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LOGICAL POSITIVISM AND ANALYSIS

By L. SUSAN STEBBING

Read March 22, 1933

'PHILOSOPHY', said Mr. Wisdom in a provocative footnote in *Mind*,[1] 'is concerned with the analysis of facts—a doctrine which Wittgenstein has lately preached and Moore long practised.' Although Mr. Wisdom's antithesis between 'preaching' and 'practice' is not very pleasantly phrased, yet it has some appropriateness. Wittgenstein has said much about the nature of philosophy, but he appears to have left to others the task of working out the consequences of this conception. Moore, on the other hand, can scarcely be said to have stated explicitly his conception of philosophy, but he has shown in the clearest possible manner what he conceives to be the nature of those problems with which a philosopher is concerned. This he has done by stating clearly, in the case of each problem with which he has dealt, *what* exactly the problem is, and *how* exactly he proposes to deal with it. This, it must be admitted, is a virtue rare among philosophers.[2]

I must make clear at the outset that in speaking of Moore's philosophical work I am referring to his published writings. It is not possible for me to determine whether—and, if so, to what extent—he has of late changed his views. Nor can I be sure that I have always rightly interpreted his statements, although I should like to believe that I have not gravely misrepresented his views. For my knowledge of Wittgenstein's doctrine I am forced to rely mainly upon the

[1] April 1931, p. 195 n.

[2] Many of us who know something about Prof. Moore's work may, indeed, be said to have been shown by him *how* philosophical problems should be tackled, however little we may be able to follow his example.

writings of the group of philosophers, sometimes referred to as 'der Wiener Kreis', who appear to have devoted themselves to working out the consequences of his view concerning the nature of philosophy. Wittgenstein's one published work, the *Tractatus Logico-Philosophicus*, is excessively condensed and, no doubt deliberately, oracular. Few who have no other knowledge of his views are likely to understand the cryptic statements in the *Tractatus*. It seems, however, that in lectures and conversations Wittgenstein has made a less cryptic statement of his views. These views have been reported by various members of the Vienna group; I refer especially to Moritz Schlick, Rudolf Carnap, Friedrich Waismann, and Otto Neurath. Notwithstanding divergences in detail, these philosophers hold in common a theory which has come to be described as 'Logical Positivism'.[1] So far as I know this description was not chosen by members of the group. Schlick prefers the description 'konsequenter Empiricismus'.[2] Nevertheless, the former description is not inept, since the Logical Positivists combine the repudiation of metaphysics—in the sense in which Auguste Comte[3] used the word—with a thoroughgoing acceptance of the logical theory of Frege, Peano, Whitehead, and Russell, as developed by Wittgenstein. This 'new logic', as Carnap calls it,[4] enables them to avoid the difficulties encountered by the empiricism of Comte, J. S. Mill,

[1] It is also described as 'Logistischer Positivismus'. See a book with this title by Äke Petzäll. He quotes the following interesting statement, from a manifesto published by 'the circle' in 1929: 'Dieser Kreis hat keine feste Organisation, er besteht aus Menschen gleicher wissenschaftlicher Grundeinstellung, der Einzelne bemüht sich um Eingliederung, jeder schiebt das Verbindende in den Vordergrund, keiner will durch Besonderheit den Zusammenhang stören. In vielem kann der eine den anderen vertreten, die Arbeit des einen kann durch den anderen weitergeführt werden' (loc. cit., p. 5).

[2] *Erkenntnis*, Band III, Heft 1, 'Positivismus und Realismus', p. 30.

[3] Carnap definitely claims Comte as the Founder of the movement (see Band II, Heft 5–6, p. 461).

[4] *Erkenntnis*, Band I, Heft 1.

and Mach, who strove to treat logic and mathematics as empirical, inductive studies. I shall point out later that this new logic has a still more important part to play as a formative influence upon the theory of the Logical Positivists. Certainly Logical Positivism may be regarded as in no small measure due to the inspiration of Wittgenstein. It is this theory which I shall mainly consider in relation to the philosophical practice of Moore.

It would not, I think, be surprising if Wittgenstein's theory were in accord with the practice of Moore. There can be no doubt that Wittgenstein has been profoundly influenced by Bertrand Russell, whilst the interaction between the views of Moore and Russell must be evident to any one who studies their writings in chronological order. Such a study would be well worth while for the light it would throw upon the present position of what has, somewhat unfortunately, come to be called 'the Cambridge school of philosophy'. This study obviously lies outside the scope of this lecture. It is, however, important to bear in mind the various strands which have contributed to the development of Logical Positivism. Moore and the Logical Positivists, including Wittgenstein, agree in rejecting certain traditional, and still not uncommon views, concerning the nature of philosophy.[1] This point of agreement is, in my opinion, of considerable importance and full of hope for the future development of philosophy. I think, however, that it is misleadingly described as agreement in the view that 'philosophy is concerned with the analysis of facts'. Even if Moore and Wittgenstein both accepted this statement it would not follow that they agreed with regard to what is

