the three modes of knowing. But before we take up this inquiry there is a preliminary question that may suggest itself: Are we not perplexing thought and multiplying entities beyond necessity if we speak of different 'worlds'? Such a doubt may occur to us when we use this kind of language, or hear it used by others, as it so often is; and we may as

well here give it voice. Should not a sound philosophy hold to it that there is one world only, not three, or perhaps several more, or perhaps even, if we allow each separate mind its separate world, an indefinite number? To explore this question thoroughly would lead us into the issue between a Monist and a Pluralist metaphysic; but that problem is beyond our present purview, and we must not at this point let ourselves be drawn into it. Doubtless the world is in some sense one; this is a proposition which, it may plausibly be argued, is shown to be true by the very attempt to deny it. But that the world is one in such a sense that propositions which are at once true and important can be asserted about it simply in so far as it is one, is by no means beyond doubt; whether it is so or not, is one of the great open questions which we look to philosophy to answer. And we must in any case take it as a fact that in our attempt to understand the world we have to approach the problem from different sides, and envisage it in different aspects, any one of which may at times seem to exclude the others from view, and that we must do our best not to confuse these. Let us allow that the worlds of which we speak can be no more than portions or aspects of a single world; still they are portions or aspects which looked at in a particular way or from a particular side may pass themselves off as the whole of it, and we need to think of them as separate if we are to understand how they are related to that whole and to one another. Here is enough to provide a general justification for the language of different 'worlds' which is so commonly used and which it seems so hard to avoid using; and this way of speaking may serve us well enough for the purpose of our present inquiry, provided we do not take it too absolutely.

If however we prefer to state the problem not in terms of worlds, but in terms of parts or aspects of a single world, we may say that the perceptual world, the material world, and the physical world, are three aspects of a certain part of the total world or reality. And without attempting here a precise definition of that part, we may sufficiently delimit it for our present purpose if we say that it comprises those entities and events, whatever they may be, which conform to the system of physical laws. This description will serve to indicate what part it is, out of the whole field known by each of the three modes of knowing, that is marked off for separate treatment by the terms 'perceptual', 'material', 'physical'; and the grounds which mark off this part as calling for separate treatment are not hard to see. If we look inward to search for the foundations of our knowledge, we find in our percepts a kind of

regularity, a susceptibility to ordered statement and prediction, which is not apparent in the same way in the other contents of our inner world. If we look outwards, what common sense finds it natural to start from is the belief in a world of material things, which is known through sense perception, and is discovered by thought to conform to regular physical laws. This world of material things is not conceived as the whole of external reality; common sense does not doubt that through or by means of this material world each knower can come to know the real existence of other mental worlds analogous to his own; it may be willing to admit that, beyond this material world and those mental worlds about which it is sure, there may be yet other realities whose discovery, if it were possible, would shift the whole balance of our world picture. But from the standpoint of common sense the material world is central; and a central question in the problem of knowledge must be, how we come to know this world and what we can know about its nature. And the answer must begin with the recognition that we know it through perception and through thought: what we can know about it is on the one hand sensible data given in perception which shape themselves into a whole immediately experienced which we call the 'perceptual' world, and on the other hand thoughts arising from these data which shape themselves into a system of propositions which we call the 'physical' world.

We have to try to give an account of the mutual relations of these three worlds, and this means that we have to consider the relation of each of them to each; the relation of the perceptual world to the physical world, and the relation of each of these to the material world. The material world, if it exists, is the true object that we want to know about and is thus the ultimate aim of the whole discussion. But a theory of knowledge that seeks to go back as far as it can finds itself led to a point where the existence of the material world appears doubtful, and only the other two can be held to be beyond doubt. That the perceptual world and the physical world both in some sense exist must be taken as certain, if argument is to be possible; the most resolute sceptic, if he tries to order his experience at all, must start by recognizing that he is himself aware of sensibles, and that he is aware too of propositions about these sensibles and about the physical objects which they suggest to him. The question then that has first to be asked is as to the relation between the perceptual world and the physical world; or taking it more widely, between the wholes of

which these two form parts, between the world of immediate experience and the world of propositions.

There are here two modes of relation which we must distinguish. The first of these is that the world of propositions, in so far as any of us can have access to it, must enter somehow into his immediate experience; the words and sentences, which have their place as members of that world, must appear as contents of his experience. The second is that the primary subject-matter of the world of propositions, that which it is about, is itself drawn from another and a deeper region of experience, the contents of which are prior to any words or sentences. This at least is true of the propositions which express most of our beliefs, including all the earlier and more important, all those which are concerned with sensations or feelings or emotions, or are directly founded on them. As time goes on there are added to these, which we may call 'primary' propositions, other propositions, which are concerned with words or sentences, and which we may in distinction call 'secondary'. But words must in the end refer to something beyond words, or we should have nothing to say about them; and thus the whole world of propositions, words and sentences rests ultimately on a foundation that is wordless. This proposition itself hardly needs discussion; it is plainly implied in our general belief about the growth of human thought out of a pre-linguistic stage; it is shown still more unmistakably in the experience of each of us as to how the certainties or beliefs that we express in words arise moment by moment out of a background which is not composed of words, but which we can be aware of as having its own character of sensation, emotion, or feeling. And we can realize for a few moments, and can imagine as continuing, a state of being in which sensation or emotion or feeling would be everything, and in which words and propositions would find no place; a state which it would be impossible to describe, but by no means impossible to understand.

How then is the content of the wordless background translated into the articulated structure of a set of propositions? Here is a problem of vast difficulty and complexity which we cannot attempt to discuss in detail; much labour has already been spent on it by acute thinkers, much still remains to be done. The point which most concerns us here is to note that somehow this translation is effected; that out of the wordless content which each of us knows in the manner of immediate awareness, there can be shaped some part of that system of propositions which, in so far as we believe

them to be true, we know in another manner. We may be doubtful perhaps as to how much of the content of immediate experience can be thus translated with any confidence into a set of true propositions; but there is one part of that content as to which we cannot admit entire doubt, if we are to suppose it possible to order experience at all, and that is the part with which we are here more especially concerned, the perceptual field. That we can by means of propositions order percepts remembered from the past so as to explain percepts in the present and predict percepts in the future is an essential presupposition of physical science, and one of the very few which no system of philosophy has yet ventured to question.

When we try to consider more closely how the work of translation is carried out, we come on a few words or concepts which occupy a special and primitive position in the structure of knowledge. These are the words 'I', 'now', 'this', 'here', and 'you', with one or two others of like import. The peculiar quality of these primitive concepts, as we may term them, consists in this: that they have a unique significance in the world of immediate experience, which they can exhibit for a moment in sentences framed to give its contents direct expression, but which they must lose when transplanted to a definite setting in the world of propositions; their momentary possession of this significance and their inability to retain it are essential conditions on which the process of translating experience into propositions depends. In the world of immediate experience 'I' stands for a single unique knower, and no other; 'now' for a single unique moment of knowing, and no other; 'this' and 'here', for a single unique entity known at that moment, with its unique position in space, and for no other. The meaning of 'you' is not so simple, but this too has a unique significance when it is taken as signifying a single person; that we have to employ this word in two different senses, that the English language has failed to keep the word 'thou', so much needed for the expression either of clear thought or of subtle emotion, is a loss that we can only deplore and accept.

In the world of propositions all these words have a meaning of another kind; they must have a function in that world and must mean something in it, or they could serve no purpose; but when they are transplanted to the world of propositions, they lose what gave them in the world of experience their peculiar quality, they lose their uniqueness. They become now general terms, applicable as the case may be to any particular knower, to any particular

moment of time conceived as present, to any particular entity or particular position in space picked out for notice, or any particular person spoken to. A sentence, which in the first moment when it was lifted out of the world of immediate experience contained one of these words, must change its form and its nature if it is to occupy a fixed place in the world of propositions; the unique significance, which was expressed sufficiently in that first moment by the word or thought 'I', 'now', 'this', 'here', 'you', must be replaced in the world of propositions by a description indicating a particular place in a conceptual order. The proposition, as we may put it, retains its particularity, but it loses its uniqueness and receives specification instead. Language is in its nature not well suited to formulate such a distinction as this, which meets us at the point where what can be expressed in language grows out of what is not, and perhaps cannot be, so expressed. We must not then hope that we can make the problem much clearer by talking about it; but neither must we forget it, for it may easily confuse a theory of knowledge which leaves it out of sight.

The words of which we are speaking serve as gateways from the world of reality to the world of thought or logic. Each of them carries with it in a sense that will not be denied the belief in a reality outside the system of concepts and propositions. And we may note further that each of them, taken in its natural usage and implication, carries with it a belief in a rather different aspect of this reality; that one of them goes beyond another in reaching out to what we have called the four circles of belief which make up the world of common sense. 'Now' is the concept of smallest range, but most indubitable quality; it implies the assurance of a real world of immediate experience, with its momentary content whatever that may be, and it implies nothing beyond this smallest circle. 'I' in its natural usage carries the implied belief further outwards, from the circle of immediate experience into a wider circle which includes remembered experience in the past. 'This' implies a still further advance, from individual experience to the material world, or at any rate it does so if here again we take the word in its natural usage; for though 'this', taken strictly, might mean no more than this pain I am now feeling, this sound I am now hearing, and might thus leave us still in the circle of immediate experience; yet in the sense in which we commonly use it, as when we say, 'This is a beech tree', 'This is Westminster Abbey', we mean to go beyond that experience, we imply our belief in a world of material objects having a substantial existence

of their own. The same may be said of 'here'; this might, if taken strictly, mean no more than presence at a point in my private perceptual space, which I conceive as existing for me at the moment which I call now, but not otherwise; it does, as commonly used, imply presence at a point in public space, in a space which I believe to be independent of my perception and as permanent as the material world. 'You' carries us on to the fourth circle which completes the world of common sense; it implies the recognition that some entity in the world of material objects has behind it an inner life of like quality to that denoted by 'I'. And 'we' puts the same recognition in a different form when it asserts that you and I stand side by side as fellow human beings.

Taken in their natural significance, then, these words carry with them a belief in the whole real world of common sense. But that significance though natural is not essential to them; for they, or most of them, can also be taken in a narrower meaning, which would restrict them to the world of immediate experience. 'This' and 'here', though as we use them in ordinary speech they imply for the most part belief in a material world, can easily be deprived of this implication; they can be driven by Mentalist arguments to admit that their function is no more than to point out entities or positions in a private perceptual world. 'I' again can be shown by similar arguments pushed further back to have no clear title in reason to that continuity with past memories which it claims to possess; it can be reduced to the bare witness of the moment's experience, and confined along with 'this' and 'here' in the small circle of 'now'. 'You' alone among these unique or primitive concepts resists such a reduction; it brings with it a metaphysical doctrine that will not be ignored; and sceptical thought avoids it, recognizing in it perhaps an intrinsic force that can destroy the relevance of arguments which might seem plausible enough in its absence. But in the case of 'we' the metaphysical implication is not so plain, and yet is half suggested; so that this word lends itself in sceptical inquiries to the dangerous ambiguity that we spoke of earlier. It ought, if scepticism is taken seriously enough to be worth anything, to mean only 'I and other momentary witnesses if any such should exist'; but carrying in itself as it does something of the emotional colouring of 'you', it is easily taken to mean: 'I and other human beings like me whom I know to be realities'.

All these concepts and the sentences in which they appear, taken in their unique sense, belong to the frontier of the world of

propositions; they have a right of entry to that world as being concepts and sentences, but they cannot remain in it without undergoing a process of translation in which they lose their uniqueness. The commonest form of this translation appears in the process by which what we call matters of fact are observed and recorded. Any ordinary matter of fact will in the first instance, at the moment when it is observed, be expressible in a proposition of the form, 'This is here now', or will be capable of reduction to a set of such propositions. *This*, some particular quality, appears *here*, at a particular place, *now*, at a particular time; or, this event has this particular quality. To some such form all the observations either of science or of history must go back, and it is in such a form that they possess the certainty which belongs to them as expressing the content of immediate experience. But left in this form the observation would perish with the moment in which it is made; to be preserved it must be formulated in such a manner that it can take a definite place in the world of propositions. Its 'this' must be translated into a specified quality or set of qualities; its 'here' and its 'now' into a specified position in space and in time, or if the phrase is preferred, in space-time. The details of this translation are beyond our present purpose; they are to be looked for in the formulated and unformulated logic of history and the sciences.

The fabric of public knowledge, in so far as it relates to matters of fact, is built up out of propositions of this typical form, containing as their elements the concepts of 'this', 'here', and 'now'. The propositions of history are concerned with particular events or particular sets of events taken in their uniqueness; the propositions of the sciences, physical or mental, are concerned with the general characteristics of categories of events, assumed to repeat themselves; but the propositions of all these orders, whatever their differences, alike go back to observations made at some particular moment as to the character of some particular event. The observation in the moment in which it is made employs and depends on the concepts 'this', 'here', and 'now'; when it takes its place in the body of public knowledge, these concepts must be translated and their uniqueness must be converted into a specified quality and a specified position in space and time.

If we pass to the concepts 'I' and 'you', and consider their relation to the body of public knowledge, more complex questions arise. In any proposition 'I' may be said to stand for the person who is at some particular moment making some observation,

perhaps performing some action or undergoing some experience, but in any case observing it; 'you' stands for some person or group of persons to whom the observer at that moment directs his words or his thoughts. And here we may note first that an 'I' is implied in every statement of fact as the witness whose presence is the ultimate authority for the statement; an observed fact must have been observed by someone. But the name of the witness is not for the most part incorporated in the book of public knowledge, not at least in the text of it; it is at best appended, so to speak, in a footnote, so that it may be referred to if doubt should arise, either to substantiate the observation or to account for possible error. In a few celebrated instances the observer's name remains in common memory; for most of the facts on which the body of public knowledge rests it is forgotten, perhaps recoverable by research, perhaps lost altogether. The fact observed stands on record by itself, and the further fact that it had to be observed drops out of sight.

'I' is in this sense implied in the background of every statement of recorded fact, as a reminder that to make the record there was needed an observer. But the concept 'I' has a more definite and concrete function than this. It stands for any particular human being, conceived not merely as an observer, but as performing some action or undergoing some experience, which is the object of his observation. And there is a region of thought in which the concept 'I' in this more definite and concrete sense, and 'you' as the correlative to it, may be said to be the significant and dominant concepts; this is the region of thought that is concerned with personal relations and with our beliefs as to what those relations should be. But here we are carried beyond the question as to how the body of public knowledge is built up. We pass from the field of the Pure Reason to the field of the Practical Reason, from the region of fact to the region of ethics, as we may call them to express briefly the difference between the two; and at this point it has to be asked whether and how far the propositions which formulate human beliefs in the field of Practical Reason or of ethics can rightly be held to have a place in the body of public or positive knowledge. Here is one of the great vexed questions which we look to philosophy to decide for us; the answer is a matter of controversy, and when we are trying to construct our theory of knowledge we must not take it for granted.

If we leave out of account the part played by the concept 'I' as the indispensable, but for the most part unidentified, witness

to any matter of recorded fact; if we set aside as beyond our present purview the part played by the concepts 'I' and 'you' in the problems of ethics and of the Practical Reason; the further part played by these concepts in building up the fabric of public knowledge appears to be of only secondary importance, and this on several grounds. The range of events in which human beings are concerned as actors is narrow when compared with the whole range of events which science seeks to investigate; and even within this narrow range most of the human actions which come to be recorded as matters of fact are recorded by an act of observation from the outside, which does not employ the concepts 'I' and 'you'; and even when these concepts enter into the original observation, they are not retained in it as it takes its place in the body of public knowledge. Following out this line of thought we may be brought to a position which seems to lie behind the language used by Behaviourists and by some other philosophers, and for which these concepts would be discarded as logically superfluous. For a position of this type the concept of a person or a human being would not be accepted as ultimate for knowledge; a person would be viewed as nothing more than a complex kind of thing, a thing as nothing more than a complex mode of grouping events; and it would be taken as the business of thought to analyse these complexes into their simpler elements. And for a complete analysis, it might be contended, the concepts 'I' and 'you' become unnecessary; the events in which human beings play a part can be sufficiently defined, as other events can, in terms of 'this', 'here', and 'now'.

We need not however here explore the question whether the concepts 'I' and 'you' could thus be dispensed with by a sufficiently rigorous analysis. We have to recognize that there is a sense in which all the concepts of the primitive order we are considering, the simpler concepts 'this', 'here', and 'now', as well as the more complex concepts 'I' and 'you', can have only a transitory place in propositions asserting matter of fact. This transitoriness arises out of their very nature, out of the function which they perform as gateways from the world of experience and the world of reality to the world of propositions. In the world of immediate experience the conceptions 'I', 'now', 'this', 'here', and 'you' are of paramount importance; in the larger world of reality which contains and surrounds that smaller world they have their place, but they are confined to a small circle within a time and space which extend indefinitely beyond them; in the world of propositions they

disappear, and are replaced by descriptions specifying the positions which the entities that they have pointed out are conceived to occupy in the spatio-temporal order.

What has been said may serve as some account of the relation in which the world of propositions stands to the world of immediate experience. We have now to extend our survey by asking how those two are related to the whole world of reality. And at this point we may go back for a moment to our chapter on Philosophic Doubt, and review some of the statements there made in the light of our discussion on the different modes of knowing. The inquirer who places himself at the standpoint of methodical doubt will find, we said, that he needs to take account of three different worlds, which are related in some such way as this. There is first the world of his immediate experience, which will stand out for him now as the one indubitable reality; second, a world or system of ideas and beliefs, or to use the language of the last few chapters a world of propositions, which claims to represent entities in a larger world of possible reality beyond his experience; third, this possible larger world itself, whose reality is for him at present in doubt. When then he seeks to resolve this doubt, the factors given him in terms of which the problem must be attacked are those first two worlds, the world of immediate experience and the world of propositions; or to put the same thing in another way, those two portions of the world of experience which may be contrasted with one another as feelings and thoughts; since it is only in so far as the world of propositions enters as thought into his experience that it can be anything for a particular inquirer.

For the purpose of this antithesis 'feeling' is to be understood in a wide sense, in which it may include sensations or emotions or desires, or indeed all the content of experience except thought in the narrower sense of that word. But these various forms of feeling, different as they are from one another, have this in common as contrasted with thought, that they claim in a more definite manner to give an assurance of reality; an assurance at least of the reality of the momentary experience itself, and often an assurance of some reality beyond that experience; of a material world which the inquirer believes himself to act on or to observe, of other selves whose presence he responds to with friendly or hostile emotions, of a past of his own which he recalls with pleasure or regret, or of a probable future which he anticipates with fear or desire. And thought as contrasted with feeling claims, not so much to reveal

reality, as to give information about its character; in so far as it serves to clarify some particular feeling, it will share the claim of that feeling to an outside reference; but in so far as it is merely thought, it can describe the character of an imaginary world as well as of a real one.

In different moments of experience the proportions of thought and feeling will vary in all sorts of ways and degrees, though neither perhaps can be absent altogether. For the most part feeling, either as sensation or emotion or desire, will be dominant, and thought subordinate to this; with consequences good or bad for practical life which do not at present concern us. What we are concerned with at present is the problem of knowledge, and the moments of experience in which thought predominates; and there are two kinds of these which we must here distinguish. There is the kind of moment that we have chiefly had in view in the earlier part of this chapter, in which some particular piece out of the content of experience is translated so as to find a place in the world of propositions. And there is another kind of moment, which may come sometimes in the experience of anyone who tries to think hard in any field of thought, more particularly in philosophy, and in which the mind is concentrated on a purely intellectual effort of comprehension, and sensation or emotion or desire or feeling, apart from the simple feeling of this effort, recede so far into the background that they seem to disappear.

Reason then, as it seeks to conceive the nature of the world of propositions and to describe its structure, has to keep in view two different needs, which are not easy to reconcile; and the attempt to emphasize the one may well lead to the other's being lost sight of. A logic which is mainly interested in the problems of the particular sciences or of history, and in the growth of knowledge piece by piece, will be alive to the need for keeping open the contact between the world of propositions and the world of reality; it will stress the importance of the concepts 'this', 'here', and 'now' as the means by which particular knowledge is arrived at; and it will hold to the common-sense notion of truth as the correspondence of thought with reality, however hard it may find it to give any clear account of what the nature of this correspondence may be. On the other hand a logic whose primary interest is comprehensiveness, and which is seeking after a unified conception of knowledge as a whole, will be mainly concerned to exhibit the world of propositions as a self-consistent and self-contained system; it will find any particular piece of knowledge significant not in

itself but in relation to other pieces of knowledge; it will be interested in beliefs about matters of fact, not as they are drawn fresh from perception with the stamp of *this*, *here*, and *now* still upon them, but in the form in which they can assume a permanent place in the world of propositions, with their uniqueness, as we have phrased it, replaced by specification. Looking at the world of propositions in this way, and realizing the difficulties that must attend any attempt to define correspondence, it may be tempted to drop the notion of truth as a correspondence of thought with reality, and to accept internal coherence as at once the criterion of truth and its meaning. And with this it closes the gateway between the two worlds; and the world of true propositions, self-consistent and self-contained, becomes for it the sole reality.

The thought that our knowledge is confined to a world or system of propositions, and that we cannot know any reality beyond this, must seem a startling paradox to common sense; so startling and so paradoxical that it may seem incredible that anyone should seriously entertain it. Yet we find philosophers constantly using language which it is hard to understand unless we take them to mean something of this kind. Such, for instance, appears to be the view implied when it is said that the world of truth and the world of reality would be seen, rightly looked at, to be one and the same; or that coherence is not only the criterion of truth, but its meaning; or when it is said that our conception of reality is to be thought of as a construction, without anything being added to show that it needs also to be thought of as a discovery. And if the philosophers who use this language may sometimes, when they are not concerned so expressly with the problem of knowledge, use language which suggests a different view; still the thought that our knowledge is adequately understood if it is conceived as a knowledge of propositions appears to be the dominant strain in their view of the problem, to shape and colour the general structure of their philosophy, and to be the influence which constantly determines their particular assertions and still more perhaps their particular negations. We must try then to understand how this way of thinking, which seems so far removed from common sense, may appear plausible, perhaps even be supposed inevitable, when reason sets itself to explore the problem to the centre.

We described in the chapter on Philosophic Doubt how the world of immediate experience, expanded as it seems to be by the

world of propositions which appears within it, may bulk so large that it eclipses all the rest of the world of reality. We have now to understand that the retreat of reason from common sense can go yet further. The world of propositions as it appears within the moment's experience may take so large a place there that it eclipses the whole world of reality, including the fact of experience itself. The inquirer who has followed the road of methodical doubt, till he is forced back to the circle of his immediate experience as the primary certainty, may distinguish within this certainty two sides or aspects, the act of experiencing and the content experienced; or if his experience takes the form of thought, the act of thinking and the propositions that are thought about. And in a moment of concentrated thought his attention may be so far fixed on the content, on the propositions thought about, that the act of thinking can be ignored; or if he is aware of it at all, it will seem nothing in itself, no more than the fact that some particular propositions are present to thought. But he cannot doubt that there is present to him in this first circle the beginning of a world or system of propositions; a world which can broaden out so as to contain within itself as ideas or concepts all those possible metaphysical entities whose real existence is for him now a matter of doubt. He must believe that he can envisage them as ideas or concepts, if he is to be able to ask significantly whether they exist as realities.

And if he is to attack with hope of success this or any other problem, he will find that the work of trying to solve it must be carried on in the world of propositions; that he must be able to distinguish one proposition or one belief from another as more or less likely to be true; and that his ultimate criterion of their probable truth will be their coherence with one another or their absence of contradiction. The various entities which in his days of common-sense thinking he took to be realities may still have their place in his system of beliefs as subjects or terms, about which he can assert propositions which are true in the sense that they are coherent with one another. But if 'to be true' means 'to be coherent' and nothing more, to say that a proposition is true will be only to say that it is coherent with other propositions in the system; and the entities about which he asserts them, the physical objects or the persons, will only be realities in the manner in which it is possible for entities to be real in the system, that is, as subjects or terms about which coherent propositions can be asserted. He will thus come by the notion of the world of propositions as a world that is

self-contained; and it may seem sufficient to think that the truth of propositions means their coherence with one another in this self-contained world, and that knowledge means the assurance that certain propositions in this world thus cohere together. And any attempt to get outside the world of propositions seems of necessity to bring him back within it, for if he asks himself whether there is outside this world of propositions another world of reality which is its counterpart, all that can be given as answer to the question is one more proposition.

As we look at the problem from this point of view, the distinction which we formulated at the opening of the present chapter appears to elude us. For when we try to distinguish from one another the three worlds of which we there spoke, the perceptual, the material, and the physical; or the wholes of which these three are parts, the world of experience, the world of reality, and the world of propositions, we seem to find that the things we are distinguishing are not different worlds, but different conceptions, all of them contained within the world of propositions. Let us illustrate this by reference to some distinctions commonly drawn in philosophical inquiries, and let us take first the distinction between appearance and reality. These terms and the contrast that they stand for may be understood in various senses. But one sense, and perhaps the one that is most evident and most important, is the sense in which 'appearance' stands for the content of immediate experience, and 'reality' for something existing beyond that experience, of which a knowledge is supposed to be conveyed imperfectly by that content. Or taking the distinction in a more particular way, we may say that 'appearance' stands for the perceptual world, 'reality' for the material world supposed to be known somehow by means of it. This was the distinction we had in mind when we imagined a spectator today watching the sunrise, and compared what he saw and what he believed to be happening with what might have been seen and believed to happen by a spectator three thousand years ago. The appearance, the perceptual world, the visual scene, might under similar conditions be almost the same for him in its quality as it would have been for that earlier spectator; the supposed reality, the event believed by each of them to be taking place in the material world, must be altogether different. But now if we push our thought a little further back and ask how can an inquirer today come to know or to guess that there is this likeness in the appearance, this difference in the

reality, the answer must be that he finds the evidence for it in propositions or statements; not probably in any particular statements he will come across summing up the contrast between the appearance and the reality as this might stand for a spectator at any one moment, but in a mass of statements of the most varied sort, from which he is led to draw the inference that the images appearing in the visual fields of human beings have changed little in the course of centuries, while human beliefs as to the supposed real object or event have changed profoundly. All that he knows or guesses about what the men of that earlier period either saw as appearance or conceived as reality comes to him through statements; so too does his own belief as to how that reality should be conceived today; the only one of the four factors he is comparing that is independent of language is the appearance of which he is himself immediately aware, and even this he must convert into a verbal description if it is to play its necessary part in the comparison. The difference between appearance and reality, when we try to think about it precisely, seems to turn into a difference between a set of propositions about the nature of the one and a set of propositions about the nature of the other.

