

LANGUAGE,
TRUTH AND LOGIC

by

ALFRED JULES AYER

*Grote Professor of the Philosophy of
Mind and Logic at University College, London*

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speculative truths, which would, as it were, compete with the hypotheses of science, nor yet to pass *a priori* judgements upon the validity of scientific theories, but that his function is to clarify the propositions of science by exhibiting their logical relationships, and by defining the symbols which occur in them. Consequently I maintain that there is nothing in the nature of philosophy to warrant the existence of conflicting philosophical "schools." And I attempt to substantiate this by providing a definitive solution of the problems which have been the chief sources of controversy between philosophers in the past.

The view that philosophizing is an activity of analysis is associated in England with the work of G. E. Moore and his disciples. But while I have learned a great deal from Professor Moore, I have reason to believe that he and his followers are not prepared to adopt such a thoroughgoing phenomenalism as I do, and that they take a rather different view of the nature of philosophical analysis. The philosophers with whom I am in the closest agreement are those who compose the "Viennese circle," under the leadership of Moritz Schlick, and are commonly known as logical positivists. And of these I owe most to Rudolf Carnap. Further, I wish to acknowledge my indebtedness to Gilbert Ryle, my original tutor in philosophy, and to Isaiah Berlin, who have discussed with me every point in the argument of this treatise, and made many valuable suggestions, although they both disagree with much of what I assert. And I must also express my thanks to J. R. M. Willis for his correction of the proofs.

A. J. AYER.

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CHAPTER I

THE ELIMINATION OF METAPHYSICS

THE TRADITIONAL DISPUTES of philosophers are, for the most part, as unwarranted as they are unfruitful. The surest way to end them is to establish beyond question what should be the purpose and method of a philosophical enquiry. And this is by no means so difficult a task as the history of philosophy would lead one to suppose. For if there are any questions which science leaves it to philosophy to answer, a straightforward process of elimination must lead to their discovery.

We may begin by criticising the metaphysical thesis that philosophy affords us knowledge of a reality transcending the world of science and common sense. Later on, when we come to define metaphysics and account for its existence, we shall find that it is possible to be a metaphysician without believing in a transcendent reality; for we shall see that many metaphysical utterances are due to the commission of logical errors, rather than to a conscious desire on the part of their authors to go beyond the limits of experience. But it is convenient for us to take the case of those who believe that it is possible to have knowledge of a transcendent reality as a starting-point for our discussion. The arguments which we use to refute them will subsequently be found to apply to the whole of metaphysics.

One way of attacking a metaphysician who claimed to have knowledge of a reality which transcended the phenomenal world would be to enquire from what premises his propositions were deduced. Must he not begin, as other men do, with the evidence of his senses? And if so, what valid process of reasoning can possibly lead him to the conception of a transcendent reality? Surely from empirical premises nothing whatsoever concerning the properties, or even the existence, of anything super-empirical can legitimately be inferred. But this objection would be met by a denial on the part of the metaphysician that his assertions were ultimately based on the evidence of his senses. He would say that he was endowed with a faculty of intellectual intuition which

enabled him to know facts that could not be known through sense-experience. And even if it could be shown that he was relying on empirical premises, and that his venture into a non-empirical world was therefore logically unjustified, it would not follow that the assertions which he made concerning this non-empirical world could not be true. For the fact that a conclusion does not follow from its putative premise is not sufficient to show that it is false. Consequently one cannot overthrow a system of transcendent metaphysics merely by criticising the way in which it comes into being. What is required is rather a criticism of the nature of the actual statements which comprise it. And this is the line of argument which we shall, in fact, pursue. For we shall maintain that no statement which refers to a "reality" transcending the limits of all possible sense-experience can possibly have any literal significance; from which it must follow that the labours of those who have striven to describe such a reality have all been devoted to the production of nonsense.

It may be suggested that this is a proposition which has already been proved by Kant. But although Kant also condemned transcendent metaphysics, he did so on different grounds. For he said that the human understanding was so constituted that it lost itself in contradictions when it ventured out beyond the limits of possible experience and attempted to deal with things in themselves. And thus he made the impossibility of a transcendent metaphysic not, as we do, a matter of logic, but a matter of fact. He asserted, not that our minds could not conceivably have had the power of penetrating beyond the phenomenal world, but merely that they were in fact devoid of it. And this leads the critic to ask how, if it is possible to know only what lies within the bounds of sense-experience, the author can be justified in asserting that real things do exist beyond, and how he can tell what are the boundaries beyond which the human understanding may not venture, unless he succeeds in passing them himself. As Wittgenstein says, "in order to draw a limit to thinking, we should have to think both sides of this limit,"¹ a truth to which Bradley gives a special twist in maintaining that the man who is ready to prove that metaphysics is impossible is a brother metaphysician with a rival theory of his own.²

¹ *Tractatus Logico-Philosophicus*, Preface.

² Bradley, *Appearance and Reality*, 2nd ed., p. 1.

Whatever force these objections may have against the Kantian doctrine, they have none whatsoever against the thesis that I am about to set forth. It cannot here be said that the author is himself overstepping the barrier he maintains to be impassable. For the fruitlessness of attempting to transcend the limits of possible sense-experience will be deduced, not from a psychological hypothesis concerning the actual constitution of the human mind, but from the rule which determines the literal significance of language. Our charge against the metaphysician is not that he attempts to employ the understanding in a field where it cannot profitably venture, but that he produces sentences which fail to conform to the conditions under which alone a sentence can be literally significant. Nor are we ourselves obliged to talk nonsense in order to show that all sentences of a certain type are necessarily devoid of literal significance. We need only formulate the criterion which enables us to test whether a sentence expresses a genuine proposition about a matter of fact, and then point out that the sentences under consideration fail to satisfy it. And this we shall now proceed to do. We shall first of all formulate the criterion in somewhat vague terms, and then give the explanations which are necessary to render it precise.

The criterion which we use to test the genuineness of apparent statements of fact is the criterion of verifiability. We say that a sentence is factually significant to any given person, if, and only if, he knows how to verify the proposition which it purports to express—that is, if he knows what observations would lead him, under certain conditions, to accept the proposition as being true, or reject it as being false. If, on the other hand, the putative proposition is of such a character that the assumption of its truth, or falsehood, is consistent with any assumption whatsoever concerning the nature of his future experience, then, as far as he is concerned, it is, if not a tautology, a mere pseudo-proposition. The sentence expressing it may be emotionally significant to him; but it is not literally significant. And with regard to questions the procedure is the same. We enquire in every case what observations would lead us to answer the question, one way or the other; and, if none can be discovered, we must conclude that the sentence under consideration does not, as far as we are concerned, express a genuine question, however strongly its grammatical appearance may suggest that it does.