[1] With this rejection I also agree. The views rejected are those which hold that philosophy is concerned with 'the ultimate nature of reality'. But in this phrase "ultimate" stands for nothing. I have considered elsewhere the grounds on which this view must be rejected, and have pointed out that the consequence of this rejection involves the denial of the possibility of deductive metaphysics. (See *Proc. Arist. Soc.*, N.S., xxxiii, pp. 65–70.)

meant by 'analysis' nor with what is meant by 'fact'. Accordingly, there seems to me room for doubt whether the doctrine 'lately preached' by Wittgenstein is the same as the doctrine 'long practised' by Moore. My purpose in this lecture is to inquire to what extent there is a divergence between these and to ask how fundamental this divergence is. First, I shall inquire in what sense exactly Moore may be said to hold, or to have held, that philosophy is concerned with the analysis of facts. Secondly, I shall consider the theory of Logical Positivism, and shall ask what use it makes of analysis. I shall suggest that this use departs, in certain respects, from the practice of Moore. Thirdly, I shall attempt to indicate that this departure reveals a certain weakness in the theory of Logical Positivism. I shall conclude with a brief statement of what seems to me to be the nature and importance of analysis in philosophical inquiry.

A certain attitude to philosophical problems and a certain method of dealing with them are characteristic of Moore's philosophical practice. This attitude he has consistently maintained notwithstanding important changes in his views with regard to various questions. In my opinion one of Moore's great contributions to philosophy is his insistence that philosophers must begin by accepting as *true* certain commonsense statements which we should all—when we are not supposed to be engaged in philosophy—*unhesitatingly* admit to be true. In other words, Moore has insisted that it is not the business of the philosopher to deny the truth of a commonsense statement, which would 'ordinarily' be said to be 'true', on the ground that there is some *not* ordinary sense in which it is not true, or on the ground that its truth has not been established. On the contrary, the business of the philosopher is to *analyse* these true statements. Moore has consistently maintained three important positions. First, he holds that 'at different moments in our lives we know a great many different empirical facts'.[1] To say this is equivalent to saying that at various moments in

[1] *Aristotelian Society: Supplementary Volume*, ix, p. 22.

our lives we are in a position to assert with regard to a certain proposition that we *know* this proposition to be *true*. For example, at the present moment I *know* that *I am now speaking* is true; you each of you know a fact which you could each of you express by saying 'I know that *I am now sitting on a chair* is true'.[1] Secondly, Moore holds that with regard to many such propositions there are expressions in ordinary usage which unambiguously express these propositions which we know to be true. A proposition is unambiguously expressed when what is said is *understood*.[2] Thirdly, Moore holds that *to understand an expression* is not equivalent to being able *to give a correct analysis* of its meaning.[3] He has pointed out that the failure to see that these are *not* equivalent has been responsible for a good many mistakes with regard to the nature of philosophical problems and with regard to their possible solution. Moore has vigorously protested against the view that the answer to such a question as 'Do you believe that the earth has existed for many years past?' cannot be a plain 'Yes' or 'No', but must depend upon what is meant by the words "the earth" and "exists" and "years". The passage in which this answer occurs will be familiar to every one. It was published in 1925. Twenty years previously Moore had begun to see how important it is to distinguish the question whether we *know* that a given proposition is true from the question whether we are able *correctly to analyse it*, although he did not then make the distinction as clear as he has subsequently. Nevertheless, his earlier statement brings out clearly enough what I have called 'one of Moore's greatest contributions to philosophy'; it also indicates the method

[1] It will be remembered that this lecture was spoken to an audience of people, who were sitting on chairs.

[2] See *Contemporary British Philosophy*, Series II, p. 198.

[3] An *unambiguous expression* is not equivalent to a *perfectly clear expression*, since we may understand more or less clearly. It is important not to confuse *ambiguity, vagueness, unclearness*; these three are quite different, and mutually independent.

which, I believe, he has consistently followed. I shall accordingly quote the passage in full.

Taking as an example the proposition *Hens lay eggs*, Moore said: 'I am willing to allow the possibility that, as some Idealists would say, the proposition "Hens lay eggs" is false, unless we mean by it: A certain kind of collection of spirits or monads sometimes has a certain intelligible relation to another kind of collection of spirits or monads. I am willing to allow the possibility that, as Reid and some scientists would say, the proposition "Hens lay eggs" is false, if we mean by it anything more than that: Certain configurations of invisible material particles sometimes have a certain spatio-temporal relation to another kind of configuration of invisible material particles. Or again, I am willing to allow, with certain other philosophers, that we must, if it is to be true, interpret this proposition as meaning that certain kinds of sensations have to other kinds a relation which may be expressed by saying that the one kind of sensations "lay" the other kind. Or again, as other philosophers say, the proposition "Hens lay eggs" may possibly mean: Certain sensations of mine *would*, under certain conditions, have to certain other sensations of mine a relation which may be expressed by saying that the one set would "lay" the other set. But whatever the proposition "Hens eggs are generally laid by hens" may *mean*, most philosophers would, I think, allow that, in some sense or other, this proposition was true.'[1]