Let us turn to another distinction which is often spoken of in discussions about historical or scientific inquiries: the distinction between facts and theories. Theories, we suppose, are subjective; facts are objective. Theories have their place in the thoughts of human thinkers and not outside them; facts belong to the world of external reality, are constituent elements of that world, and would be the same if no thinker had ever thought about them. And this, no doubt, is what we want facts to be and what a strong impulse in our thought believes them to be; but can this clear-cut way of reviewing the distinction hold? For when we look into them more clearly, facts seem to grow out of theories and theories to harden into facts before our eyes. Are we, for instance, believing a fact when we believe that the earth turns on its axis and revolves round the sun? or that the coal measures were once tropical forests? or that matter is composed of atoms and electrons? Common sense today would in each case not hesitate to answer, Yes. Yet all these statements were at one time theories, and must when first propounded have seemed venturesome and surprising ones. These no doubt are instances of the more general kind of facts, but the more general facts are also the more important ones, and if the distinction between facts and theories breaks down with these, it can hardly be regarded as fundamental. And even with facts of a

more particular kind some conclusion of the same sort seems to hold. If we try to grasp any fact, whatever its degree of generality, we find that it has to be expressed in a proposition, and the proposition expressing it must have been first formulated at some date by some speculating or observing mind. If it purported to do no more than to describe a sensible event as this appears in an observer's momentary expression, it might be admitted to assert a fact that was beyond doubt for the observer himself. But any proposition that claims to do more than this, to make an assertion about some happening in the past, or about some regularity which extends over both past and future, may be faced with a demand to show the evidence on which it was based; and a proposition that may be challenged can hardly in strictness be called more than a theory, except in so far as it is able to meet the challenge successfully and receive general aeceptance. The distinction between facts and theories seems thus to be no clear-cut one, but to turn into a difference of degree between two classes of propositions, which are not marked off from one another by any sharp dividing line. When we speak of fact, we mean a proposition which is generally accepted as certain. When we speak of a theory, we mean a proposition which is put forward as probable, but which is not yet accepted as certain, or is so no longer.

In all this there is nothing strange or paradoxical while we look at the problem from the side of the world of propositions. The world of propositions contains among its constituents all propositions that have been at any time entertained by human beings; it contains in a special class or sub-system those among this whole number which are conceived as making up the body of present knowledge; those, that is, which are regarded by the best authorities at the present day as best expressing the truth about reality. It is thus only to be expected that particular propositions which were at first put forward tentatively are from time to time promoted into the higher class of truths accepted as certain, and that some of them are perhaps later on moved down again out of that class as being superseded by a more correct formulation, so that they will now rank only as propositions which were at one time believed. This process by which propositions pass into or out of the higher category of accepted knowledge must go on as science grows and develops; and it was with this in mind that we defined the physical world as the system of those propositions which today make up the body of knowledge comprised in the physical sciences.

What however must seem strange and paradoxical is that,

while we thus fix our views on the world of propositions, the world of reality which we supposed ourselves to be describing seems to disappear. All that we can assert about the material world is that it corresponds in some way to that part of the world of propositions which we call the physical world; all that we can assert about the whole world of reality is that it corresponds in some way to the whole world of propositions. And if we can say no more than this, are we saying anything when we speak of reality or of a material world?

Looking at the problem of knowledge in this way, we can see how strangely the conclusion appears to be forced on us that the world of thought and the world of reality are not two separate worlds, but one; that the constituent elements of this world are propositions or judgments; and that its truth consists in the internal coherence of these judgments with one another and not in their correspondence with any other reality outside. The conclusion may seem indeed irresistible for anyone who has faced the difficulties we have mentioned, unless he accepts the principle that knowledge of reality depends not on thought only, but on feeling.

The position we have been describing is most easily understood, and can be best justified to reason, if it is arrived at by the road of methodical doubt which we described earlier. But it, or something like it, seems to be assumed by many philosophers who have not professed to follow that road; assumed at any rate in one part of their thought, even if things inconsistent with it are assumed in another. And however it may be arrived at, an inquirer who has once reached this position will find it hard to escape from; the world of propositions has such a powerful attractive force, when attention is concentrated on it, that the question whether there may be anything beyond it can drop out of sight or be dismissed as a meaningless question. Nor does reason alone seem able to carry him further; all it can do for him is to make the world of propositions appear more coherent in itself. The clue that he needs to guide him back to the world of reality must be found in feeling or emotion; and the beginning of this clue is given him in the feeling of awareness which is expressed by Descartes in the word 'cogito'. He can feel himself aware of whatever appears as the content of his thought, and this feeling is something of a different order from anything in that content; not included in it, and not contributing to its coherence, nor needed to make it more coherent; but needed as the external condition which makes it

possible for it to appear. And with the help of this feeling he can realize that what he is aware of is not merely a set of propositions, but is these as contained in the world of his immediate experience; a world which has, what the world of propositions has not, that peculiar attribute or quality which he knows as the taste of reality.

With this step the return to common sense begins; but so far it is only begun. The world of immediate experience, which on the journey down the road of methodical doubt was the last part of the real world to be lost sight of, will on the journey upward be the first part of that world to reappear. And what lies beyond this will still be in doubt. The inquirer has still to face the question whether the sense data which appear in his experience are to be conceived as nothing more than appearances within it, or as signs of a larger reality outside it. But he will at any rate have got so far as to understand this: that the taste of reality is something different from information about reality, and that the significance of reality is not exhausted by the completest possible collection of propositions describing its nature. It is because he knows the taste of reality in his own immediate experience that questions as to the reality either of a material world or of other experiences can have significance for him. He will want then, if he can, to comprehend the world of propositions in a way which will exhibit it, not merely as internally coherent, but also as corresponding to a world of reality which is its counterpart. Is there such a counterpart, and if so, how can it be known? The answer to this question may be hard to formulate, but at least the right question has now been asked, and is not to be dismissed as merely meaningless.

The world of reality, if it exists, must be conceived as a counterpart which corresponds in some way to the world of propositions; not to the whole of this world, but to that part of it which is held to have the attribute of being true. There are other structures or systems in the world of propositions, impressive perhaps in their scale and their inner consistency, which are recognized, without any drastic philosophic criticism, as the work of fancy or misguided speculation, and as having no counterpart in reality. What portions of the world of propositions are to be conceived as being true and as having a counterpart in reality, will vary with different thinkers and with the principles of reasoning that they accept, which are likely to differ widely from one another; but one point seems essential, that the systems or domains of knowledge which are conceived to have a counterpart in reality should be connected in some way by the accepted principles of reasoning with some

data in the immediate experience of the inquirer. It is, to take the plainest and most obvious instance, because the propositions which purport to describe the nature of the physical world can claim to be connected with the data of sense perception, that the beliefs first of common sense and then of science about the physical world hold the paramount importance that they do for the theory of knowledge.

But how is the inquirer to understand the relation of correspondence which may hold between the world of propositions and the world of reality? It is difficult to conceive this, for when he looks at his immediate experience, he will find there nothing, or next to nothing, which the world of propositions can be supposed to correspond with. The world of propositions is vast, timeless, and coherent; the world of immediate experience is small and its contents are fragmentary and transitory; it provides somehow moment by moment the elements or fragments out of which the world of propositions is built up, but once these elements have been used as building material, they have served their purpose, or so it seems. He may be aware of one or two sensibles or images given in the present moment, and of a few more remembered from a moment just past, which correspond to and justify constituents of the world of propositions, as when he thinks 'There is at this moment a clap of thunder' or 'A moment ago there was a flash of lightning'. But these few scattered images are not what he is looking for, a reality that can correspond with the whole world of true propositions. He knows by thought the world of propositions, but this is not that world of external reality; he knows by immediate awareness the thoughts, and perceptions, which are the content of his experience at any moment, but these again are not that world of external reality. The world of external reality, which in his days of common sense he believed to exist, was a world which both possessed reality as the world of his immediate experience does, and reached out into vast distances of time and space as the world of propositions does. Can he recover and justify a belief in this world?

Reason, so far as he has understood its principles and followed them, cannot help him to this belief. Here feeling has to intervene a second time for a further purpose. He must depend on feeling for the assurance that the sensibles which appear in his perception are more than merely themselves, and more than merely data out of which a conceptual scheme can be constructed; that they are signs of a vast persistent reality outside his experience. His momentary experience is the focus or meeting point, in which there are

brought together the two larger worlds, which are so different in their manner of being, yet seem so hard to distinguish; the world of propositions and the world of reality. He makes contact with the two by different faculties or modes of apprehending: with the world of propositions by successive acts of thought, which explore it step by step, one proposition after another; with reality and the material world by a comprehensive act or state of feeling, which is not expressly present to thought, but is taken for granted in his certainty that this world is something independent of his thoughts about it.

The transition from the world of propositions to the world of reality is thus not a simple and direct one; the two are connected for each inquirer by the moment of his immediate experience and what can be contained in that. And this may help to explain how it may happen that his thought can rest content with the world of propositions and not seek to go beyond it. When he thinks of all that he wants to know, the world of his immediate experience may seem so small and so subjective that it is negligible and irrelevant for the problem of knowledge. But if he tries to think how knowledge can be possible for him, he will be forced to the conclusion that it is only in this small subjective world that those two larger objective worlds can come together. Compared with this the two must both be conceived as objective, though in different ways. The world of reality, if it exists at all, must be objective in the sense that it exists outside the experience of any particular individual, and as a Realist philosophy would add, outside the experience of all human beings; it includes these experiences, but they are not the whole of it. The world of propositions must be conceived as objective, in the sense that the propositions which are its members can retain some kind of identity from one moment to another (if there are other moments) and can be entertained by different individuals (if there are different individuals). And each of these objective worlds is immensely larger than the small world of immediate experience which forms the link between them. On either side of this small world a larger objective world opens out and seems to expand indefinitely. On one side lies the world of propositions; the few scattered beliefs or judgments which are all that the mind can find room for explicitly at any moment, lead out into a whole world or system of propositions which includes them and gives them their significance. On the other side lies the world of reality; the belief of the thinker in some fragment of his past now remembered, in some part of the physical world now

revealed to perception, brings with it the belief in a whole world of reality in which these parts and fragments have their places. But the channel which joins these two oceans is the narrow channel of immediate experience.

We have been considering in these last pages a theory of knowledge which is to be found in varying forms in different philosophies, sometimes expressly stated, more often implied in the background; which looked at from one side may seem both economical and self-consistent; yet which appears, when we follow out its consequences, to break too sharply with common sense for us to accept it as adequate. We come back then to the conception of the three modes of knowing which we spoke of at the beginning of this chapter, as giving an account of the problem which best expresses the outlook of common sense. We have to distinguish three different ways in which anyone may be said to know or to think of a fact or event which he conceives as having objective reality. He can know it or think of it, first, as a reality or as a part of the whole field of reality which lies outside his own experience; second, as a part of his experience which, as he believes, corresponds to that reality and is a sign to him of its existence and of its nature; third, as a set of propositions by means of which it is possible for him to construct a conceptual description of the reality, to record this description for reference in the future, to communicate it so that it can be shared with other minds.

These three modes of knowing work together so easily and simply in the ordinary business of life that for the most part we do not need to distinguish them. It is only now and then that some failure in adjustment makes us reflect: at this point what I thought or felt did not rightly correspond to the reality, at that point what I said did not rightly express what I thought or felt. But when we try to analyse, we have to recognize that these distinctions which come to the front in the fact of error are always present in the background; that a theory of knowledge cannot afford to ignore any of the three modes; and that the best theory of knowledge will be the one which is best able to give each of them its due place.

If however we want to range them in the order of their importance for knowledge, the right order should, it would seem, be that in which we have named them above. The first and most essential element which our theory of knowledge should take account of is the reality which the knower wants to know, which would, as he believes, continue to exist if he himself should cease

to know or cease to exist; next to this comes the element answering to this in his own experience, which is the indispensable means by which he can know, yet is only the means or vehicle of knowledge, not its object; last in order of importance comes the set of propositions in which he may describe the reality, for this last is still more clearly not the object of knowledge, but a means, and not even an indispensable means.

This is the view natural to common sense as to the relative importance of the part played by the three modes of knowing in any piece of knowledge; and as regards much of what we suppose ourselves to know this common-sense outlook still holds its own. Each of us when he believes himself to know or to think about some part of his own past experience or of the experience of some other person realizes well enough that the object of his knowledge is the experience he is thinking about; that the end of his thinking is to grasp the nature of this object; that his own experience of the moment, though at some particular moment it may seem to be what is most important to him in virtue of the feeling which goes along with this thought, is not itself the object of his knowledge, but is only a means to that; and that the words and sentences which may arise in his mind as describing the reality that he is thinking of are still further from the reality, that they are only a secondary means or instrument by which he may be helped to clarify and focus the thought or feeling, which is his primary means of knowing. All this may seem too plain to be ignored and too obvious to be worth stating.

What makes it worth our notice is that this natural outlook of common sense has come to be obscured, or even reversed, in the discussions about theory of knowledge which have grown up round the problem as to the reality of the physical world. When one experience conceives itself to know another experience, what we suppose to happen is that the nature of the experience which is known is somehow reflected or reproduced, not precisely with all its fullness, yet with substantial accuracy, in the experience which knows; and the resemblance between the knower and the known may be close enough for this supposition to be not too far from the truth. And in the outlook of pre-scientific ages the relation could seem to be not essentially different, when what the knower supposed himself to know was not some other experience but some object or thing in the material world; he could suppose that the forms, volumes, and colours, of which he was immediately aware, reflected or reproduced with some imperfection and distortion

forms, volumes, and colours actually present in the material object. But as physics, physiology and psychology worked from their different sides on the problem as to the nature of the physical world and our knowledge of it, this way of viewing the position became more and more difficult to hold to; the perspective of common sense was shifted and turned the other way round. The knowledge that is expressed in propositions came forward to occupy the foreground of the picture; knowledge as awareness of immediate experience fell back into the middle distance; knowledge as assurance of a material reality beyond experience receded so far into the background that it could seem to disappear altogether. For of this supposed material reality what could now be said? Its nature, if it existed, must be conceived to be somehow symbolized or expressed in the perceptual world on the one hand and in the physical world or system of physical propositions on the other hand. But this nature appeared in itself to be unknown, perhaps unknowable. And thus Mentalist thought was led to its conclusion that the conception of a material world should be discarded as superfluous and useless, and that a reasonable philosophy should make what it could of the two worlds whose relation to knowledge seemed more understandable, the world of percepts and the world of physical propositions.

What answer, let us ask again, can be given to this contention? What, if anything, is gained by supposing that the world of propositions, which embodies human knowledge about the events and entities subject to physical laws, has a counterpart to it that is independent of human thought and perception? The theory of knowledge to which our inquiry has led us would answer that the relation between the physical, the perceptual, and the material worlds is to be conceived in some such way as this. The perceptual world of each individual is the world conforming to physical laws, as this is presented or symbolized in the awareness of that individual. The physical world is the world conforming to physical laws, as this is presented or symbolized in the system of propositions which constitutes physical science. The material world is the world, or the sum total of entities and events, conforming to physical laws, as this world exists in its intrinsic nature. This way of conceiving the problem involves us in the puzzle that the material world seems at one moment nearer and more solid, at another more remote and shadowy, than the other two. The material world alone of the three has a substantial existence independent of the thought and perceptions of human thinkers; the perceptual world has no

more than a phenomenal existence as a momentary appearance in the awareness of each individual percipient; the physical world has no more than a schematic existence as an ideal system of thought to which the thoughts of individual thinkers in some measure conform. But it is also true to say that each individual knower knows the material world only as the background on which the contents of his perceptual world are displayed from moment to moment and as the subject-matter described in the propositions of physical science. What he adds to his knowledge of it by knowing it as material is not a knowledge of its particular nature; all his particular knowledge about it must come from his percepts and his thoughts; yet in knowing it as material he adds something that is not negligible, he adds the knowledge or at least the firm belief that this world which he knows by means of his thoughts and percepts is something more than the thoughts and percepts by means of which he knows it.

The material world is known as the object of perception, as the object of thought, and as the object of emotion. As the object of perception it is the ultimate background or substratum, itself without particular sensible quality, to which all particular sensibles are referred. As the object of thought it is the ultimate term to which all propositions about physical entities relate, or to use the language appropriate to a certain view of logical structure, the ultimate subject to which all such propositions are ascribed as predicates. As the object of emotion it is a substantial reality known in itself. By the help of these distinctions, and in some such way only, it seems possible to interpret the language to which so many philosophers have had recourse, when they speak of the reality behind sense perception as unknowable. That the nature of this reality is in large part unknown to us and is likely to remain so can well be understood; but what meaning can we attach to the statement that a reality can be known to exist which is in its nature unknowable? In the light of the distinctions we have drawn this puzzling language, while it remains confused, becomes more intelligible. The ultimate background of perception can rightly be called unknowable, because apart from particular sensations there is nothing to know about it. The ultimate subject of predication can rightly be called unknowable, because apart from particular predicates there is nothing to know about it. But the material world as the object of emotion, as the reality behind our perceptions and thoughts, is the very thing that we know in the external mode of knowing, if external knowing is possible at all,

and if any of us can know anything beyond his immediate experience. What in one sense of knowing is unknowable is in another sense of the word the thing we know best.

When we ask then, What does the notion of the material world add to the notions of the perceptual world and the physical world beyond what is already contained in those notions? our answer will be that it adds nothing more except the belief that the material world exists; but we shall go on to say that in adding this it adds the element in virtue of which the belief in a material world responds to a fundamental need of feeling. This element is not simply the whole complex emotion which we have spoken of as the sense of nature; that complex emotion contains within itself a number of different elements, one or another of which might be present to feeling though the belief in a material world should be absent. Apart from any such belief the images that compose the visual scene could still appear to us beautiful or sublime, as they may in fancy or in dream; the sensations of pain or pleasure which arise from material contact could retain their power to call up feelings of terror or desire, even if they were taken as sensations only and their material origin were ignored; the system of propositions in which thought describes the physical world might still impress by its coherence and its logical symmetry, as the system of mathematical propositions can impress apart from any reference to a material reality. But the whole complex emotion which creates and justifies the belief in a material world is more than any one of these or than all of them together; it is bound up with the belief that beyond our perceptions and our thoughts there exists a reality independent of them which controls our sensations of pleasure and pain, calls up in our perception images of form and colour, and is the substance to which the propositions of physical science relate.

But now let us turn back to consider further the way in which Mentalist speculation dealt with this problem. If the material world was dismissed as superfluous, how was the relation between the perceptual world and the physical world to be conceived? That the two should stand side by side as co-ordinate means or instruments of knowledge could be understood if it were accepted that each had its counterpart in a third thing, the material world, which was the real object of knowledge, and to the knowing of which they were both ancillary. But if there should be no such material counterpart, it becomes hard to see how the perceptual

world and the physical world can maintain an equal standing in the problem of knowledge; the real object of knowledge must in that case, it would seem, be looked for in one or other of them, not in both at once. And thus there appears in Mentalist theories of knowledge an ambiguity, sometimes coming to the front in definite controversy, as to whether knowledge is to be found in the world of perception or in the world of propositions.

Here then arises a cleavage in Mentalist philosophy, which is not identical with the cleavage between Idealism and Phenomenalism that we spoke of earlier, but which cuts across that. The Idealist theory of knowledge on its first appearance with Berkeley, and the Phenomenalist theory of knowledge on its first appearance with Hume, alike took their start from the perceptual world. It was natural that they should, since what had made the problem of knowledge urgent was mainly the discovery that the advance of science seemed to transfer to the perceptual world one piece of content after another which common sense had supposed present in the material world. And now if this transference was to be carried to its extreme point, if the whole material world was to be rejected as a superfluous fancy, Phenomenalism had to show how to construct and justify the particular knowledge claimed by science and by history; Idealism had to show this too, if it was to establish its position in the light of modern thought, but it was even more concerned to vindicate a religious or spiritual interpretation of reality as a whole. Hume attempted the first of these tasks, Berkeley the second. But each of these attempts, for all its ability, suffered from an initial weakness; the world of perceptual experience which both took as their starting point was in its essential nature something private and personal. And this weakness in a measure justified the charge of subjectivism or of solipsism which has been so constantly brought against each of these thinkers. If we look at what either of them meant to do and supposed that he had done, the charge is so wide of the mark that it may appear absurd. Berkeley conceived his philosophy on one side as an expression of unsophisticated common sense, on another as an aid to Christian doctrine, and the thought never struck him that it might be inconsistent with either of these. Hume, no doubt more alive to the radical nature of his rejections, still believed that what he had kept was a sufficient support for the positive sciences and for history. If however we consider not the intentions of the two thinkers but the logical results of their theories of knowledge the imputation will seem not so undeserved.

The starting point in perceptual experience was inherently subjective; and if the transition from this to a material world, which common sense had assumed a right to make, was to be disallowed as illegitimate, it was hard to see how objectivity could be reached, and how any thinker was to justify a belief in events falling outside his own experience.

The more imposing structure of Idealist speculation which was erected later in Germany was conceived by its authors to have avoided this initial weakness, and is on this ground often described as objective Idealism in contrast to the subjective Idealism of Berkeley. The Objective Idealists took as their field of study the world of judgments or propositions; and here they found a world that appeared both objective and self-sufficient. This world of judgments, or rather that portion of it which comprised the system of true judgments, must be held to be objective, if communication between minds or even consistent thought was to be conceived as possible. And if the doctrine which interpreted the meaning of 'truth' as coherence within a system of judgments was accepted, the system appeared self-sufficient; the troublesome problem, what is the nature of the reality to which the world of judgment corresponds, might be written off as a meaningless problem, for there could be no reason to assume any such correspondence or any such reality.

The world of thought or of propositions was thus made to appear objective and self-sufficient: objective, inasmuch as all knowledge which could be shared by thinkers in common must be contained in it; self-sufficient, inasmuch as it implied no reference to any reality beyond itself. And yet it lacked something which common sense must feel to be needed for an adequate world picture; something which it is hard to put into words, but the lack of which may be indicated by saying that this world of propositions was not actual. Thus if the Idealism called 'Objective' had gained something in logical coherence which the earlier Idealism had lost, it had also lost something which the earlier Idealism had kept. The earlier or Subjective Idealism fixes its attention on the thinking and perceiving mind and on the ideas which in the act of thinking or perceiving the mind conceives itself to know; it leaves out of its view all the supposed realities of common sense other than the thinking and perceiving mind. The latter or Objective Idealism fixes its attention on the system of ideas or judgments which in the act of thinking the mind conceives itself to know; and it leaves out of its view all the supposed realities of common sense, including

the thinking and perceiving mind itself. It thus secures a less assailable position than that of Subjective Idealism, but at the cost of renouncing more; it secures objectivity, we may say, by renouncing actuality. The Idealism of Berkeley was a retreat from the material world to the perceptual world, from the world of outside reality to the world of immediate experience. Objective Idealism was a further movement onwards from the world of immediate experience to the world of thought which seemed to open out on the further side of that; a world which was by its definition common to all thinkers and which might be claimed to be objective as contrasted with the subjective experience of any individual. But the claim to objectivity was an ambiguous claim; the world with which Objective Idealism concerned itself was not the objective world of reality, which common sense supposed itself to know in part and desired to know better; it was reality's logical counterpart, a world or system of true propositions, which in so far as it expressed truth might with some right be termed objective, but which in so far as it was a system had only a schematic, not an actual, existence. And the significance and the implication of this new movement in philosophy might have been more clearly brought out if the name chosen for it had been, not 'Objective Idealism', but 'Logical Idealism'.

Yet the world of logic and propositions has such a powerful attractive force, when attention is once concentrated on it, that the question whether there may be anything beyond it can easily drop out of sight; and the Objective or Logical form of Idealism was able to entrench itself so securely in that world that for two generations or more it could dominate philosophic thought, and that it came to be looked on in wide circles as the one legitimate and final philosophy. In the last forty years its predominance has been seriously shaken, in part no doubt as a result of searching criticisms directed against its theory of knowledge. And yet that theory of knowledge could seem within its own limits so self-contained and compact that these criticisms might of themselves hardly have brought about the change; and what perhaps did most to weaken the position of Idealism in the general climate of thought was a feeling that this philosophy must be in some way out of date, because it claimed to know so much that it could never have learnt from science.

We suggested a little way back that there were two lines of cleavage along which Mentalist thought might differentiate itself.

There was the line of cleavage which we took into account earlier in discussing the difference between Idealism and Phenomenalism; a cleavage which has its source in theory of knowledge, but which shows itself most clearly in the metaphysical doctrines of the two. Both of them conceive that the appearances or phenomena which common sense interprets as a material world are in reality mental constructs, but they conceive the constructing mind in ways that are radically different. For Idealism the work of construction is done by a single mind, universal or supreme, and the task falling on particular human minds is to reproduce some part of this construction as well as they can; for Phenomenalism all that can be said is that the work of construction is done by particular human minds, and it is useless to ask what, or whether anything, lies behind them. Here the cleavage is determined chiefly by a difference in the central metaphysical doctrine. But there is another line of cleavage which we have now come in sight of as a result of our inquiry into the conditions of knowledge, and which turns on whether a philosophy takes as its point of departure the world of perceptual experience or the world of propositions. Within the Idealist school of thought this line of cleavage shows itself as the contrast between the Subjective Idealism of Berkeley and the Objective or Logical Idealism of the Hegelians. Can we discover any corresponding line of cleavage within that other form of Mentalist thought which we have called 'Phenomenalist'? Should there not be room here for a fourth term in the comparison?