As the adoption of this procedure is an essential factor in the argument of this book, it needs to be examined in detail.

In the first place, it is necessary to draw a distinction between practical verifiability, and verifiability in principle. Plainly we all understand, in many cases believe, propositions which we have not in fact taken steps to verify. Many of these are propositions which we could verify if we took enough trouble. But there remain a number of significant propositions, concerning matters of fact, which we could not verify even if we chose; simply because we lack the practical means of placing ourselves in the situation where the relevant observations could be made. A simple and familiar example of such a proposition is the proposition that there are mountains on the farther side of the moon.¹ No rocket has yet been invented which would enable me to go and look at the farther side of the moon, so that I am unable to decide the matter by actual observation. But I do know what observations would decide it for me, if, as is theoretically conceivable, I were once in a position to make them. And therefore I say that the proposition is verifiable in principle, if not in practice, and is accordingly significant. On the other hand, such a metaphysical pseudo-proposition as "the Absolute enters into, but is itself incapable of, evolution and progress,"² is not even in principle verifiable. For one cannot conceive of an observation which would enable one to determine whether the Absolute did, or did not, enter into evolution and progress. Of course it is possible that the author of such a remark is using English words in a way in which they are not commonly used by English-speaking people, and that he does, in fact, intend to assert something which could be empirically verified. But until he makes us understand how the proposition that he wishes to express would be verified, he fails to communicate anything to us. And if he admits, as I think the author of the remark in question would have admitted, that his words were not intended to express either a tautology or a proposition which was capable, at least in principle, of being verified, then it follows that he has made an utterance which has no literal significance even for himself.

A further distinction which we must make is the distinction

¹ This example has been used by Professor Schlick to illustrate the same point.

² A remark taken at random from *Appearance and Reality*, by F. H. Bradley.

between the "strong" and the "weak" sense of the term "verifiable." A proposition is said to be verifiable, in the strong sense of the term, if, and only if, its truth could be conclusively established in experience. But it is verifiable, in the weak sense, if it is possible for experience to render it probable. In which sense are we using the term when we say that a putative proposition is genuine only if it is verifiable?

It seems to me that if we adopt conclusive verifiability as our criterion of significance, as some positivists have proposed,¹ our argument will prove too much. Consider, for example, the case of general propositions of law—such propositions, namely, as "arsenic is poisonous"; "all men are mortal"; "a body tends to expand when it is heated." It is of the very nature of these propositions that their truth cannot be established with certainty by any finite series of observations. But if it is recognised that such general propositions of law are designed to cover an infinite number of cases, then it must be admitted that they cannot, even in principle, be verified conclusively. And then, if we adopt conclusive verifiability as our criterion of significance, we are logically obliged to treat these general propositions of law in the same fashion as we treat the statements of the metaphysician.

In face of this difficulty, some positivists² have adopted the heroic course of saying that these general propositions are indeed pieces of nonsense, albeit an essentially important type of nonsense. But here the introduction of the term "important" is simply an attempt to hedge. It serves only to mark the authors' recognition that their view is somewhat too paradoxical, without in any way removing the paradox. Besides, the difficulty is not confined to the case of general propositions of law, though it is there revealed most plainly. It is hardly less obvious in the case of propositions about the remote past. For it must surely be admitted that, however strong the evidence in favour of historical statements may be, their truth can never become more than highly probable. And to maintain that they also constituted an important, or unimportant, type of nonsense would be unpleasable, to say the very least. Indeed, it will be our contention

¹ e.g. M. Schlick, "Positivismus und Realismus," *Erkenntnis*, Vol. I, 1930. F. Waismann, "Logische Analyse des Wahrscheinlichkeitsbegriffs," *Erkenntnis*, Vol. I, 1930.

² e.g. M. Schlick, "Die Kausalität in der gegenwärtigen Physik," *Naturwissenschaft*, Vol. 19, 1931.

that no proposition, other than a tautology, can possibly be anything more than a probable hypothesis. And if this is correct, the principle that a sentence can be factually significant only if it expresses what is conclusively verifiable is self-stultifying as a criterion of significance. For it leads to the conclusion that it is impossible to make a significant statement of fact at all.

Nor can we accept the suggestion that a sentence should be allowed to be factually significant if, and only if, it expresses something which is definitely confutable by experience.¹ Those who adopt this course assume that, although no finite series of observations is ever sufficient to establish the truth of a hypothesis beyond all possibility of doubt, there are crucial cases in which a single observation, or series of observations, can definitely confute it. But, as we shall show later on, this assumption is false. A hypothesis cannot be conclusively confuted any more than it can be conclusively verified. For when we take the occurrence of certain observations as proof that a given hypothesis is false, we presuppose the existence of certain conditions. And though, in any given case, it may be extremely improbable that this assumption is false, it is not logically impossible. We shall see that there need be no self-contradiction in holding that some of the relevant circumstances are other than we have taken them to be, and consequently that the hypothesis has not really broken down. And if it is not the case that any hypothesis can be definitely confuted, we cannot hold that the genuineness of a proposition depends on the possibility of its definite confutation.

Accordingly, we fall back on the weaker sense of verification. We say that the question that must be asked about any putative statement of fact is not, Would any observations make its truth or falsehood logically certain? but simply, Would any observations be relevant to the determination of its truth or falsehood? And it is only if a negative answer is given to this second question that we conclude that the statement under consideration is nonsensical.

To make our position clearer, we may formulate it in another way. Let us call a proposition which records an actual or possible observation an experiential proposition. Then we may say that it is the mark of a genuine factual proposition, not that it should be equivalent to an experiential proposition, or any finite number

¹ This has been proposed by Karl Popper in his *Logik der Forschung*.

of experiential propositions, but simply that some experiential propositions can be deduced from it in conjunction with certain other premises without being deducible from those other premises alone.¹

This criterion seems liberal enough. In contrast to the principle of conclusive verifiability, it clearly does not deny significance to general propositions or to propositions about the past. Let us see what kinds of assertion it rules out.