Were Moore to rewrite this passage to-day he would no doubt phrase it differently. Yet, as it stands, it brings out with sufficient clearness the point I wish to stress, namely, that we may know with regard to a certain proposition that it is *true* although we do not know its analysis. This contention is important. It suggests that it is futile for philosophers to dispute the truth of commonsense statements merely on the ground that the analysis of these statements cannot be

[1] *Proc. Arist. Soc.*, 1905–6: 'The Nature and Reality of Objects of Perception.' Republished in *Philosophical Studies*, see pp. 64–5.

given, or on the ground that if an analysis were given, it would be shocking to common sense. Moore, in the passage I have quoted, admits the possibility of four different views with regard to the analysis of "Hens lay eggs", whilst insisting that the question which, if any, of them is correct is entirely independent of the question whether we can *know* that hens do lay eggs.

I prefer to use somewhat different language from that used by Moore in either of the papers to which I have referred. Where he, in his later and clearer statement, speaks of 'understanding *the meaning of a proposition*' I prefer to speak of 'understanding a *sentence*'. Where he speaks of 'knowing what a proposition *means*, in the sense of being able *to give a correct analysis* of its meaning' I prefer to speak of 'knowing *the analysis of a sentence*'. I wish to avoid the word "meaning" on account of its ambiguity. I wish to avoid, as far as possible, using the word "proposition", because I believe that what we analyse are *expressions*, of which sentences are one kind; and that when we analyse a sentence expressing a proposition what we obtain is not *another proposition* but *another expression*. Using the language which seems to me clearer I can now restate what I believe to be Moore's contribution to the problem concerning the nature of philosophy. He has shown that the chief task of philosophy is to discover the correct analysis of expressions which every one would agree are sometimes used to say what is true. This problem may be expressed in the form: *What is it I am knowing (or judging) when I know (or judge) so-and-so to be such-and-such?* Since the 'so-and-so' and the 'such-and-such' in this formulation can be replaced by anything which makes sense, it will be seen that there are no significant statements which are insusceptible of philosophical treatment. If it be correct to describe the problem, formulated above, as the problem of the analysis of facts, then I think it is true to say that Moore's philosophical practice is concerned with the analysis of facts. Certainly he would repudiate the view that philosophy is concerned

to justify our commonsense beliefs. Either they cannot be justified, I should contend, or their justification falls within the scope of commonsense knowledge or of one or other of the special sciences. Some of our beliefs, indeed, stand in no need of justification; for example, my belief that I am now speaking. It does not require justification since I *know* it to be true. What the philosopher has to do is not to justify our beliefs, but to make them *clear*.

My last remark will probably have reminded those familiar with the work of Wittgenstein of one of his most famous statements. It is so important in this connexion that I shall quote it in full. He says: 'The object of philosophy is the logical clarification of thought. Philosophy is not a theory but an activity. A philosophical work consists essentially of elucidations. The result of philosophy is not a number of "philosophical propositions", but to make propositions clear. Philosophy should make clear and delimit sharply the thoughts which otherwise are, as it were, opaque and blurred.'[1] There is undoubtedly some agreement between this statement and the practice of Moore. But it is important to ask what Wittgenstein means by 'the clarification of thought', how this clarification is to be achieved, and in what sense philosophy is said to be an *activity*. Wittgenstein has himself to some extent answered the first two of these questions. The question in what sense philosophy is an *activity* has been explicitly answered by Schlick. I shall for the moment postpone its consideration.

If I do not misunderstand Wittgenstein, he maintains that to clarify our thought we must understand the logic of our language. This understanding is achieved when we have discerned the principles of symbolism, and can thus answer the question *how* it is that sentences *mean*. He states that the purpose of his book is to 'draw a limit to thinking, or rather—not to thinking, but to the expression of thoughts'. This limit can, he says, 'only be drawn in language and what lies on the other side of the limit will be simply

[1] *Tractatus Logico-Philosophicus*, 4·112.

nonsense'.[1] He is thus concerned to lay down certain principles in accordance with which language can be so used as to construct significant propositions. I have not time to give a detailed statement of the way in which Wittgenstein attempts to achieve this aim. I am more concerned to consider the consequences—drawn by the Logical Positivists—from one of his principles, which I shall call the *principle of verifiability*, which is, at most, only hinted at in his book. Accordingly the following brief statement of Wittgenstein's more important doctrines must suffice.

Wittgenstein seems to distinguish three kinds of sentences: (1) meaningless, or nonsensical, sentences; (2) tautologies and contradictions; (3) significant sentences. The word "sentence" is here used in the widest possible sense to cover all arrangements of objects which, in accordance with some convention, can be so used as to convey information about arrangements of other objects. What I am calling a sentence Wittgenstein calls a *Satzzeichen* (propositional sign).[2] His usage of the words "proposition" and "propositional sign" is far from consistent, but it is at least clear that the propositional sign is *the fact* that the words have a certain syntactical form.[3] I think that Wittgenstein wishes to maintain that, for a set of words to constitute a sentence, these words, thus arranged, must be *used* to express a thought. What is thus expressed is a proposition. Propositions assert that a certain state of affairs (*Sachlage*) is the case, although it might quite well not have been the case. Indeed, some propositions are *false*. Significant propositions

[1] Ibid. *Preface.* [2] See ibid., 3·12.