This fourth term, there seems reason for thinking, has been supplied, or is in course of being supplied, by the movement called 'Logical Positivism'. It might be premature to speak with confidence as to the meaning and place of a mode of thought which is still only in the making and in process of defining itself. But we may suggest that Logical Positivism stands to the Phenomenalism of Hume in the same kind of relation as that in which Objective or Logical Idealism stands to the Idealism of Berkeley. It transfers the centre of its system from the perceptual world to the world of propositions; and in doing this it establishes itself in a position further removed from contact with reality, but by that very fact more secure against logical criticism. And if Objective Idealism could hold an unchallenged position for so long by entrenching itself in a world of propositions or judgments and refusing to be drawn into discussions as to anything beyond this, it may well be that Logical Positivism will be able to establish for itself a position which on logical grounds would seem as strong, and which in

respect of its conclusions would appear less open to attack because it would claim to know nothing beyond the knowledge guaranteed by science.

Logical Positivism thus represents the confluence of two powerful streams of thought, the two which may perhaps be said to be those most evident and active in recent philosophy. There is the Positivist stream which derives its main force from the success of science in reaching agreement as contrasted with the failure of traditional philosophy; and which proceeds to the conclusion that the only valid methods of attaining knowledge are sense perception and reasoning based on sense perception, and that the knowledge collected and guaranteed by the sciences is the only valid knowledge. It is a stream of thought which has no necessary bent towards Mentalism, which might have flowed and which for some time sought to flow towards a Materialist position, but which has been more and more diverted from this by the difficulty of forming a tenable conception of the material world. There is again the Mentalist or Logical stream, which derives its main force from the difficulty of forming a tenable conception of the material world; and which is by this difficulty forced back first into the world of immediate experience, then into the world of propositions. It is a stream of thought which has no necessary bent towards Positivism, which might have flowed and for long did flow in an Idealist direction, but which in the end has been diverted from this partly by logical difficulties, partly by the general change in the intellectual climate which has told against Idealism. And these two powerful streams meet in Logical Positivism, which gives us as the object of human knowledge a world or system of propositions and the conclusions of science as formulated in that system.

Such seems to be in effect the upshot of this way of thinking: that we can know the accepted propositions of the sciences, including in this term mathematics and history, but can know nothing else about the nature of reality, except in so far as we may take it for granted that we as a society of thinkers are present somewhere in the background to know these propositions. This must strike common sense as a meagre conclusion for philosophy; but it is the conclusion towards which strict reason seems to lead us, and it is one that common sense will find it hard to avoid, unless it is prepared to entertain the conjecture that there may be knowledge about reality which can be gained through emotion and in no other way.

CHAPTER XXVI

CONDITIONS OF METAPHYSICAL BELIEF

LET us come back now to the main question which emerged for discussion in the earlier chapters of our inquiry. We distinguished between two possible conceptions of philosophy which might be termed 'metaphysical' and 'positivist'; and again between two possible functions for philosophy, which might be termed 'metaphysical' and 'critical'. And for the better understanding of these distinctions we proposed to ask whether we could assign a clear meaning to the phrase 'metaphysical belief', and whether we could reach any general conclusion as to the conditions under which beliefs of this order may arise and as to the grounds which might be held to justify them. We set out then to discover, if we could, a class of metaphysical beliefs, or an instance of a metaphysical belief, by studying which we might be helped to form an opinion about the character of the class; and helped in particular to see how metaphysical belief is related to the beliefs which may be said to be authorized by science, and which would be accepted by the positivist philosophy as falling within the body of public knowledge.

The instance of belief that could serve us here would need, we thought, to be something of this kind. It must be a belief of a wide and general order about the nature of reality; it must, if we were to draw any valid inference from it, be a belief which in the end and after scrutiny we should be prepared to accept as certainly true; it ought not to fall within the accepted conclusions of the sciences, or it could not help us to know whether there is such a thing as a true metaphysical belief which goes beyond those conclusions; yet it ought not to fall in a region altogether beyond the fields explored by the sciences, or in accepting it as true we should prejudge the vital issue whether and how far philosophy can give us knowledge about such a region. We turned then to the problem

of sense perception as the field of inquiry which appeared most promising for our purpose. Common sense assumes without question that our perceptions can give us knowledge about a world of material things which exist independently of those perceptions. Here is a belief of that wide and general order which seems to deserve the name 'metaphysical'; and when we set ourselves to examine the grounds on which this belief had been criticized, we found ourselves faced with a problem which might be ranked as a metaphysical problem.

Physical science, when it began its work, took over the belief in the independent existence of the material world in the same unquestioning way in which common sense had assumed it. The assumption however has in the last three centuries been challenged by critical thought, in consequence largely of difficulties which science itself has brought to the front; and as the challenge came to be developed, science showed itself not able, perhaps not even concerned, to meet it. Most men of science no doubt continued, as did most of the general public, to hold the common-sense belief in a material world, but by no means all of them, nor all the most distinguished. Some of them, seeking to formulate clear premises for scientific thought, found a Phenomenalist position sufficient; others, more interested in linking up their beliefs about science with a general philosophy, leaned more to an attitude that may be called 'Idealist'; but from both these sides the assumption of a material world was criticized as unnecessary for science, and the majority who continued to assume it did so rather because they followed common sense than because they had any effective answer to such criticisms.

And this readiness on the part of men of science to accept either a Phenomenalist or an Idealist philosophy is not difficult to understand; for the most evident achievements of science, its power to predict and to correlate human perceptions, could be as well exhibited in the frame of a Mentalist as of a Materialist world picture. Could indeed any crucial test be thought of which could be applied to decide the issue between them? and if no such test could be applied, was not this enough to show that the issue was one which could never be decided? It seemed to follow from the accepted principles of scientific reasoning that if a proposition about the nature of the physical world could not be shown to be probably true or probably false by any conceivable test, if there was no conceivable test that could have any bearing on the point, then the question as to its truth or falsehood must be held certainly

unanswerable and perhaps meaningless. And was not this just such a case? Could any experimental test be devised which should make it in the least degree more or less likely that behind any particular perception there was a persistent material object independent of the perception, and behind the sum total of human perceptions a persistent and independent material world?

Here then our inquiry seemed to have brought us to a clear instance which might serve to exhibit the relation of metaphysical to scientific belief. The belief in the existence of a material world was a belief of that wide and general kind that had been commonly intended by the term 'metaphysical'; it was a belief that had been held certain by historic common sense; it was concerned with the field of inquiry which science had most explored and in which it had won its most notable successes; and when the belief was challenged science showed itself neutral on the issue. There is then, it would seem, a class of metaphysical beliefs that do not so much claim to rise above the region of scientific belief (which was what the positivist criticism had implied when it ruled out metaphysical beliefs as groundless), but claim rather to go below it or to underlie it; or at any rate we have here one instance of such a class of beliefs. But this very instance might be held to show that when we come on a belief that falls within the province not of science but of metaphysics, we find that it is a belief about which it is impossible to say whether it is true or false. For when we tried to sum up the considerations which should weigh for or against the belief in a material world—on the one hand the continuous assurance of historic common sense as to its truth; on the other hand the strength of the reasoned arguments against any possible formulation of the way in which it might be true, the even balance of opinion among scientists and philosophers today as to whether it should be held true or false, and the impossibility of devising any crucial test to determine whether it should be held true or false—the reflection seemed to be forced on us that what makes the balance turn one way or the other for a particular thinker could be no more than personal caprice, and that any conclusion on the subject that could be considered objectively certain or even objectively probable must be beyond our reach.

And in this position of uncertainty we might have remained, if we had confined our attention to the problem of the reality of a material world. But a new direction was given to our inquiry when we observed that this first problem led on, as it seemed

inevitably, to two further problems which should be ranked along with it in a theory of knowledge. One of these was, Can any inquirer have sufficient ground for believing in the reality of a mind or experience other than his own? The second was, Can any inquirer have sufficient ground for believing in the reality of his own past experience? These two problems, arising as they did naturally out of the first problem, appeared to fall as it did within the domain of metaphysics; yet there was a significant difference in the treatment they have received from philosophers during the last two or three centuries. Important schools of philosophy have doubted or denied the reality of a material world; this doubt or denial has been held reasonable, not only by philosophers, but by men of science, and it seems clear, when we consider the language used, that we have here to do not merely with a question of terminology or analysis, but that what is doubted or denied is, in the case of some thinkers at any rate, the essence of the belief in a material world as held by historic common sense. In the treatment of this problem the demands of common sense should give way to the demands of reason: so it is claimed by Mentalist philosophers, and the upholders of the belief in a material world so far admit the claim that they think it incumbent on them to put forward a reasoned defence for the belief. But no philosopher of note, perhaps no philosopher even, has brought himself in earnest to doubt or deny the reality of other selves or of his own past experience. Some of them have used language which taken in its natural sense would suggest such a doubt or denial, many more have used arguments which pushed to their natural consequence would support it; but when we consider in any such case the total effect of what the writer says, it seems clear that neither the language nor the arguments are intended to carry this conclusion. In the treatment of these two problems the demands of reason, or what we might have expected to be presented as the demands of reason, have to give way to common sense, or to something in human nature that lies deeper than common sense and supports it. Here then are beliefs of the metaphysical order which are accepted by general consent as certainly true, without reason and without question.

In this respect, their unquestioned position, these two beliefs stand on a different footing from the belief in a material world; and the difference, we have urged, is significant and calls for more explanation than it has yet received. But it is a difference of fact only, and it has arisen in a particular limited region of fact; it

belongs to that peculiar blend of reason and common sense which has emerged from the philosophical discussions of the last two or three centuries. When we look beyond that, the three beliefs appear to stand side by side on an equal footing. All three alike are part of the general heritage of historic common sense; if we try to study the records of what human beings have thought and felt in past times, it seems plain that, however much the particular beliefs of different ages and countries may have varied, the general framework in which these particular beliefs were included, the general canvas or background on which these particular beliefs were displayed, contained as essential elements the belief of each individual in the reality of his own past, of other selves, and of the material world; and that the last of these was no less essential than the other two. And if we look at the problem from the other side, from the side of pure reason, we find that all three beliefs are open to the same line of sceptical criticism and might with equal right be dismissed as logically superfluous. We find indeed that those philosophers who have taken most pains to work out a theory of knowledge that should justify Mentalism have been led on by the logic of their position to deny not only the reality of the material world, but also, though in a half-hearted way and almost as it might seem against their will, the reality of particular selves and of past time. Viewed either from the standpoint of historic common sense or from the standpoint of strict reason, the beliefs in the reality of past experience, of other selves, and of the material world appear to stand or fall together; and they may approximately be ranked in a single category, under the title we gave them, as the three metaphysical dogmas of common sense.

Let us consider a little further how we are to understand the terms here employed: 'metaphysical', 'dogmas', 'common sense'.

We are not as yet prepared to attempt any general description of the field of metaphysical knowledge or of the methods of inquiry proper to it. But we can venture to say that these three beliefs, the belief of each inquirer in the reality of the material world, of other selves and of his own past experience, fall within that field; for if they do not belong to it, to what field of study can they belong? Plainly not to the field of any of the sciences, or of any other particular branch of knowledge, such as history or mathematics or logic. These beliefs, and the questions which may be raised as to their truth, must be placed within the field of

metaphysics, because we cannot find a place for them anywhere else. And yet they are not to be dismissed in any of the ways mentioned earlier in which the positivist school of philosophy claimed to dismiss all metaphysical statements. This claim was made on the ground that metaphysical statements were either identical propositions without any positive import, or collections of words which mean nothing, or fancies with no evidence to support them. But the three beliefs which we are now considering are not identical statements, for it is possible to doubt or deny them; they are not meaningless, for our deepest feelings about the world depend upon them; and if it is possible, as we have agreed it is, for a sceptical reasoner to call them fancies and to assert that neither he nor anyone else has a logical right to believe in any of them, not even in the reality of other selves or of his own past, yet as regards these last two, at any rate, it is certain that with or without right all of us do.

Next, what are we to understand by the term 'dogma'? We can find good philosophical authority for taking dogma simply as equivalent to 'metaphysical belief'. The term, for instance, is so defined by McTaggart. 'By metaphysics', he says, 'I mean the systematic study of the ultimate nature of reality, and by dogma I mean any proposition which has a metaphysical significance.' And this definition seems to fit in well enough with common usage, or at any rate with one side of that. The word 'dogma' as commonly used may be taken to import a belief of a wide and general kind about the nature of reality; not perhaps so wide as what the term 'ultimate' might be supposed to cover, but certainly wider and more general than belief about a particular matter of fact. There is however another side to the meaning suggested by the word which is not brought out in McTaggart's definition. Common usage, when it speaks of a belief as a 'dogma', seems to imply something about the manner in which the belief is arrived at and the certainty with which it is held; it suggests that the belief or proposition called by that name is one which those who believe it hold to be certain, and yet is one which they have not arrived at by regularly accepted canons of evidence. And this suggestion is implied even more definitely in the cognate words 'dogmatic' and 'dogmatize'.

The word 'dogma' may be taken then as suitable for our present purpose just because it brings these different implications together. It suggests that there is a class of beliefs which combine, either of necessity or at least in fact, these various attributes: that they are

beliefs relating to some wide aspect of the nature of reality, that they appear to possess a peculiar kind of certainty, and that by the ordinary canons of evidence they cannot be proved. And the three instances of metaphysical belief of which we are here speaking may be called 'dogmas' in the popular sense as well as in the sense of McTaggart's definition. They are concerned, if not quite with questions of ultimate reality, at any rate with questions as to the true or essential nature of some large portion of reality. They are held by those who believe them to be unquestionably certain; two of them, the beliefs of each of us in the reality of his own past and in the reality of other selves, being so held by every one without exception; and the third, belief in the reality of a material world, while by Mentalist arguments it may be doubted or denied, being held in the same unquestioning way by that large majority who have never heard of those arguments or have not been convinced by them. Yet this certainty is of a peculiar kind, in that it cannot be said to depend on any accepted process of reasoning. These three beliefs are beliefs about which all of us, except Mentalist philosophers in their more philosophic moments, are content to dogmatize and feel that we have a right to be dogmatic.

What then can we say as to the nature of this peculiar certainty and as to the grounds for these beliefs? We may say first that by logical canons of evidence it does not seem possible to prove them. Philosophers have made many attempts to prove that a material world exists, but it may be doubted whether any philosopher has ever been satisfied that the attempt of any other philosopher to do this was successful. Attempts have also been made to prove that minds other than the thinker's own exist, though it is perhaps significant to observe that these attempts have been fewer and less persistent; and here it can be said yet more confidently that no adequate logical ground has been shown for the belief in the existence of other minds, even on the assumption that a material world exists, and still less is any adequate ground apparent if that assumption is not made.

But the fact that these beliefs cannot be proved would not of itself be sufficient to give them that special position in our system of thinking which we find them to possess. All proof must set out from some beginning, from something which we believe without being able to prove or feeling the need to prove. There must be beliefs which are self-evident if we are to believe anything at all, and knowledge which is self-evident if we are to be able to know

anything at all. The notion of self-evidence ought however to be kept within strict limits; and when we tried to define these limits, we were led to the view that one of the conditions for accepting a belief as self-evident should be that unless it were accepted coherent thinking would be impossible. Some such condition as this seemed to be implied in the notion as generally understood and to be requisite if the notion was not to be dangerously extended. And this definition furnished us with two categories of self-evident beliefs: beliefs as to the content of immediate experience and beliefs as to some fundamental propositions of logic and mathematics; but the three beliefs with which we are now concerned are not to be ranked with either of these categories. My knowledge of what passes before my mind in the moment of immediate experience possesses a prior certainty to anything that can fairly be called a 'dogma', because if I did not have this knowledge I could not think at all. My knowledge of some fundamental truths of logic and mathematics may again be said to possess a prior certainty, because belief in these is bound up with the possibility of being able to think consistently. But it is possible both to think and to think consistently while holding as doubtful any of the three beliefs which we have classed as metaphysical dogmas; and it is this that gives them their peculiar status. We feel that they ought to be susceptible of proof, while finding it impossible to prove them; and yet without proof we continue to hold them as certain. And it is this conception of a certainty which is neither logically self-evident nor justified by proof that seems well expressed by 'dogma'.

But if we go on to consider another quality of these beliefs the word 'dogma' might seem here less appropriate. 'Dogma', at any rate as the term is sometimes used, suggests a belief that has been embodied in a fixed and definite form of words, and one of the characteristics of the beliefs which we are now considering is that, if they are in one aspect definite, they are in another aspect highly indefinite and vague. We may indeed describe the nature of their certainty in some such way as this: that we are certain of the existence of something outside our own immediate experience, but as to the nature of what it is that so exists we have no clear knowledge or conception. That this should be the way in which we hold some of our most fundamental beliefs is not what we might have expected when we set out on our inquiry. Clear conception has been regarded by great philosophers, notably by Descartes, as in itself a guarantee of the possession of true knowledge; and the

absence of a clear conception might even more plausibly be said to be a sign of the absence of true knowledge. Nobody can rightly claim to know anything unless he can give a clear account of what he claims to know: some such principle as this seems to commend itself so plainly to reason and to common sense that it might almost be taken for granted; and there are fields of our knowledge, large and important ones, as to which we can hardly doubt that it holds good. Yet now we find, when we try to scrutinize some of the portions of our knowledge which are most primitive and least questionable, that here the very opposite is the case. We are certain of them, but if we are pressed to say what it is as to which we are certain, we can say very little. I hold it certain that something which I call 'my self' or 'my mind' has existed in the past outside my present momentary state, but as to the nature of that which has so existed I can say little or nothing, and the more I think about it the more I find myself in doubt. I hold it certain that outside my own present or continuing mental states there exists something which I call 'the material world', but what I mean by 'the material world' I find it hard to say, and the more I try to understand what physicists have to tell me about it, the more my difficulties grow. I hold it certain again that at one or another point in this material world I recognize other minds or selves similar to mine, but about the nature of these other minds or selves I know in one sense no more, in another sense even less, than I know about my own. So great is my ignorance that when I try to formulate my beliefs I find I have no better words to use than these vague words, 'mind', 'self', 'material world'; I can no doubt interpret them or explain them by other terms, more complicated and seeming more precise, which for particular purposes of prediction or description may seem to serve better; yet when I want to express or confirm my sense of certainty about the realities I believe in, the words to which I come as the least inadequate are those first vague general terms, of whose meaning I have to recognize that I can give no clear account. And if I go on to ask myself what I gain by using words or conceptions of whose meaning I can give no clear account, here again is a question to which I am at a loss to give any convincing answer. And yet I can surely say that I gain something, for great as my ignorance is, it is not complete. I am certain that something exists which I seek to express by these words; they are the expression of my belief that something exists beyond my own momentary state, a belief which so far as logic and reason go seems open to doubt, but which I

have found, by the effort to doubt it systematically, that it is impossible for me to doubt in fact.

Next, let us consider what is to be understood by calling these beliefs 'dogmas of common sense'. There is here a possible ambiguity which we need to be clear about. The three beliefs are to be ranked together as beliefs of the metaphysical order about which common sense is certain. But this does not mean that they are derived from common sense, or that we can justify them, as some philosophers seem inclined to do, on the ground that they are so derived. They are not derived from common sense, they go down to something in our nature which is more primitive. Everyone believes them, but the fact that everyone else believes them cannot be the ground for the fact that each of us believes them; they are certainties that each of us must arrive at for himself alone. This seems clear as a matter of history both for the individual and for the race; none of us is likely to remember being told as a child that he ought to hold these beliefs, nor do we find any mention of them as having been taught to people in the past. And it is still more clear as a matter of logic; for when it happens, at a late stage in thought, and as a result of pushing sceptical inquiry further and further, that anyone comes to question these beliefs, he finds that he must answer his questions for himself, without having any common sense to appeal to. If he seriously entertains a doubt whether other selves exist, if he really conceives it possible that what appears to him as other minds may be only the creation of his own fancy, it is plain that this doubt cannot be removed or in the least diminished by any corroboration which the supposed illusory minds created by his fancy may appear to give to the belief which he is doubting. And this conclusion holds no less evidently as to his belief in the reality of his past experience, and must hold, as we have seen, in the end with regard to his belief in the reality of the material world. There is then a class of fundamental beliefs about reality which do not depend on testimony, and which are so certain in themselves that testimony can add nothing to their certainty. Or if to say this is too sweeping, for even the beliefs we hold most certain will in a sense gain something when we find that others hold them too, we can at least say that before any inquirer can draw any support for these beliefs from testimony, he must hold them for himself with so much certainty that all that testimony can add will in comparison be small.

Each of us must make his decision on these questions for himself alone; and he must make it, we may go on to say, within the brief passing moment of time which is all that he can ever have at his disposal. To say this is only to state the limits under which an act of choice has to be made, whether in the intellectual field or in any other; but these limits bear with a peculiar force on the metaphysical problem. For each inquirer must recognize, if he tries to bring home to himself the conditions under which he has to decide between alternative beliefs, that these are very far from granting him that wide survey of his past thought and of the past and present thought of other thinkers, which popular language or his own fancy might have led him to suppose he could command. The quality of his thinking at any moment must be narrowly determined by the course his thinking has taken in the past, by the physical structure of his brain, by the society in which he has grown up, by all the influences which come from the reality beyond his momentary experience, whatever the nature of that reality may be; perhaps so far determined that no choice in fact is open to him, but only the appearance of choice; and at any rate so far determined that the choice must be made within a narrow range of possibilities. All the reflections or arguments which he has ever had presented to him, all that he has learnt from other thinkers, must be summed up for him in a single pulse of momentary thought in so far as they can serve him at all. This inescapable fact lies behind the doubts which our inquiry has called up as to the reality of material things or of other selves or of his own past; whether these are realities or not, they can at any rate only help him now in so far as influences from them are part of his thinking at this moment.

But how are we to relate this inescapable fact to that other evident fact, that reasoning and analysis are serviceable tools and that they need a succession of minutes or days or years to do their work in? Certainly we must not let the reflection we have just had before us impair our faith in the value of these processes, but it may warn us to assign due limits to their efficacy. In the ordinary business of logical thinking, supposing this to go at all rightly, thought proceeds step by step; at any one moment what falls to be taken is a further definite step; and the thinker may so far trust to his assurance of what has preceded as to feel tolerably sure that what he has now before him is some particular definite choice to be made between alternatives or some particular act of reasoning to be carried out. In the procedure of the sciences or of history, or

even in many portions of philosophy, the situation may often be of this kind; and the narrowness of the issue need not tell against the likelihood of a right decision. But with the problems we have called 'metaphysical', problems as to the ultimate or essential nature of reality, the case is otherwise. Here the choice is not between particulars, but between one large conception of the nature of reality and another; and however much an inquirer may attempt from moment to moment to criticize or clarify his conception of the problem he cannot save himself from having in the end to envisage it as a totality. Here analysis must abdicate; or better, it achieves its goal by discovering itself to be irrelevant

The inquirer who is facing an ultimate problem of metaphysics cannot hope then to have his question answered for him either by reason or by common sense, as we have so far conceived those terms. When he has made his decision, he may look round to ask whether that decision can be supported by reasoned analysis or confirmed by the beliefs of other men, and he will no doubt do wisely to seek for such confirmation or support; but these must follow as secondary after the decision has been made. He must face the problem first for himself as a whole and in a moment and in solitude, because this is the only way in which the problem can be presented to a human mind.

What now can we say as to the grounds on which it may be possible to justify these primary metaphysical beliefs, which we all are sure of though we do not know how we came to hold them or how we ought to express them; in which we all agree, yet which each of us has arrived at by himself, and which he must justify, if he feels the need to justify them, for himself alone? The course of our inquiry has gone to show that they depend on emotion, and that if they can be justified, they must be justified by that. When we examined each of them in turn and asked on what it depended and how it might be justified, the best answer we could find was that it expressed an emotional need which was too strong to be denied; when we considered them as a class, and recognized that they were neither logically self-evident nor capable of proof, and asked what element in experience could give us that confidence in them which in fact we have, the only answer again seemed to be that this element was emotion.

But if we admit that emotion can ever be a valid ground for knowledge, should not our next business be to ask, What kind of emotion and under what conditions? If we are to suppose that the

emotions, all or any of them, can be a source of knowledge, we shall be allowing that there is a source of knowledge different from any that we assumed at the outset of our inquiry, or that inquiries into the theory of knowledge usually take into account. And with this we come to a problem which philosophers have left strangely obscure. What is strange is not that they have failed to find an adequate answer to it, for the problem may well be a difficult one. But they have failed for the most part to recognize that there is a problem to be considered. Is the presence of an emotion ever a valid ground for believing in a reality outside the experience in which the emotion is felt; and if so, when? If we put the question in this general way, we have at once to face a suspicion that in the search for knowledge emotion can only be a disturbing factor. The emotions, we have said, are bound up with liking and disliking; but the search for knowledge, we conceive, should be a matter for the intellect unbiassed by likes or dislikes; is not emotion here bound to mislead us? Yet this reflection need not altogether dispose of the matter. All forms and manifestations of mental activity may mislead, even what we call 'pure reasoning'; the best mathematicians and logicians of the past have often been misled by pure reasoning, as the best mathematicians and logicians of today are very ready to point out. It does not then follow, because the emotions have special power to lead us wrong, that they can never lead us right. Yet their influence is likely to be dangerous, and if we are to trust ourselves to it, we ought at least to be clear as to what we are doing.

Should not then philosophers regard it as an important task to explore this problem? And what in fact has their answer to it been? We might expect them on such a subject to disagree; but it is surprising to find that they seem to have nothing definite to say about it. This at least is the first impression which a student is likely to get when he turns for guidance to philosophical literature. This first impression may be modified to some extent by further study; but it will remain true that he will find little to show that the cardinal importance of the problem has been recognized. And he may read through books about philosophy which have great names attached to them and which treat of matters to which a discussion of this question might seem relevant and necessary, and find not a word said as to how it should be answered. What can account for such a silence? Does the thought that emotion can give us knowledge seem to the writer so plainly true that it does not need to be affirmed? Or does he hold it so plainly false that it

does not need to be refuted? One of these two things must be the reason, we cannot help supposing; but which?

It seems in fact to be sometimes the first and sometimes the second. These two contrary doctrines, the one telling us that the emotions can be a source of knowledge, the other that they can have nothing to do with it, may both, if we look more closely, be found expressed or implied in philosophical literature; and what makes the strangeness of the position is that they run through it side by side, but are never brought together, hardly even to the point at which the one might recognize the existence of the other.