A good example of the kind of utterance that is condemned by our criterion as being not even false but nonsensical would be the assertion that the world of sense-experience was altogether unreal. It must, of course, be admitted that our senses do sometimes deceive us. We may, as the result of having certain sensations, expect certain other sensations to be obtainable which are, in fact, not obtainable. But, in all such cases, it is further sense-experience that informs us of the mistakes that arise out of sense-experience. We say that the senses sometimes deceive us, just because the expectations to which our sense-experiences give rise do not always accord with what we subsequently experience. That is, we rely on our senses to substantiate or confute the judgements which are based on our sensations. And therefore the fact that our perceptual judgements are sometimes found to be erroneous has not the slightest tendency to show that the world of sense-experience is unreal. And, indeed, it is plain that no conceivable observation, or series of observations, could have any tendency to show that the world revealed to us by sense-experience was unreal. Consequently, anyone who condemns the sensible world as a world of mere appearance, as opposed to reality, is saying something which, according to our criterion of significance, is literally nonsensical.

An example of a controversy which the application of our criterion obliges us to condemn as fictitious is provided by those who dispute concerning the number of substances that there are in the world. For it is admitted both by monists, who maintain that reality is one substance, and by pluralists, who maintain that reality is many, that it is impossible to imagine any empirical situation which would be relevant to the solution of their dispute. But if we are told that no possible observation could give any

¹ This is an over-simplified statement, which is not literally correct. I give what I believe to be the correct formulation in the Introduction, p. 13.

probability either to the assertion that reality was one substance or to the assertion that it was many, then we must conclude that neither assertion is significant. We shall see later on¹ that there are genuine logical and empirical questions involved in the dispute between monists and pluralists. But the metaphysical question concerning "substance" is ruled out by our criterion as spurious.

A similar treatment must be accorded to the controversy between realists and idealists, in its metaphysical aspect. A simple illustration, which I have made use of in a similar argument elsewhere,² will help to demonstrate this. Let us suppose that a picture is discovered and the suggestion made that it was painted by Goya. There is a definite procedure for dealing with such a question. The experts examine the picture to see in what way it resembles the accredited works of Goya, and to see if it bears any marks which are characteristic of a forgery; they look up contemporary records for evidence of the existence of such a picture, and so on. In the end, they may still disagree, but each one knows what empirical evidence would go to confirm or discredit his opinion. Suppose, now, that these men have studied philosophy, and some of them proceed to maintain that this picture is a set of ideas in the perceiver's mind, or in God's mind, others that it is objectively real. What possible experience could any of them have which would be relevant to the solution of this dispute one way or the other? In the ordinary sense of the term "real," in which it is opposed to "illusory," the reality of the picture is not in doubt. The disputants have satisfied themselves that the picture is real, in this sense, by obtaining a correlated series of sensations of sight and sensations of touch. Is there any similar process by which they could discover whether the picture was real, in the sense in which the term "real" is opposed to "ideal"? Clearly there is none. But, if that is so, the problem is fictitious according to our criterion. This does not mean that the realist-idealist controversy may be dismissed without further ado. For it can legitimately be regarded as a dispute concerning the analysis of existential propositions, and so as involving a logical problem which, as we shall see, can be definitively solved.³ What we have just shown is that the question at issue between idealists and

¹ In Chapter VIII.

² Vide "Demonstration of the Impossibility of Metaphysics," *Mind*, 1934, p. 339.

³ Vide Chapter VIII.

realists becomes fictitious when, as is often the case, it is given a metaphysical interpretation.

There is no need for us to give further examples of the operation of our criterion of significance. For our object is merely to show that philosophy, as a genuine branch of knowledge, must be distinguished from metaphysics. We are not now concerned with the historical question how much of what has traditionally passed for philosophy is actually metaphysical. We shall, however, point out later on that the majority of the "great philosophers" of the past were not essentially metaphysicians, and thus reassure those who would otherwise be prevented from adopting our criterion by considerations of piety.

As to the validity of the verification principle, in the form in which we have stated it, a demonstration will be given in the course of this book. For it will be shown that all propositions which have factual content are empirical hypotheses; and that the function of an empirical hypothesis is to provide a rule for the anticipation of experience.¹ And this means that every empirical hypothesis must be relevant to some actual, or possible, experience, so that a statement which is not relevant to any experience is not an empirical hypothesis, and accordingly has no factual content. But this is precisely what the principle of verifiability asserts.

It should be mentioned here that the fact that the utterances of the metaphysician are nonsensical does not follow simply from the fact that they are devoid of factual content. It follows from that fact, together with the fact that they are not *a priori* propositions. And in assuming that they are not *a priori* propositions, we are once again anticipating the conclusions of a later chapter in this book.² For it will be shown there that *a priori* propositions, which have always been attractive to philosophers on account of their certainty, owe this certainty to the fact that they are tautologies. We may accordingly define a metaphysical sentence as a sentence which purports to express a genuine proposition, but does, in fact, express neither a tautology nor an empirical hypothesis. And as tautologies and empirical hypotheses form the entire class of significant propositions, we are justified in concluding that all metaphysical assertions are nonsensical. Our next task is to show how they come to be made.

¹ Vide Chapter V.

² Chapter IV.

The use of the term "substance," to which we have already referred, provides us with a good example of the way in which metaphysics mostly comes to be written. It happens to be the case that we cannot, in our language, refer to the sensible properties of a thing without introducing a word or phrase which appears to stand for the thing itself as opposed to anything which may be said about it. And, as a result of this, those who are infected by the primitive superstition that to every name a single real entity must correspond assume that it is necessary to distinguish logically between the thing itself and any, or all, of its sensible properties. And so they employ the term "substance" to refer to the thing itself. But from the fact that we happen to employ a single word to refer to a thing, and make that word the grammatical subject of the sentences in which we refer to the sensible appearances of the thing, it does not by any means follow that the thing itself is a "simple entity," or that it cannot be defined in terms of the totality of its appearances. It is true that in talking of "its" appearances we appear to distinguish the thing from the appearances, but that is simply an accident of linguistic usage. Logical analysis shows that what makes these "appearances" the "appearances of" the same thing is not their relationship to an entity other than themselves, but their relationship to one another. The metaphysician fails to see this because he is misled by a superficial grammatical feature of his language.