[3] Ibid. 3·14. The difference between a *propositional sign*, a *proposition*, and a *significant proposition*, is indicated in 3·13. So far as I can discover *the proposition* is *the propositional sign as used by a thinker* to express his thoughts (cf. 3·22). *The significant proposition* is the *proposition as used to refer to a definite state of affairs.* The *proposition* must be distinguished from a *sentence* used to express it, since the same proposition can be expressed in different languages; it must also be distinguished from *the fact* to which a true proposition is sometimes said to correspond, since we can think about a proposition independently of its truth or falsity.

say something about the world, they exclude some possible states of affairs, whilst allowing some other state of affairs. For example, 'There is a table in this room', or 'Franklin Roosevelt is President of the United States now'.[1] Tautologies and contradictions, however, are not significant because they *say nothing* about the world. For tautologies agree with all the possibilities, whilst contradictions agree with none of them. Obviously, if I say 'There is a table here or there is not a table here', I have said nothing about what is here; I have given no information. Likewise, if I say 'There is a table here and there is not a table here' I have told you nothing; I have excluded no possible state of affairs. No one, I think, would be likely to deny this contention. What is important about Wittgenstein's treatment of tautologies is his claim that all the propositions of logic and mathematics are tautological, so that whenever the propositions *p* and *q* are mutually deducible they say the same, and are thus not two different propositions.[2] It must be granted that tautologies and contradictions are to be sharply distinguished from significant propositions, but it is misleading to say that they are nonsensical. A nonsensical sentence may, from the point of view of logic, be regarded as not a sentence at all but as a mere juxtaposition of words; it may, however, be regarded as a sentence in the grammatical sense provided that it does not violate the rules of grammatical syntax. Perhaps

> 'Twas brillig, and the slithy toves
>   Did gyre and gimble in the wabe;
> All mimsy were the borogroves,
>   And the mome raths outgrabe,

may be taken as an example, in spite of Humpty Dumpty's explanation. We should all probably agree that 'Is blue more identical than music?' does not ask a question at all,

[1] Such significant propositions as these Wittgenstein would now, I understand, call 'hypotheses'.

[2] Herein, according to Wittgenstein, lies the nature of logical necessity.

although the words are so combined as to look like an interrogative sentence to any one who happened not to understand the word 'blue', say, or the word 'more', but did understand the other words. Now, Wittgenstein maintains that 'most propositions and questions, that have been written about philosophical matters, are not false but senseless'.[1] This point has been emphasized and illustrated by Schlick, from whom my nonsensical interrogative sentence was taken. He says, 'a careful analysis shows that this is the case with most so-called philosophical problems. They look like questions, and it is very difficult to recognize them as nonsensical, but logical analysis proves them to be merely some kind of confusion of words.'[2] In my opinion Wittgenstein has rendered a great service to philosophy in explicitly calling attention to the ease with which we mistake a nonsensical set of words for the formulation of a profound philosophical problem. Here, again, his theory is in accordance with the practice of Moore, who some years ago enlightened philosophers with regard to the senselessness of the conception of *Reality*, and showed how Bradley, for instance, by using the word 'real' had been led into talking nonsense.[3] It is assuredly the first qualification of a philosopher to be able to distinguish grammatical sentences which are nonsensical from those which are not. Nor is it so easy to make this distinction as plain men and lecturers in philosophy are apt to suppose. In my opinion, however, we also stand in need of some kind of classification of different *sorts* of nonsense. Wittgenstein, I gather,[4] distinguishes between important and unimportant nonsense, but how precisely he would draw the distinction I do not

[1] Op. cit., 4·003.

[2] *College of the Pacific, Publications in Philosophy*, vol. i, p. 59.

[3] See *Philosophical Studies*, pp. 218–19.

[4] For this point I am indebted to Mr. R. B. Braithwaite, who has kindly let me read, in proof, an account of Wittgenstein's views, which he has given in an article shortly to be published. See *Cambridge University Studies*.

know. It might not be difficult to hazard a guess, but to do so would take me longer than time permits. I must proceed to consider how Wittgenstein proposes to discover whether what *seems* to be a proposition or a question has sense, or not. In the *Tractatus* he merely asserts that the senseless 'questions and propositions of the philosophers result from the fact that we do not understand the logic of our language'.[1] But in his lectures he appears to have answered more fully the question under what conditions a proposition has sense. This answer I shall take from the writings of the Logical Positivists.