We may begin to see our way a little further through the problem if we look on each of these doctrines as being the principle, avowed or unavowed, of one of the main types of philosophy which we distinguished in an earlier chapter. The scientific or positivist type of philosophy is indeed fairly clear in its attitude towards the question. How, it asks, have the sciences established their claim to constitute a body of trustworthy knowledge? and it answers that they have achieved this by trusting to sense perception and to inference based on sense perception, and by ruling out as irrelevant and disturbing factors all beliefs that spring from emotion. The cosmogony of pre-scientific times was full of beliefs that this or that should be held true of the physical world because it would conduce to human welfare or would satisfy human aesthetic feeling; science has progressed by discarding any such assumptions. If then the abandonment of any appeal to emotion is the right principle for science, ought not a philosophy which aims at being a super-science to be guided by it too? How far this principle would carry philosophy is a question not yet perhaps sufficiently explored, and it may be that few of the philosophers who propose it have fully acted up to it. Yet the principle itself is assumed clearly enough in the language used by this school.

Something of the contrary appears when we turn to consider philosophies of the impressionist type; if, that is, we employ this term in a sense wide enough to cover that large field of poetry and letters in which so much of common thought today finds what it takes as its guide to life and calls its 'philosophy'. The conclusion that emotion can give knowledge, to which we have been brought by a process of exclusion at the end of a long journey, would seem to it not surprising, but a commonplace; what it might find surprising is that we should have had to beat about the thicket of knowledge for so long before we came on it. That whole way of thinking which we have brought under the name 'impressionist

philosophy' might almost be summed up as an interpretation of the world in the light of emotion. If we look for phrases from the poets to tell us how faith, hope, or love may give us knowledge, we could soon gather enough to fill an anthology. Are we to suppose them to be deluding themselves and their readers when they speak like this, or to be weaving pleasant patterns of words which it would be absurd of us to take seriously? Or are they saying something that in some sense touches truth?

On this question of the relation of the emotions to knowledge the contrast between these two conceptions of philosophy, the positivist and the impressionist, seems to reach its extreme point; or perhaps we should rather say, the contrast between these two ways of using the term 'philosophy', for at this extreme point they hardly seem to have in view the same thing. They move as it were in different universes, they speak each of them a language which to the other is unintelligible. In either language we may find such words as 'truth' and 'knowledge', 'learning' and 'being taught', but have these words in their double usage any common meaning? The two ways of thinking cannot even come near enough to ask one another the question.

But should not the metaphysical philosophy have made an attempt to solve the problem, or at least to formulate it as a problem if it could not answer it? The aim it sets before itself is to unify thought, not merely to unify the sciences among themselves, but to unify the sciences with the whole of thought; and if so, one part of its business should surely be to ask how the implicit vague belief of common sense that the emotions can in some undefined way give us knowledge is to be reconciled with the explicit principle of scientific reason that in the fields where knowledge is most definite the emotions can only mislead. But if we ask what the metaphysical philosophy has to say about this, we find no clear or certain answer. For the most part, when it is stating its general principles of reasoning, it seems to tell us that those principles are as strict and rigorous as the methods of reasoning used in mathematics or the sciences; it is on this ground that it claims not merely to coordinate the results of the sciences, but to supplement and go beyond them. And yet a reader who sets out to study some particular system of metaphysics may find cause to suspect that so imposing a structure was not compiled out of pure reason, and that emotion has gone to help in the building of it. How, for instance, if we may take as examples two of the most famous philosophical doctrines of the nineteenth century, are we to

explain that Hegel and Schopenhauer, setting out, as they seem to do, from very similar logical presuppositions, came to the conclusion, the one that all reality was perfect, the other that everything in the world, except perhaps art and death, was an evil? Surely here the process of reasoning must have been determined to some extent by the emotional attitude of the reasoner.

When we look at the problem from these two ends; when on the one hand we have to recognize that some of the most fundamental and primary among our metaphysical beliefs have their origin and ground in emotion; when on the other hand we begin to suspect that some of the most far-reaching speculations of metaphysicians have likewise their origin and ground in emotion; the thought may come to us, Is it not possible that all beliefs of the metaphysical order rest in the end on an appeal to emotion, and that the philosophers who have sought to build their beliefs of this order into a system have, knowingly or not, relied of necessity on such an appeal? If this is the case, we must not too hastily suppose ourselves entitled either to approve their practice or to condemn it. Whether the philosophers who have trusted to emotion to determine their beliefs were right in so doing, it may be difficult to say; but they can hardly have been right in so trusting it without admitting this either to their readers or to themselves. If emotion has a place among the avenues to knowledge, its place there ought to be recognized and avowed. We must attempt then at this point to define more clearly than we have yet done what we are to understand by the term 'emotion'; so far at least as to indicate how the mental activities which we rank under this head stand in relation to those other mental activities which are generally accepted as legitimate sources of knowledge, our sensations and our thoughts.

When we attempted earlier to distinguish among the elements of experience, the first main division that we came on was a division into thought and feelings. And in terms of this division both sensations and emotions fall under the broad head of feelings; in either case we mean to indicate an element of experience which, however much of thought may be conveyed or embodied in it, is apprehended in its intrinsic quality and is not a vehicle for thought only. Why then, we have next to ask, do we draw this further dividing line, and distinguish among feelings, some as being sensations, and some emotions? Can we give any clear account of what we intend by this distinction? The best answer that seems

here to offer itself is that we mean to indicate by 'sensations' those feelings which arise in the mind as though they were produced by some bodily cause and which claim to tell us of a material origin; by 'emotions' those feelings which make no such claim. If we phrase our distinction in this way, 'emotion' will have a wider and looser meaning than 'sensation'. The term 'sensation', however various may be the kinds of sensations included under it, implies a certain common attribute in its supposed material origin, and the category has at any rate this measure of unity; the term 'emotion' is defined only negatively, and the category may have no inner unity among its members. We must be prepared then to find that the different kinds of feelings covered by the term 'emotion' may differ among themselves more widely and radically than sensations do. This possibility need not concern us at the present stage, when what we are asking is only whether any of our feelings other than sensations can give us knowledge of anything beyond themselves; but it may be relevant later, when we come to ask what kinds of emotion, if any, may be trusted as a source of knowledge.

Let us go on to ask how far sensations and emotions, thus loosely determined and distinguished from one another, exhibit likeness and difference when we consider them as grounds of belief and as possible means to knowledge. First, we may note that the distinction is based on a claim and that the claim need not represent a fact. For a philosophy which believes itself to have transcended dualism the distinction as we have stated it could hardly be an ultimate one. If we take up a Mentalist point of view and carry it through consistently, we shall have to say that sensations and emotions alike fall within a continuous order of mental events and can be conditioned only by other mental events; sensations then cannot have a material origin, any more than emotions can, however much they may claim to have one. If the centre of our metaphysic is belief in a material world, and if we press the implications of this belief as far as we can, we may be led to say, and we can find creditable authority for saying, that emotions just as much as sensations are conditioned by bodily events, and have a material origin, though they do not claim it. And if we place ourselves, as in this inquiry we have attempted to do, in a state of suspense in which we doubt the existence and nature of any world beyond the first circle of immediate experience, all we can say is that sensations and emotions are both alike known to us as elements in that first circle; both alike may be elements there present and nothing more; both may, if there is a material world beyond

immediate experience, be alike caused by that material world and reveal to us something of its nature. Emotion and sensation thus stand on a common footing inasmuch as both are subjective in their own quality as elements in immediate experience. And they stand again on a common footing in that either may seem to give us, and may claim to give us, objective knowledge of a reality beyond that experience. This claim, this seeming, is something of which we must not make too much, but neither must we make too little; for when we go back as far as we can, the only possible ground for believing that any element in immediate experience can tell us anything about a reality beyond experience is that it claims to do so and its claim is not refuted; it seems to do so and we find nothing to prevent this seeming from being true. And this first condition for being held a valid ground of belief, the claim or the seeming, is fulfilled by our emotions, at least by some of them, as definitely as it is fulfilled by our sensations. Our emotions of love, hate, fear, anger, claim to refer to an outside object no less insistently than do our sensations of sound, form, or colour. The belief that they reveal to us a real object beyond themselves may in any particular case very well be mistaken, may conceivably as a whole be an illusion; but it arises from a deep propensity in our nature which it needs time and critical thought to question or correct, and which even these cannot destroy.

We must distinguish at this point between the claim to have a material origin, which we have taken as the mark defining sensations in contrast to emotions, and the broader claim to tell us something about an outside reality, which some at any rate of our emotions make as well as some or all of our sensations. We drew earlier a tentative distinction between those of our sensations which were the source of knowledge and those which were the source of pleasure or pain; and this distinction we can still say has a relative importance; there is a difference between sensations such as sight and touch, which claim to tell us directly about a quality of some object outside our personal experience, and sensations of pleasure or pain, which seem to tell us about an inner quality of our experience and nothing more. But if the definition which we have just formulated is to hold, we have now to add that pleasures and pains, those of them which fall within the category of sensations, do tell us something more: they tell us that the feeling which has this inner quality springs from a material origin. And if I ask myself what I mean by saying that a pleasure or a pain has a material origin, it carries me as far as this: that I

suppose that there exists a world of material things independent of my thought or sensation, and that this particular pleasure or pain is uniquely attached to a limited area of that world which I distinguish as my body, and that it is caused by material conditions arising either in that limited area or outside it. All these suppositions no doubt may be illusions; I can replace the term 'material' by 'physical', and can define the term 'physical' so that it no longer carries with it the assumption bound up for me with the term 'material', but serves only to mark off a class of events or entities within the mental world. And if I am to be a consistent Mentalist this is what I have to do; only I must recognize that in doing this I commit myself to a metaphysic which denies the existence of material things. The belief that the claim of my sensations to have a material origin is a true claim and the belief that there exists a world of material things go together, and are the same belief expressed in rather different words.

But the claim made by the emotions to tell us of an outside reality has no necessary connection with belief in a material world, as we can see if we recall how we came to the thought that emotion can reveal reality. The first and clearest instances to convince us of this met us when we found that the feeling we called 'self-love' was the only ground which seemed able to account for the belief of each of us in the reality of his own past, and the feeling we called 'sympathy' the only ground which could account for his belief in the reality of other minds. Each of these beliefs is implicated with an emotional feeling; neither of them is implicated with any supposition that this feeling arises from a material cause. And in this they differ from the belief in the material cause. And in this they differ from the belief in the reality of a material world, which is bound up not only with that vague general feeling which we have called 'the sense of Nature', but with the assumption that the sensations which provide the particulars of our belief about material things have themselves a material origin. Here indeed, when we try to isolate the element in experience which is the source of our belief in a material world, we come on something which is certainly feeling, but of which it is hard to say whether it is sensation or emotion.

At this point sensation and emotion seem to merge into a region within the category of feeling, which might with equal justice be called by either name. And even when the two words clearly stand for different conceptions, as for the most part they do, the two conceptions have enough in common to make us look on them as

distinguishable regions within this single common category. Both alike are present to awareness as contents of immediate experience with their own intrinsic quality, both would be real as contents of experience with that intrinsic quality if beyond the experience there were nothing else. Both are thus in their own nature subjective; yet both claim, or may claim, to give objective knowledge of a reality beyond the experience. The parallel is at least close enough to justify us in saying that anyone who admits that sensation is a valid ground for knowledge, should not dismiss off hand the suggestion that such a ground may be given in emotion too. If the suggestion is to be ruled out, this ought only to be done after a close scrutiny, closer perhaps than philosophy has yet given to the problem.

But we have set out only half of the conditions of the problem if we note only the resemblances. There must be reasons, and forcible ones, why science and the scientific conception of philosophy have built up their world picture on the principle that sensations should be trusted and emotions ignored. We have then also to look for the differences between them; and one evident difference is that our knowledge of the physical world seems to be dependent on sensations at every moment and in every detail, while it has taken us a long time to isolate points at which knowledge depends on emotion. But this way of putting it does not quite do justice to the facts as our analysis has set them out. In fact, if that analysis is sound, we are in every moment of belief about our own past depending on the emotion we have called 'self-love', in every moment of belief about other selves depending on the emotion we have called 'sympathy', in every moment at which we interpret sensation as knowledge of a material world depending on the emotion we have called 'the sense of Nature'. The element which is contributed to our total knowledge about a whole by our knowledge of its quality as a whole is just as much a necessary constituent of the total knowledge as is our knowledge of the quality of any of the parts, but it is a constituent that is likely to emerge late in analysis, and only after a study of the qualities of the parts has satisfied us that a knowledge of these is not by itself enough to make up a knowledge of the whole.

If we push our analysis far enough, if we accept the view that it is emotion which creates the certainty of common sense as to the reality of the material world, we must recognize that emotion has a share no less important than sensation has in giving us the

common-sense knowledge on which science is founded. Supposing that we could eliminate from our interpretation of experience all that comes from emotion, and could confine our system of belief to what might be built on sensation and inference from sensation, we should no doubt find ourselves with something that might be called a 'knowledge of wholes', but these wholes would for each percipient be no more than modes of grouping sensible qualities which he might find useful for the purpose of ordering his own experience. He might, for instance, group together and specify as loaves of bread or bottles of wine particular sets of visual or tactual sense data that could be useful for the purpose of leading to sensations of taste, and as bicycles or motor cars other sense data useful for the purpose of leading to sensations of movement. Certain visual data that could serve the purpose of giving him warmth or light, he might specify as the sun, yet other more complex groups, useful for the purpose of extending his knowledge beyond the range of his primary sense data, he might specify as human beings, and note that they could serve as secondary reporting centres. But all this would so far be logical construction only, he would have no reason to suppose that any of these sets or groups of sensibles had any existence as wholes outside his own perception or thought. It is only emotion which can assure him that they have not merely a convenient schematic unity in his thought, but a substantial unity of their own in a world outside his experience, that his thought of them is not merely a logical construction but a metaphysical discovery. We cannot then simply say that sensation gives us knowledge of the physical world and emotion does not. The function of emotion even in building up our knowledge about the physical world is indispensable, though it is there invisible, because it operates only by contributing to belief an element which is taken for granted and is supposed to need no support.

We shall then better express the contrast we are here concerned with if we say that sensation gives knowledge of the nature of parts or units or particulars, and that emotion can give knowledge of the nature of wholes. The knowledge arising from sense perception is essentially a knowledge of particulars; not to begin with a knowledge of ultimate particulars, for sensation as it comes to us at each moment is so much coloured by the results of past thought and emotion that it presents itself as aknowledge of those larger and and more complex particulars which we may call 'sensible objects' or 'perceptual objects'; yet from the beginning it is a knowledge of particulars, and a form of analysis is ready to hand that will

exhibit it as a knowledge of the ultimate units into which these sensible objects can be discriminated. But in our study of the knowledge given by emotion analysis has a different function; it operates only by convincing us that there is an element in our belief about the whole which we should have no ground for believing in if the emotion were absent.

There is another reason, hardly less obvious and perhaps even more important, why sensation should be accepted and emotion left out of account as a basis for objective knowledge: our sensations present us with something that we can accept as agreement, our emotions very largely with what we seem bound to regard as contradiction. The sensations of different observers disagree no doubt in their immediate quality, but this disagreement can be so accounted for as to be consistent with an underlying agreement. This is true first and most evidently of the disagreements or differences among visual sense data which arise from differences in the position of observers. Here indeed the reconciliation is so instantaneously effected by the natural working of the organism that the very existence of these disagreements is for the most part ignored by common sense and could for long be overlooked by philosophy. And even the disagreements that cannot be so quickly and easily resolved into agreement lend themselves to explanation along a line which avoids ultimate inconsistency, when certain assumptions are made as to the manner in which the percepts of individual observers are conditioned by their sense organs. But with the beliefs that arise from emotion the disagreement is much more palpable and the means of reconciling it much less evident.

It is no doubt possible, if we look far enough, to find a leading principle on which to account for differences in emotional reaction that may seem broadly analogous to the leading principle on which we account for differences in sense perception. Just as the differences in the sensory reactions of various observers to the world arise largely from the fact that each observer is the sensory centre of his own world and is bound to view everything from that sensory standpoint; so, it might be said, the differences in the emotional reactions of various observers to the world arise largely from the fact that each observer is the emotional centre of his own world and is bound to view everything in it from that emotional standpoint. Here is an analogy, perhaps an important and significant one; but the way in which it worked out in practice was likely to

obscure the parallel between sensation and emotion rather than to illustrate it. The differences in sense perception which arose through each observer being the centre of his own world were harmonized by the instinctive working of the psycho-physical organism into what seemed a perception of objective reality, without its being necessary for reason to intervene; the function of reason here only came in at a late stage or as to minor details. But the natural working of the organism produced no such harmony between the emotional reactions of different human beings. Here reason had to intervene, and to impress on each individual that he could only reach an objective standpoint from which to view the world by discounting his first self-centred outlook; social pressure, ethics, conscience, all worked together to remind him of this, and the result was to exhibit emotion as a source not of knowledge, but of error.

We can see then how it came about that when in the seventeenth century physical science took a fresh start and a new theory of knowledge had to be constructed to suit the new scientific outlook, the possibility that emotion might be a valid ground of knowledge was either rejected or ignored. Over one large field of inquiry, the study of the physical world, it was definitely rejected. Science as it set itself to study this field started of necessity from the data of sense perception and from the general interpretation given to them by common sense; it did not ask how the common-sense view was to be justified or reinterpreted as a whole, it was concerned with particular points in which this view required to be supplemented or corrected. And in following up these particular inquiries it was led to realize how many of the suppositions drawn from unscrutinized feeling had led thought astray in the past. Earlier ages had supposed that particular knowledge about the nature of the physical world could be given by emotion; that, for instance, the heavenly bodies could be known to move in circular orbits because this mode of motion appeared the most perfect to aesthetic feeling; or again that natural happenings could be assumed to fall out in a particular way because this would be conducive to human welfare. But inquiry showed that when such beliefs arising from emotion were tested, they needed review and correction in the light of a closer examination of the sensible data and stricter inference from these; instance after instance was found to tell in this direction, none appeared pointing to the contrary. Thus for the study of the physical world it was accepted as a definite principle of method that sense perception and inference

based on sense perception were the valid means of obtaining knowledge, and that emotion was to be ruled out as an irrelevant factor. And as physical inquiry was the field in which science achieved its first and most evident successes and worked out its clearest principles of method, it came to be generally assumed, though without any such definite formulation, that this principle should be accepted for other fields of inquiry as well; that history and psychology, ethics, and metaphysics must establish their conclusions without any appeal to emotion, if these conclusions were to be held entitled to a place in the body of public knowledge. If these departments of thought were sciences, they should follow the approved methods of science; if they were not sciences, they might be pleasant by-paths for fancy, but they could not be supposed to give knowledge. Some such assumption, perhaps not so bluntly stated, seems to underlie the attitude in which the problem is now commonly approached.

When then we try to sum up what philosophies of different types have to say about the relation of emotion to knowledge, the answer seems to be to this effect. Philosophy of the positivist type takes its stand, following the lead of science, on the principle that there are two valid sources for knowledge, sensation or sense perception in the first place, logical thought, as exhibited in deductive mathematical systems, in the second place; and it holds that in the search for knowledge emotion can be nothing but a disturbing element. Philosophy of the metaphysical type does not confront the problem so clearly, but for the most part it seems to accept, or at any rate it does not challenge, this principle, though it would assign a different relative importance to sense perception and to deductive thinking. And if a contrary opinion is from time to time implied, or even asserted, in the unsystematized pronouncements that we have called 'impressionist' philosophy, we cannot expect to find it there formulated as a serious contribution to the problem of knowledge. Philosophy then as a whole, we must conclude, gives no clear answer to the question, has indeed hardly recognized it as a question to which a clear answer of some kind is needed; but in so far as a definite answer can be said to emerge, it is to the effect that it is right to trust sensation as a source of knowledge and never to trust emotion. And yet if we can persuade ourselves to approach the problem without prepossession, it is not easy to see any cogent reason for this strict distinction. We can understand that there are solid grounds why science, and in particular physical science, should wish to draw it; and the success of science in its own field

is evidence that it knows its own business well enough. But we may still ask, Need this principle of method, because it has been found useful in particular fields, be laid down by philosophy as a general principle for all possible knowledge?

The statement that the scientific conception of philosophy rules out feeling and emotion as irrelevant to knowledge or to the search for truth may seem to have been put here in too absolute a way. There are two possible qualifications which may at this point be worth mentioning. The first is that science has its picture of the ideal scientist or thinker, and this picture ascribes to him characteristic virtues or qualities of mind which in a broad sense may be ranked as belonging to the emotional side of life; intellectual curiosity, patience, single-mindedness, the love of truth, perhaps too a wish to help humanity and a hope that his researches may be able to help it. Here is one respect in which a connection between knowledge and emotion may be said to be generally admitted; and from a different angle another quite different connection may be suggested. We may find it contended as a matter of psychological analysis that belief is itself an emotion or a feeling, or at any rate that the act of belief has in it an emotional element. We need not turn aside here to follow out either of these lines of thought; we mention them only to make it clear that they have no bearing on the problem before us, as to whether specific knowledge may be dependent on some specific emotion. The love of truth and the intellectual virtues must be conceived to play their part, not by guiding the inquirer in one direction rather than another, but by keeping his feet on the straight path of reason, and warning him against any other emotion that might persuade him to stray from it. And if we accept the analysis which sees in belief or in the feeling of certainty an element of emotion, this will be an element which depends on the quality of the certainty, not on the specific content of the belief. The question that we are concerned with here is not to be confused with either of these. What we are asking is whether a specific emotional state can ever help us to reach a specific piece of knowledge which can be reached in no other way; and this is the question which we suggest calls for closer scrutiny than philosophers have yet given to it.

If the question is discussed at all, it is apt to be dealt with in a rather perfunctory way on the assumption that believing on the ground of emotion is the same thing as believing on the ground of desire. To accept a belief on the ground that we wish it to be

true is a practice, as philosophers of a critical turn of mind are ready to point out, very contrary to the principles of sound reasoning, and they may go on to say that we should hesitate to commit ourselves to any belief which we very much wish to entertain, unless we can find good reasoned evidence for accepting it. And this in general seems a sound principle of logical caution; yet surely it has its limits. For certainly I wish very much to believe that I have existed in the past and shall exist in the future, and that people other than myself exist; and I am unable to find that any philosopher has ever furnished me with good logical grounds for believing in any of these things. Yet I should feel that I was carrying logical caution too far if, because I want to believe them and have not what I can hold to be adequate evidence for believing them, I should try to hold my thought in suspense and tell myself that I am not sure whether I believe them or not.

This reflection may seem absurd; for what, it may be said, can my wanting have to do with certainties so palpable as these? But this is just the point at issue. If an emotional need to believe is strong enough, if the belief presents itself with a sufficient compelling force, desire is felt to be irrelevant and does not enter into the question. Desire only comes in as an element conditioning the problem, when the emotional need to believe is weak.

Doubtless desire and emotion are connected in our mental life. Desire arises out of emotion, emotion out of desire, in a way hard to analyse. But as influences conditioning the origin of our beliefs, they can work very differently; and often, it would seem, when the emotional side of our nature is aroused, we tend to believe not what we desire but its opposite. This is surely an elementary piece of psychology, but it is one which seems commonly to be forgotten in the warnings given by critical philosophers about the danger of listening to desire. They are apt to speak as though when people believe things that go beyond the evidence they always persuade themselves to believe what they want. Yet anyone who will take the trouble to consider how he and other persons conduct themselves in the ordinary business of life may satisfy himself that a general statement of this kind would be much too sweeping. Certainly our beliefs about matters in which we may be emotionally interested tend all the time to run beyond anything that we have solid grounds for, but they are as likely to be distorted in the direction of what we do not want to happen as of what we do. If we reflect how the mind works when we are wondering about the unknown conditions in some state of things with which our wishes

and fears are bound up; when we are speculating as to the difficulties of an undertaking, or the cause of an illness, our own or a friend's; we can feel pretty sure that our judgment will be biassed by feeling, but the bias seems to be given by our fears as readily as by our wishes, and it is a question of mood and temperament which at any moment will be stronger. And if we turn from these matters of every day to the deeper problems of metaphysics or religion, here again we find that beliefs appear often to be based not on desire but on its opposite. Judging by what history tells us, we must suppose that millions of men in Europe have believed firmly in the reality of hell, yet thought that they were themselves likely to be damned; and that millions of men in Asia have believed firmly in the continuance of life after death, yet felt that the continuance of life was not a promise they welcomed, but a fate they wished to escape from. The notion that human beliefs are formed on the principle that we believe that things are just as we want them to be is a piece of psychological fancy too easy and simple to stand scrutiny.

So far we have been brought by trying to find the ground for those metaphysical beliefs of which we feel most certain, the three which we have called 'the metaphysical dogmas of common sense'. These beliefs fall within the limits of the metaphysical field on a reasonable conception of those limits; they form the part of this field which lies nearest to us, and it is natural to set out from them when we seek to explore those parts of the field which lie further off. But we must recognize that there is a gap, and a formidable one, between the nearer and the further parts of the field, between the metaphysics of common sense and the region of speculative metaphysics. Here in this remoter region of speculative metaphysics lie those great questions which have so much exercised philosophy in the past as to the existence of God, a future life, man's destiny, a purpose in the world. It was problems such as these which the traditional philosophy had most in mind when it claimed to reach metaphysical knowledge, and which the positivist philosophy has had in mind when it denies that such knowledge is attainable. And we have now to ask, how far can the conclusions which we have drawn from examining the part of the metaphysical field that lies nearest be of help to us when we seek to explore those parts of the field that are more remote?

At this point the line of thought which we have been following must take a new turn if it is to carry us further. We have concluded

that emotion can give us knowledge because we find that particular beliefs which we hold certain and as to which we are all agreed depend on emotion; apart from emotion it is hard to see why we should hold them, harder still to see why we should hold them with that entire certainty which they in fact possess for us. But we have now to ask another question: assuming that we have satisfied ourselves that these particular beliefs as to which we are all certain and all agreed are conditioned by emotion, that they would not arise in us but for the presence of an emotional state on which they depend; can this conclusion help us to find what beliefs are justified as to ultimate questions about which we feel no such complete certainty and can observe no such general agreement?