A simpler and clearer instance of the way in which a consideration of grammar leads to metaphysics is the case of the metaphysical concept of Being. The origin of our temptation to raise questions about Being, which no conceivable experience would enable us to answer, lies in the fact that, in our language, sentences which express existential propositions and sentences which express attributive propositions may be of the same grammatical form. For instance, the sentences "Martyrs exist" and "Martyrs suffer" both consist of a noun followed by an intransitive verb, and the fact that they have grammatically the same appearance leads one to assume that they are of the same logical type. It is seen that in the proposition "Martyrs suffer," the members of a certain species are credited with a certain attribute, and it is sometimes assumed that the same thing is true of such a proposition as "Martyrs exist." If this were actually the case, it would, indeed, be as legitimate to speculate about the Being of martyrs

as it is to speculate about their suffering. But, as Kant pointed out,¹ existence is not an attribute. For, when we ascribe an attribute to a thing, we covertly assert that it exists: so that if existence were itself an attribute, it would follow that all positive existential propositions were tautologies, and all negative existential propositions self-contradictory; and this is not the case.² So that those who raise questions about Being which are based on the assumption that existence is an attribute are guilty of following grammar beyond the boundaries of sense.

A similar mistake has been made in connection with such propositions as "Unicorns are fictitious." Here again the fact that there is a superficial grammatical resemblance between the English sentences "Dogs are faithful" and "Unicorns are fictitious," and between the corresponding sentences in other languages, creates the assumption that they are of the same logical type. Dogs must exist in order to have the property of being faithful, and so it is held that unless unicorns in some way existed they could not have the property of being fictitious. But, as it is plainly self-contradictory to say that fictitious objects exist, the device is adopted of saying that they are real in some non-empirical sense—that they have a mode of real being which is different from the mode of being of existent things. But since there is no way of testing whether an object is real in this sense, as there is for testing whether it is real in the ordinary sense, the assertion that fictitious objects have a special non-empirical mode of real being is devoid of all literal significance. It comes to be made as a result of the assumption that being fictitious is an attribute. And this is a fallacy of the same order as the fallacy of supposing that existence is an attribute, and it can be exposed in the same way.

In general, the postulation of real non-existent entities results from the superstition, just now referred to, that, to every word or phrase that can be the grammatical subject of a sentence, there must somewhere be a real entity corresponding. For as there is no place in the empirical world for many of these "entities," a special non-empirical world is invoked to house them. To this error must be attributed, not only the utterances of a Heidegger,

¹ Vide *The Critique of Pure Reason*, "Transcendental Dialectic," Book II, Chapter iii, section 4.

² This argument is well stated by John Wisdom, *Interpretation and Analysis*, pp. 62, 63.

who bases his metaphysics on the assumption that "Nothing" is a name which is used to denote something peculiarly mysterious,¹ but also the prevalence of such problems as those concerning the reality of propositions and universals whose senselessness, though less obvious, is no less complete.

These few examples afford a sufficient indication of the way in which most metaphysical assertions come to be formulated. They show how easy it is to write sentences which are literally nonsensical without seeing that they are nonsensical. And thus we see that the view that a number of the traditional "problems of philosophy" are metaphysical, and consequently fictitious, does not involve any incredible assumptions about the psychology of philosophers.

Among those who recognise that if philosophy is to be accounted a genuine branch of knowledge it must be defined in such a way as to distinguish it from metaphysics, it is fashionable to speak of the metaphysician as a kind of misplaced poet. As his statements have no literal meaning, they are not subject to any criteria of truth or falsehood: but they may still serve to express, or arouse, emotion, and thus be subject to ethical or æsthetic standards. And it is suggested that they may have considerable value, as means of moral inspiration, or even as works of art. In this way, an attempt is made to compensate the metaphysician for his extrusion from philosophy.²

I am afraid that this compensation is hardly in accordance with his deserts. The view that the metaphysician is to be reckoned among the poets appears to rest on the assumption that both talk nonsense. But this assumption is false. In the vast majority of cases the sentences which are produced by poets do have literal meaning. The difference between the man who uses language scientifically and the man who uses it emotively is not that the one produces sentences which are incapable of arousing emotion, and the other sentences which have no sense, but that the one is primarily concerned with the expression of true propositions, the other with the creation of a work of art. Thus, if a work of science

¹ Vide *Was ist Metaphysik*, by Heidegger: criticised by Rudolf Carnap in his "Überwindung der Metaphysik durch logische Analyse der Sprache," *Erkenntnis*, Vol. II, 1932.

² For a discussion of this point, see also C. A. Mace, "Representation and Expression," *Analysis*, Vol. I, No. 3; and "Metaphysics and Emotive Language," *Analysis*, Vol. II, Nos. 1 and 2.

contains true and important propositions, its value as a work of science will hardly be diminished by the fact that they are inelegantly expressed. And similarly, a work of art is not necessarily the worse for the fact that all the propositions comprising it are literally false. But to say that many literary works are largely composed of falsehoods, is not to say that they are composed of pseudo-propositions. It is, in fact, very rare for a literary artist to produce sentences which have no literal meaning. And where this does occur, the sentences are carefully chosen for their rhythm and balance. If the author writes nonsense, it is because he considers it most suitable for bringing about the effects for which his writing is designed.

The metaphysician, on the other hand, does not intend to write nonsense. He lapses into it through being deceived by grammar, or through committing errors of reasoning, such as that which leads to the view that the sensible world is unreal. But it is not the mark of a poet simply to make mistakes of this sort. There are some, indeed, who would see in the fact that the metaphysician's utterances are senseless a reason against the view that they have æsthetic value. And, without going so far as this, we may safely say that it does not constitute a reason for it.

It is true, however, that although the greater part of metaphysics is merely the embodiment of humdrum errors, there remain a number of metaphysical passages which are the work of genuine mystical feeling; and they may more plausibly be held to have moral or æsthetic value. But, as far as we are concerned, the distinction between the kind of metaphysics that is produced by a philosopher who has been duped by grammar, and the kind that is produced by a mystic who is trying to express the inexpressible, is of no great importance: what is important to us is to realise that even the utterances of the metaphysician who is attempting to expound a vision are literally senseless; so that henceforth we may pursue our philosophical researches with as little regard for them as for the more inglorious kind of metaphysics which comes from a failure to understand the workings of our language.

