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THE PHILOSOPHICAL REVIEW

MEANING AND VERIFICATION

I

PHILOSOPHICAL questions, as compared with ordinary scientific problems, are always strangely paradoxical. But it seems to be an especially strange paradox that the question concerning the meaning of a proposition should constitute a serious philosophical difficulty. For is it not the very nature and purpose of every proposition to express its own meaning? In fact, when we are confronted with a proposition (in a language familiar to us) we usually know its meaning immediately. If we do not, we can have it explained to us, but the explanation will consist of a new proposition; and if the new one is capable of expressing the meaning, why should not the original one be capable of it? So that a snippy person when asked what he meant by a certain statement might be perfectly justified in saying, 'I meant exactly what I said!'.

It is logically legitimate and actually the normal way in ordinary life and even in science to answer a question concerning the meaning of a proposition by simply repeating it either more distinctly or in slightly different words. Under what circumstances, then, can there be any sense in asking for the meaning of a statement which is well before our eyes or ears?

Evidently the only possibility is that we have not *understood* it. And in this case what is actually before our eyes or ears is nothing but a series of words which we are unable to handle; we do not know how to use it, how to 'apply it to reality'. Such a series of words is for us simply a complex of signs 'without meaning', a mere sequel of sounds or a mere row of marks on paper, and we have no right to call it 'a proposition' at all; we may perhaps speak of it as 'a sentence'.

If we adopt this terminology we can now easily get rid of our paradox by saying that we cannot inquire after the meaning of a proposition, but can ask about the meaning of a sentence, and that this amounts to asking, 'What proposition does the sentence stand for?'. And this question is answered either by a proposition in a language with which we are already perfectly familiar; or by indicating the logical rules which will make a proposition out of the sentence, *i.e.*, will tell us exactly in what circumstances the sentence is to be *used*. These two methods do not actually differ in principle; both of them give meaning to the sentence (transform it into a proposition) by locating it, as it were, within the system of a definite language; the first method making use of a language which is already in our possession, the second one building it up for us. The first method represents the simplest kind of ordinary 'translation'; the second one affords a deeper insight into the nature of meaning, and will have to be used in order to overcome philosophical difficulties connected with the understanding of sentences.

The source of these difficulties is to be found in the fact that very often we do not know how to handle our own words; we speak or write without having first agreed upon a definite logical grammar which will constitute the signification of our terms. We commit the mistake of thinking that we know the meaning of a sentence (*i.e.*, understand it as a proposition) if we are familiar with all the words occurring in it. But this is not sufficient. It will not lead to confusion or error as long as we remain in the domain of everyday life by which our words have been formed and to which they are adapted, but it will become fatal the moment we try to think about abstract problems by means of the same terms without carefully fixing their signification for the new purpose. For every word has a definite signification only within a definite context into which it has been fitted; in any other context it will have no meaning unless we provide new rules for the use of the word in the new case, and this may be done, at least in principle, quite arbitrarily.

Let us consider an example. If a friend should say to me, 'Take me to a country where the sky is three times as blue as in England!' I should not know how to fulfill his wish; his phrase

would appear nonsensical to me, because the word 'blue' is used in a way which is not provided for by the rules of our language. The combination of a numeral and the name of a color does not occur in it; therefore my friend's sentence has no meaning, although its exterior linguistic form is that of a command or a wish. But he can, of course, give it a meaning. If I ask him, 'What do you mean by "three times as blue"?', he can arbitrarily indicate certain definite physical circumstances concerning the serenity of the sky which he wants his phrase to be the description of. And then, perhaps, I shall be able to follow his directions; his wish will have become meaningful for me.

Thus, whenever we ask about a sentence, 'What does it mean?', what we expect is instruction as to the circumstances in which the sentence is to be used; we want a description of the conditions under which the sentence will form a *true* proposition, and of those which will make it *false*. The meaning of a word or a combination of words is, in this way, determined by a set of rules which regulate their use and which, following Wittgenstein, we may call the rules of their *grammar*, taking this word in its widest sense.

(If the preceding remarks about meaning are as correct as I am convinced they are, this will, to a large measure, be due to conversations with Wittgenstein which have greatly influenced my own views about these matters. I can hardly exaggerate my indebtedness to this philosopher. I do not wish to impute to him any responsibility for the contents of this article, but I have reason to hope that he will agree with the main substance of it.)

Stating the meaning of a sentence amounts to stating the rules according to which the sentence is to be used, and this is the same as stating the way in which it can be verified (or falsified). The meaning of a proposition is the method of its verification.

The 'grammatical' rules will partly consist of ordinary definitions, *i.e.*, explanations of words by means of other words, partly of what are called 'ostensive' definitions, *i.e.*, explanations by means of a procedure which puts the words to actual use. The simplest form of an ostensive definition is a pointing gesture combined with the pronouncing of the word, as when we teach a child the signification of the sound 'blue' by showing a blue object. But

in most cases the ostensive definition is of a more complicated form; we cannot point to an object corresponding to words like 'because', 'immediate', 'chance', 'again', etc. In these cases we require the presence of certain complex situations, and the meaning of the words is defined by the way we use them in these different situations.

It is clear that in order to understand a verbal definition we must know the signification of the explaining words beforehand, and that the only explanation which can work without any previous knowledge is the ostensive definition. We conclude that there is no way of understanding any meaning without ultimate reference to ostensive definitions, and this means, in an obvious sense, reference to 'experience' or 'possibility of verification'.

This is the situation, and nothing seems to me simpler or less questionable. It is this situation and nothing else that we describe when we affirm that the meaning of a proposition can be given only by giving the rules of its verification in experience. (The addition, 'in experience', is really superfluous, as no other kind of verification has been defined.)

This view has been called the "experimental theory of meaning"; but it certainly is no theory at all, for the term 'theory' is used for a set of hypotheses about a certain subject-matter, and there are no hypotheses involved in our view, which proposes to be nothing but a simple statement of the way in which meaning is *actually* assigned to propositions, both in everyday life and in science. There has never been any other way, and it would be a grave error to suppose that we believe we have discovered a new conception of meaning which is contrary to common opinion and which we want to introduce into philosophy. On the contrary, our conception is not only entirely in agreement with, but even derived from, common sense and scientific procedure. Although our criterion of meaning has always been employed in practice, it has very rarely been formulated in the past, and this is perhaps the only excuse for the attempts of so many philosophers to deny its feasibility.

The most famous case of an explicit formulation of our criterion is Einstein's answer to the question, What do we mean when we speak of two events at distant places happening simultaneously?