When we looked for the ground on which these dogmas of common sense were based, they appeared to rest in a peculiar manner on a feeling of immediate certainty. But immediate certainty of itself is not enough. We know how often and how easily apparent certainties may mislead us; we can learn from history how they have misled mankind through the ages into divergent and conflicting beliefs about the most vital questions. And in taking these dogmas of common sense to be justified we could appeal to something more: we appealed not only to their primary ground in the feeling of immediate certainty, but to a secondary ground in the fact of general agreement. These dogmas, which must in the first instance be asserted by each inquirer for himself on the strength of a certainty felt in the solitude of his own thoughts and in a single moment, are confirmed for him when he discovers that they impose themselves as certain not in that first moment only but in each moment when he returns to the problem, and again that they are accepted as certain by the general voice of historic common sense. But if metaphysical belief seeks to go beyond these few unquestionable dogmas, such reinforcement is lacking; the inquirer's momentary certainty is not confirmed by the certainty of other persons, nor even perhaps by his own at other moments.

In this predicament the best he can do is to hold fast to the clue that he must trust emotion, as the one element in immediate experience which claims a power to carry him beyond it. But what is to give him confidence that he can trust this? In most of the questions which arise in life our emotions, we had to recognize, have no more title to be considered infallible than any other element in experience; they can conflict with one another and mislead us as much as our sensations or our thoughts, perhaps more so; and if

they speak to us more imperatively, this may only mean that they can mislead us more dangerously. We must trust them, or we cannot go right; but if we do trust them, are we not still likely to go wrong? Such is the dilemma with which we seem to be faced. Yet now that we have been driven back to what appears the last possible starting point for a knowledge of reality, we cannot merely leave the problem like this. If we are confident that we have some beliefs, however vague and however scanty, about the essential nature of reality which are more than fancy or delusion; if we are sure that we possess something which deserves to be considered a knowledge of that nature; we ought to try to make clear to ourselves what such a confidence implies. And what it seems to imply is this: that we can, if we search well enough, discover, below all those superficial emotions that conflict and mislead, some deeper underlying emotions which determine our beliefs about reality and which we can trust not to deceive us. Here if anywhere we may hope to find a foundation on which to build our structure of metaphysical belief.

We may sum up the conclusions to which we have come in some such thoughts as this: that we trust our deepest feelings not to deceive us and that we believe our trust in them to be justified. And this confidence seems to have two sides to it, an inner and an outer. The inner side is that we trust ourselves to possess within our immediate experience a power of distinguishing emotions in respect of their degree and quality of value, so that we can say of certain emotional states that they are intrinsically better than their opposite, that it is better that we should have them than that we should be without them. The outer side is that we can trust the better emotional state as being more likely than the worse emotional state to give us knowledge about a reality which lies beyond immediate experience. These two sides or aspects in union with one another make up our confidence in the thought that emotion can give us knowledge. And we can see them working together if we look back to the point in our inquiry at which this thought first suggested itself as possible; to the point where we were asking what the ground could be for our belief in the existence of other minds. The inquirer who asks himself how he knows that he is not the only thinking and feeling being in an imaginary or inanimate universe finds his surest ground for his knowledge in the emotion we call 'sympathy'; and in trusting to this he assumes two things, first that the state in which he feels this emotion is better than a state would be in which the emotion was absent, second that this

better emotional state does not deceive him in the belief which it brings with it about reality.

We assume then that we can discover within our experience a standard of value which is known to us through emotion, and which we may call 'objective', meaning by this word that it has a definite place in the world of outside reality, or at least that it is in definite correspondence with something in the nature of that reality. But is this assumption, or this set of assumptions, firm enough to serve as foundation for our metaphysical structure? Plainly it goes beyond anything that sense perception or logical thought or the two together can be held to justify, and it lies open to searching questions. Can we assign any clear meaning to the phrase 'an objective standard of value'? Can we suppose that, if there is such an objective standard, it is known to us through emotion? Can we suppose that, if there is such a standard so known to us, it can have anything to do with giving us knowledge about the nature of reality? Here are questions which call for scrutiny and which cannot be answered quickly. Yet we can perhaps before going further say so much as this: that if such an assumption could be sustained, it would fit in with, and might help to account for, the manner in which we find ourselves holding some of our most fundamental certainties. We feel ourselves certain of something, and yet when we try to put our certainty into words we have to confess that it is hard, if not impossible, to say what it is that we are certain of. We are certain (or rather, as each of us has here to speak for himself, let me say, I am certain) that I am existing at this moment, that I have existed in the past, that other persons have existed and exist now, and that they and I exist in a material world. Yet these expressions of my certainty, or any other ways that I can think of for expressing it, carry with them implications that may well be misleading. What I want then, if I can, to understand and account for, is this complete certainty as to something in the core or centre of my belief, which I feel that no possible doubt could really shake, nor any possible argument or authority reason me out of; and this complete uncertainty as to the right formulation of it; the two continuing as it were to stand side by side, so that neither can the certainty remove the uncertainty, nor the uncertainty impair the certainty. And for this the best explanation I am able to find is that the core or centre of the belief is given in emotion; that I am certain that the emotional state which goes with the belief and compels it is better than a state would be which should be without it; and that the sentences in which I try to formulate the belief are

right or wrong, true or false, just in so far as they serve to express the emotion and keep it fresh and living in my thoughts. The possibility of right metaphysical belief seems then to hang on some such fundamental assumption as this: that we are certain that some states of mind are better than others, and that we can in some measure trust this certainty. And with this we are brought to a problem which we have hitherto so far as we could kept out of our survey, to the problem of ethics or of values.

CHAPTER XXVII

SOME QUESTIONS OF ETHICS

THE region of ethics, to the borders of which we have now come, opens up a series of questions hardly less wide and difficult than those which have occupied us so far. We cannot here attempt to explore it, but we may perhaps hope that the course of our inquiry has led us to a viewpoint from which we can survey it in the distance, distinguish in outline a few of its main features, and make some conjectures about its relation to a possible region of metaphysics which may lie on its further side.

What we shall attempt here will be to note briefly some of the chief debatable questions that arise within the region of ethics, not in the hope of dealing with them in a way which we could accept as final, but in order to clear our thoughts as to what it is we are talking about. And for this preliminary purpose it may be helpful, as we go on, to set down some answers which might provisionally be held to express the view of historic common sense on these disputed questions. This will give us a starting point and no more; on this problem as on others common sense speaks with many voices, and these voices are concerned to express difference rather than agreement, and what is common to them is to be found less in what they say than in what they take for granted. But as a starting point it may be worth having; it will help us to distinguish some of the main issues which arise, it will give us a framework within which we can place conflicting views, and it may serve to show what are the ethical presuppositions which underlie the belief in the possibility of a metaphysic.

And first, how are we to conceive the boundaries of the field of ethics? We may as a beginning define 'ethics' as 'the study of those beliefs or judgments in which we judge some thing or event to be good or to have value, or judge that one thing or event is better or has more value than another'. If we try to consider the judgments

of this class more in detail, we find that there are various forms of them, different in their manner of expression and in their apparent quality, yet having this in common, that they represent an opposition or antithesis between a pair of contrasted terms, one of which is preferred to the other. The terms of this order which stand out as widest in their suggestion are those named above: 'good' with its opposite 'bad' or 'evil', 'value' with its opposite 'disvalue' or 'negative value'. But there are other antithetical pairs for which an independent place might be claimed, such as 'right' and 'wrong', 'beautiful' and 'ugly', 'moral' and 'immoral', 'virtue' and 'vice', 'pleasure' and 'pain', 'utility' and 'disutility'; and it would be easy to extend the list by including yet others which have hardly less title to separate mention. Are these pairs of opposed conceptions, and others that might be named, all independent of one another? or could they be reduced without loss to a smaller number, or to a single pair in terms of which the remainder could be expressed? Either view can be defended, and often has been. On the one hand it may be urged that we have to do with a single primary antithesis of good and bad, and that those other antithetical conceptions are to be understood in relation to this and find their ultimate significance in terms of it. On the other hand it may be urged that the words 'good' and 'bad' are themselves used in various senses, and that if we are to give them a precise meaning we must interpret them in terms of one of those more particular antitheses, and understand 'the good' as equivalent, for instance, to 'the pleasant' or 'the useful' or 'the beautiful' or 'the moral', or as somehow dependent on one or other of these notions.

With this we come in sight of an age-long controversy, in which problems as to the substance of ethics, and problems as to its formal statement, are linked together in a perplexing tangle, through which it is hard to see a clear way. We can say, however, that one large question involved in it, and perhaps the most important, is the question which met us above: Can a belief in objective values be justified? And on this we find a fundamental cleavage between two opposed views: on the one side a view maintaining the objectivity of value, which is the view that has for the most part been held by traditional philosophy and by historic common sense; on the other side a view which can claim support both from reason and from common sense today, and which maintains that the belief in objective values is not justified and is perhaps in the end not even intelligible. This is the main issue which here concerns us, and

our survey of the ethical field will be mainly designed to bring out the arguments that can be urged on either side of it.

We may take as a point of departure which will fairly express the general attitude of common sense something to this effect: that there is an essential or primary sense of the word 'good' which it may not be possible to define further, but which can be brought out more clearly by calling it 'intrinsic'; and that we seem to have a certainty based on immediate perception that some things or some events are good or have value in this sense.

We distinguish then, among the various possible meanings of the words 'good' or 'value', one meaning that may be marked off by the word 'intrinsic'; and in doing this we come upon what is perhaps the clearest and most important distinction to be drawn among these possible different meanings. We contrast a sense in which we judge things or events to be good intrinsically or good as ends or good in themselves, with another sense, in which we term things or events 'good', but imply by this only that we judge them to be good instrumentally or as means or in their consequences. It is these judgments of instrumental value that we make when we say that things are useful or harmful, or (shifting a little our point of view) useful or useless; and it is these judgments that we often, and in practical life perhaps for the most part, make, when we say simply that things are good or bad, without qualification. But judgments of this latter class, however large a place they may fill in our thoughts owing to their practical importance, are not fundamental or self-contained; they derive their significance from judgments of intrinsic value which they imply and on which they depend. All the labour we spend on discovering what things are useful or instrumentally good would be purposeless, unless we can somehow know that there are some things or events which are intrinsically good or have intrinsic value, or at least that some things or events are intrinsically better or have more intrinsic value than others.

But which of these last two statements do we mean to assert? Are these ethical judgments which we make, and for some of which we claim immediate certainty, positive or comparative? Here again we come on a problem which is open to dispute. On the one hand we may be tempted to say that we cannot know our direction unless we know our goal, cannot be sure that we are going right unless we are sure about where we are going to; and thus we find, running through much of the traditional philosophy,

a vein of thought contending that we cannot know what is good unless we have some knowledge of a limiting concept, which is referred to by such terms as 'the Idea of the Good' or 'the Supreme' or 'Absolute Good' or 'the Summum Bonum'. What force there may be in this contention is a question beyond our present concern. We can at any rate understand that, if such a supreme good is a true object of knowledge and it is possible for us to know it, our reaching that knowledge would go far to clarify and correct any notions as to what is better and what is worse which we might have held before. But admitting, as we must, that our judgments about the steps in the process would gain in certainty and fullness if we could know the goal which is its limit, should we conclude that each judgment about a particular step must entirely depend on a knowledge of the limit for any rightness it may have? This seems hard to suppose, and not consistent with such analogies as we can appeal to. We can know whether one thing is hotter or colder than another without knowing whether there is a limit to the possible states of things in the direction of absolute cold (as scientists seem to tell us there is) or in the direction of absolute heat (as scientists seem to tell us there is not); and indeed the whole process of thought and experiment by which science has come to its conclusion that there is a limit of absolute cold, and no limit, or no discoverable limit, of absolute heat, has its origin in our immediate judgments of perception telling us that one sensible is hotter or colder than another, and is dependent on our believing that we can trust such judgments, at any rate on the whole and in the long run. And in the same kind of way it would seem that any process of thought by which it may be possible for us to reach knowledge of an absolute good must have its origin in our immediate judgments of better and worse, and is dependent on our believing that we can, on the whole and in the long run, trust these.

Next, what are the things to which we ascribe the quality good or which we judge to have value? We find ourselves in ordinary usage applying the term 'good' to the most diverse kinds of things or objects, events or states of affairs, and it might be hard to think of any entity coming within any of these wide categories that could not be said in some sense to be good or bad, either intrinsically or instrumentally, either as end or as means. But without at present attempting to assign a definite limit to the class of things that might in this widest application of the term be held to be good or bad, we may be safe in saying that the things which common sense

would most confidently rank as intrinsically good or intrinsically bad are experiences or states of experience, and that when we say that other things are good or bad we mean that they are good or bad in so far as they conduce to these. And we may perhaps go a step further in particularizing, and say that the things which we in the most definite sense distinguish as intrinsically good or bad are emotions, or states of experience in respect of their emotional quality; taking the term 'emotion' here in a sense wide enough to include in its scope feelings, so far as these are pleasant or painful. If we isolate in thought as far as we can some part or aspect of experience which is in this sense without emotional quality, if we try to conceive a moment of perception or of intellectual thinking strictly by itself, we might ascribe to it instrumental value, perhaps a high one, in so far as it might help towards a state of emotion; we should hesitate to allow that in itself it had intrinsic value.

Next we may raise the question: How is it that we come to recognize this quality of intrinsic goodness? The answer which seems natural to common sense is the answer we suggested above, that we recognize it by an act of perception. In this answer however and even in the wording of our question, we may perhaps be already assuming too much; we assume that the quality we call 'intrinsic goodness' is an objective quality, and that we can rightly be said to recognize or perceive it. Let us begin then by asking: How is it that we come to ascribe this quality to some entities, and not to others? Or: How is it that we come to form immediate judgments of intrinsic value?

The immediate judgments of intrinsic value with which we are here concerned form only a small proportion of the whole number of judgments that we make in the field of ethics. We may judge a thing to be good instrumentally because we believe that it will tend to produce something which we already know to be good intrinsically. Or again we may, according at least to some commonly accepted ethical theories, judge a thing to be good intrinsically because we believe it to fall within a class of things which we already know to be good intrinsically. Judgments of either of these kinds would be ethical judgments, but not immediate ethical judgments. All our ethical judgments however must in the end be based, as must all our other judgments ascribing a character to anything that exists, on immediate judgments as to the quality of some entity present at some moment to awareness; and the character ascribed by immediate ethical judgments is the character

of intrinsic goodness. And we have now to note that the immediate judgments which give us a starting point for ethics differ in some important points from the other immediate judgments which give us a starting point for characterizing existence. First, whereas those other judgments are concerned with a wide range of qualities of various kinds, ethical judgments are, on the view which we are now trying to exhibit, concerned with a single quality which may be said to be unique, in that it is not to be identified with any other quality or analysed into any set of other qualities. And further, whereas those other judgments are or may be simple, and if they are complex seem capable of being analysed into immediate judgments which are simple, ethical judgments are of necessity complex; their necessary complexity consisting in this, that they seem always to imply a judgment that the thing or state which is held to be intrinsically good or bad is characterized by some other quality or set of qualities falling outside the ethical field, and that it is in virtue of these other non-ethical qualities that it is judged to be good or bad. If we want to group these other qualities under a single term that is not merely negative, the best we can do may be to speak of them as the 'natural' qualities; not that this term can be taken to imply any clearly marked common element in them, for they may be of the most various orders, either physical or psychical; but it may serve to bring out the point, that we want to include in the category all those qualities that fall within the survey of the various sciences, whether physical or psychological, which describe the nature of existence.

Next, what do we mean when we speak of an immediate ethical judgment as an act of perception? In using this phrase we make a claim for these judgments which goes beyond what we have said above; we claim for them objectivity. The distinguishing mark of perception, as we have used the term and as it seems to be commonly used, is that it has a double reference, subjective and objective; we are aware of some element given in immediate experience, we take this as a sign revealing the nature of a reality beyond the experience. In sense perception, which is the form of perception that gives us our first and most definite notion of the meaning of the term, this double reference is essential; and it must not be lost sight of, if we are usefully to extend the range of the term so that it covers other modes of perception. In sense perception the subjective side is that we apprehend a sensible quality presented in immediate experience; the objective side is that we believe that we can by means of this receive information about a

quality or set of qualities characterizing some thing or event in a material world independent of the experience. In memory, which we suggested might be thought of as a form of perception or as analogous to perception, the subjective side is again that we apprehend a quality presented in immediate experience; the objective side is that we believe that we can by means of this receive information about a quality or set of qualities that characterized some thing or event in a past time independent of the experience which perceives or judges. And if we are to be justified in speaking of 'ethical perception' or in saying that ethical judgments are based on perception, we must take such language as implying that this mode of perception or these judgments have an objective reference, and in some way give information about a state of things independent of the experience which perceives or judges. What this objective reference amounts to may be a question hard to determine; it is not to be taken as informing us of a fact about existence, either the fact of anything existing now in the material world or the fact of anything having existed in the past. But we may perhaps find an adequate expression of the claim to objectivity, if we say that an immediate ethical judgment claims to perceive an objective relation between a set of natural qualities possessed by a thing or by a state of experience and the ethical quality which it ascribes to the thing or to the state in virtue of its possessing those natural qualities. It claims that, if a set of natural qualities which is now apprehended or now imagined should at any other time be apprehended or imagined, a right judgment would ascribe to it the same ethical quality. An immediate ethical judgment is thus at once conditional and categorical; it is true only under given conditions, but given the same conditions, if it is true once, it is true always.

This interpretation will hold for most of the pairs of antithetical terms which we took as the starting point for our survey of the ethical field, at any rate if they are understood in what we may take to be their primary sense, which is at once their strongest sense and the sense that seems most naturally to belong to them. 'Good' and 'bad', 'right' and 'wrong', 'beautiful' and 'ugly', 'moral' and 'immoral', 'virtue' and 'vice'; all of these, understood in their strongest and most natural sense, imply a belief in intrinsic values of which human beings can have objective knowledge. They differ in their import in so far as they attempt to mark off, not always very definitely, one part or province of the ethical field from another; the terms 'right', 'moral', or 'virtuous' relating to the province of action or conduct viewed from rather different

angles, 'beautiful' to the province of aesthetics, 'good' in a narrower sense again to the province of action or conduct, while in its wider sense it may be taken as relating to the whole field of ethics. But all these terms, when we allow them their full weight and strongest sense, contain along with their differences a common element which implies a claim to objectivity.

And this claim to objectivity seems to carry with it two further ideas or assumptions: the idea of perfection and the idea of obligation. We must beware of reading into either of these too large a content. If we say that the belief in objective goodness and beauty carries with it the idea of a standard of perfection, this is not to be taken as implying that perfect goodness or perfect beauty anywhere exists, nor even that they can be distinctly conceived; traditional philosophy has often been tempted on to draw one or both of these conclusions, but neither conclusion can be shown to be of necessity implied in the claim to objectivity. Yet there does seem to be implied in the claim some kind of reference to a standard of perfection, and if we try to put into words what is vaguely taken for granted, we may say that it is to this effect: that there is a scale of degrees of value which human judgments can under favourable conditions rightly apprehend, but which is itself fixed independently of those judgments; and that this scale of degrees points towards a limiting concept of perfection, which gives a direction and a meaning to the scale, though it may itself not be realized in existence nor be capable of being realized in human thought. And in the claim to recognize a standard of perfection, the ethical terms of which we are speaking bring with them in some way the idea of obligation; not of necessity the full idea of moral obligation or of duty, for this may be conditioned partly by the idea of freedom, and the question how far we are free either to act or to will opens up further problems beyond our present purpose; but they bring with them the idea of obligation in so far as they imply that there is a standard of better or worse to which things and actions ought to conform, whether or not they do or can conform to it, and in accordance with which we ought to judge, whether or not we do or can so judge. Something like this seems to be implied in the claim that it is possible to have a knowledge of objective intrinsic values.

So far then the view of common sense as to the ethical problem may be said to present a climate of thought not incompatible with the suggestion that ethical judgments can supply a ground for

metaphysical knowledge. Common sense, as we are interpreting its voice, believes that we can make immediate ethical judgments in which we judge by direct perception that one state of experience is intrinsically better than another, and it believes that these judgments aim at objective truth and may in some cases attain it. But if we push our questions further, we come on considerations which would seem to tell in a contrary direction. How, we have next to ask, do these judgments which claim to express an objective knowledge of goodness or beauty arise in us? Whence do they derive their title to proclaim a standard of perfection or to demand conformity with that standard? We have said that they are based on a kind of perception; but this perception, if so it can be called, is something very different from the sense perception which supports our judgments about the nature of the physical world, or from the intellectual perception which supports our logical and mathematical judgments; nor is it easy to see how our ethical judgments could be derived from judgments of those other two kinds by any process of reasoned inference. What then is to be said about their source and origin?

When we ask this question, one answer which presents itself is that ethical judgments, at any rate those immediate ethical judgments on which the rest must be based, and which are most entitled to the name, are in some special way connected with the emotional side of our nature. The fact of this connection seems indeed to stand out as a main feature distinguishing judgments of this class, though its character and extent may be hard to state precisely. To begin with, we have already had to note that the things or events to which we feel the notion of intrinsic goodness or intrinsic value most clearly applicable are emotions, or experiences in respect of their emotional quality. This of itself would not establish the connection we are now looking for; we were concerned at that point with the nature of the experience judged or thought about, not with the nature of the experience or thought which judges. Yet if emotion is to be rightly judged or appraised, should not emotion play a part in forming or influencing the judgment? True, the emotion which judges is one thing, the emotion which is judged is another; the emotion which is judged may be subjective and passionate, the emotion which judges may be dispassionate and objective, and if it is to judge rightly perhaps it should be. But different as the two are or may be, some colour of emotion seems to belong to them both. And the terms we have to employ when we speak of our ethical judgments, 'approval' and

'disapproval', 'sympathy' and 'antipathy', 'admiration' and 'condemnation', all carry with them an implication of this emotional colouring.

The words just mentioned apply specially to the part of the ethical field which is concerned with action or with conduct; and it is here, in the part of that field nearest to our personal human interests, that the connection of ethical judgment with emotion is most evident. But if we pass from the part of the ethical field concerned with conduct to that more remote part which is concerned with beauty, from ethics in the narrower sense to aesthetics, the same kind of connection is still to be traced. The various aesthetic doctrines, differing as they do about so many points, seem agreed on one: that the recognition of beauty or of significant form, or of whatever is supposed to be the chief value in this region, depends on or goes along with something that can best be called 'aesthetic emotion'. From one side after another we find evidence that a close connection of emotion with ethical judgment, either as cause or as effect or as constant accompaniment, is to be observed running through the whole extent of the ethical field. Whether the emotion follows the judgment, or the judgment follows the emotion, or sometimes one happens and sometimes the other, may be matter for doubt; but that the two come together, constantly if not always, cannot well be doubted.

How far is such a connection, amounting perhaps to a dependence of ethical judgments on emotion, to be held compatible with the claim of these judgments to be objectively true? Here we find ourselves faced with what looks like a clash or discrepancy in the way of viewing this problem that is natural to common sense. Perhaps however in the last few pages we have taken to crediting common sense with more definite views on these complicated questions than we have any right to. Let us then put our contention less definitely in some such way as this. We find a fairly widespread belief that ethical judgments, some of them at any rate, aim at objective truth and may in some cases attain it. We find again a fairly widespread belief that ethical judgments, or at any rate those immediate ethical judgments from which the rest are derived, are connected with emotion and appear to depend on it. And besides these two beliefs or assumptions we may set a third belief, also fairly widespread, which holds that judgments depending on emotion are shown by that dependence to be personal and subjective, and cannot claim to be objectively true. These three beliefs or assumptions are so widely entertained that

an inquirer setting out to find his way through the tangled wood of ethical discussion might very well take any one of them for granted as an accepted premise. And yet when we set them side by side the conclusion is forced on us that they cannot all three be taken to be true; any two of them hold good, but if those two, then not the third.

How are we to view this dilemma? And how has it been viewed in the past either by philosophers or by common sense? Any full answer to the question would carry us deep into the history of ethical theory, and we must be content here with a summary impression. And what this seems to show is that the first assumption, that ethical judgments can convey objective truth, has been commonly accepted in the past as a fundamental principle of ethics; it has perhaps been in general assumed rather than expressly stated, but as an assumption it appears to underlie the language used about ethical problems both by historic common sense and by traditional philosophy; so that if at most periods until recently either philosophers or ordinary people had been asked whether they could know for certain that there were some things or actions or states of experience which were intrinsically better than their opposites, the answer given by nearly all would have been that, in some cases at least, they certainly could.

But no such clear answer seems ready to hand with regard to the other two assumptions, the assumption that ethical judgments depend on emotion, or the assumption that if they depend on emotion they cannot give objective knowledge. When we look at the ethical discussions of the past, we do not seem to find that either of these positions is either clearly asserted or clearly denied. It is assumed that there are ethical judgments which can claim authority as giving objective knowledge, and there is much argument as to the ground on which this authority can be claimed. It is not denied, and it hardly could be, that ethical judgments have a special connection with the emotional side of our nature, but the connection does not seem to be supposed relevant to the question of their claim to authority. The dilemma with which we are now concerned was for the most part left unnoticed.

It has however in recent times been brought to the front by changing conditions in the intellectual climate; and it has in particular been clearly envisaged by the movement called 'Logical Positivism', which, as we suggested earlier, represents the convergence of two of the most powerful currents in modern thought.

Faced with our dilemma, this movement does not hesitate as to its attitude. It maintains that ethical judgments depend on emotion, and in view of the dependence it denies that they can give objective knowledge. Their function, it asserts, is emotive only, not cognitive; if their nature is rightly understood, it will be seen that they express emotion and that this is all that they can do. Here is a clear and definite answer to our problem. Let us ask first whether we accept it in so far as it maintains that ethical judgments depend on emotion.

This dependence, if it is a fact, is not an obvious fact; it could, as we have seen, be overlooked or its importance could be ignored; and there are many of our ethical judgments for which it plainly does not hold. If we assume, as common sense finds it natural to do, that there are some things which we somehow know to be good without troubling ourselves to ask why; if we take this knowledge as supplying us with a body of premises to start from, we shall find that many or most of the ethical judgments made in daily life may be derived from these premises by the ordinary methods of reasoning, by means of which we connect observed facts with accepted principles. Our judgments of instrumental value are derived from our judgments of intrinsic value by employing the notion of cause; we take it for granted that health is good as an end, we infer that hygiene and medicine are good as means in so far as they tend to promote it. Or again we may judge that particular things or actions are either good or bad because they fall within a class of things or actions which we somehow know to be intrinsically good or intrinsically bad as a class; here what we have to decide is whether the thing is rightly assigned to the class, and this is a question which may be decided by observation of its natural qualities. In questions such as these emotion need not play a part, and the personal emotions which are most likely to obtrude themselves here may be just as much irrelevant and disturbing factors as they are in judgments about the course of physical events. A doctor will not think himself better able to form a true judgment as to the cause or cure of an illness because it is the illness of himself or of someone near to him; a moralist is not likely to form a more correct judgment as to the moral quality of an action because it is the action of himself or of someone near to him. We can say of most of the ethical judgments made in daily life that they do not depend on emotion in the sense which here concerns us; emotion may often be operative as their cause, it is irrelevant to the question of their truth.