In an important article on *Logische Analyse des Wahrscheinlichkeitsbegriffs*, Waismann says: 'Eine Aussage beschreibt einen Sachverhalt. Der Sachverhalt besteht oder er besteht nicht. Ein Mittelding gibt es nicht, und daher gibt es auch keinen Uebergang zwischen wahr und falsch. Kann auf keine Weise angegeben werden, wann ein Satz wahr ist, so hat der Satz überhaupt keinen Sinn; denn der Sinn des Satzes ist die Methode seiner Verifikation. In der Tat, wer einen Satz ausspricht, der muss wissen, unter welchen Bedingungen er den Satz wahr oder falsch nennt; vermag er das nicht anzugeben, so weiss er auch nicht, was er gesagt hat. Eine Aussage, die nicht endgültig verifiziert werden kann, ist überhaupt nicht verifizierbar; sie entbehrt eben jeden Sinn.'[2] In this statement Waismann supplies also the answer to the problem whether a question has sense, i.e. is properly a question and not merely a grammatical arrangement of words. A question has sense when it is *in principle* answerable. A question which is unanswerable in principle is not properly a question at all; it is a pseudo-question, i.e. a meaningless interrogative sentence. A distinction must be drawn between those questions which are *in principle* (*grundsätzlich*) unanswerable, and those which only happen to be unanswerable owing to our technical limitations or to lack of determinate information. For example, the question: 'Are there mountains on the other

[1] Loc. cit., 4·003.   [2] *Erkenntnis*, Band IX, Heft 2–4, p. 229.

side of the moon?' is not in fact answerable because we happen not to be able to observe the other side of the moon. Similarly, I cannot answer the question: 'What is King George V doing *now*?' because I happen not to know. But I could imagine the *sort* of answer which might be given, and which would be true, or false. A question is, then, *unanswerable in principle* if we could not understand any proposition offered as an answer to it. A question is *answerable in principle* if the proposition offered in answer can be understood. A proposition is understood only if it is verifiable; it is verifiable if, and only if, we know the conditions under which the proposition would be true, and the conditions under which it would be false.

This notion of verifiability is of the greatest importance for the understanding of the distinctive tenets of Logical Positivism. I shall, therefore, quote another statement of Wittgenstein's principle of verifiability. Schlick has reported Wittgenstein as follows: 'In order to understand a proposition we must be able exactly to indicate those particular circumstances that would make it true and those other particular circumstances that would make it false. "Circumstances" means facts of experience; and so experience decides about the truth or falsity of propositions, experience "verifies" propositions, and therefore the criterion of the solubility of a problem is its reducibility to possible experience.'[1] As thus stated by Schlick and by Waismann, the principle of verifiability seems innocuous enough. So much the Logical Positivists might have learnt from Moore, or even from Hume. But their interpretation of *verifiability* depends upon another important strand in their theory, namely, the 'new logic' of Russell and Wittgenstein. This theory of logic has turned their attention to symbolism, i.e. to problems of the structure of language and to the possibility of constructing deductive systems.

[1] *College of the Pacific, Publications*, vol. i, p. 114. Cf. also Carnap, *Der logische Aufbau der Welt*, § 180; *Scheinprobleme in der Philosophie*, p. 27; Schlick, 'Positivismus und Realismus', p. 29 (*Erkenntnis*, 1932).

Both these points are important. I shall consider first the problem of language, returning later to the consideration of the use made by the Logical Positivists, especially Carnap, of constructed deductive systems.

Language is to be understood as any means of communication; it is not directly presentative or pictorial, for language does not *present* what it is used to say, but *communicates* it. Knowledge consists in communicability. The Logical Positivists insist upon the importance of the distinction between *Erkenntnis* (knowledge proper) and *Erlebnis* (direct experience)—which they take to be equivalent to Russell's distinction between 'knowledge by description' and 'acquaintance'.[1] Knowledge, i.e. the communicable, is concerned with structure: acquaintance, i.e. direct experience, is concerned with content (*Inhalt*). Content cannot be communicated; it is directly given; it can at best only be pointed to. For example. Here is a piece of green blotting paper. You can *see* the shade of green presented to you. But I could not *communicate* its shade to you. I might make efforts to *describe* this shade by recalling to you some other green patch which you have seen. But this description could only give what the Logical Positivists call 'structure'; it could only communicate the place of this shade within a comprehensive system of shades of colour, and finally, its place in the spectrum. If you were blind you would not know what is this shade of green which I seek to communicate to you by description. Since you are *not* blind, you now see the content *green*. Suppose we met to-morrow and I wished to remind you of this *green*. I might try to do so in either of two ways. I might produce this same piece of blotting paper. Even then I should not have *expressed*, i.e. *communicated*, content. This, for two reasons. First, I should *present* content, not communicate it; secondly, the shade

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[1] I am somewhat doubtful whether the Logical Positivists, in adopting Russell's terminology, are nevertheless in agreement with his view of this distinction. This, however, is a minor point. What is important are the consequences they draw from the distinction thus expressed.

might have changed. That it had not done so would be an assumption. Or, again, I might ask you to recall the shade. But, then, I should clearly only be describing this shade by reminding you of its relation to something else. Hence, *content* cannot be communicated. As Schlick put it—in a lecture given to the University of London, last November— 'The inexpressibility of content is not an accidental feature that we discover it to possess; it belongs to its very nature. We must regard it as the defining characteristic of content.'[1] According to Schlick, it is a blunder to say we *know* content, and dangerous to say we *intuit* content, since the phrase 'intuition of content' suggests that content is an object grasped by the mind. But it is nonsense to say 'I perceive content', and equally nonsense to say 'I do not perceive content', for *content* cannot in any way be brought within the context of language. It is a mistake, Schlick urges, to suppose that 'by means of a gesture our words can be linked to content'. Hence, in my opinion, we ought not even to say, as some Logical Positivists do, that we can *point* to content. You will observe that on this view most of my remarks since I began to speak about this blotting paper have been nonsensical. It is the sort of nonsense, no doubt, which it is very difficult to avoid.