THE FUNCTION OF PHILOSOPHY

AMONG THE SUPERSTITIONS from which we are freed by the abandonment of metaphysics is the view that it is the business of the philosopher to construct a deductive system. In rejecting this view we are not, of course, suggesting that the philosopher can dispense with deductive reasoning. We are simply contesting his right to posit certain first principles, and then offer them with their consequences as a complete picture of reality. To discredit this procedure, one has only to show that there can be no first principles of the kind it requires.

As it is the function of these first principles to provide a certain basis for our knowledge, it is clear that they are not to be found among the so-called laws of nature. For we shall see that the "laws of nature," if they are not mere definitions, are simply hypotheses which may be confuted by experience. And, indeed, it has never been the practice of the system-builders in philosophy to choose inductive generalizations for their premises. Rightly regarding such generalizations as being merely probable, they subordinate them to principles which they believe to be logically certain.

This is illustrated most clearly in the system of Descartes. It is commonly said that Descartes attempted to derive all human knowledge from premises whose truth was intuitively certain: but this interpretation puts an undue stress on the element of psychology in his system. I think he realised well enough that a mere appeal to intuition was insufficient for his purpose, since men are not all equally credulous, and that what he was really trying to do was to base all our knowledge on propositions which it would be self-contradictory to deny. He thought he had found such a proposition in "*cogito*," which must not here be understood in its ordinary sense of "I think," but rather as meaning "there is a thought now." In fact he was wrong, because "*non cogito*" would be self-contradictory only if it negated itself: and

this no significant proposition can do. But even if it were true that such a proposition as "there is a thought now" was logically certain, it still would not serve Descartes' purpose. For if "*cogito*" is taken in this sense, his initial principle, "*cogito ergo sum*," is false. "I exist" does not follow from "there is a thought now." The fact that a thought occurs at a given moment does not entail that any other thought has occurred at any other moment, still less that there has occurred a series of thoughts sufficient to constitute a single self. As Hume conclusively showed, no one event intrinsically points to any other. We infer the existence of events which we are not actually observing, with the help of general principles. But these principles must be obtained inductively. By mere deduction from what is immediately given we cannot advance a single step beyond. And, consequently, any attempt to base a deductive system on propositions which describe what is immediately given is bound to be a failure.

The only other course open to one who wished to deduce all our knowledge from "first principles," without indulging in metaphysics, would be to take for his premises a set of *a priori* truths. But, as we have already mentioned, and shall later show, an *a priori* truth is a tautology. And from a set of tautologies, taken by themselves, only further tautologies can be validly deduced. But it would be absurd to put forward a system of tautologies as constituting the whole truth about the universe. And thus we may conclude that it is not possible to deduce all our knowledge from "first principles"; so that those who hold that it is the function of philosophy to carry out such a deduction are denying its claim to be a genuine branch of knowledge.

The belief that it is the business of the philosopher to search for first principles is bound up with the familiar conception of philosophy as the study of reality as a whole. And this conception is one which it is difficult to criticize, because it is so vague. If it is taken to imply, as it sometimes is, that the philosopher somehow projects himself outside the world, and takes a bird's-eye view of it, then it is plainly a metaphysical conception. And it is also metaphysical to assert, as some do, that "reality as a whole" is somehow generically different from the reality which is investigated piecemeal by the special sciences. But if the assertion that philosophy studies reality as a whole is understood to imply merely that the philosopher is equally concerned with the

content of every science, then we may accept it, not indeed as an adequate definition of philosophy, but as a truth about it. For we shall find, when we come to discuss the relationship of philosophy to science, that it is not, in principle, related to any one science more closely than to any other.

In saying that philosophy is concerned with each of the sciences, in a manner which we shall indicate,¹ we mean also to rule out the supposition that philosophy can be ranged alongside the existing sciences, as a special department of speculative knowledge. Those who make this supposition cherish the belief that there are some things in the world which are possible objects of speculative knowledge and yet lie beyond the scope of empirical science. But this belief is a delusion. There is no field of experience which cannot, in principle, be brought under some form of scientific law, and no type of speculative knowledge about the world which it is, in principle, beyond the power of science to give. We have already gone some way to substantiate this proposition by demolishing metaphysics; and we shall justify it to the full in the course of this book.

With this we complete the overthrow of speculative philosophy. We are now in a position to see that the function of philosophy is wholly critical. In what exactly does its critical activity consist?

One way of answering this question is to say that it is the philosopher's business to test the validity of our scientific hypotheses and everyday assumptions. But this view, though very widely held, is mistaken. If a man chooses to doubt the truth of all the propositions he ordinarily believes, it is not in the power of philosophy to reassure him. The most that philosophy can do, apart from seeing whether his beliefs are self-consistent, is to show what are the criteria which are used to determine the truth or falsehood of any given proposition: and then, when the sceptic realises that certain observations would verify his propositions, he may also realize that he could make those observations, and so consider his original beliefs to be justified. But in such a case one cannot say that it is philosophy which justifies his beliefs. Philosophy merely shows him that experience can justify them. We may look to the philosopher to show us what we accept as constituting sufficient evidence for the truth of any given

¹ Vide Chapter III and Chapter VIII.

empirical proposition. But whether the evidence is forthcoming or not is in every case a purely empirical question.

If anyone thinks that we are here taking too much for granted, let him refer to the chapter on "Truth and Probability," in which we discuss how the validity of synthetic propositions is determined. He will see there that the only sort of justification that is necessary or possible for self-consistent empirical propositions is empirical verification. And this applies just as much to the laws of science as to the maxims of common sense. Indeed there is no difference in kind between them. The superiority of the scientific hypothesis consists merely in its being more abstract, more precise, and more fruitful. And although scientific objects such as atoms and electrons seem to be fictitious in a way that chairs and tables are not, here, too, the distinction is only a distinction of degree. For both these kinds of objects are known only by their sensible manifestations and are definable in terms of them.