But the secondary ethical judgments which can be justified by ordinary canons of reasoning from accepted premises must in the end go back to primary ethical judgments, which must themselves be justified in some other way, if they can be justified at all. What then can be said, what has in fact been said, about these primary ethical judgments and the ground for them? Here is a question which demands an answer, and various answers were given to it by historic common sense and by traditional philosophy. These primary judgments or first principles of ethics might be justified on the ground that they conformed to the will of God, as this had been revealed to mankind by an inspired book or an inspired teacher; or that they embodied an ideal seen in its fullness in a prior state of existence and recalled imperfectly in this; or with a less definite doctrine, that they expressed a supreme law of the universe, which could impose itself on the minds of human beings through its intrinsic force; or without any direct recourse to a metaphysic, on the ground that they were self-evident. And this last answer specially commended itself to philosophers, for here appeal could be made to the analogy of logic and mathematics. Just as logic and mathematics could be shown to rest on first principles, which themselves could not be proved but must be accepted as self-evident, and yet it could not be doubted that they gave objective knowledge; so it could be supposed that ethics too might form a body of objective knowledge, and yet be derived from first principles of which all that could in the end be said was that they must be accepted as self-evident. These answers were different in their metaphysical implications, but they were not of necessity conflicting and could be combined in various ways; and however much they differed, they pointed to one common conclusion, that in probing the foundations of ethics there was a certain point at which questioning should stop.

But what was to be said if questioning would not stop? Here was an ultimate question which might itself seem to demand an answer, and yet through most of the history of ethical thought it remained unanswered in the background. The body of ethical principles could no doubt be seen by an observer to change, as his survey passed from one country to another, or from one age to a succeeding one; and even in a single time and place it might change in a sudden and revolutionary way, when one creed fought with and replaced another. And yet through all these changes and revolutions most men and most philosophers continued to hold that there was a central core of ethical principles, which was as real as the

reality of the material world and needed proof as little as that. They might question whether this or that particular principle should be taken to form part of the central core; they might discard principles they had grown up with or might adopt new ones. But if they made such changes they would seem to themselves not to be losing faith in this central core, but to be drawing out more correctly its implications; the justification for a new view in the field of ethics was looked for in the old view better understood. And thus the discussions that went on round the ethical problem did not probe so far as to question the reality of this certain and objective core; they took its certainty and objectivity for granted, and asked how these were to be accounted for, and what conclusions could be deduced from them as to metaphysics or theory of knowledge.

This firm belief in an unquestionable core of ethical doctrine has been deeply shaken by developments of thought in the last two centuries. The influences which have gone to weaken it were various, but the main ones were the same as those which tended to throw doubt on the traditional beliefs of metaphysics. There were first the detailed criticisms drawn from science and from history, which questioned the whole system of religion and philosophy that had for so long dominated Europe. But could not the ethical beliefs which had formed part of this system hold their ground independently of it, or if they had to undergo change, submit only to change in detail, as had happened in the past, leaving the core of ethical belief with its certainty and objectivity unimpaired? So it might seem, and so for a time it was supposed. But the growth of the critical spirit had, we have seen, a general result which was more far-reaching than any or all of its particular results. Its effect was to divide human beliefs into two great regions, whose main character was very different, though the boundary between them might be shifting and hard to define. On one side of this boundary fell the beliefs which were accepted as making up the body of public or positive knowledge; accepted on various grounds, but mainly in virtue of their satisfying two tests: the internal test, that they could be derived either from pure reason or from sense perception aided by logical inference, the external test that they could command agreement and could serve to predict and to construct. On the other side were left the beliefs which did not satisfy these tests. And the progress of thought, as it tended to consolidate the beliefs on one side of the boundary into a body of

accepted knowledge, tended to weaken the position of those that fell beyond it, not so much by refuting them as by leaving them outside. To this outer region of private speculation or fancy were relegated, as positivist thought became more confident of itself, many of the great systems of belief which the traditional philosophy had looked on as possible fields of knowledge; beliefs falling within the spheres of religion, or metaphysics, and as it in the end appeared, of ethics too. For could it be claimed with confidence that any of the doctrines of ethics satisfied the tests required for positive knowledge; that they were derived either from strict reason or from sense perception; or that they commanded general agreement as this was commanded by the accepted beliefs of science; or that they could serve, as these could, to predict and to construct?

What then was to be said if the process of questioning would not stop, if it pressed on to scrutinize the ultimate belief in an unquestionable core of ethical doctrine? How far could any of the grounds on which traditional philosophy had sought to found an ethical system supply an answer? Let us consider first the answer which had been most generally accepted by philosophers: that ethics, like logic and mathematics, formed a body of reasoned knowledge derived from self-evident first principles. The analogy was plausible; yet there was a difference which became apparent when it was asked what those principles were. The principles of logic and mathematics could be held to be self-evident on the ground that they were accepted by all thinkers and that they appeared necessary to coherent thinking; or at any rate this was true of some of them; not perhaps of the propositions which a strict analysis would select as the ultimate principles on which to found its logical structure, for these might only emerge after long discussion; but of some among them it seemed to be clearly true. It seemed clear at least that the systems of logic and mathematics had a necessary development of their own, and that at a certain point in this development there could be found propositions, such as 'two and two make four', or 'things that are equal to the same thing are equal to one another', which were not in fact doubted or denied, and the doubt or denial of which must lead to contradiction and confusion. But were there to be found in the whole range of ethical thought any propositions of which this could with confidence be said? Here all seemed questionable, from one end to the other, from the specific judgments which common sense might pronounce on particular happenings to the ultimate

principles which might be appealed to in support of these judgments. As knowledge of the world widened and knowledge of the past was accumulated, it became increasingly plain how radically the common sense of one age or one society could differ from that of another in its judgments about good and evil. And the differences were not less plain in the principles by means of which philosophers sought to bring order into these judgments. The principles appealed to for that purpose could not, any of them, command general agreement; they were not founded on either of the accepted sources of agreed knowledge, either on sense perception or on logical reason; they could, any or all of them, be denied without involving contradiction. One or another of them might in the eyes of a particular thinker or school of thinkers appear unquestionable; but all that this seemed to mean was that it appeared unquestionable to thinkers whose emotional outlook on the world was of a particular kind. And if self-evidence in the region of ethics depends ultimately on an appeal to emotion, it must be held to be radically different from that self-evidence which we find in logic and mathematics.

Some such appeal to emotion seems again in the end to meet us, if we consider the line of defence which would base ethical beliefs on religious or metaphysical doctrines. The believer in a religion, however confident he may feel as to its truth, must in the end derive his confidence from a trust in his own feeling as to what is better or worse. Believing his religion to be true, he will no doubt think it right to follow its guidance in his judgment as to what particular things are good or evil. But if he has to answer the question as to why he takes his judgments as to what is good or evil from this religion, and not from that other or from none at all, what is he to say? Either he can do no more than repeat that he knows his own religion to be the true one, which in effect means only that he accepts it because of the fact that he was born and brought up in it; or if he looks for a deeper reason, he must maintain that he is certain that the whole state of feeling, which goes along with his believing it, is better for him than a state of feeling would be which was without this belief. If he starts from this certainty he may find confirming reasons later, but it is from something like this that he must take his start. And so again with a philosopher who may hold that there is a supreme ethical law of the universe, and that particular beliefs about good and evil are objective in so far as they express this law; his particular beliefs about good and evil may depend for their significance on his belief in the universal

ethical law, but his belief in that law must itself depend in the end on his assurance that the emotional state which goes with his belief in it is better than a state would be in which the belief was absent.

Such are some of the considerations which may be urged in support of the contention that ethical judgments depend on emotion; and it is not easy to deny their force. All our derived ethical judgments seem to depend for their authority on an immediate judgment made at some moment asserting that of two alternatives before the mind at that moment one is intrinsically better than the other. And if we ask on what ground this immediate judgment is based, all we can say is that it is, or it expresses, an immediate act of preference; and if we ask how we know that the preference is right, all we can say is that we believe that the state of feeling which expresses itself in that preference and in that judgment is better than a state of feeling would be which should express itself in the contrary way. Our judgments of better or worse, of value or disvalue, go back in the end to an act of preference which is bound up with and depends on emotion.

The dependence of ethical judgments on emotion must then, it would seem, be accepted as a fact; and Logical Positivism draws from this the conclusion that their claim to give objective knowledge must be denied. The conclusion accords naturally with its view that the methods of science are the only methods which can give positive knowledge, may be said indeed to follow of necessity from that view. Science has built up its systems of propositions on the principle that emotion cannot give knowledge; the presence of emotions may often be a cause which explains the origin of beliefs, it can never be a valid ground which justifies them. When then we see reason to think that in a particular department of what is supposed to be knowledge beliefs are often conditioned by emotion, we should so far view those beliefs with mistrust; when we observe that the results arrived at in this department by different thinkers constantly disagree, we should recognize that this is what might be expected and that our mistrust is confirmed; and when we find, as we probe the foundations of this supposed knowledge, that its primary beliefs spring from emotion and if this were cut away would lose their support, we must hold that its title to form part of the body of positive or public knowledge falls to the ground. Along some such line of thought Logical Positivism claims to demolish the supposed validity of ethics, and it sums up its claim

by asserting bluntly that the conceptions of goodness and beauty, and the sciences of ethics and aesthetics which claim to use these conceptions, are nonsense.

But is not this last assertion so sweeping that it refutes itself? For a science or study of ethics seems to form a necessary part of any picture that is to be adequate to the facts of human life. It is an evident fact that we all of us want things, and that we sometimes contrive or happen to get what we want; and ethics, if it is nothing else, should have a place and a function as the study of what human beings want and of how their wants may be supplied. It is again an evident fact that societies, laws, institutions, governments have come into being as instruments for the better securing of human wants, and that elaborate structures of economic and social and political science have been built up with a view to the more efficient working of these instruments. And this implies a general recognition of instrumental value, which must in the end, it would seem, rest on some set of doctrines or presuppositions as to intrinsic value. What, if ethics is nonsense, is to be said about all this?

Here is a question which Logical Positivism does not seem to have so far set itself to answer, not at any rate in detail. How are we to understand this omission? One comment which may suggest itself is that we find here another instance of the tendency we have already had to notice, whereby the various departments of thought and inquiry as they severally develop come to lose contact and interconnection, so that conclusions may be put forward confidently in one department which run counter to what are accepted as necessary presuppositions in another. But something more than this may be said to account for the silence. It may be urged that it was unnecessary to work out in detail a new answer to the problem, because there was already in existence a way of ethical thinking which claims to give a reasoned survey of human conduct, and which at the same time is consistent with the view that the main ethical ideas employed by the traditional philosophy, and notably the belief in an objective standard of value, should be dismissed as nonsense. The word 'nonsense' sounds perhaps needlessly harsh and startling; but if we take it as no more than a vigorous assertion of the doctrine that ethical beliefs are emotive only and not cognitive, subjective only and not objective, we may see ground for thinking that the doctrine is not so startling or novel as it might at first appear.

If we turn back and look again at the notions which seemed to

stand out as primary in the ethical field, we may find considerations to suggest a line of approach different from the one that we have followed. We included among these notions two which do not imply any claim to a knowledge of objective value: the notions of pleasure and utility. Each of these seems entitled to a place among the primary ethical concepts; yet they do not stand on the same footing as the other concepts which we have been discussing. When we say of something that it is good or beautiful, right or moral or virtuous, putting into any of these words its full weight and strongest meaning, we are asserting that the thing or the feeling or the action of which we are speaking has a value that is both intrinsic and objective. When we say of a thing or of a feeling or of an action that it is pleasant or that it is useful, we do not intend this double assertion. If we say that it is useful, we are saying nothing about its intrinsic value; we assert only that it has an instrumental value as means to an end. If we say that it is pleasant, what seems to be implied is that it has a value which is intrinsic, but is not objective.

This last statement needs scrutiny, for 'pleasure' is an ambiguous word round which many controversies have gathered. It is a word whose meaning we know not by definition, but by taste; or at any rate we may say that if we did not first know it by taste, no definition could help us to understand it. But starting from our understanding of the taste, we may conceive in various ways the class of entities which we should rank together as possessing this taste, and here a definition may help to show what limits we can most usefully assign to the class. If then we ask, which are the things or events which we recognize as having the taste of pleasure or of pain, the first answer which presents itself is that they are states of experience and in particular states of feeling; it is these that we compare with one another as being more or less pleasant or unpleasant or painful. And if we go on to ask which are the feelings which give us this taste most vividly and unmistakably, the answer agains seems clear, that we find them in the region of physical sensation. Our understanding of what either 'pleasure' or 'pain' can mean has its root and origin in this region; but while it begins here, it cannot be said to end here. It is a moral commonplace that there may be painful emotional states, of fear or anger or envy, in which the pleasantest physical surroundings will fail to please; it can hardly be denied that there are some pleasures, of friendship and affection, of aesthetic taste or intellectual interest, which may be enjoyed apart from pleasant physical sensations, though it may

be doubtful how far they could hold their own as pleasures in the presence of acute physical pain.

But when we pass from sensation to emotion we find that the limits of the concept are hard to determine and are drawn differently by different psychologists and moralists. Some of these, anxious to prevent pleasure from being too pleased with itself, would restrict it so narrowly as to cover physical sensations and little more; others, wishing to think of pleasure more highly, would expand it so far as to cover almost the whole range of the emotions which might be supposed appropriate to right judgments about goodness or beauty. And here it seems most in line with common usage to take an intermediate position, which we might express by saying that pleasure and pain are determined for us both by the sensations which we in fact feel and by the emotions which we in fact feel, but not by the emotions which we suppose we ought to feel. We might then go on to describe a pleasant state of feeling as a state which is felt by its possessor to have value for him in itself at the moment, apart from any thought of its consequences and apart from any thought of obligation. Its value would thus depend on his own immediate liking and would have no reference to any other standard; it would be intrinsic, but not objective.

We are thus led to distinguish two ideas which we have so far thought of as coinciding, intrinsic value and objective value; and once the distinction is brought to our notice, we can see that it goes naturally with that double reference in ethical perception which we spoke of earlier. Ethical perception, like any other perception, is two-sided: if it is to be capable of perceiving it must have its inner side or condition, which is a moment of experience with a particular content of feeling and judgment; if it is fully to deserve the name 'perception' it must have its outer side or condition, which is some state of affairs that the judgment claims to apprehend in a reality beyond the experience. To these two sides there correspond two senses in which it is natural to use the term 'value'. If we fix attention on the inner side, we think of value, in its subjective sense, as something which is created by the mere fact that it is felt, and which makes no appeal to any standard beyond itself. If we focus attention on the outer side, and look on the inner side as a window revealing this, we think of value, in an objective sense, as something which implies a standard and which belongs to the reality independently of our feeling it. And we may say

broadly, though not precisely (for all ethical terms are used with so much looseness that no statement about their usage can be more than very broadly true) that the subjective sense is what we have in mind when we employ the terms 'pleasant' or 'pleasing', while the objective sense is what we have in mind when we employ in their stronger sense such terms as 'good' or 'beautiful' or 'virtuous', or any of those ethical terms which suggest a claim to objectivity.

How then are we to conceive the relations between these three terms, whose bearing on one another we have now to consider, 'the good', 'the pleasing', and 'value'? At this point two lines of ethical thought diverge: the line which we first tried to exhibit as the main ethical doctrine of historic common sense, and an alternative line of thought which leads to a Subjectivist conclusion. Both would have to begin by allowing that the antithesis of pleasing and displeasing and the antithesis of good and evil alike fall within that widest antithesis of positive and negative value which runs through the whole ethical domain. What pleases has a value through the mere fact that it is valued; the act of valuing of itself creates a value which may be transitory, delusive, perhaps self-destructive, but which is felt as value while it lasts; and we need to attach our idea of value, at any rate one end of it, to this momentary feeling, if 'value' is to be for us something more than an empty word. Pleasure then, we have to say, or anything that pleases, has a positive intrinsic value in so far as it pleases, however much that positive value may be neutralized or outweighed if it is considered as an element or condition in a larger whole; pain or anything that displeases has a negative intrinsic value in so far as it displeases, however much that negative value may be neutralized or outweighed if it is considered as an element or condition in a larger whole. But the main doctrine of common sense, as we have so far conceived it, while it would allow that pleasure as such has a positive intrinsic value, would not go on to say that pleasure is the only positive intrinsic value, or the only intrinsic good, or even that it is a good at all in that strongest sense of the word 'good' in which good implies an objective standard. The pleasing and the good are qualities which may at fortunate moments go together, and in Paradise or in Utopia we can imagine that they always would, but in our present world of error and defect it is palpable that they often do not. The pattern of value presented by reality shows them standing side by side, as things compatible but not identical; this is how we must view the problem when we are

speaking strictly, if we hold by the main ethical doctrine of common sense with its belief in objective goodness.

But once it is allowed that pleasure is a value, there is opened up a line of thought which will lead to a different ethical doctrine. Pleasure, if it is a value, is an intrinsic value; it has its value in itself, not in something else that it leads to; and more can be claimed for it than this. There can be claimed for it that it is the form of value which we first apprehend and which we can be least in doubt about; it is in the experience of pleasure that we receive our earliest taste of value, and it is by the help of this that all our later judgments of value have to be understood. And having claimed so much for pleasure, the doctrine we are now concerned with goes on to claim yet more; it claims that pleasure is not merely the primary and most indubitable intrinsic value, it is the only one.

The doctrine when thus first baldly stated may strike common sense as startling and unsatisfying; and perhaps there is something in it that should in the end fail to satisfy, but it can be so presented as to lose its startlingness. It seems at first to claim too much for pleasure. Is it not a plain matter of fact that pleasures are not the only things we value, nor even the things we value most, that human beings are very far from always choosing those moments of experience which offer the greatest possible amount of pleasant feeling, and are ready to choose instead others which offer less pleasure, or even pain? But the doctrine before us does not intend to deny so evident a fact as this; and it meets the query by adverting to the distinction which we drew earlier between intrinsic value and instrumental value. Any ethical theory which is to give an adequate account of human activities must allow for the fact that we often choose a thing or an action with little intrinsic value rather than a thing or an action with greater intrinsic value, if we believe that what we choose will be instrumental to still greater intrinsic value in the future. An ethical theory which founds itself on the idea of objective goodness and virtue will have to say that there are many actions which it is right to perform, not because they are in themselves evidently good or virtuous, but because we believe that they will lead to good in their consequences. And the doctrine we are now trying to understand claims to carry its analysis of the idea of intrinsic value further back by making an extended use of the idea of utility; the actions or dispositions, it says, which that other theory would prefer and would call right on the ground that they are intrinsically good or virtuous, are

really to be preferred and called right on the ground that they can be trusted, generally or always, to lead in their consequences to the greatest amount of the sole value which is really intrinsic, pleasure.

The doctrine claims thus to construct a system of ethics on the basis of two simple ideas, the idea of pleasure as the end and the idea of utility as the means; from these, it says, are derived all those other ethical terms which we spoke of earlier as primary, and in the light of these two those others should be interpreted if their significance is to be rightly understood. It will hardly need the expression 'intrinsic good' as a special term in its ethical language, since this could at most serve it as a synonym for 'intrinsic value' or 'intrinsic pleasure'. But it will have a use for the word 'good' to describe those things or actions or dispositions which are instrumentally good or good as means, inasmuch as they tend to produce a balance of pleasure over pain; and in keeping this word its language will accord with the language of common sense. It can indeed go a long way in line with common sense by contending that the actions and dispositions which have been held intrinsically good in the past, or such of them as its view of ethics may seek to defend and justify, are on that view still to be held good, though 'good' must now be read as meaning only 'good instrumentally'; and it can make out a plausible case for this contention by putting forward the plea, which common sense would be reluctant to deny, that the actions and dispositions which have been held good in the past, or most of them at any rate, have in fact been good in the new sense now proposed for the word, as tending to promote human pleasure or to diminish human pain.

In working out this conception, in arguing that from the ideas of pleasure and utility it is possible to construct a system which will justify the ethical beliefs of the past in so far as these were reasonable, and will correct them in so far as they failed to conform to reason, this doctrine has open to it a wide field of operation which may in a sense be considered objective. It can put together a body of statements as to the forms of activity which tend on the whole to increase pleasure or to diminish pain for human beings; and it can claim that these statements will be useful in the same kind of way as other statements can be useful about the manner in which natural events may be expected to happen, and that they may be considered objective in the same kind of sense. But this will be an objectivity of means only; the end to be served by these

means will be subjective, depending as it does on the pleasure or liking of individuals, and it will remain subjective even when these individuals happen to agree. Ethics thus on this view of its nature would not have the thorough-going objectivity supposed possible by the first ethical doctrine: an objectivity that would be independent, not merely of the likings of particular individuals, but of human likings in general, and that would claim to envisage a standard of perfection, in the light of which it could know that one state of experience is intrinsically better or worse than another.

We have then to recognize these two contrasted ethical doctrines, on the one hand the ethic of perfection, on the other hand the ethic of pleasure and utility; and once we have recognized them we may find them crossing one another and conflicting through much of the history of ethical thought. And the central question at issue between them brings us back to the question which met us earlier: Are we to take an Objectivist or a Subjectivist view of ethics? The Objectivist view, which holds that ethical judgments aim at objective truth and may in some cases attain it, is the view which naturally presents itself if we start from the thought that we have a power of perception which shows us what is good or right or beautiful or virtuous or moral, and if we take these notions, all or any of them, in their strongest sense. The Subjectivist view, which holds that ethical judgments are inherently subjective in that they tell us about human thoughts and feelings and tell us nothing more, is the view which naturally presents itself if we start from the notions of pleasure and utility and interpret those other ethical notions in terms of these. The issue between these two views, which has been sharply summed up by Logical Positivism in its contention that ethical beliefs are nonsense, has thus been in a manner implicit in the long and detailed discussion, which has played so large a part in the history of ethical theory, as to the idea of pleasure and its relation to the idea of good; and both the sharp summing up and the detailed discussion are relevant as helping us to envisage the problem before us. The discussion as to the status of pleasure in ethics is relevant, because it shows that inquirers setting themselves to frame a theory of human conduct have thought it possible to construct an adequate one on the basis of the ideas of pleasure and utility, without calling in aid any of those ethical ideas which imply a claim to objectivity; and it thus supplies something that we felt to be lacking in the argument of Logical Positivism, when it was content to make the brief

pronouncement that ethical beliefs are nonsense. And on the other hand that brief pronouncement is relevant to our problem, because it serves to isolate a question which in the detailed discussion as to the status of pleasure has been mixed with and overlaid by other questions; it raises sharply the question whether it is possible to construct an adequate theory of human conduct that is based strictly on the ideas of pleasure and utility, and makes no appeal to any belief in an objective ethical standard.

The question whether our view of ethics is to be Objectivist or Subjectivist stands out in the light of our inquiry as the central question in the ethical field; yet it is not easy to state it in terms altogether free from ambiguity. The terms 'objective' and 'subjective' are in themselves ambiguous; they depend on their application, and as we look at them they may seem to change places. We are here faced with a shift of view something like that which met us in our study of the problem of sense perception. Our inquiry into that problem began by taking it for granted that our perceptions, while themselves only subjective, could give us knowledge of a material world which was objective; our perceptions then we thought of as appearance, and the material world we thought of as reality. But as we were brought by one difficulty after another to doubt whether we could form any tenable conception of the supposed material world, we found ourselves falling back on our perceptual worlds and their contents, as being at any rate real in their own place. And with this shift of view we came to the thought that the material world which we had begun by calling 'objective' might be perhaps no more than a subjective fancy, and that the field for objective knowledge was to be found in the contents and relations of the perceptual worlds which we had begun by calling 'subjective'.

Something analogous seems to hold in the region that we are now considering. If there is a world or system of values, objective and intrinsic, that is the reality about which we want our ethical thinking to inform us, if it can. But is there such an objective world of values, and can we hope to have knowledge of it? If we cannot know it, the best we can do may be to fall back on our feelings of liking and disliking, which are at any rate real in their own place, and see what knowledge we can hope to get about these. And with this there comes about a shift of view such as met us in the problem of sense perception; we are led to think, first, that our belief in an objective world of ethical values may be no

more than a subjective fancy; second, that when we look for objective knowledge in the ethical field, what can best deserve the name is a knowledge of those human feelings which we began by thinking of as subjective.

Our belief in an objective world of ethical values may be no more than a subjective fancy: we have seen how many lines of thought seem to point to this conclusion. There is the discovery, becoming more evident as our knowledge of fact increases, of how the ethical beliefs of one time or country differ from those of another; there is the difficulty, even if we confine our thought to a single time or country, of reaching any agreed standard as to what those values are; there is the reflection, which may be called obvious, that ethical beliefs are not to be derived from either of the two recognized sources of objective knowledge, from sense perception or from logical inference; there is the further reflection not so obvious but forced on us when we press our inquiry home, that they have their origin in emotion, which according to a now commonly accepted canon of thought can be a source only of subjective belief and not of knowledge. And to these considerations we have to add yet another: that the terms or notions, to which we appealed as testifying to the belief of common sense in objective ethical values, appear under scrutiny to give only a doubtful and half-hearted testimony to this effect.