This answer consisted in a description of an experimental method by which the simultaneity of such events was actually ascertained. Einstein's philosophical opponents maintained—and some of them still maintain—that they knew the meaning of the above question independently of any method of verification. All I am trying to do is to stick consistently to Einstein's position and to admit no exceptions from it. (Professor Bridgman's book on *The Logic of Modern Physics* is an admirable attempt to carry out this program for all concepts of physics.) I am not writing for those who think that Einstein's philosophical opponents were right.

II

Professor C. I. Lewis, in a remarkable address on "Experience and Meaning" (published in this *Review*, March 1934), has justly stated that the view developed above (he speaks of it as the "empirical-meaning requirement") forms the basis of the whole philosophy of what has been called the "logical positivism of the Viennese Circle". He criticizes this basis as inadequate chiefly on the ground that its acceptance would impose certain limitations upon "significant philosophic discussion" which, at some points, would make such discussion altogether impossible and, at other points, restrict it to an intolerable extent.

Feeling responsible as I do for certain features of the Viennese philosophy (which I should prefer to call Consistent Empiricism), and being of the opinion that it really does not impose any restrictions upon significant philosophizing at all, I shall try to examine Professor Lewis's chief arguments and point out why I think that they do not endanger our position—at least as far as I can answer for it myself. All of my own arguments will be derived from the statements made in section I.

Professor Lewis describes the empirical-meaning requirement as demanding "that any concept put forward or any proposition asserted shall have a definite denotation; that it shall be intelligible not only verbally and logically but in the further sense that one can specify those empirical items which would determine the applicability of the concept or constitute the verification of the proposition" (*loc. cit.* 125). Here it seems to me that there is no justification for the words "but in the *further* sense . . .", *i.e.*, for

the distinction of two (or three?) senses of intelligibility. The remarks in section I. show that, according to our opinion, 'verbal and logical' understanding *consists in* knowing how the proposition in question could be verified. For, unless we mean by 'verbal understanding' that we know how the words are actually used, the term could hardly mean anything but a shadowy feeling of being acquainted with the words, and in a philosophical discussion it does not seem advisable to call such a feeling 'understanding'. Similarly, I should not advise that we speak of a sentence as being 'logically intelligible' when we just feel convinced that its exterior form is that of a proper proposition (if, *e.g.* it has the form, substantive—copula—adjective, and therefore appears to predicate a property of a thing). For it seems to me that by such a phrase we want to say much *more*, namely, that we are completely aware of the whole grammar of the sentence, *i.e.*, that we know exactly the circumstances to which it is fitted. Thus knowledge of how a proposition is verified is not anything over and above its verbal and logical understanding, but is identical with it. It seems to me, therefore, that when we demand that a proposition be verifiable we are not adding a new requirement but are simply formulating the conditions which have actually always been acknowledged as necessary for meaning and intelligibility.

The mere statement that no sentence has meaning unless we are able to indicate a way of testing its truth or falsity is not very useful if we do not explain very carefully the signification of the phrases 'method of testing' and 'verifiability'. Professor Lewis is quite right when he asks for such an explanation. He himself suggests some ways in which it might be given, and I am glad to say that his suggestions appear to me to be in perfect agreement with my own views and those of my philosophical friends. It will be easy to show that there is no serious divergence between the point of view of the pragmatist as Professor Lewis conceives it and that of the Viennese Empiricist. And if in some special questions they arrive at different conclusions, it may be hoped that a careful examination will bridge the difference.

How do we define verifiability?

In the first place I should like to point out that when we say that "a proposition has meaning only if it is verifiable" we are

not saying “. . . if it is *verified*”. This simple remark does away with one of the chief objections; the “here and now predicament”, as Professor Lewis calls it, does not exist any more. We fall into the snares of this predicament only if we regard verification itself as the criterion of meaning, instead of ‘possibility of verification’ (= verifiability); this would indeed lead to a “reduction to absurdity of meaning”. Obviously the predicament arises through some fallacy by which these two notions are confounded. I do not know if Russell’s statement, “Empirical knowledge is confined to what we actually observe” (quoted by Professor Lewis *loc. cit.* 130), must be interpreted as containing this fallacy, but it would certainly be worth while to discover its genesis.

Let us consider the following argument which Professor Lewis discusses (131), but which he does not want to impute to anyone:

Suppose it maintained that no issue is meaningful unless it can be put to the test of decisive verification. And no verification can take place except in the immediately present experience of the subject. Then nothing can be meant except what is actually present in the experience in which that meaning is entertained.

This argument has the form of a conclusion drawn from two premisses. Let us for the moment assume the second premiss to be meaningful and true. You will observe that even then the conclusion does *not* follow. For the first premiss assures us that the issue has meaning if it *can* be verified; the verification does not have to take place, and therefore it is quite irrelevant whether it can take place in the future or in the present only. Apart from this, the second premiss is, of course, nonsensical; for what fact could possibly be described by the sentence ‘verification can take place only in present experience’? Is not verifying an act or process like hearing or feeling bored? Might we not just as well say that I can hear or feel bored only in the present moment? And what could I mean by this? The particular nonsense involved in such phrases will become clearer when we speak of the ‘ego-centric predicament’ later on; at present we are content to know that our empirical-meaning postulate has nothing whatever to do with the now-predicament. ‘Verifiable’ does not even mean ‘verifiable here now’; much less does it mean ‘being verified now’.

Perhaps it will be thought that the only way of making sure of

the verifiability of a proposition would consist in its actual verification. But we shall soon see that this is not the case.

There seems to be a great temptation to connect meaning and the 'immediately given' in the wrong way; and some of the Viennese positivists may have yielded to this temptation, thereby getting dangerously near to the fallacy we have just been describing. Parts of Carnap's *Logischer Aufbau der Welt*, for instance, might be interpreted as implying that a proposition about future events did not really refer to the future at all but asserted only the present existence of certain expectations (and, similarly, speaking about the past would really mean speaking about present memories). But it is certain that the author of that book does not hold such a view now, and that it cannot be regarded as a teaching of the new positivism. On the contrary, we have pointed out from the beginning that our definition of meaning does not imply such absurd consequences, and when someone asked, "But how can you verify a proposition about a future event?", we replied, "Why, for instance, by waiting for it to happen! 'Waiting' is a perfectly legitimate method of verification".

* * *

Thus I think that everybody—including the Consistent Empiricist—agrees that it would be nonsense to say, 'We can mean nothing but the immediately given'. If in this sentence we replace the word 'mean' by the word 'know' we arrive at a statement similar to Bertrand Russell's mentioned above. The temptation to formulate phrases of this sort arises, I believe, from a certain ambiguity of the verb 'to know' which is the source of many metaphysical troubles and to which, therefore, I have often had to call attention on other occasions (see *e.g.* *Allgemeine Erkenntnislehre* 2nd ed. 1925, §12). In the first place the word may stand simply for 'being aware of a datum', *i.e.* for the mere presence of a feeling, a color, a sound, etc.; and if the word 'knowledge' is taken in this sense the assertion 'Empirical knowledge is confined to what we actually observe' does not say anything at all, but is a mere tautology. (This case, I think, would correspond to what Professor Lewis calls "identity-theories" of the "knowledge-

relation". Such theories, resting on a tautology of this kind, would be empty verbiage without significance.)