From the point of view of knowledge (i.e. *Erkenntnis* as distinguished from *Erlebnis*) what the word "green" expresses is not content, but a unique set of relations to what may be called 'other qualities'. I have dwelt on this point because it seems to me to involve at least three important consequences. (1) All knowledge is recognition; if I say I know X, then I must be able to say *as what I recognize* X. (2) All knowledge is communication of structure. The word "green"—when it occurs in a sentence expressing a fact—can say nothing about *the shade*; it can only express the place of the colour in the world. Accordingly, in physics, colour is *replaced* by wave length. (3) To com-

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[1] This quotation is taken from a verbatim report of Prof. Schlick's Lectures, which I owe to the kindness of Miss Margaret MacDonald.

municate is to use language. Hence, as I have pointed out, for Logical Positivisim, the problem of knowledge resolves itself into the problem *how* language *can* be used to communicate. This is just the question: *How* do sentences *mean*? To which, from this point of view, the reply must be that sentences *mean* by conveying structure.

At this point it is important to bear in mind the other contention of the Logical Positivists, namely, that a sentence is meaningless (*sinnlos*) unless it is known under what circumstances the sentence could be used to say what is true and under what circumstances it could be used to say what is false. This is Wittgenstein's principle of verifiability: *the meaning of a proposition is the method of its verification.*[1] How could a proposition be verified if what is communicated is never content (*Inhalt*) but only structure? Clearly, verification depends upon the presence of content. Accordingly, every significant proposition which I assert says what could be verified only by my own direct experience, either present or future. Thus, though you and I use the same words[2] if I say 'This is a table', and you say 'This is a table', *what* we are referring to is not the same. That the same form of words used by two different people may not refer to the same is obviously sometimes the case. For example, if *I* say 'I have toothache', or 'I am thirsty', and *you* say 'I have toothache', or 'I am thirsty', then clearly, not only does the word 'I' have a different reference in the case of *my* saying from its reference in the case of *your* saying, but also my experienced toothache (or thirst) is *one* direct experience, your experienced toothache (or thirst) is *another* direct experience. Not only could these never be the same, but *I*

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[1] See the quotation from Waismann, p. 64 above. It seems to me that Wittgenstein may have been suggesting this principle when he wrote one of his cryptic statements in the *Tractatus*, viz: 'Im Satz wird gleichsam eine Sachlage probeweise zusammengestellt' (4·031).

[2] A full discussion of this point would require a full discussion of what we take to be 'the same words'. This is not possible now. But I do not think that type-token ambiguities raise any difficulties here.

cannot refer directly to *your* toothache (or your thirst) nor *you* to *mine*. Hence "having toothache" does not mean the same in "*I* have toothache" as in "*You* have toothache". It is characteristic of the Logical Positivists' view that cases where personal pronouns enter are not fundamentally different from such cases as my saying 'There are people here' or 'This is a table'. The meaning (*Sinn*) of the proposition I express by saying 'This is a table' *is* just how it would be verified, i.e. how it would be found true and how it would be found false. This verification must lie within my own experience.

It is to Carnap that—so far as I know—the fullest development of this view is due. What I have now to say is based mainly upon an important article of his[1] in which he seeks to maintain the thesis of the unity of science, i.e. that all the sciences are parts of one science, namely, physics. More precisely, he maintains that every scientific proposition can be expressed in the language of physics. This contention is to be established by the following considerations. Whenever I am using what would commonly be said to be an ordinary language—such as I am using in this lecture—what I am saying is either senseless or it can be transformed into a language which directly reports my own direct experience. Such a language Carnap calls 'Protokollsprache'.[2] Knowledge possessed by the scientist is based upon propositions expressed in protocol-language. Thus Carnap says: 'Wir stellen uns hierbei das Verfahren so schematisiert vor, als würden alle unsere Erlebnisse, Wahrnehmungen, aber auch Gefühle, Gedanken usw. sowohl in der Wissenschaft als auch im gewöhnlichen Leben zunächst schriftlich protokolliert, so dass die weitere Verarbeitung immer an ein Protokoll als Ausgangspunkt anknüpft. Mit dem "ursprünglichen" Protokoll ist dasjenige gemeint, das wir erhalten würden,

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[1] 'Die physikalische Sprache als Universalsprache der Wissenschaft', *Erkenntnis*, Band II, Heft 5–6. The quotations which follow are all taken from this article.