When we claimed for them that they implied a belief in objective ethical values, we had to qualify the claim by saying that they implied this if they were given their full weight and strongest sense. And if we look at common usage, we shall find that this qualification must be understood widely; that all of these terms are ambiguous and may often bear something much less than their strongest sense. The central term 'good', which we took as the starting point for our claim that common sense has believed in intrinsic and objective values, falls away from this strongest sense in two directions: on one side, as we have seen, it loses its implication of intrinsicalness and asserts, not that a thing is good in itself, but only that it is good as a means or instrumentally; on another side it seems to lose its implication of objectivity and to say only that what the speaker calls 'good', a good dinner for instance or a good laugh, is a thing which he at some moment likes or finds pleasant. So too the other ethical conceptions which we called objective undergo a constant weakening in common usage. 'Beautiful' may be watered down so as to mean no more than pleasing; 'moral' may mean no more than conformity with

accepted rule; 'right' no more than appropriate choice of means to an end. And the conception of a standard or of obligation which we found implied as a common element in these objective ethical terms, can itself be so weakened as to lose its full meaning of 'ought'; the standard to which reference is made may mean only the opinion of some majority, the obligation may mean only that failure to comply with this opinion can entail the penalty of isolation or a name for eccentricity. How easily we drop into saying, 'You ought to do this', when all we mean is that if you do not do it you will go against some trifling social convention. Yet can we be sure that when we use the word 'ought' in what we suppose to be its fullest and strongest sense we come in reality nearer to an objective truth about ethical value?

This is the kind of challenge which the advocates of a Subjectivist view of ethics can urge against the Objectivist view, and so far as we have gone it seems hard to find any conclusive answer. We may appeal to the common sense and common language of the past as evidence that the belief in objective ethical values is itself a reality; this, we cannot doubt, is the way in which men, some men certainly and perhaps most men, have in fact thought and felt. But we must admit that the common sense of the past has often been wrong, even when it was more nearly unanimous than we can claim it to have been here; and the evidence of language is ambiguous. It can convince us that some men, when they have used the words 'good' or 'beautiful' or 'right', have sometimes had in mind an objective standard which means more than a reference to human feeling; but it shows that other men, or the same men at other times, when they use the same words, have in mind no standard that could be held to be objective, nothing which could not adequately be expressed in terms of pleasure and utility.

And now, if we should have to accept the thought that our belief in an objective world of ethical values is perhaps no more than a subjective fancy, we may set over against this the thought that a Subjectivist ethics, which claims only to give an account of human conduct in terms of pleasure and utility, can claim within its range to deal with objective fact. This would be so even if we carried the hypothesis of Subjectivity to its furthest possible point; if I could be sure of nothing beyond my own momentary experience, I could be sure at least of one fact, that in this passing moment I could distinguish one feeling as more pleasant or more painful than another. But we need not here complicate our

inquiry by presenting again the extreme Subjectivist view of reality. We are taking for granted at this point the primary assumptions of common sense, and among them these: that each of us is sure that he is one among a society of human beings like himself, that he can have a knowledge, partial and second-hand but real, of their thoughts and feelings, and in particular that he can know something of their feelings about value. It will then be a matter of importance for him that he and they have these feelings of immediate preference, and that they know something about the things they like and the way in which they may be helped to get them. And here is room for a conception of ethics founded on the notions of pleasure and utility which may have a broad and solid objectivity of fact.

But for the central problem now before us this objectivity of fact is nothing to the purpose. The question to which we want an answer is whether we can reach a knowledge of values which are objective in the sense that they do not depend on human liking; and for the purpose of this question a doctrine that interprets all ethical values in terms of human pains and pleasures or human likes and dislikes must rank as Subjectivist, whether it bases itself on the likes and dislikes of particular individuals or, taking a wider range, on the likes and dislikes common to human beings as members of a particular society or, taking a wider range still, on the likes and dislikes common to human beings as animals of a particular species. It is in this sense that we have to understand the terms 'objective' and 'subjective' when we say that the issue between the Objectivist and the Subjectivist views is the central problem of ethics.

How then is the issue to be decided? We cannot hope by going beyond the ethical field to find any more certain or ultimate principle which should determine our decision. The various principles outside that field on which an ethical doctrine might be supposed to be based all appeared, when we examined them, to be themselves based on an ethical ground which was more fundamental than any of them: on the conviction that we can sometimes know, when we compare two beliefs, that the choice between them turns on a difference between two emotional states, and that one of those two states is intrinsically better than the other. Our deepest beliefs in the ethical field belong to the class of beliefs which must justify themselves in this way, if they are to be justified at all. And the belief in objective values may be said to be self-justifying, and to be justified in the only way in which such a belief

could be, if we find ourselves convinced after the most careful and dispassionate scrutiny we can make that it appears certain in itself, and that its certainty appears to be bound up with the certainty of those more particular ethical beliefs which we hold most certain.

This justification of the belief in objective values may be said to be so far final that no argument drawn from outside the ethical field could shake it. Can it, however, be challenged from inside that field? For the ethic of pleasure and utility seems to meet us at this point with a challenge. The immediate judgments of better and worse, it says, which claim to express a knowledge of objective value, are in fact only subjective judgments of likes and dislikes passing themselves off as something more; and we can satisfy ourselves of this if we examine closely any of those particular beliefs which seem to us most clearly to possess objective certainty. We shall find that they can all be sufficiently accounted for in terms of pleasure and utility, of human likings and what can help to satisfy them; and if some of these judgments have a more peculiar feeling of certainty than others, this is only because they have behind them a wider agreement about the feeling of pleasure or a more far-sighted calculation of utility.

Here then the issue is joined between the two views of the ethical problem which we have distinguished as the ethic of pleasure and utility and the ethic of perfection. And with this we are brought up against that tangled controversy we mentioned earlier, which arises round the meaning and mutual relations of the primary ethical ideas, and more particularly, as we can now see, round the relation of the idea of good to the idea of pleasure. How many uncertain factors and ambiguous notions are involved in this controversy has become partly evident in the course of our inquiry; and the further we probe into the discussion the more the uncertainties and ambiguities crowd upon us. We could not hope to do justice to either of the opposing doctrines, still less come to a decision between them, without undertaking a far more detailed survey of the whole ethical field than would here be in place. But before we leave the problem we may indicate a few of the main considerations that might be urged on one side or the other.

The claim that an ethic of pleasure and utility can be self-sufficient may be supported by some such arguments as these. The states of experience or activities or dispositions which we prefer and which we take to have value can be seen on examination to

be preferred, either because they have intrinsic value as pleasant in themselves, or because they have instrumental value as means to pleasure in the future; if examination should show them not to be either pleasant or a means to pleasure, we should no longer think it reasonable to value them. This dependence of our judgments about value on our feelings about pleasure stands out first and most clearly with the pleasures and pains which arise from physical sensation. It is about these that we find the nearest approach to agreement among human opinions in the field of ethics; it is in seeking to promote physical pleasure, or still more perhaps in its converse, in seeking to diminish physical pain, that we can be most confident that our efforts are directed to securing something which is really valued.

Part of the strength of the view we are considering is that it takes its start from these palpable facts. But when it maintains that pleasure is the sole intrinsic value, this is not to be understood as meaning physical pleasure and nothing more. It can claim to find a place for the various mental activities, aesthetic or intellectual or constructive, which general consent would rank as pleasures of a higher order; it can claim them at any rate in so far as they either give pleasure or subserve utility, and when they reach a point at which they fail to do either, how are we to be sure that they are any longer worth pursuing? And if these aesthetic or intellectual pleasures are the privilege of a few, it can claim also to find room for higher pleasures which are more widely spread; for affection, friendship, and sympathy. The force of sympathy can bring us to feel the pleasure of others as our own pleasure, and even more their pain and suffering as our own pain. To give, to help, to join in some common work, to share the feelings of others and to feel that our feelings are shared by them, all these things may themselves be pleasures, sometimes intense ones. And pleasure here comes into the account in a double manner, as a value in itself and as a means to value in the future; for this natural force of sympathy is the root out of which comes a growth of moral sentiment and moral conduct, making it possible for human beings to co-operate with one another, and for families, clans, tribes, and nations to hold together. The sense of community which rests on sympathy is supported too at a lower level by a feeling that may be considered as its other side, by a fear of isolation and separateness. Human beings in general find it pleasant to be in agreement with the people round them, or if this is putting it in too positive a way, they find it at any rate painful to be in too sharp a disagree-

ment; they feel a need to belong to a group or herd, to share its belief and opinions. And these common feelings, the warmth and pleasure of sympathy, the pain and dread of isolation, working in with the practical need for mutual help, are enough to explain how it is that human societies have been able to come into being, to maintain themselves from one generation to another, to increase and develop.

We need not then look further than an ethic of pleasure and utility, to account for impulses which go beyond the physical pleasure of the individual and which may be called in a broad sense 'altruistic'. Such impulses are indeed not confined to humanity; they can be traced far down in the animal kingdom. Devotion to mate and offspring is evident, as even casual observations may show, in the higher animal orders at any rate, in beasts and birds. Devotion to the swarm or the hive is to be found, so the most careful observers tell us, at a much lower point in the scale of life, in the societies of ants, bees, and termites; reaching indeed here a degree of self-abnegation which equals or goes beyond anything that could be supposed possible in the most totalitarian human communities. Yet what looks like self-sacrifice or devotion to others cannot here be more than the fulfilment of self, the expression of an immediate impulse. We may fancy, perhaps truly, that in those actions which are commonly called 'instinctive' there may sometimes be discerned a deliberate choice of means to an end; it would be carrying fancy too far to conjecture that there is ever a deliberate choice of one end as better than another. Animal behaviour, whether it looks like egoism or like altruism, is sufficiently accounted for if we suppose either that the animal is doing what it wants or that it is doing what it must. And a theory of ethics, which can account for altruism in the animal world, should serve with appropriate changes of detail to account for altruism in man; such a view at any rate may seem natural to common sense today, if it tries to conceive the development of human nature in the light of what science has to say about the development of organic life. On this way of thinking the main key to the understanding of man's position in the world is that he is to be looked on as one among the animals; perhaps higher, or at any rate more complex, than the rest of the animal kingdom, but only higher or more complex in the sense in which one species of animal may be said to be higher or more complex than another; and by saying that he is higher it is hard to see what can be meant except that he is capable of a more subtle kind of pleasure,

or of a pleasure which he would prefer to the pleasures enjoyed by the other animals, if it were open to him to make the comparisons.

At one point then after another, as we trace the development of human society, the modes of feeling and behaviour which general consent approves as good or virtuous or moral can be seen to arise, and to have arisen naturally, out of the impulse to pursue what is pleasant and avoid what is painful. Broadly speaking and for the most part, it can be said that the activities or dispositions which common sense has in the past judged to be good have been those activities and dispositions which have tended to promote human pleasure or to diminish human pain; and when the ethical judgments of common sense in the past are challenged or revised and actions then approved are condemned by common sense today, the reason for the change of view is likely to be that such actions can now be seen to have caused needless suffering; and when a question is raised now as to whether some particular activity or disposition should be judged good or bad, the test by which common sense would decide the question would again be to note what its effect may be expected to be in increasing and diminishing human pleasure or human pain. And if this is the test which common sense would in fact employ to decide whether any particular activity or disposition should be ranked as good or bad, and if it is hard to see what more appropriate test could be chosen, need we look further to discover what we mean when we use these terms? Here, it may be claimed, is a final and conclusive argument to show that an adequate ethical system can be based on the ideas of pleasure and utility alone, without any need to appeal to the ideas of perfection or of obligation or of a supposed world of ethical values independent of human liking and disliking.

The argument is a plausible one, yet it may be suspected that something is left out which is an essential element in the notion of the good, as this has been conceived in the past. We seem at any rate to find that defenders of the ethic of pleasure and utility, when they set themselves to show in detail how they can derive from their avowed principles a system of values which will not depart too widely from those which common sense has believed in, need at some point or other to call in aid other principles which they have professed to discard. Keeping within its avowed principles the ethic of pleasure and utility can claim to find a

place for the higher pleasures, in so far as they are in fact felt simply as present pleasures or are seen to be means to pleasure in the future, but it can claim them so far only. If it goes further and says that pleasures of a higher order ought to be preferred to pleasures of a lower order, it appeals to the idea of obligation; if it even compares pleasures with one another as higher and lower, not simply as more or less pleasant, it appeals to the idea of a scale of perfection. If it maintains, as some of its most persuasive advocates have maintained, that each of us ought to value the pleasure of others equally with his own, it again makes an appeal to the idea of obligation; without this indeed it is hard to see how it can reasonably make out its claim to pass from a personal to a social standpoint. Apart from the ideas of perfection and obligation, the idea of pleasure in itself appears too accidental and capricious to bear the weight which is claimed for it; and when the gaps left by that are filled by calling in aid the idea of utility, this on its side appears too mechanical and calculating to provide all that is needed.

Common sense would no doubt accept the contention that the activities and dispositions which it would approve as good do in fact tend to promote human pleasure or to diminish human pain; it might perhaps admit that the surest way to justify particular activities is to show that they tend to promote human pleasure or to diminish human pain; it would be reluctant to agree that the tendency to promote pleasure or to diminish pain is all that there is to be said on the matter. It would remain convinced that in the notion of perfection there is something more which it would not willingly give up. If it is asked what more there can be it might find it hard to give a clear answer; yet it would feel that the justification by utility does not allow enough for the immediacy and intensity of the belief that certain activities, certain dispositions, are good in themselves. There are beliefs of the ethical order, such as the belief that love is better than hatred, mercy better than cruelty, understanding better than delusion, which we feel to need no reason to support them, and to be so certain that it is impossible to doubt them; would not this certainty be arbitrary and irrational, unless it is true that there are objective ethical values and that we can know these directly? And neither the idea of pleasure nor the idea of utility can well account for a belief which appears in one form or another as a constant feature in the ethic of perfection: the belief that our preferences of the better to the worse can themselves be ranked in terms of better

and worse, that the training of our preferences so as to reach a better understanding of true value is one of the most important things in life, and that for this training we need to be guided by those who have a better understanding than our own.

This brief summary of a few of the points that can be urged on behalf of each view may suggest that neither case can be ruled out of court so quickly or easily as the advocates of the other are often ready to assume. The issue between the two ramifies out in many directions. On one side it leads back to the central question of all ethics: can a belief in objective values be justified? On other sides it is bound up with many of the most difficult questions arising in that main part of the ethical field which is concerned with human conduct: questions of form, as to the usage and mutual relations of the primary terms in which matters of conduct are to be discussed; questions of substance, as to what types of experience are good or evil, what types of action are right or wrong. An answer which is to do justice to the problem would have to go deeply into these various questions, and to find its way through the entanglement of form and substance, by which doctrines that in their essence agree can use very different languages, and doctrines that differ widely can seem to say much the same thing.

Does an ethic of perfection or an ethic of pleasure and utility, in any of the varying forms which either of them may assume, provide the more adequate theory of human conduct? Can either of them guide us through the conflict of feelings and judgments to a core of common doctrine as to what is better or worse? The ethic of perfection in the form in which it for long dominated European thought provided such a core of doctrine, and was able in substance to command agreement for it, in spite of perplexities in theory and failure to achieve it in practice; but this power to command agreement was bound up with belief in a religious and metaphysical system, and it rested on the authority of this system as a whole and on the unquestioned assumption that certainty about ethics, religion, and metaphysics was attainable. When this assumption came to be questioned and the authority of the system to be debated, it began to appear how wide a discrepancy of actual feelings and judgments about ethical matters lay behind the seeming agreement. And as the process of questioning goes on, the belief in an objective standard of perfection is left hanging in the air. It has lost the link which united it with a whole system of accepted beliefs; and if there should be such a

standard, how could it help us, supposing we all interpret it differently?

Here the ethic of pleasure and utility comes forward to fill the gap. It claims to provide a common foundation on which an agreed fabric of ethical doctrine may be constructed, in the kind of way in which science has been able within other regions to arrive through disagreement and discussion at agreement. It can claim then, while challenging the ethic of perfection in principle, to co-operate with it in some measure as regards practice; to justify at any rate a large portion of the ethical beliefs of the past, and to supply a basis on which life in society can hold together. And this is a claim which may deserve attention even from a philosophy which holds to the belief in an ethic of perfection; when so much is doubtful, partial agreement in a limited field can be worth something. It may be indeed that an ethic of perfection, rightly conceived, would be able to include a rightly conceived ethic of pleasure and utility as an element in itself. Nor should we suppose that an ethic of perfection must of necessity be, or always has been, better than an ethic of pleasure and utility. It seems a matter of historic fact that ethical doctrines put forward in the name of pleasure and utility have often been more charitable, more humane, and within their limits more reasonable, than doctrines put forward in the name of perfection. Yet when all this is allowed for, we have still to say that belief in an ethic of perfection will support us in the hope that ethics can supply a basis for metaphysics, and belief in an ethic of pleasure and utility will not.

For the purpose then which we had in view when we undertook our survey of the ethical field, the issue between the Objectivist and the Subjectivist conceptions of ethics is sharp and clear. We must choose between the belief that our immediate ethical judgments can in some cases reveal to us something in an objective world of value, and the belief that they can tell us of nothing more than the likes and dislikes which happen to belong to us as particular individuals or as members of a particular society or as animals of a particular species. Between these two alternatives there is room for intermediate positions which may be useful for the practical conduct of life; but none of these compromises can help us for the purpose for which we are looking to ethics to help us, the attainment of metaphysical knowledge. We can imagine that a society of intelligent apes or termites might by studying their common likes and dislikes construct a plan of behaviour which

would enable them more effectively to get the things they liked and to avoid the things they disliked; we should think them deluded if they went on to suppose that from such a plan of behaviour they could advance to a knowledge of metaphysical reality. And if we have to renounce the possibility of an ethic of perfection and content ourselves with an ethic of pleasure and utility, we must accept it that we are in the same position as they.

CHAPTER XXVIII

ETHICS AND METAPHYSICS

These brief scattered glimpses must for the present suffice as our survey of the ethical region. What now can we say as to the relation between the two great regions of speculation which we have marked off from one another in using the terms 'ethics' and 'metaphysics'? Our problem as we stated it at the outset of our inquiry was as wide as the whole problem of knowledge. What, we asked, are the things that we can know, and how can we know them? But plainly we needed to limit the width of this first formulation, if our inquiry was to get anywhere; and a suggestion for limiting it was supplied by the contrast between the opposing conceptions of philosophy which we termed the 'metaphysical' and the 'positivist'. The traditional or metaphysical philosophy had claimed that it was possible for human reason to reach a central knowledge or knowledge of the ultimate nature of reality; the positivist philosophy denied this claim and maintained that what could be known about the nature of reality was only such particular knowledge as was built up and warranted by the sciences. Here then the main issue which concerned us in the problem of knowledge seemed to be clearly raised. Was the traditional philosophy in the right when it claimed that it was possible to reach this central or metaphysical knowledge about the ultimate nature of reality or (to use a word not quite so ambitious) about its essential nature? What, if anything, could be known about this ultimate or essential nature, and by what methods, if by any, was this knowledge to be attained?

The problem thus conceived was wide enough, and yet in so conceiving it we had perhaps left out of account an element that should have been kept in sight if our original question was to be fully answered. We had left out the problem of value. When we asked, What things can be known? should we not have reckoned

values among the things that can be known? And when we asked, Is a central knowledge possible? should not a central knowledge that deserves the name be able, not only to bring together within its survey our various beliefs about existence, but also to link up our beliefs about existence with our beliefs about value? This might, no doubt, be disputed; it can be contended, as we have just seen, that when we come to the region of values we are concerned with the emotive aspects of language only, not the cognitive. Yet in accepting this contention we should break with the general view of historic common sense. Ought we not therefore at least to allow that the problem as to our knowledge of value must fall within the general problem of knowledge at the outset, even if we should have to rule it out in the end?

There would seem then to have been an ambiguity in the manner in which we defined our main problem. When we asked whether it was possible to attain metaphysical knowledge, or knowledge about the essential nature of reality, our language left it an open question whether the ethical problem was included or not within the terms that we had used. There were two uncertain points: first, the uncertainty that we have noticed as to the extension of the word 'knowledge'; and also another uncertainty, connected perhaps with the first, as to the extension of the word 'nature'. When we speak of the nature of a thing, what that expression might seem most appropriately to stand for is the sum total of the thing's natural qualities. And it seems reasonable to take the expression 'natural qualities' in the sense we assigned to it a few pages back, as comprising those qualities which fall within the survey of the various sciences, physical and psychological, or which might be conceived as falling within their survey, if they were fully perfected; and reasonable again to say that we should be able to give a complete account of the nature of a thing if we were able to set out all its natural qualities in this sense. But the term 'nature' cannot be tied down to a single rigid meaning; it is one of those words which philosophers cannot well do without, but which they must be content to use in a variety of senses. And many of them have in fact used it in a wider sense, in which it would include not only the natural qualities of a thing as we have defined these above, but also the ethical qualities of goodness or beauty; and it is hard to find a ground for ruling out this wider sense as illegitimate, unless it be the ground that the qualities of goodness and beauty are not to be held objective, that they cannot be objects of knowledge, and that the words 'good' and 'beautiful'

can only express the presence of a feeling. The wider or narrower extension of the word 'nature' would thus appear to stand or fall with the wider or narrower extension of the word 'knowledge'.

We can perhaps best bring these reflections to a head if we distinguish a narrower and a wider way in which we may view the whole metaphysical problem: a narrower sense in which it would exclude the ethical problem, a wider sense in which it would include it. The metaphysical problem in the narrower sense might then be understood in terms of our earlier definition as the problem whether, and if so how, we can reach a knowledge about the essential nature of reality; and the word 'nature' might for this purpose be understood in that vague and negative, yet intelligible, sense in which when we speak of anything's nature we mean the sum total of its natural qualities, and when we speak of natural qualities we mean to exclude ethical qualities such as goodness or beauty. But we may also give to the metaphysical problem a wider interpretation in which it would include, not only the narrower metaphysical problem as thus defined, but also the ethical problem, or at least an essential part of it. For the ethical problem also falls into two parts, the ethical field of inquiry may be viewed in two aspects. It may be viewed on the one hand as the study of human wants and likings; covering on the side of theory a study of the things that human beings, or particular groups of human beings, may be supposed to like or want now, or to have liked or wanted in the past, and of the accounts they have given to one another about this; and on the side of practice a study of the way in which they may be helped to get the things they want more fully and successfully. Or it may on the other hand be viewed in a way which seems more nearly to be the view of historic common sense, however hard it may be to ground it in reason: as a study of human judgments about intrinsic value or intrinsic better and worse, and of the problem by what right we form these and whether they can be held to express the objective nature of reality. And if we place ourselves even by hypothesis at this second point of view, we must recognize that the belief that ethical judgments are objective and are grounded in reality is itself, apart from any consequences, a belief of the first importance about reality's essential nature; and that the problem whether this belief is truth or illusion is an important part of the whole metaphysical problem.

Our inquiry has so far proceeded on the assumption that the metaphysical and the ethical problem could be dealt with

separately and that this was the right way to deal with them. We have assumed that if our subject of inquiry was the metaphysical problem, our first business would be to answer this as well as we could by finding out what, if anything, we might be justified in saying about the essential nature of reality, in the narrower sense of the word 'nature'. This, we supposed, was a problem that might be attacked by itself, and then when this had been answered we might go on to inquire how we ought to understand the concepts of better and worse, and how the conclusions that we had reached as to the nature of reality should be looked at in the light of this understanding. Such a view as to the separateness of the two problems seemed to accord with the procedure that it would be right to follow if we were examining any question as to a matter of fact falling within the province of history or of science. We should ask in that case, What do we on the evidence available conclude has happened in this particular instance? or, What is the law in accordance with which we believe things to happen in this particular class of instances? and to provide us with this evidence we should look to sense perception and to thought using the material given in sense perception. We should not suppose that our opinion as to what is better or worse, as to what ought to happen or what we should like to happen, could form part of the evidence as to what has in fact happened in the past or is likely to happen in the future. The principle here assumed as to a separation between questions of fact and questions of value is the avowed principle of the sciences; it is generally accepted, though perhaps with more sense of difficulty, as the principle to be aimed at in historical inquiry; and it seems for the most part to be the principle assumed by philosophers, the principle at any rate which they have assumed in theory, if they have not always followed it in practice.

True, we found a different view put forward by Idealists, or by a certain school of Idealist philosophers, when they interpreted coherence as implying perfection, and contended that we could pass directly from the assurance that reality must be logically coherent to a certainty that it must be perfectly harmonious. But this was a contention which we could see no sufficient ground for accepting; such an extension of the implications of coherence seemed to need for its support the metaphysical doctrine that all reality was to be conceived as a single absolute experience, while that doctrine seemed in its turn to be based on the extended meaning given to the principle of coherence. Thus the fusion of the ethical and the metaphysical problems which marked this strain

of Idealist speculation appeared to be reached by reducing both to a problem of logic. And the logical principle appealed to seemed itself to stand in need of metaphysical support; it might perhaps find a legitimate place in a complete metaphysical system, if such could be constructed; we did not see how it could help us at a stage of our inquiry when we were still doubtful whether any metaphysic was possible.

We could not then accept the contention that the metaphysical and the ethical problem were fused together in the simple and complete way that the Idealist view demanded. Yet on the other hand we have not found ourselves able to keep them fully apart in the manner which the general procedure of common sense and of the sciences would indicate as appropriate, and which we began by assuming as appropriate for us. Let us turn then to consider the points at which we have been forced to recognize their connection.

First, as we have seen, the ethical problem is itself a part of the metaphysical problem, at least in this sense, that the most fundamental question of ethics is at the same time a question of metaphysics. Is there an objective standard of value? Is the distinction that we make between better and worse a distinction that holds good only as regards human feelings, or does it hold good in the nature of reality? The question is one which it may be difficult, perhaps impossible, to answer, and difficult even to formulate clearly and briefly; but the words we have used may serve to show that the issue is a real one and is of central importance for our whole philosophy. If we believe, as historic common sense has on the whole believed, that there is an objective standard of value, and that our assurance of this is not impaired by the uncertainties and discrepancies of human thought as to which particular things are better or worse; we believe in that case that we possess, no doubt very partially and imperfectly, a piece of knowledge of the first importance about the essential nature of reality; and our ethics will then be in a sense a department of our metaphysics; not in the sense that it depends on some metaphysical principle outside the ethical field, but in the sense that the ultimate principle of ethics should itself rank as a principle of metaphysics.