It is time, therefore, to abandon the superstition that natural science cannot be regarded as logically respectable until philosophers have solved the problem of induction. The problem of induction is, roughly speaking, the problem of finding a way to prove that certain empirical generalizations which are derived from past experience will hold good also in the future. There are only two ways of approaching this problem on the assumption that it is a genuine problem, and it is easy to see that neither of them can lead to its solution. One may attempt to deduce the proposition which one is required to prove either from a purely formal principle or from an empirical principle. In the former case one commits the error of supposing that from a tautology it is possible to deduce a proposition about a matter of fact; in the latter case one simply assumes what one is setting out to prove. For example, it is often said that we can justify induction by invoking the uniformity of nature, or by postulating a "principle of limited independent variety."¹ But, in fact, the principle of the uniformity of nature merely states, in a misleading fashion, the assumption that past experience is a reliable guide to the future; while the principle of limited independent variety presupposes it. And it is plain that any other empirical principle which was put forward as a justification of induction would beg the question in the same way. For the only grounds which one

¹ cf. J. M. Keynes, *A Treatise on Probability*, Part III.

could have for believing such a principle would be inductive grounds.

Thus it appears that there is no possible way of solving the problem of induction, as it is ordinarily conceived. And this means that it is a fictitious problem, since all genuine problems are at least theoretically capable of being solved: and the credit of natural science is not impaired by the fact that some philosophers continue to be puzzled by it. Actually, we shall see that the only test to which a form of scientific procedure which satisfies the necessary condition of self-consistency is subject, is the test of its success in practice. We are entitled to have faith in our procedure just so long as it does the work which it is designed to do—that is, enables us to predict future experience, and so to control our environment. Of course, the fact that a certain form of procedure has always been successful in practice affords no logical guarantee that it will continue to be so. But then it is a mistake to demand a guarantee where it is logically impossible to obtain one. This does not mean that it is irrational to expect future experience to conform to the past. For when we come to define “rationality” we shall find that for us “being rational” entails being guided in a particular fashion by past experience.

The task of defining rationality is precisely the sort of task that it is the business of philosophy to undertake. But in achieving this it does not justify scientific procedure. What justifies scientific procedure, to the extent to which it is capable of being justified, is the success of the predictions to which it gives rise: and this can be determined only in actual experience. By itself, the analysis of a synthetic principle tells us nothing whatsoever about its truth.

Unhappily, this fact is generally disregarded by philosophers who concern themselves with the so-called theory of knowledge. Thus it is common for writers on the subject of perception to assume that, unless one can give a satisfactory analysis of perceptual situations, one is not entitled to believe in the existence of material things. But this is a complete mistake. What gives one the right to believe in the existence of a certain material thing is simply the fact that one has certain sensations: for, whether one realises it or not, to say that the thing exists is equivalent to saying that such sensations are obtainable. It is the philosopher’s business to give a correct definition of material things in terms of

sensations. But his success or failure in this task has no bearing whatsoever on the validity of our perceptual judgements. That depends wholly on actual sense-experience.

It follows that the philosopher has no right to despise the beliefs of common sense. If he does so, he merely displays his ignorance of the true purpose of his enquiries. What he is entitled to despise is the unreflecting analysis of those beliefs, which takes the grammatical structure of the sentence as a trustworthy guide to its meaning. Thus, many of the mistakes made in connection with the problem of perception can be accounted for by the fact, already referred to in connection with the metaphysical notion of “substance,” that it happens to be impossible in an ordinary European language to mention a thing without appearing to distinguish it generically from its qualities and states. But from the fact that the common-sense analysis of a proposition is mistaken it by no means follows that the proposition is not true. The philosopher may be able to show us that the propositions we believe are far more complex than we suppose; but it does not follow from this that we have no right to believe them.

It should now be sufficiently clear that if the philosopher is to uphold his claim to make a special contribution to the stock of our knowledge, he must not attempt to formulate speculative truths, or to look for first principles, or to make *a priori* judgements about the validity of our empirical beliefs. He must, in fact, confine himself to works of clarification and analysis of a sort which we shall presently describe.

In saying that the activity of philosophising is essentially analytic, we are not, of course, maintaining that all those who are commonly called philosophers have actually been engaged in carrying out analyses. On the contrary, we have been at pains to show that a great deal of what is commonly called philosophy is metaphysical in character. What we have been in search of, in enquiring into the function of philosophy, is a definition of philosophy which should accord to some extent with the practice of those who are commonly called philosophers, and at the same time be consistent with the common assumption that philosophy is a special branch of knowledge. It is because metaphysics fails to satisfy this second condition that we distinguish it from philosophy, in spite of the fact that it is commonly referred to as philosophy. And our justification for making this distinction is

that it is necessitated by our original postulate that philosophy is a special branch of knowledge, and our demonstration that metaphysics is not.

Although this procedure is logically unassailable, it will perhaps be attacked on the ground that it is inexpedient. It will be said that the "history of philosophy" is, almost entirely, a history of metaphysics; and, consequently, that although there is no actual fallacy involved in our using the word "philosophy" in the sense in which philosophy is incompatible with metaphysics, it is dangerously misleading. For all our care in defining the term will not prevent people from confusing the activities which we call philosophical with the metaphysical activities of those whom they have been taught to regard as philosophers. And therefore it would surely be advisable for us to abandon the term "philosophy" altogether, as a name for a distinctive branch of knowledge, and invent some new description for the activity which we were minded to call the activity of philosophizing.

Our answer to this is that it is not the case that the "history of philosophy" is almost entirely a history of metaphysics. That it contains some metaphysics is undeniable. But I think it can be shown that the majority of those who are commonly supposed to have been great philosophers were primarily not metaphysicians but analysts. For example, I do not see how anyone who follows the account which we shall give of the nature of philosophical analysis and then turns to Locke's *Essay Concerning Human Understanding* can fail to conclude that it is essentially an analytic work. Locke is generally regarded as being one who, like G. E. Moore at the present time, puts forward a philosophy of common sense.¹ But he does not, any more than Moore, attempt to give an *a priori* justification of our common-sense beliefs. Rather does he appear to have seen that it was not his business as a philosopher to affirm or deny the validity of any empirical propositions, but only to analyse them. For he is content, in his own words, "to be employed as an under-labourer in clearing the ground a little, and removing some of the rubbish that lies in the way of knowledge"; and so devotes himself to the purely analytic tasks of defining knowledge, and classifying propositions, and displaying the nature of material things. And the small portion of his work

¹ Vide G. E. Moore, "A Defence of Common Sense," *Contemporary British Philosophy*, Vol. II.

which is not philosophical, in our sense, is not given over to metaphysics, but to psychology.