In the second place the word 'knowledge' may be used in one of the significant meanings which it has in science and ordinary life; and in this case Russell's assertion would obviously (as Professor Lewis remarked) be false. Russell himself, as is well known, distinguishes between 'knowledge by acquaintance' and 'knowledge by description', but perhaps it should be noted that this distinction does not entirely coincide with the one we have been insisting upon just now.

* * *

III

Verifiability means possibility of verification. Professor Lewis justly remarks that to "omit all examination of the wide range of significance which could attach to 'possible verification', would be to leave the whole conception rather obscure" (*loc. cit.* 137). For our purpose it suffices to distinguish between two of the many ways in which the word 'possibility' is used. We shall call them 'empirical possibility' and 'logical possibility'. Professor Lewis describes two meanings of 'verifiability' which correspond exactly to this difference; he is fully aware of it, and there is hardly anything left for me to do but carefully to work out the distinction and show its bearing upon our issue.

I propose to call 'empirically possible' anything that does not contradict the laws of nature. This is, I think, the largest sense in which we may speak of empirical possibility; we do not restrict the term to happenings which are not only in accordance with the laws of nature but also with the actual state of the universe (where 'actual' might refer to the present moment of our own lives, or to the condition of human beings on this planet, and so forth). If we chose the latter definition (which seems to have been in Professor Lewis's mind when he spoke of "possible experience as conditioned by the actual", *loc. cit.* 141) we should not get the sharp boundaries we need for our present purpose. So 'empirical possibility' is to mean 'compatibility with natural laws'.

Now, since we cannot boast of a complete and sure knowledge of nature's laws, it is evident that we can never assert with certainty the empirical possibility of any fact, and here we may be permitted to speak of *degrees* of possibility. Is it possible for me to lift this book? Surely!—This table? I think so!—This billiard table? I don't think so!—This automobile? Certainly not!—It is clear that in these cases the answer is given by *experience*, as the result of experiments performed in the past. Any judgment about empirical possibility is based on experience and will often be rather uncertain; there will be no sharp boundary between possibility and impossibility.

Is the possibility of verification which we insist upon of this empirical sort? In that case there would be different degrees of verifiability, the question of meaning would be a matter of more or less, not a matter of yes or no. In many disputes concerning our issue it is the empirical possibility of verification which is discussed; the various examples of verifiability given by Professor Lewis, *e.g.*, are instances of different empirical circumstances in which the verification is carried out or prevented from being carried out. Many of those who refuse to accept our criterion of meaning seem to imagine that the procedure of its application in a special case is somewhat like this: A proposition is presented to us ready made, and in order to discover its meaning we have to try various methods of verifying or falsifying it, and if one of these methods works we have found the meaning of the proposition; but if not, we say it has no meaning. If we really had to proceed in this way, it is clear that the determination of meaning would be entirely a matter of experience, and that in many cases no sharp and ultimate decision could be obtained. How could we ever know that we had tried long enough, if none of our methods were successful? Might not future efforts disclose a meaning which we were unable to find before?

This whole conception is, of course, entirely erroneous. It speaks of meaning as if it were a kind of entity inherent in a sentence and hidden in it like a nut in its shell, so that the philosopher would have to crack the shell or sentence in order to reveal the nut or meaning. We know from our considerations in section I that a proposition cannot be given 'ready made'; that meaning

does not inhere in a sentence where it might be discovered, but that it must be bestowed upon it. And this is done by applying to the sentence the rules of the logical grammar of our language, as explained in section I. These rules are not facts of nature which could be 'discovered', but they are prescriptions stipulated by acts of definition. And these definitions have to be known to those who pronounce the sentence in question and to those who hear or read it. Otherwise they are not confronted with any proposition at all, and there is nothing they could try to verify, because you can't verify or falsify a mere row of words. You cannot even start verifying before you know the meaning, *i.e.*, before you have established the possibility of verification.

In other words, the possibility of verification which is relevant to meaning cannot be of the empirical sort; it cannot be established *post festum*. You have to be sure of it before you can consider the empirical circumstances and investigate whether or no or under what conditions they will permit of verification. The empirical circumstances are all-important when you want to know if a proposition is *true* (which is the concern of the scientist), but they can have no influence on the *meaning* of the proposition (which is the concern of the philosopher). Professor Lewis has seen and expressed this very clearly (*loc. cit.* 142, first six lines), and our Vienna positivism, as far as I can answer for it, is in complete agreement with him on this point. It must be emphasized that when we speak of verifiability we mean *logical* possibility of verification, and nothing but this.

* * *

I call a fact or a process 'logically possible' if it can be *described*, *i.e.*, if the sentence which is supposed to describe it obeys the rules of grammar we have stipulated for our language. (I am expressing myself rather incorrectly. A fact which could not be described would, of course, not be any fact at all; *any* fact is logically possible. But I think my meaning will be understood.) Take some examples. The sentences, 'My friend died the day after tomorrow'; 'The lady wore a dark red dress which was bright green'; 'The campanile is 100 feet and 150 feet high'; 'The child was naked, but wore a long white nightgown', obviously violate the rules

which, in ordinary English, govern the use of the words occurring in the sentences. They do not describe any facts at all; they are meaningless, because they represent *logical* impossibilities.

It is of the greatest importance (not only for our present issue but for philosophical problems in general) to see that whenever we speak of logical impossibility we are referring to a discrepancy between the definitions of our terms and the way in which we use them. We must avoid the severe mistake committed by some of the former Empiricists like Mill and Spencer, who regarded logical principles (*e.g.* the Law of Contradiction) as laws of nature governing the psychological process of thinking. The non-sensical statements alluded to above do not correspond to thoughts which, by a sort of psychological experiment, we find ourselves unable to think; they do not correspond to any thoughts at all. When we hear the words, 'A tower which is both 100 feet and 150 feet high', the image of two towers of different heights may be in our mind, and we may find it psychologically (empirically) impossible to combine the two pictures into one image, but it is not this fact which is denoted by the words 'logical impossibility'. The height of a tower cannot be 100 feet and 150 feet at the same time; a child cannot be naked and dressed at the same time—not because we are unable to imagine it, but because our definitions of 'height', of the numerals, of the terms 'naked' and 'dressed', are not compatible with the particular combinations of those words in our examples. 'They are not compatible with such combinations' means that the rules of our language have not provided any use for such combinations; they do not describe any fact. We could change these rules, of course, and thereby arrange a meaning for the terms 'both red and green', 'both naked and dressed'; but if we decide to stick to the ordinary definitions (which reveal themselves in the way we actually use our words) we have decided to regard those combined terms as meaningless, *i.e.*, not to use them as the description of *any* fact. Whatever fact we may or may not imagine, if the word 'naked' (or 'red') occurs in its description we have decided that the word 'dressed' (or 'green') cannot be put in its place in the same description. If we do not follow this rule it means that we want to introduce a new definition of the words, or that we don't mind using words without

meaning and like to indulge in nonsense. (I am far from condemning this attitude under all circumstances; on certain occasions—as in *Alice in Wonderland*—it may be the only sensible attitude and far more delightful than any treatise on Logic. But in such a treatise we have a right to expect a different attitude.)