[2] I shall not try to translate this term, but I suppose it may be regarded as equivalent to 'direct-record-language'.

wenn wir Protokollaufnahme und Verarbeitung der Pro-
tokollsätze im wissenschaftlichen Verfahren scharf vonein-
ander trennen würden, also in das Protokoll keine indirekt
gewonnenen Sätze aufnehmen würden.'[1] This basic protocol
would, Carnap says, be very clumsy. As an approximation
Carnap gives the example: 'Versuchsanordnung: an den
und den Stellen sind Körper von der und der Beschaffen-
heit (z. B., "Kupferdraht"; vielleicht dürfte statt dessen nur
gesagt werden: "ein dünner, langer, brauner Körper",
während die Bestimmung "Kupfer" durch Verarbeitung
früherer Protokolle, in denen derselbe Körper auftritt,
gewonnen wird); jetzt hier Zeiger auf 5, zugleich dort
Funke und Knall, dann Ozongeruch.' Simpler examples
would be: 'boredom now', 'here-now blue', 'there red'.

At this point it is important to notice that, according to
Carnap, protocol-language can be looked at from two
different points of view—or, perhaps, it would be more
accurate to say that any language using ordinary words
can be regarded as one or other of two different modes of
speech, which Carnap calls respectively the formal mode
and the content (*inhaltliche*) mode. The formal mode speaks
of *words* and refers only to linguistic forms. The content
mode speaks of 'objects', 'states of affairs' (*Sachverhalten*),
'sense' (*Sinn*), 'content', 'meaning' (*Bedeutung*). Carnap
maintains that the use of the content mode leads to pseudo-
problems. For, as he points out, it was not strictly correct
to speak of *the* basic protocol. On the contrary, each subject,
or experient, has his *own* protocol. Thus there are as many
protocol-languages as there are experients. This, it seems
to me, follows directly from Wittgenstein's interpretation of
the principle of verifiability. If we attempt to interpret a
protocol as referring to, or indicating, content, we shall be
led into insuperable difficulties. Suppose, for instance, that
an experient, A, says a definite proposition in his own proto-
col, e.g. A says, 'I am thirsty', or better, 'Thirst—now'. If
this be interpreted in the content mode the problem arises:

[1] p. 437.

Can this state of affairs, expressed by A in his protocol-
language, be expressed in the protocol-language of another
experient, B? If so, then B, using his own protocol, speaks
of *the experience of A as experienced by B*. But the experience of
B cannot be the experience of A. On the content view,
then, what A says refers to a different state of affairs from
what B says. *No* proposition in B's protocol can express the
thirst of A; B *can* refer only to what is directly given to him-
self. It is true that we say that B can *recognize* the thirst of
A, but what B actually recognizes is only the material cir-
cumstances of A's body. This is all that B can *verify*; hence,
on this view, this is all that B can *say*. If we try to make B's
expression "the thirst of A" refer to *A's experience of thirst*,
then we are saying something that is in principle unverifi-
able. Accordingly, on the content view "A is thirsty" is,
for B, a meaningless set of words; they have no *sense*. Thus,
Carnap holds, if we insist that protocol propositions must
refer to content, then each protocol-language can be used
only *monadically*. There would be no intersubjective protocol-
language. But we do manage to communicate. You do
manage to understand me when I say 'I am thirsty', or
when I say, 'This is a table'. How, then, is this possible,
since your direct experience and my direct experience do
not overlap, have nothing in common? How *can* we
communicate?

Carnap maintains that such difficulties disappear if we
interpret protocol-language in the formal mode, i.e. as
expressing structure, not as expressing content, as *containing
words*, not as *describing states of affairs*. We then discover, he
urges, that a protocol-language is a part of physical lan-
guage, a sub-language of the language of physics. This
language is inter-subjective and inter-sensory. It may be
called 'the physicalistic language'.[1] On the formal inter-
pretation a protocol proposition *consists* of words arranged

[1] Carnap uses the term 'physicalistic' in order to distinguish this
language from what may be called 'the language of contemporary
physics'.

in syntactical form. Carnap maintains for these words to be understood, i.e. have sense (*Sinn*), it is not necessary that the meaning (*Bedeutung*) should be given. For the meaning of a word can be given either by translation or by definition, i.e. by rules for transforming one word into another word, or set of words. Translation is a rule for transforming a word into one language into a word of another language. For example, 'mensa' is translated by 'table'. Definition is a rule of transformation within the same language. Now, it is Carnap's contention that propositions in my protocol-language can be translated into the physicalistic language; so can propositions in each of your private, protocol-languages. Conversely, physical propositions, expressed in the physicalistic language, can be translated into my protocol-language, and into each of your protocol-languages. What *cannot* happen is that my protocol proposition could be translated into your protocol-languages, nor conversely. You understand me—when you do—only because your protocols and my protocol are *all* sub-languages (*Teil-sprache*) of the universal, physicalistic language, although these various sub-languages contain nothing in common. It is difficult to see how out of a number of private languages, which do not overlap, it is possible to derive a public, i.e. inter-subjective, universal language. Yet, as Carnap admits, verification in physics is based upon protocol propositions. He attempts to get over the difficulty of making physics private by asserting that scientific verification depends not upon a singular, determinate proposition—such as 'Red here—now'—but upon a sub-system of such propositions. He says: 'wenn eine hinreichende Menge physikalischer Sätze gegeben ist, ein Satz der Protokollsprache abgeleitet werden kann'.[1] For example, a protocol proposition '*Brown now*' *seen by me* could be deduced by you from a sufficiently definite description of my body. Carnap maintains that such a deduction always takes place when in ordinary life people understand each other. Thus my pro-