Nor is it fair to regard Berkeley as a metaphysician. For he did not, in fact, deny the reality of material things, as we are still too commonly told. What he denied was the adequacy of Locke's analysis of the notion of a material thing. He maintained that to say of various "ideas of sensation" that they belonged to a single material thing was not, as Locke thought, to say that they were related to a single unobservable underlying "somewhat," but rather that they stood in certain relations to one another. And in this he was right. Admittedly he made the mistake of supposing that what was immediately given in sensation was necessarily mental; and the use, by him and by Locke, of the word "idea" to denote an element in that which is sensibly given is objectionable, because it suggests this false view. Accordingly we replace the word "idea" in this usage by the neutral word "sense-content," which we shall use to refer to the immediate data not merely of "outer" but also of "introspective" sensation, and say that what Berkeley discovered was that material things must be definable in terms of sense-contents. We shall see, when we come finally to settle the conflict between idealism and realism, that his actual conception of the relationship between material things and sense-contents was not altogether accurate. It led him to some notoriously paradoxical conclusions, which a slight emendation will enable us to avoid. But the fact that he failed to give a completely correct account of the way in which material things are constituted out of sense-contents does not invalidate his contention that they are so constituted. On the contrary, we know that it must be possible to define material things in terms of sense-contents, because it is only by the occurrence of certain sense-contents that the existence of any material thing can ever be in the least degree verified. And thus we see that we have not to enquire whether a phenomenalist "theory of perception" or some other sort of theory is correct, but only what form of phenomenalist theory is correct. For the fact that all causal and representative theories of perception treat material things as if they were unobservable entities entitles us, as Berkeley saw, to rule them out *a priori*. The unfortunate thing is that, in spite of this, he found it necessary to postulate God as an unobservable cause of our "ideas"; and he must be criticised also for failing to

see that the argument which he uses to dispose of Locke's analysis of a material thing is fatal to his own conception of the nature of the self, a point which was effectively seized upon by Hume.

Of Hume we may say not merely that he was not in practice a metaphysician, but that he explicitly rejected metaphysics. We find the strongest evidence of this in the passage with which he concludes his *Enquiry Concerning Human Understanding*. "If," he says, "we take in our hand any volume; of divinity, or school metaphysics, for instance; let us ask, Does it contain any abstract reasoning concerning quantity or number? No. Does it contain any experimental reasoning concerning matter of fact and existence? No. Commit it then to the flames. For it can contain nothing but sophistry and illusion." What is this but a rhetorical version of our own thesis that a sentence which does not express either a formally true proposition or an empirical hypothesis is devoid of literal significance? It is true that Hume does not, so far as I know, actually put forward any view concerning the nature of philosophical propositions themselves, but those of his works which are commonly accounted philosophical are, apart from certain passages which deal with questions of psychology, works of analysis. If this is not universally conceded, it is because his treatment of causation, which is the main feature of his philosophical work, is often misinterpreted. He has been accused of denying causation, whereas in fact he was concerned only with defining it. So far is he from asserting that no causal propositions are true that he is himself at pains to give rules for judging of the existence of causes and effects.¹ He realised well enough that the question whether a given causal proposition was true or false was not one that could be settled *a priori*, and accordingly confined himself to discussing the analytic question, What is it that we are asserting when we assert that one event is causally connected with another? And in answering this question he showed, I think conclusively, first that the relation of cause and effect was not logical in character, since any proposition asserting a causal connection could be denied without self-contradiction, secondly that causal laws were not analytically derived from experience, since they were not deducible from any finite number of experiential propositions, and, thirdly, that it was a mistake to analyse propositions asserting causal connections in terms of a relation of

necessitation which held between particular events, since it was impossible to conceive of any observations which would have the slightest tendency to establish the existence of such a relation. He thus laid the way open for the view, which we adopt, that every assertion of a particular causal connection involves the assertion of a causal law, and that every general proposition of the form "C causes E" is equivalent to a proposition of the form "whenever C, then E," where the symbol "whenever" must be taken to refer, not to a finite number of actual instances of C, but to the infinite number of possible instances. He himself defines a cause as "an object, followed by another, and where all the objects similar to the first are followed by objects similar to the second," or, alternatively, as "an object followed by another, and whose appearance always conveys the thought to that other";¹ but neither of these definitions is acceptable as it stands. For, even if it is true that we should not, according to our standards of rationality, have good reason to believe that an event C was the cause of an event E unless we had observed a constant conjunction of events like C with events like E, still there is no self-contradiction involved in asserting the proposition "C is the cause of E" and at the same time denying that any events like C or like E ever have been observed; and this would be self-contradictory if the first of the definitions quoted was correct. Nor is it inconceivable, as the second definition implies, that there should be causal laws which have never yet been thought of. But although we are obliged, for these reasons, to reject Hume's actual definitions of a cause, our view of the nature of causation remains substantially the same as his. And we agree with him that there can be no other justification for inductive reasoning than its success in practice, while insisting more strongly than he did that no better justification is required. For it is his failure to make this second point clear that has given his views the air of paradox which has caused them to be so much undervalued and misunderstood.

When we consider, also, that Hobbes and Bentham were chiefly occupied in giving definitions, and that the best part of John Stuart Mill's work consists in a development of the analyses carried out by Hume, we may fairly claim that in holding that the activity of philosophising is essentially analytic we are

¹ Vide *A Treatise of Human Nature*, Book I, Part III, section 15.

¹ *An Enquiry Concerning Human Understanding*, section 7.

adopting a standpoint which has always been implicit in English empiricism. Not that the practice of philosophical analysis has been confined to members of this school. But it is with them that we have the closest historical affinity.

If I refrain from discussing these questions in detail, and make no attempt to furnish a complete list of all the "great philosophers" whose work is predominantly analytic—a list which would certainly include Plato and Aristotle and Kant—it is because the point to which this discussion is relevant is one of minor importance in our enquiry. We have been maintaining that much of "traditional philosophy" is genuinely philosophical, by our standards, in order to defend ourselves against the charge that our retention of the word "philosophy" is misleading. But even if it were the case that none of those who are commonly called philosophers had ever been engaged in what we call the activity of philosophising, it would not follow that our definition of philosophy was erroneous, given our initial postulates. We may admit that our retention of the word "philosophy" is causally dependent on our belief in the historical propositions set forth above. But the validity of these historical propositions has no logical bearing on the validity of our definition of philosophy, nor on the validity of the distinction between philosophy, in our sense, and metaphysics.