The result of our considerations is this: Verifiability, which is the sufficient and necessary condition of meaning, is a possibility of the logical order; it is created by constructing the sentence in accordance with the rules by which its terms are defined. The only case in which verification is (logically) impossible is the case where you have *made* it impossible by not setting any rules for its verification. Grammatical rules are not found anywhere in nature, but are made by man and are, in principle, arbitrary; so you cannot give meaning to a sentence by *discovering* a method of verifying it, but only by *stipulating* how it *shall* be done. Thus logical possibility or impossibility of verification is always *self-imposed*. If we utter a sentence without meaning it is always *our own fault*.

The tremendous philosophic importance of this last remark will be realized when we consider that what we said about the meaning of *assertions* applies also to the meaning of *questions*. There are, of course, many questions which can never be answered by human beings. But the impossibility of finding the answer may be of two different kinds. If it is merely empirical in the sense defined, if it is due to the chance circumstances to which our human existence is confined, there may be reason to lament our fate and the weakness of our physical and mental powers, but the problem could never be said to be absolutely insoluble, and there would always be some hope, at least for future generations. For the empirical circumstances may alter, human facilities may develop, and even the laws of nature may change (perhaps even suddenly and in such a way that the universe would be thrown open to much more extended investigation). A problem of this kind might be called practically unanswerable or technically unanswerable, and might cause the scientist great trouble, but the philosopher, who is concerned with general principles only, would not feel terribly excited about it.

But what about those questions for which it is *logically* im-

possible to find an answer? Such problems would remain insoluble under all imaginable circumstances; they would confront us with a definite hopeless *Ignorabimus*; and it is of the greatest importance for the philosopher to know whether there are any such issues. Now it is easy to see from what has been said before that this calamity could happen only if the question itself had no meaning. It would not be a genuine question at all, but a mere row of words with a question-mark at the end. We must say that a question is meaningful, if we can *understand* it, *i.e.*, if we are able to decide for any given proposition whether, if true, it would be an answer to our question. And if this is so, the actual decision could only be prevented by empirical circumstances, which means that it would not be *logically* impossible. Hence no meaningful problem can be insoluble in *principle*. If in any case we find an answer to be logically impossible we know that we really have not been asking anything, that what sounded like a question was actually a nonsensical combination of words. A genuine question is one for which an answer is logically possible. This is one of the most characteristic results of our empiricism. It means that in principle there are no limits to our knowledge. The boundaries which must be acknowledged are of an empirical nature and, therefore, never ultimate; they can be pushed back further and further; there is no unfathomable mystery in the world.

* * *

The dividing line between logical possibility and impossibility of verification is absolutely sharp and distinct; there is no gradual transition between meaning and nonsense. For either you have given the grammatical rules for verification, or you have not; *tertium non datur*.

Empirical possibility is determined by the laws of nature, but meaning and verifiability are entirely independent of them. Everything that I can describe or define is logically possible—and definitions are in no way bound up with natural laws. The proposition 'Rivers flow uphill' is meaningful, but happens to be false because the fact it describes is *physically* impossible. It will not deprive a proposition of its meaning if the conditions which I stipulate for its verification are incompatible with the laws of

nature; I may prescribe conditions, for instance, which could be fulfilled only if the velocity of light were greater than it actually is, or if the Law of Conservation of Energy did not hold, and so forth.

An opponent of our view might find a dangerous paradox or even a contradiction in the preceding explanations, because on the one hand we insisted so strongly on what has been called the "*empirical-meaning requirement*", and on the other hand we assert most emphatically that meaning and verifiability do not depend on any empirical conditions whatever, but are determined by purely logical possibilities. The opponent will object: if meaning is a matter of experience, how can it be a matter of definition and logic?

In reality there is no contradiction or difficulty. The word 'experience' is ambiguous. Firstly, it may be a name for any so-called 'immediate data'—which is a comparatively modern use of the word—and secondly we can use it in the sense in which we speak *e.g.*, of an 'experienced traveller', meaning a man who has not only seen a great deal but also knows how to profit from it for his actions. It is in this second sense (by the way, the sense the word has in Hume's and Kant's philosophy) that verifiability must be declared to be independent of experience. The possibility of verification does not rest on any 'experiential truth', on a law of nature or any other true general proposition, but is determined solely by our definitions, by the rules which have been fixed for our language, or which we can fix arbitrarily at any moment. All of these rules ultimately point to ostensive definitions, as we have explained, and through them verifiability is linked to *experience* in the *first* sense of the word. No rule of expression presupposes any law or regularity in the world (which is the condition of 'experience' as Hume and Kant use the word), but it does presuppose data and situations, to which names can be attached. The rules of language are rules of the application of language; so there must be something to which it can be applied. Expressibility and verifiability are one and the same thing. There is no antagonism between logic and experience. Not only can the logician be an empiricist at the same time; he *must* be one if he wants to understand what he himself is doing.

IV

Let us glance at some examples in order to illustrate the consequences of our attitude in regard to certain issues of traditional philosophy. Take the famous case of the reality of the other side of the moon (which is also one of Professor Lewis's examples). None of us, I think, would be willing to accept a view according to which it would be nonsense to speak of the averted face of our satellite. Can there be the slightest doubt that, according to our explanations, the conditions of meaning are amply satisfied in this case?