So far then we have reached the result that the ethical problem and the narrower metaphysical problem are from a comprehensive view to be regarded as forming departments of the whole metaphysical problem in its widest sense. So far, however, we might still think it right to proceed upon the common assumption of common sense and the sciences, that the two departments may and

should be examined separately, and that it is only after the separate examination of each has been completed that philosophy can properly attempt to bring their results together. But we have now to note that our inquiry has suggested that the two are linked together in a closer and more complicated manner than this. For we found the ethical problem arising to confront us at one point after another as we set ourselves to inquire into the metaphysical problem, in the narrower sense of 'metaphysics', the problem as to what we can know about the nature of reality, in the narrower sense of the word 'nature'.

The ethical problem met us first when we asked the question, What do we want to know? The field of possible knowledge that inquiry might seek to explore appears infinitely wide, the propositions that might possibly be known infinitely numerous. What portions of this infinite field, which among these infinitely numerous propositions should be selected to make up that limited field, that limited number of propositions, which is all that can in practice come within the scope of knowledge for any individual inquirer or in the end for the whole human race? If the search for knowledge is not to wander endlessly and to lose itself in a wilderness of irrelevance, there is need for principles of selection which must be given somehow in terms of what we want to know. How are these principles to be determined?

Two main lines of answer at this point suggested themselves in accordance with which we might rank one piece of knowledge as being more or less significant than another. We may desire a piece of knowledge either because we believe that it helps us to achieve some result which we hold to be worth getting, or because we feel that it is worth having for its own sake. The two impulses are different, yet connected. They are different in their operation, because the one is concerned with means to a desired end, with the field of ethics in the sense in which this corresponds to the field of conduct or of practice; whereas the other is concerned with a manner of judging in which we appraise mental activities as worth having for their own sake, and is more analogous to the way of looking at things that we call 'aesthetic'. Yet they are connected, in that both imply and depend on a belief that there are some things or states of mind which are worth having for their own sake, that there are some ends which possess intrinsic value; and both may thus be said to fall within the field of ethics in the wider sense in which this can be equated with the whole field comprising

questions of value. And behind the question, as to the relation which should be taken to hold within this field between the province of ethics in the narrower sense and the province of aesthetics, there seemed to emerge a more fundamental question, as to the relation of the field of ethics in the wider sense to metaphysics or to the possibility of a metaphysic. These essential ethical beliefs of ours, these beliefs that certain things or certain states of mind are worth having for their own sake, are they, some or any of them, objective and grounded in the nature of reality? Or can we say of them only that they are beliefs which we, as individuals or as members of particular societies or as animals of a particular species, happen to find ourselves holding? The first of these answers lays claim to an insight of a far-reaching kind whose justification is not easy to see; and it might be claimed that we can give an adequate account of the search for knowledge in terms of the second. Such an answer, in one of its various possible forms, which would interpret the search for knowledge by reference to our personal or social or biological needs, might be thought able to explain the success which this search has achieved in the past and to supply some measure of guidance for it in the future. Yet if this second answer is all that we are justified in asserting, it hardly seems enough to support the confidence that there is a sense in which we can rightly feel that we want to know everything, or to give us the decisive clue which is needed to show us our way through the mass of material to be known, as this more and more crowds upon us. If we believe it possible to discover such a clue and to vindicate such a confidence, does not this imply that we trust our ethical beliefs to be somehow objective and grounded in the nature of reality, however hard we may find it to assign a precise meaning to such words?

The ethical problem thus presented itself as a real though a somewhat remote one, when we were inquiring into the general assumptions which might be held to justify the search for knowledge; and it has met us again in one form or another as we have been brought up against particular problems of metaphysics. It was present in a veiled form behind the deadlock reached by our inquiry into the world of mind; it began to show itself more clearly at the end of our inquiry into the world of matter. The main questions which concerned us there were to ask, What was the ground for our belief in other minds? What sufficient reason might there be to convince an inquirer that he could recognize mind as existing and operative at any point in the material world? In

searching for an answer we were led to think that two questions needed here to be distinguished. First, there was the question whether he could know, and if so how, that other minds existed; second, there was the question whether the existence of mind could be supposed to make any difference, and if so what difference, to the course of events in the material world. And either of these when followed out seemed to lead us to the region of ethics for a complete answer.

To the first of them we could find only one answer which appeared adequate: the reason why each of us is certain that other minds exist is that he is assured of this by the emotion of sympathy in a manner which leaves no room for doubt. But behind this answer rose a further question, Ought we, when we see how constantly our emotions clash with one another and mislead us, to think that emotion can ever be a sufficient reason for belief? Here again we found only one answer to account for our certainty: there are some emotions about which we can know that it is better that we should have them than that we should be without them, and on which we can rely to tell us something of the truth about the nature of reality. And once we had accepted this as answering our problem as to the reason why we believe in other minds, we were led on to think that a similar answer might help to solve for us two other metaphysical problems: the problem often raised but never adequately disposed of as to the ground for our belief in a material world; and the problem seldom raised, but seeming no less to deserve discussion, as to why anyone should believe in the reality of his own past experience.

The second question that emerged from our inquiry into the world of matter was the question whether the existence of mind could be supposed to make any difference, and if so what, to the course of events in the material world. To this no clear answer showed itself, and we found the problem grew more doubtful and difficult the further it was examined. We seemed, however, able to say that any answer that was to be adequate must depend in some way upon ethical considerations, and the confusion into which we fell when we tried to leave such considerations out of account supported this conclusion.

How are we to conceive the relation holding between the several mental worlds which each of us is assured of—by immediate awareness in his own case, by sympathy in the case of other human beings—and the material world, which he believes to be the primary reality revealed to him through sense perception? In the

material world events appear to succeed and determine one another in accordance with an order of physical causation, which has no place for such ethical concepts as purpose or value. In the several mental worlds as we know or imagine them, the order of physical causation plainly determines much, but we seem also to find evidence of another order of causation, in which purpose and value play a part, and which we may distinguish from the first by calling it ethical causation. And the question here confronts us: Is this apparent order of ethical causation appearance only, or is it a reality? And if it is a reality, what is the relation of these two orders of causation to one another? Is the apparent order of ethical causation only a manner in which the results of the order of physical causation exhibit themselves at certain points in human experience, in virtue of the fact that physical causes outside the organism and within it produce at particular moments particular wishes and beliefs, and produce at other moments perceptions which present themselves as the fulfilment of these wishes and beliefs? And is the reality behind the appearance only this, that human beings sometimes get what they suppose themselves to want? Or is the order of ethical causation an operative self-contained order, in the sense at least that it interacts with and can modify the order of physical causation in the thoughts and doings of human beings, perhaps in the further sense that it may in some cases modify the order of physical causation in what we think of as the non-human world, possibly even in the yet further sense that it could be seen with sufficient knowledge to contain the order of physical causation as a subordinate element within itself? Or is the whole conception of operative causation one which an enlightened philosophy would dismiss as crude? And if so, what is the more refined notion of causation that this philosophy would put in its place?

Finally, we seem to be brought up against the ethical problem if we turn back to consider our main question as to the possibility of reaching a central knowledge. We found a claim made by the traditional philosophy that it should be possible to reach a knowledge of the ultimate nature of reality, and this seemed to mean that it should be possible to find a centre in relation to which each piece of particular knowledge as to the parts or qualities or aspects of reality would fall into its right place and receive its right significance. Whether this claim can be justified is a problem still before us, yet we may perhaps say that our inquiry into the

presuppositions of our common-sense thinking has carried us some way towards understanding what such a claim might mean. Our inquiry has shown us that we can, within the region of our common-sense thinking, distinguish a class of beliefs of wide generality which have a peculiar relation to the mass of our particular beliefs; they do not depend on those particular beliefs, nor do those depend on them; we can imagine them removed, and the mass of our beliefs would remain each with its particular content, but there would be taken from them a general element in their content which makes an essential part of their significance for our feeling.

The example of this class of beliefs may help us to understand what might be meant by 'central knowledge' or by 'central belief'; it suggests a possible picture of the realm of knowledge in which a small group of beliefs of the metaphysical order would form as it were an inner ring, with our various particular beliefs surrounding them at distances nearer or further off in proportion to their importance or unimportance, and the beliefs of the inner ring themselves perhaps surrounding some one still more central belief as to the whole nature of reality. In the same kind of way then as our particular beliefs about the nature and qualities of the various physical entities postulated by common sense or by science are related to a central belief that there exists a reality which we may call 'the material world', whose essential nature, so far as it can be known, is known to us through feeling but which we cannot come nearer to defining by any precise formulation; or in the same kind of way again as our particular beliefs about the nature and qualities of the various mental worlds, our own or other people's, are related to a central belief that there exist realities which we may call 'minds' or 'selves', whose essential nature so far as it can be known is known to us through feeling, but which we cannot come nearer to defining by any precise formulation; on some such analogy we might conceive that our several beliefs of the metaphysical order may in their turn be related to a still more central belief in the existence of a supreme reality, whose nature again we cannot hope to define precisely, but which so far as it can be known must be known to us through feeling. And if any such analogy is to hold, it would be consistent with it to suppose that, just as the metaphysical beliefs of common sense depend for their support on our certainty that they go along with a state of feeling or emotion which is intrinsically better than the state would be in which these beliefs were absent, so this still more central metaphysical belief would depend for its support on a state of feeling or

emotion which the inquirer who might have attained it would know to be better than a state could be in which the belief was absent. Along some such road as this we may conjecture how it might have been possible for the traditional philosophy to come by its belief in a central knowledge about the ultimate nature of reality; on any other line of approach the justification for such a belief is hard to find.

The metaphysical problem and the ethical problem are thus related to one another in a complex way; they are separate and yet connected, and we need to take account both of the separateness and of the connection, and to do justice to both is not easy. The case for treating them as separate is clear. That when we are trying to answer questions about existence, considerations of value should be held irrelevant: this is an accepted principle of scientific method, and over a large part of the field of belief we must recognize its force. And yet the principle, adequate as it may be to guide our thought about particular matters of fact, appears to have its limits when we come nearer to ultimate questions. We seem, when we scrutinize some of our most general beliefs about the nature of reality, to find them resting in the end on presuppositions about value, on an assurance that we can sometimes know one state of feeling to be better than another. We seem again to find, if we look at some of the beliefs which have ranked as fundamental for traditional philosophy, that these two rest on presuppositions about value, and are perhaps only intelligible in the light of such presuppositions. Is this seeming dependence of metaphysical on ethical belief to be thought of merely as error and illusion, or is there here a connection for which room should be allowed in a complete theory of knowledge?

If we suppose such a dependence of metaphysical on ethical belief to hold, we must fall back on that trust in feeling or emotion which we have found to lie at the roots of some of our deepest beliefs about both value and existence. We must take it that we are relying on a twofold assumption to this effect: first, that we can be sure, sometimes and somehow, that one state of feeling or emotion is objectively better than another; secondly, that we can be sure, sometimes and somehow, that the better state brings with it a true perception of the nature of reality, or at any rate a truer perception than would be given by a worse state. We have to qualify these assumptions by 'somehow', for it is not easy to see how they are to be justified; and we have to qualify them by 'sometimes', for it is only over a part of the field of belief that they can

be supposed to hold good, and if we can accept them at all, we must try to distinguish the regions in which they are likely to lead us right from the region in which they are as likely, or more so, to lead us wrong. But let us begin by asking whether they can be accepted at all.

We must admit that each of them may well be questioned; that neither follows from any generally accepted principle of reasoning; and again that there is no clear necessary connection between the two. The second of them will in a manner depend on the first. If I maintain that the better feeling can give me a truer perception of reality than the worse feeling would, I must believe that, when I call it 'better', I mean something more than that I happen personally to like it better or to find it more pleasant. The understanding of value which is to support an objective belief about reality must itself be objective. But the second assumption makes a further claim, which the first does not imply. I may believe that there is an objective standard of value, and that I can so far recognize this as to be sure that one state of feeling is intrinsically better than another, yet not go on to believe that the better state can teach me anything about the nature of reality.

We seem then to find in the region of ethics a kind of discontinuity between one level of belief and another, and again a kind of dependence of one level upon another, which has a likeness to the discontinuity and dependence that we found to hold with our beliefs about existence. The analogy is close enough to suggest that the same picture which served us to illustrate the interrelation of those beliefs may be in place again here. When we tried to envisage the way in which an inquirer setting out from the standpoint of methodical doubt might recover or justify his main beliefs about the nature of existence, we found it helpful to conceive the growth of belief as expanding through a series of circles. We pictured him as beginning his journey in the circle of his immediate experience, and passing on from that to three further circles, which brought into view one after another a belief in the reality of his own experience in the past, in the reality of the material world, and in the reality of other minds or selves inhabiting that world along with himself. And when he reached this fourth circle of belief, we said, he would find himself in the real world as that is conceived by common sense today. Now that we are including in our survey the ethical problem, there is something to be added to this statement. The world as common sense conceives it

is a world in which those minds or selves value some things more than others; and with this there is introduced a new element, giving to the world picture and to the various parts of it a significance that they would not otherwise possess.

The notion of value which now makes its appearance in the field of belief has no clear or necessary connection with the notion of existence or reality. If we think of the material world in the manner in which physical science makes it natural to think of it, as having existed for long periods before there was any thought or sentience of the kind we know about, we can see no reason to suppose in it the presence of value in any of the possible senses the word might bear; in the sense either of objective value, if a meaning can be attached to that phrase, or of subjective value, as this is created by human feelings and desires. If we develop our picture to take in the origin of life, we allow room for the possibility of valuing, but we have still not reached value as a fact. We can conceive that there might be living creatures which were sentient in so far as they possessed sense organs and had a faculty of perceiving, yet not so far sentient as to be sensitive to pleasure and pain; we can even suppose that they might have mental powers of a high order, might pursue trains of reasoning and construct world systems out of their sense data, yet have nothing in their constitution which would lead them to value one state of feeling as being either better or pleasanter than another. There is no logical reason to prevent all this from being possible; but if we can be sure of anything about human nature, we are sure that in fact it is not like this. The philosophic doubter, even when he loses hold of all beyond the momentary world implied in *Cogito*, will realize this to be a world in which he values feelings as pleasant or painful; in other ways too, it may be, but in this way at least. And if he should be tempted to take *Cogito* in a merely intellectual sense, and to think of himself as a purely rational being, a slight change in his material environment would be enough to show him that, whether a world beyond his experience exists or not, his experience is conditioned for better or worse by the quality of his sensation. The values present in a Subjectivist world might be gross, narrow, and disorderly; but they would still be values in the respect that they were valued.

We need not however trouble ourselves with the question as to the place that value might hold in a Subjectivist world picture. We are concerned here with the significance of value for common sense, and this begins to take shape in the fourth circle of belief,

when the inquirer realizes that he is neither a solitary thinker in a world of mind, nor the only sentient creature in a world of matter, but that he is one among a multitude of human beings like himself. He realizes this by an act of emotional perception: the feeling of sympathy, which is aroused in his experience by the presence of other human beings, carries with it the assurance that these others are selves or persons, having each of them their feelings of pleasure and pain, and the sense of values that springs from them. The presence of values or of acts of valuing in the world which he sees round him will be for him an objective fact; but the standpoint from which he will judge these acts of valuing will be subjective, and no reason is so far apparent why he should transcend this standpoint.

We must remember here that, as we noted earlier, the terms 'objective' and 'subjective' are relative in their significance; we cannot well do without them in such discussions as this, but they shift their meaning as we use them, and must be handled with care. The language of 'circles' in which we are trying to picture the growth of belief is intended to describe a process in which a single inquirer advances from the subjective starting point of belief to its objective goal, whatever that may be: from an assurance of the one indubitable reality which is his own momentary experience to belief in the full reality that may be accessible to human knowledge. As he passes through the successive circles which we have distinguished, one after another region of belief, which might be no more than a subjective fancy in his personal experience, becomes for him an objective reality outside it. The whole process is to be understood as an account of the growth of belief in an individual mind; perhaps as representing the way in which that growth takes place in fact, for though it must be hard or impossible to verify it, it may well come as near to the facts as any other would; and at any rate, what matters for our purpose, as an account of the way in which the growth of belief could best be justified to the critical reason, when reason pushes its questions as far as it can.

The world as it appears in the circle of belief that has now been reached is a world of matter peopled by sentient beings, which have their sensitiveness to pleasure and pain, their wants and satisfactions, and which create values for themselves in this way, if perhaps in no other. So much assurance as to value is guaranteed by the feeling of sympathy which guarantees the reality of other selves, and is essential to the view of common sense today, as it has been at all times. The emotional impulse which discovers the fourth

circle of belief about reality discovers it in the same moment as a first circle of belief about value. But it is the first circle only; what has been reached so far is not the full ethical outlook of the past, with the belief in objective value which was for the most part taken for granted by historic common sense and by traditional philosophy. And we must try to distinguish what is implied in this first circle from other beliefs which are not there implied, and which will need to be reached by a further step, if they are to be reached at all.

The inquirer whose progress we are following will, as he looks at the world round him, conceive its various inhabitants, men or animals, as having their several impulses, desires, satisfactions, wants, ideals, increasing in range and complexity as the level of their awareness rises or expands. These impulses and desires, as he interprets them, and the actions in which they express themselves, will rouse in him liking or disliking, will attract him or repel him, and will appear to him good or bad, either in the sense that he feels them to be good or bad intrinsically, or in the sense that he thinks them likely to be instrumental to good or bad results in the future. But in all this the centre to which his judgments of value refer will be given by his own impulses or desires or satisfactions; he will see the world as containing these other beings, each with its particular desires and values, he will judge them from the viewpoint of his own. The standard by which he judges will be his personal preference, the standard by which he conceives others to judge will be their personal preferences; and both his judgments and theirs will be essentially subjective, even when those standards happen to agree.

His ethical outlook then will be, in terms of the distinctions drawn in the last chapter, an ethic of pleasure and utility. This is not to be taken as meaning that his concern will be only with his own physical pleasure either in the present or in the future. An ethic of pleasure and utility can, as we saw, find room on the side of reason and theory for a wide survey of value, in the sense in which value is created by human acts of valuing; it can construct an ethical system giving an account of the things that human beings desire or prefer, but it will take account of all this only as matter of fact. On the side of feeling and of practice it can find room for an appreciation of whatever values may express the desires or interests of any persons or groups or societies whose interests the individual thinker identifies with his own, but it will take account of all this only as part of his individual satisfaction. What

he himself prefers, what he believes that other people prefer, will on the one side and on the other determine the limits of his ethical survey. 'Good' will mean for him only what he finds pleasant or useful for himself, or what other people find pleasant or useful for themselves; and neither of these ways of understanding the conception can show any reason why he should take account of the welfare of others except in so far as he personally feels it pleasant or thinks it useful for himself that he should do so.

If he is to pass beyond this point of view, there must enter into his field of belief conceptions not so far allowed for: the thought and feeling of perfection, of obligation, of a scale of values extending beyond that portion of the scale which he himself envisages. When any of these conceptions is brought into the account, he will pass from what we may call the first to the second circle of ethical belief, from a belief in value as subjective to a belief in value as objective. How are we to suppose that this passage can be effected, how is it to be justified to reason, and what change is it likely to make in his ethical outlook or in his total outlook on the world?

We are brought back here to that main issue which emerged for us in the last chapter on the central question of ethics; and we must recognize again, as we did then, how strong are the considerations which might be urged on either side. To do justice to them would need a detailed inquiry into the ethical problem; and all we can here attempt is to bring out some of the points that have most bearing on theory of knowledge and on the possibility of a metaphysic.

The passage from a subjective to an objective conception of value is most clearly apparent, and may be thought most readily understandable if it goes with the acceptance of some comprehensive outlook on the world; if the inquirer in whose thought the passage takes place is converted to a religious or metaphysical doctrine which he had not believed in before, or if perhaps a doctrine already familiar reveals to him for the first time the force and meaning behind it. Such a system of doctrine once it is accepted is likely to bring with it a set of ethical beliefs which will be accepted as forming part of it. The authority of a traditional system might then appear enough to explain both how it was that a belief in objective value came to be generally held in the past, and how it is that the belief can still appeal to individuals today. The problem as to the ground for the belief would then be referred from ethics to metaphysics; but if this way out is attempted,

all that can happen will be that it will be referred by metaphysics to ethics again; for the question whether any metaphysical doctrine can be justified to reason is itself the main question which we are looking to philosophy to answer for us, if it can. We seem then here to be caught up in a vicious circle, ethics seeking to refer the problem to metaphysics, metaphysics to refer it back to ethics. At what point, if any, can we hope to escape from the circle, and to find a sufficiently firm starting point either for ethical or for metaphysical belief?

The line of thought followed in our last chapter suggested that, if a starting point is to be found anywhere, it must be looked for in the region of our belief about value; and that a view which would base ethics on metaphysics does not go far enough back. Such a view must be open to the doubt, which might at all times have been raised, as to whether any system of belief about reality, however well grounded it might be, can have a title in reason to decide questions of value unless it contains a belief about value as part of itself. It is open to a further doubt, more urgent and pressing in the conflict of systems today, as to whether any system of belief, which claims to determine ends of action and not merely means, is likely in fact to command acceptance unless a belief about value is there first to support it. From both these sides the reflection appears forced on us that, however much a belief in objective value may seem to depend on a whole religious or metaphysical doctrine, and however much it may in practice be confirmed and amplified by such a dependence, yet the first acceptance of the whole doctrine must rest on an ethical belief which is more fundamental; on the belief that the state of feeling which goes with the presence of the doctrine can be seen to be in itself objectively better than its absence would be.

But how is this belief in objective value to be justified to reason? or, as it might be better first to ask: If we assume a belief in objective value to be justified, what is the method of reasoning on which we are relying? We proposed in our last chapter to define the claim to objectivity in some such way as this: that an immediate ethical judgment, or a judgment as to what is intrinsically good, if it is true once, is true always. This seems to express the point of essential difference from the subjective conception of value, for which any judgment as to what is good will vary from time to time in accordance with what is liked or disliked by the particular speaker, or with what is liked or disliked by a particular group or society whose preferences the speaker has in view. But if the notion

of objective value is to be of service in practice, something more definite than this is needed. We need to be certain that some particular state of experience is intrinsically good, or is better than some other with which it might be compared; and if this certainty is to be available for use as a piece of public knowledge, it must be more than a faculty of immediate judgment as to particulars. We must be able to formulate it in general terms, and to say that we can know with certainty of some general qualities or characteristics, which belong to some states of experience and not to others, that they are better than their opposites, that their presence is better than their absence.

But is there any quality of which we can say with certainty that it is in this sense objectively good? If the metaphysical and religious doctrines, on which so large a part of the ethical beliefs of the past have depended or been thought to depend, are regarded by critical thought today as doubtful, is there any core or residue of ethical doctrine which can be looked on as still beyond doubt? Here is a question on which common sense today appears uncertain and divided, more divided perhaps than on any other of the main questions of philosophy. There are still, no doubt, many people who would hold to the traditional belief in objective value, some perhaps who would say that they are as directly certain of this as they are certain of the reality of other selves or of the material world. But how far is this feeling of certainty derived from religious or from traditional philosophy, or perhaps from the effects left by these when they are no longer accepted? For it can be said no less confidently that there are many others today who, looking at the ethical problem without presuppositions drawn from such sources, would contend that a belief in objective value is not suggested by the facts of experience nor required to account for them. The more we learn, they would say, about the codes and systems of behaviour that have been approved and followed at different times in the past, or are approved and followed in different countries today, the more we try to observe without prejudice the things that men actually do and order and justify under the stress of varying circumstances, the harder it is to find among the qualities or dispositions traditionally called 'good' any one which would be agreed by general consent to be intrinsically better than its opposite.

When then critical thought presses its case against a belief in the objectivity of value, when it questions where in the whole range of human feelings or activities objective value can be said to be certainly present, common sense today seems to give no

assured answer to the question. Yet we should probably be expressing what is still the general view of common sense, or not be going far beyond this, if we say that, however much in traditional ethics it might regard as merely subjective and dependent on circumstances, there are some impulses in human nature which it would hold to be good without qualification, and these are the emotions and dispositions which spring directly from human sympathy. We are brought back here to the thought of a force which we have found to play a determining part at previous turning points in our inquiry. Sympathy, which convinces each human being that other human beings are sensitive as he himself is to pleasure and pain, which leads him sometimes and to some degree to feel pain at their pain and take pleasure in their pleasure, may lead him further; it may and sometimes does, though it need not and does not always, lead him to a point at which he feels that he ought to take account of their pain or pleasure even when to do so is no longer pleasant or useful for himself. Here is a point, the first and perhaps the only point, at which the notion of obligation is likely to present itself as binding to an inquirer today who does not derive his ethical beliefs from some general religious or philosophic outlook on the world.

Let us consider then, how things may go with an inquirer who passes from a subjective to an objective conception of value, not in consequence of a sudden conversion to a new philosophy, but as the result of a slow and hesitating development in which life has seemed somehow to teach him that other human beings have claims on him which it is not merely sometimes pleasant and usually expedient for him to take account of, but which he ought to take account of, whether he wants to or not. What are we to conceive as effected by this passage from the first to the second circle of ethical belief, in itself and apart from any other change? We may at first be inclined to think that not much difference is made, and that what there is, is not clearly a gain. The particular ethical beliefs that he may find himself with after his change of attitude are likely to be much the same as what he held before; the difference will be that he will now hold them with the belief that they are not merely his personal beliefs, but that they, or some of them, possess an objective authority, which makes them binding on him, and as he may perhaps go on to conclude, binding for other people as well. And if he should be too ready to draw this conclusion, and to suppose that anything that seems right to him must be right for everyone else, his change of attitude might

mean no more than that he would go on holding his old opinions in a more arrogant and obstinate spirit.

Yet this need not, perhaps should not, be the consequence of the change. If his belief in objective value is entertained seriously and consistently, its effect should be to open the door to further advance rather than to close it. The thought that there is a standard of value beyond his feeling, and independent of it, should encourage him to think that it is worth while for him to try to judge his own feelings of value by reference to this standard. In the same way then as he trusts reason to correct his beliefs about facts and about the nature of what exists, he will trust some power in himself, whatever name he may call it by, to correct his beliefs about value. He will pass from a belief that value is merely something which human beings create as they please by the fact of their desiring one thing or another, to a belief that it is a principle grounded in reality whose nature it is possible for them by right effort to discover; that the ethical field is a field in which one belief can be better than another, and in which the search for better knowledge may be justified by results. And with the conviction that in the region of value there are things that may be discovered and that are worth searching for, there will come into his thought a new element which may in time remodel the whole structure of belief.

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