It is advisable to stress the point that philosophy, as we understand it, is wholly independent of metaphysics, inasmuch as the analytic method is commonly supposed by its critics to have a metaphysical basis. Being misled by the associations of the word "analysis," they assume that philosophical analysis is an activity of dissection; that it consists in "breaking up" objects into their constituent parts, until the whole universe is ultimately exhibited as an aggregate of "bare particulars," united by external relations. If this were really so, the most effective way of attacking the method would be to show that its basic presupposition was nonsensical. For to say that the universe was an aggregate of bare particulars would be as senseless as to say that it was Fire or Water or Experience. It is plain that no possible observation would enable one to verify such an assertion. But, so far as I know, this line of criticism is in fact never adopted. The critics content themselves with pointing out that few, if any, of the complex objects in the world are simply the sum of their parts.

They have a structure, an organic unity, which distinguishes them, as genuine wholes, from mere aggregates. But the analyst, so it is said, is obliged by his atomistic metaphysics to regard an object consisting of parts a , b , c , and d in a distinctive configuration as being simply $a+b+c+d$, and thus gives an entirely false account of its nature.

If we follow the Gestalt psychologists, who of all men talk most constantly about genuine wholes, in defining such a whole as one in which the properties of every part depend to some extent on its position in the whole, then we may accept it as an empirical fact that there exist genuine, or organic, wholes. And if the analytic method involved a denial of this fact, it would indeed be a faulty method. But, actually, the validity of the analytic method is not dependent on any empirical, much less any metaphysical, presupposition about the nature of things. For the philosopher, as an analyst, is not directly concerned with the physical properties of things. He is concerned only with the way in which we speak about them.

In other words, the propositions of philosophy are not factual, but linguistic in character—that is, they do not describe the behaviour of physical, or even mental, objects; they express definitions, or the formal consequences of definitions. Accordingly, we may say that philosophy is a department of logic. For we shall see that the characteristic mark of a purely logical enquiry is that it is concerned with the formal consequences of our definitions and not with questions of empirical fact.

It follows that philosophy does not in any way compete with science. The difference in type between philosophical and scientific propositions is such that they cannot conceivably contradict one another. And this makes it clear that the possibility of philosophical analysis is independent of any empirical assumptions. That it is independent of any metaphysical assumptions should be even more obvious still. For it is absurd to suppose that the provision of definitions, and the study of their formal consequences, involves the nonsensical assertion that the world is composed of bare particulars, or any other metaphysical dogma.

What has contributed as much as anything to the prevalent misunderstanding of the nature of philosophical analysis is the fact that propositions and questions which are really linguistic

are often expressed in such a way that they appear to be factual.¹ A striking instance of this is provided by the proposition that a material thing cannot be in two places at once. This looks like an empirical proposition, and is constantly invoked by those who desire to prove that it is possible for an empirical proposition to be logically certain. But a more critical inspection shows that it is not empirical at all, but linguistic. It simply records the fact that, as the result of certain verbal conventions, the proposition that two sense-contents occur in the same visual or tactual sense-field is incompatible with the proposition that they belong to the same material thing.² And this is indeed a necessary fact. But it has not the least tendency to show that we have certain knowledge about the empirical properties of objects. For it is necessary only because we happen to use the relevant words in a particular way. There is no logical reason why we should not so alter our definitions that the sentence "A thing cannot be in two places at once" comes to express a self-contradiction instead of a necessary truth.

Another good example of linguistically necessary proposition which appears to be a record of empirical fact is the proposition, "Relations are not particulars, but universals." One might suppose that this was a proposition of the same order as, "Armenians are not Mohammedans, but Christians": but one would be mistaken. For, whereas the latter proposition is an empirical hypothesis relating to the religious practices of a certain group of people, the former is not a proposition about "things" at all, but simply about words. It records the fact that relation-symbols belong by definition to the class of symbols for characters, and not to the class of symbols for things.

The assertion that relations are universals provokes the question, "What is a universal?"; and this question is not, as it has traditionally been regarded, a question about the character of certain real objects, but a request for a definition of a certain term. Philosophy, as it is written, is full of questions like this,

¹ Carnap has stressed this point. Where we speak of "linguistic" propositions expressed in "factual" or "pseudo-factual" language he speaks of "Pseudo-Objektsätze" or "quasi-syntaktische Sätze" as being expressed in the "Inhaltliche," as opposed to the "Formale Redeweise." Vide *Logische Syntax der Sprache*, Part V.

² cf. my article "On Particulars and Universals," *Proceedings of the Aristotelian Society*, 1933-4, pp. 54, 55.

which seem to be factual but are not. Thus, to ask what is the nature of a material object is to ask for a definition of "material object," and this, as we shall shortly see, is to ask how propositions about material objects are to be translated into propositions about sense-contents. Similarly, to ask what is a number is to ask some such question as whether it is possible to translate propositions about the natural numbers into propositions about classes.¹ And the same thing applies to all the other philosophical questions of the form, "What is an x ?" or, "What is the nature of x ?" They are all requests for definitions, and, as we shall see, for definitions of a peculiar sort.

Although it is misleading to write about linguistic questions in "factual" language, it is often convenient for the sake of brevity. And we shall not always avoid doing it ourselves. But it is important that no one should be deceived by this practice into supposing that the philosopher is engaged on an empirical or a metaphysical enquiry. We may speak loosely of him as analysing facts, or notions, or even things. But we must make it clear that these are simply ways of saying that he is concerned with the definition of the corresponding words.

CHAPTER III

THE NATURE OF PHILOSOPHICAL ANALYSIS

FROM OUR ASSERTION that philosophy provides definitions, it must not be inferred that it is the function of the philosopher to compile a dictionary, in the ordinary sense. For the definitions which philosophy is required to provide are of a different kind from those which we expect to find in dictionaries. In a dictionary we look mainly for what may be called *explicit* definitions; in philosophy, for definitions *in use*. A brief explanation should suffice to make the nature of this distinction clear.

We define a symbol *explicitly* when we put forward another symbol, or symbolic expression which is synonymous with it. And

¹ cf. Rudolf Carnap, *Logische Syntax der Sprache*, Part V, 79B, and 84.