I think there can be no doubt. For the question, 'What is the other side of the moon like?', could be answered, for instance, by a description of what would be seen or touched by a person located somewhere behind the moon. The question whether it be physically possible for a human being—or indeed any other living being—to travel around the moon does not even have to be raised here; it is entirely irrelevant. Even if it could be shown that a journey to another celestial body were absolutely incompatible with the known laws of nature, a proposition about the other side of the moon would still be meaningful. Since our sentence speaks of certain places in space as being filled with matter (for that is what the words 'side of the moon' stand for), it will have meaning if we indicate under what circumstances a proposition of the form, 'this place is filled with matter', shall be called true or false. The concept 'physical substance at a certain place' is defined by our language in physics and geometry. Geometry itself is the grammar of our propositions about 'spatial' relations, and it is not very difficult to see how assertions about physical properties and spatial relations are connected with 'sense-data' by ostensive definitions. This connection, by the way, is *not* such as to entitle us to say that physical substance is 'a mere construction put upon sense-data', or that a physical body is 'a complex of sense-data'—unless we interpret these phrases as rather inadequate abbreviations of the assertion that all propositions containing the term 'physical body' require for their verification the presence of sense-data. And this is certainly an exceedingly trivial statement.

In the case of the moon we might perhaps say that the meaning-

requirement is fulfilled if we are able to 'imagine' (picture mentally) situations which would verify our proposition. But if we should say in general that verifiability of an assertion implies possibility of 'imagining' the asserted fact, this would be true only in a restricted sense. It would not be true in so far as the possibility is of the empirical kind, *i.e.*, implying specific human capacities. I do not think, for instance, that we can be accused of talking nonsense if we speak of a universe of ten dimensions, or of beings possessing sense-organs and having perceptions entirely different from ours; and yet it does not seem right to say that we are able to 'imagine' such beings and such perceptions, or a ten-dimensional world. But we *must* be able to say under what *observable* circumstances we should assert the existence of the beings or sense-organs just referred to. It is clear that I can speak meaningfully of the sound of a friend's voice without being able actually to recall it in my imagination.—This is not the place to discuss the logical grammar of the word 'to imagine'; these few remarks may caution us against accepting too readily a *psychological* explanation of verifiability.

We must not identify meaning with any of the psychological data which form the material of a mental sentence (or 'thought') in the same sense in which articulated sounds form the material of a spoken sentence, or black marks on paper the material of a written sentence. When you are doing a calculation in arithmetic it is quite irrelevant whether you have before your mind the images of black numbers or of red numbers, or no visual picture at all. And even if it were empirically impossible for you to do any calculation without imagining black numbers at the same time, the mental pictures of those black marks could, of course, in no way be considered as constituting the meaning, or part of the meaning, of the calculation.

Carnap is right in putting great stress upon the fact (always emphasized by the critics of 'psychologism') that the question of meaning has nothing to do with the psychological question as to the mental processes of which an act of thought may consist. But I am not sure that he has seen with equal clarity that reference to ostensive definitions (which we postulate for meaning) does *not* involve the error of a confusion of the two questions. In order

to understand a sentence containing, *e.g.*, the words 'red flag', it is indispensable that I should be able to indicate a situation where I could point to an object which I should call a 'flag', and whose color I could recognize as 'red' as distinguished from other colors. But in order to do this it is *not* necessary that I should actually call up the image of a red flag. It is of the utmost importance to see that these two things have nothing in common. At this moment I am trying in vain to imagine the shape of a capital G in German print; nevertheless I can speak about it without talking nonsense, and I know I should recognize it if I saw the letter. Imagining a red patch is utterly different from referring to an ostensive definition of 'red'. Verifiability has nothing to do with any images that may be associated with the words of the sentence in question.

* * *

No more difficulty than in the case of the other side of the moon will be found in discussing, as another significant example, the question of 'immortality', which Professor Lewis calls, and which is usually called, a *metaphysical* problem. I take it for granted that 'immortality' is not supposed to signify never-ending life (for that might possibly be meaningless on account of infinity being involved), but that we are concerned with the question of survival after 'death'. I think we may agree with Professor Lewis when he says about this hypothesis: "Our understanding of what would verify it has no lack of clarity." In fact, I can easily imagine *e.g.* witnessing the funeral of my own body and continuing to exist without a body, for nothing is easier than to describe a world which differs from our ordinary world only in the complete absence of all data which I would call parts of my own body.

We must conclude that immortality, in the sense defined, should not be regarded as a 'metaphysical problem', but is an empirical hypothesis, because it possesses logical verifiability. It could be verified by following the prescription: 'Wait until you die!' Professor Lewis seems to hold that this method is not satisfactory from the point of view of science. He says (143):

The hypothesis of immortality is unverifiable in an obvious sense.
 . . . if it be maintained that only what is scientifically verifiable has

meaning, then this conception is a case in point. It could hardly be verified by science; and there is no observation or experiment which science could make, the negative result of which would disprove it.

I fancy that in these sentences the private method of verification is rejected as being unscientific because it would apply only to the individual case of the experiencing person himself, whereas a scientific statement should be capable of a *general* proof, open to any careful observer. But I see no reason why even this should be declared to be impossible. On the contrary, it is easy to describe experiences such that the hypothesis of an invisible existence of human beings after their bodily death would be the most acceptable explanation of the phenomena observed. These phenomena, it is true, would have to be of a much more convincing nature than the ridiculous happenings alleged to have occurred in meetings of the occultists—but I think there cannot be the slightest doubt as to the possibility (in the logical sense) of phenomena which would form a scientific justification of the hypothesis of survival after death, and would permit an investigation by scientific methods of that form of life. To be sure, the hypothesis could never be established as absolutely true, but it shares this fate with all hypotheses. If it should be urged that the souls of the deceased might inhabit some supercelestial space where they would not be accessible to our perception, and that therefore the truth or falsity of the assertion could never be tested, the reply would be that if the words 'supercelestial space' are to have any meaning at all, that space must be defined in such a way that the impossibility of reaching it or of perceiving anything in it would be merely empirical, so that some means of overcoming the difficulties could at least be described, although it might be beyond human power to put them into use.

Thus our conclusion stands. The hypothesis of immortality is an empirical statement which owes its meaning to its verifiability, and it has no meaning beyond the possibility of verification. If it must be admitted that science could make no experiment the negative result of which would disprove it, this is true only in the same sense in which it is true for many other hypotheses of similar structure—especially those that have sprung up from other motives than the knowledge of a great many facts of experience

which must be regarded as giving a high probability to the hypothesis.

* * *

The question about the 'existence of the external world' will be discussed in the next section.

V

Let us now turn to a point of fundamental importance and the deepest philosophic interest. Professor Lewis refers to it as the "egocentric predicament", and he describes as one of the most characteristic features of logical positivism its attempt to take this predicament seriously. It seems to be formulated in the sentence (128), "Actually given experience is given in the first person", and its importance for the doctrine of logical positivism seems to be evident from the fact that Carnap, in his *Der logische Aufbau der Welt*, states that the method of this book may be called "methodological solipsism". Professor Lewis thinks, rightly, that the egocentric or solipsistic principle is not implied by our general principle of verifiability, and so he regards it as a second principle which, together with that of verifiability, leads, in his opinion, to the main results of the Viennese philosophy.

If I may be permitted to make a few general remarks here I should like to say that one of the greatest advantages and attractions of true positivism seems to me to be the antisolipsistic attitude which characterizes it from the very beginning. There is as little danger of solipsism in it as in any 'realism', and it seems to me to be the chief point of difference between idealism and positivism that the latter keeps entirely clear of the egocentric predicament. I think it is the greatest misunderstanding of the positivist idea (often even committed by thinkers who called themselves positivists) to see in it a tendency towards solipsism or a kinship to subjective idealism. We may regard Vaihinger's *Philosophy of As If* as a typical example of this mistake (he calls his book a "System of Idealistic Positivism"), and perhaps the philosophy of Mach and Avenarius as one of the most consistent attempts to avoid it. It is rather unfortunate that Carnap has advocated what he calls "methodological solipsism", and that in

his construction of all concepts out of elementary data the "eigen-psychische Gegenstände" (for-me entities) come first and form the basis for the construction of physical objects, which finally lead to the concept of other selves; but if there is any mistake here it is chiefly in the terminology, not in the thought. "Methodological solipsism" is *not* a kind of solipsism, but a *method* of building up concepts. And it must be borne in mind that the order of construction which Carnap recommends—beginning with "for-me entities"—is not asserted to be the only possible one. It would have been better to have chosen a different order, but in principle Carnap was well aware of the fact that original experience is "without a subject" (see Lewis *loc. cit.* 145).

The strongest emphasis should be laid on the fact that primitive experience is absolutely neutral or, as Wittgenstein has occasionally put it, that immediate data "have no owner". Since the genuine positivist denies (with Mach etc.) that original experience "has that quality or status, characteristic of all given experience, which is indicated by the adjective 'first person'" (*loc. cit.* 145), he cannot possibly take the 'egocentric predicament' seriously; for him this predicament does not exist. To see that primitive experience is *not* first-person experience seems to me to be one of the most important steps which philosophy must take towards the clarification of its deepest problems.

The unique position of the 'self' is not a basic property of all experience, but is itself a fact (among other facts) of experience. Idealism (as represented by Berkeley's "*esse = percipi*" or by Schopenhauer's "Die Welt ist meine Vorstellung") and other doctrines with egocentric tendencies commit the great error of mistaking the unique position of the ego, which is an empirical fact, for a logical, *a priori* truth, or, rather, substituting the one for the other. It is worth while to investigate this matter and analyse the sentence which seems to express the egocentric predicament. This will not be a digression, for without the clarification of this point it will be impossible to understand the basic position of our empiricism.

How does the idealist or the solipsist arrive at the statement that the world, as far as I know it, is 'my own idea', that ultimately I know nothing but the 'content of my own consciousness'?

Experience teaches that all immediate data depend in some way or other upon those data that constitute what I call 'my body'. All visual data disappear when the eyes of this body are closed; all sounds cease when its ears are stuffed up; and so on. This body is distinguished from the 'bodies of other beings' by the fact that it always appears in a peculiar perspective (its back or its eyes, for instance, never appear except in a looking glass); but this is not nearly so significant as the other fact that the quality of *all* data is conditioned by the state of the organs of this particular body. Obviously these two facts—and perhaps originally the first one—form the only reason why this body is called 'my' body. The possessive pronoun singles it out from among other bodies; it is an adjective which denotes the uniqueness described.

The fact that all data are dependent upon 'my' body (particularly those parts of it which are called 'sense-organs') induces us to form the concept of 'perception'. We do not find this concept in the language of unsophisticated, primitive people; they do not say, 'I perceive a tree', but simply, 'there is a tree'. 'Perception' implies the distinction between a subject which perceives and an object which is perceived. Originally the perceiver is the sense-organ or the body to which it belongs, but since the body itself—including the nervous system—is also one of the perceived things, the original view is soon 'corrected' by substituting for the perceiver a new subject, which is called 'ego' or 'mind' or 'consciousness'. It is usually thought of as somehow residing *in* the body, because the sense-organs are on the surface of the body. The mistake of locating consciousness or mind inside the body ('in the head'), which has been called "introjection" by R. Avenarius, is the main source of the difficulties of the so-called 'mind-body problem'. By avoiding the error of introjection we avoid at the same time the idealistic fallacy which leads to solipsism. It is easy to show that introjection is an error. When I see a green meadow the 'green' is declared to be a content of my consciousness, but it certainly is not inside my head. Inside my skull there is nothing but my brain; and if there should happen to be a green spot in my brain, it would obviously not be the green of the meadow, but the green of the brain.

But for our purpose it is not necessary to follow this train of thought; it is sufficient to restate the facts clearly.

It is a fact of experience that all data depend in some way or other upon the state of a certain body which has the peculiarity that its eyes and its back are never seen (except by means of a mirror). It is usually called 'my' body; but here, in order to avoid mistakes, I shall take the liberty of calling it the body 'M'. A particular case of the dependence just mentioned is expressed by the sentence, 'I do not perceive anything unless the sense-organs of the body M are affected'. Or, taking a still more special case, I may make the following statement:

'I feel pain only when the body M is hurt.' (P)

I shall refer to this statement as 'proposition P'.

Now let us consider another proposition (Q):

'I can feel only my pain.' (Q)

The sentence Q may be interpreted in various ways. *Firstly*, it may be regarded as equivalent to P, so that P and Q would just be two different ways of expressing one and the same empirical fact. The word 'can' occurring in Q would denote what we have called 'empirical possibility', and the words 'I' and 'my' would refer to the body M. It is of the utmost importance to realize that in this first interpretation Q is the description of a fact of experience, *i.e.*, a fact which we could very well imagine to be different.

We could easily imagine (here I am closely following ideas expressed by Mr. Wittgenstein) that I experience a pain every time the body of my friend is hurt, that I am gay when his face bears a joyful expression, that I feel tired after he has taken a long walk, or even that I do not see anything when his eyes are closed, and so forth. Proposition Q (if interpreted as being equivalent to P) denies that these things ever happen; but if they did happen, Q would be falsified. Thus we indicate the meaning of Q (or P) by describing facts which make Q true, and other facts that would make it false. If facts of the latter kind occurred our world would be rather different from the one in which we are actually living; the properties of the 'data' would depend on other

human bodies (or perhaps only one of them) as well as upon the body M.

This fictitious world may be empirically impossible, because incompatible with the actual laws of nature—though we cannot at all be sure of this—but it is logically possible, because we were able to give a description of it. Now let us for a moment suppose this fictitious world to be real. How would our language adapt itself to it? It might be done in two different ways which are of interest for our problem.

Proposition P would be false. As regards Q, there would be two possibilities. The first is to maintain that its meaning is still to be the same as that of P. In this case Q would be false and could be replaced by the true proposition,

‘I can feel somebody else’s pain as well as my own.’ (R)

R would state the empirical fact (which for the moment we suppose to be true) that the datum ‘pain’ occurs not only when M is hurt, but also when some injury is inflicted upon some other body, say, the body ‘O’.

If we express the supposed state of affairs by the proposition R, there will evidently be no temptation and no pretext to make any ‘solipsistic’ statement. *My* body—which in this case could mean nothing but ‘body M’—would still be unique in that it would always appear in a particular perspective (with invisible back, etc.), but it would no longer be unique as being the only body upon whose state depended the properties of all other data. And it was only this latter characteristic which gave rise to the ego-centric view. The philosophic doubt concerning the ‘reality of the external world’ arose from the consideration that I had no knowledge of that world except by perception, *i.e.*, by means of the sensitive organs of *my* body. If this is no longer true, if the data depend also on other bodies O (which differ from M in certain empirical respects, but not in *principle*), then there will be no more justification in calling the data ‘*my* own’; other individuals O will have the same right to be regarded as owners or proprietors of the data. The sceptic was afraid that other bodies O might be nothing but images owned by the ‘mind’ belonging to the body M, because everything seemed to depend on the state of the latter; but under the circumstances described there exists

perfect symmetry between O and M; the egocentric predicament has disappeared.

You will perhaps call my attention to the fact that the circumstances we have been describing are fictitious, that they do not occur in our real world, so that in this world, unfortunately, the egocentric predicament holds its sway. I answer that I wish to base my argument only on the fact that the difference between the two words is merely empirical, *i.e.*, proposition P just happens to be true in the actual world as far as our experience goes. It does not even seem to be incompatible with the known laws of nature; the probability which these laws give to the falsity of P is not zero.

Now if we still agree that proposition Q is to be regarded as identical with P (which means that 'my' is to be defined as referring to M), the word 'can' in Q will still indicate *empirical* possibility. Consequently, if a philosopher tried to use Q as the basis of a kind of solipsism, he would have to be prepared to see his whole construction falsified by some future experience. But this is exactly what the true solipsist *refuses* to do. He contends that no experience whatever could possibly contradict him, because it would always necessarily have the peculiar for-me character, which may be described by the 'egocentric predicament'. In other words, he is well aware that solipsism cannot be based on Q as long as Q is, by definition, nothing but another way of expressing P. As a matter of fact, the solipsist who makes the statement Q attaches a different meaning to the same words; he does not wish merely to assert P, but he intends to say something entirely different. The difference lies in the word 'my'. He does not want to define the personal pronoun by reference to the body M, but uses it in a much more general way. What meaning does he give to the sentence Q?

Let us examine this *second* interpretation which may be given to Q.

The idealist or solipsist who says, 'I can feel only my own pain', or, more generally, 'I can be aware only of the data of my own consciousness', believes that he is uttering a necessary, self-evident truth which no possible experience can force him to sacrifice. He will have to admit the possibility of circumstances such as those we

described for our fictitious world; but, he will say, even if I feel pain every time when another body O is hurt, I shall never say, 'I feel O's pain', but always, 'My pain is in O's body'.

We cannot declare this statement of the idealist to be *false*; it is just a different way of adapting our language to the imagined new circumstances, and the rules of language are, in principle, arbitrary. But, of course, some uses of our words may recommend themselves as practical and well adapted; others may be condemned as misleading. Let us examine the idealist's attitude from this point of view.

He rejects our proposition R and replaces it by the other one:

'I can feel pain in other bodies as well as in my own.' (S)

He wants to insist that any pain I feel must be called *my* pain, no matter where it is felt, and in order to assert this he says:

'I *can* feel only *my* pain.' (T)

Sentence T is, as far as the words are concerned, the same as Q. I have used slightly different signs by having the words 'can' and 'my' printed in italics, in order to indicate that, when used by the solipsist, these two words have a signification which is different from the signification they had in Q when we interpreted Q as meaning the same as P. In T 'my pain' no longer means 'pain in body M', because, according to the solipsist's explanation, 'my pain' may also be in another body O; so we must ask: what does the pronoun 'my' signify here?

It is easy to see that it does not signify *anything*; it is a superfluous word which may just as well be omitted. 'I feel pain' and 'I feel my pain' are, according to the solipsist's definition, to have identical meaning; the word 'my', therefore, has no function in the sentence. If he says, 'The pain which I feel is my pain', he is uttering a mere tautology, because he has declared that whatever the empirical circumstances may be, he will never allow the pronouns 'your' or 'his' to be used in connection with 'I feel pain', but always the pronoun 'my'. This stipulation, being independent of empirical facts, is a logical rule, and if it is followed, T becomes a tautology; the word 'can' in T (together with 'only') does not denote empirical impossibility, but *logical* impossibility. In other words it would not be false, it would be *nonsense* (grammatically forbidden) to say 'I can feel somebody else's pain'. A tautology,

being the negation of nonsense, is itself devoid of meaning in the sense that it does not assert anything, but merely indicates a rule concerning the use of words.

We infer that T, which is the second interpretation of Q, adopted by the solipsist and forming the basis of his argument, is strictly meaningless. It does not say anything at all, does not express any interpretation of the world or view about the world; it just introduces a strange way of speaking, a clumsy kind of language, which attaches the index 'my' (or 'content of my consciousness') to everything without exception. Solipsism is nonsense, because its starting-point, the egocentric predicament, is meaningless.

The words 'I' and 'my', if we use them according to the solipsist's prescription, are absolutely empty, mere adornments of speech. There would be no difference of meaning between the three expressions, 'I feel my pain'; 'I feel pain'; and 'there is pain'. Lichtenberg, the wonderful eighteenth-century physicist and philosopher, declared that Descartes had no right to start his philosophy with the proposition 'I think', instead of saying 'it thinks'. Just as there would be no sense in speaking of a white horse unless it were logically possible that a horse might *not* be white, so no sentence containing the words 'I' or 'my' would be meaningful unless we could replace them by 'he' or 'his' without speaking nonsense. But such a substitution is impossible in a sentence that would seem to express the egocentric predicament or the solipsistic philosophy.

R and S are not different explanations or interpretations of a certain state of affairs which we have described, but simply verbally different formulations of this description. It is of fundamental importance to see that R and S are not two propositions, but one and the same proposition in two different languages. The solipsist, by rejecting the language of R and insisting upon the language of S, has adopted a terminology which makes Q tautological, transforms it into T. Thus he has made it impossible to verify or falsify his own statements; he himself has deprived them of meaning. By refusing to avail himself of the opportunities (which we showed him) to make the statement 'I can feel somebody else's pain' meaningful, he has at the same time lost the

opportunity of giving meaning to the sentence 'I can feel only my own pain'.

The pronoun 'my' indicates *possession*; we cannot speak of the 'owner' of a pain—or any other datum—except in cases where the word 'my' can be used meaningfully, *i.e.*, where by substituting 'his' or 'your' we would get the description of a possible state of affairs. This condition is fulfilled if 'my' is defined as referring to the body M, and it would also be fulfilled if I agree to call 'my body' any body in which I can feel pain. In our actual world these two definitions apply to one and the same body, but that is an empirical fact which might be different. If the two definitions did not coincide and if we adopted the second one we should need a new word to distinguish the body M from other bodies in which I might have sensations; the word 'my' would have meaning in a sentence of the form 'A is one of my bodies, but B is not', but it would be meaningless in the statement 'I can feel pain only in my bodies', for this would be a mere tautology.

The grammar of the word 'owner' is similar to that of the word 'my': it makes sense only where it is logically possible for a thing to *change* its owner, *i.e.*, where the relation between the owner and the owned object is empirical, not logical ('external', not 'internal'). Thus one could say 'Body M is the owner of this pain', or 'that pain is owned by the bodies M and O'. The second proposition can, perhaps, never be truthfully asserted in our actual world (although I cannot see that it would be incompatible with the laws of nature), but both of them would make sense. Their meaning would be to express certain relations of dependence between the pain and the state of certain bodies, and the existence of such a relation could easily be tested.

The solipsist refuses to use the word 'owner' in this sensible way. He knows that many properties of the data do not depend at all upon any states of human bodies, *viz.*, all those regularities of their behavior that can be expressed by 'physical laws'; he knows, therefore, that it would be wrong to say 'my body is the owner of everything', and so he speaks of a 'self', or 'ego', or 'consciousness', and declares this to be the owner of everything. (The idealist, by the way, makes the same mistake when he asserts that we know nothing but 'appearances'.) This is nonsense because

the word 'owner', when used in this way, has lost its meaning. The solipsistic assertion cannot be verified or falsified, it will be true by definition, whatever the facts may be; it simply consists in the verbal prescription to add the phrase 'owned by Me' to the names of all objects, etc.

Thus we see that unless we choose to call our body the owner or bearer of the data—which seems to be a rather misleading expression—we have to say that the data *have no owner* or bearer. This neutrality of experience—as against the subjectivity claimed for it by the idealist—is one of the most fundamental points of true positivism. The sentence 'All experience is first-person experience' will either mean the simple empirical fact that all data are in certain respects dependent on the state of the nervous system of my body M, or it will be meaningless. Before this physiological fact is discovered, experience is not 'my' experience at all, it is self-sufficient and does not 'belong' to anybody. The proposition 'The ego is the centre of the world' may be regarded as an expression of the same fact, and has meaning only if it refers to the body. The concept of 'ego' is a construction put upon the same fact, and we could easily imagine a world in which this concept would not have been formed, where there would be no idea of an insurmountable barrier between what is inside the Me and what is outside of it. It would be a world in which occurrences like those corresponding to proposition R and similar ones were the rule, and in which the facts of 'memory' were not so pronounced as they are in our actual world. Under those circumstances we should not be tempted to fall into the 'egocentric predicament', but the sentence which tries to express such a predicament would be meaningless under *any* circumstances.

* * *

After our last remarks it will be easy to deal with the so-called problem concerning the existence of the external world. If, with Professor Lewis (143), we formulate the 'realistic' hypothesis by asserting, "If all minds should disappear from the universe, the stars would still go on in their courses", we must admit the impossibility of verifying it, but the impossibility is merely *empirical*. And the empirical circumstances are such that we have every

reason to believe the hypothesis to be true. We are as sure of it as of the best founded physical laws that science has discovered.

As a matter of fact, we have already pointed out that there are certain regularities in the world which experience shows to be entirely independent of what happens to human beings on the earth. The laws of motion of the celestial bodies are formulated entirely without reference to any human bodies, and *this is the reason* why we are justified in maintaining that they will go on in their courses after mankind has vanished from the earth. Experience shows no connection between the two kinds of events. We observe that the course of the stars is no more changed by the death of human beings than, say, by the eruption of a volcano, or by a change of government in China. Why should we suppose that there would be any difference if all living beings on our planet, or indeed everywhere in the universe, were extinguished? There can be no doubt that on the strength of empirical evidence the existence of living beings is no necessary condition for the existence of the rest of the world.

The question 'Will the world go on existing after I am dead?' has no meaning unless it is interpreted as asking 'Does the existence of the stars etc. depend upon the life or death of a human being?', and this question is answered in the negative by experience. The mistake of the solipsist or idealist consists in rejecting this empirical interpretation and looking for some metaphysical issue behind it; but all their efforts to construct a new sense of the question end only in depriving it of its old one.

It will be noticed that I have taken the liberty of substituting the phrase 'if all living beings disappeared from the universe' for the phrase 'if all *minds* disappeared from the universe'. I hope it will not be thought that I have changed the meaning of the issue by this substitution. I have avoided the word 'mind' because I take it to signify the same as the words 'ego' or 'consciousness', which we have found to be so dark and dangerous. By living beings I meant beings capable of perception, and the concept of perception had been defined only by reference to living *bodies*, to physical organs. Thus I was justified in substituting 'death of living beings' for 'disappearance of minds'. But the arguments hold for any empirical definition one may choose to give for 'mind'. I need only

point out that, according to experience, the motion of the stars etc. is quite independent of all 'mental' phenomena such as feeling joy or sorrow, meditating, dreaming, etc.; and we may infer that the course of the stars would not be affected if those phenomena should cease to exist.

But is it true that this inference could be verified by experience? Empirically it seems to be impossible, but we know that only logical possibility of verification is required. And verification without a 'mind' is logically possible on account of the 'neutral', impersonal character of experience on which we have insisted. Primitive experience, mere existence of ordered data, does not presuppose a 'subject', or 'ego', or 'Me', or 'mind'; it can take place without any of the facts which lead to the formation of those concepts; it is not an experience of anybody. It is not difficult to imagine a universe without plants and animals and human bodies (including the body M), and without the mental phenomena just referred to: it would certainly be a 'world without minds' (for what else could deserve this name?), but the laws of nature might be exactly the same as in our actual world. We could describe this universe in terms of our actual experience (we would only have to leave out all terms referring to human bodies and emotions); and that is sufficient to speak of it as a world of possible experience.

The last considerations may serve as an example of one of the main theses of true positivism: that the naïve representation of the world, as the man in the street sees it, is perfectly correct; and that the solution of the great philosophical issues consists in returning to this original world-view, after having shown that the troublesome problems arose only from an inadequate description of the world by means of a faulty language.

* * *

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