[1] p. 457.

tocol-language, which never overlaps with your protocol-languages, can nevertheless be understood by you, since my protocol can be transformed into the language of physics. It is true that a proposition p, in my protocol, which only I can understand, will not seem the same to me as the proposition p' into which it is transformed in the physicalistic language. This is because p is associated by me with my own protocol, and p' with the physicalistic language. Nevertheless, if p and p' are mutually deducible, they express the same, and what they express is structure. According to the Logical Positivists, if p and p' are mutually deducible, p and p' are the *same* proposition; the difference is only in the language, i.e. in the propositional-sign. To establish the possibility that p and p' are mutually deducible, we *must* adopt the formal mode of interpreting language. So long as we persist in attempting to use the content mode, *no* proposition in my protocol could be deduced from the propositions of physics, nor conversely. Nor can you understand what I am saying now unless you interpret what I say as communicating structure. But this, according to the Logical Positivists, you *must* do. Thus, from a somewhat different point of view, Carnap enforces Wittgenstein's interpretation of the principle of verifiability.

In my opinion Carnap's discussion throws light upon one of Wittgenstein's cryptic statements in the *Tractatus*. He there says: 'What solipsism *means* (*meint*) is quite correct, only it cannot be *said*, but it shows itself. That the world is *my* world shows itself in that the limits of the language (the language which only I understand) mean the limits of *my* world' (5.62). From this statement it follows that it is nonsense to *say* 'I am a solipsist' and equally nonsense to *say* 'I am not a solipsist'. But, I gather,[1] to say 'I am a solipsist' is to say important nonsense, the kind of nonsense

[1] See article by Braithwaite, referred to above. I think, however, that it is important to take into account Wittgenstein's further statement: 'The subject does not belong to the world but it is a limit of the world' (5.632. Cf. also, 5.6331 and 5.64).

which Wittgenstein allows himself to talk. But, even if it be nonsense to *say* 'I am a solipsist', still—according to this statement of Wittgenstein's—what I thus *intend* to say (if I do say it) is true, only, in this case, I *cannot* say what I intend.

Any philosophical view which leads to the conclusion that what solipsism *means*, or *intends*, to say is quite correct is, in my opinion, obviously false. It should, however, be noticed that Wittgenstein's solipsistic conclusion (if I may be allowed to talk what Wittgenstein would call nonsense) is not based upon the usual grounds—namely, the difficulty, or the supposed difficulty, of finding *reasons* for my belief in the existence of anything except myself. It is derived entirely from a theory with regard to the way in which language may become a significant symbolism, a theory leading to what I have called Wittgenstein's interpretation of the principle of verifiability. Carnap attempts to evade the solipsistic conclusion by prefixing 'methodological' and turning the theory into the doctrine of 'physicalism'.[1] This theory permits you and me to communicate by using the physicalistic language in the formal mode. Carnap stresses the point that methodological solipsism allows no assertion that other minds *exist*, or that an external world *exists*. On the contrary, propositions *about* other minds, or *about* an external object, will be propositions conveying structure, not propositions asserting that there are other *existents*. Such propositions would have to attempt to refer to *content*; hence, they could have no equivalent in the universal, physicalistic language. The doctrines of both Carnap and Wittgenstein seem to me to suggest that Wittgenstein's statement—'What solipsism *means* is quite correct, only it cannot be *said*'—is just the reverse of what they require. For, in my opinion, methodological solipsism ought to assert: 'What solipsism *means* is NOT correct, but only solipsism *can be said*'. I do not, however, suppose for a moment that either Carnap or Wittgenstein would regard my suggestion as other than absurd.

[1] See op. cit., p. 462.

Although the intentional solipsism of Wittgenstein and the methodological solipsism of Carnap are not reached along traditional lines, they both seem to me to be open to serious criticism. I think the point of my criticism can be made clearer if I first consider Carnap's attempt to construct the world on the basis of direct experience. This attempt is contained in his important book *Der logische Aufbau der Welt*. In the brief time at my disposal I cannot give even the barest summary of his argument. I must confine attention to two points relating especially to my present discussion. First, the world is to be *logically* constructed. Secondly, Carnap takes as his motto Russell's reformulation of Occam's Razor, namely, 'The supreme maxim in scientific philosophizing is this: Whenever possible, logical constructions are to be substituted for inferred entities'. These two points are, of course, closely connected. Carnap seems to follow Russell in supposing that if I could truly say that I *know* that this is a table, my knowledge of the table would be inferential knowledge. But such inferential *knowledge* is impossible. Moreover, it is nonsense to talk of *this table* as an 'inferred entity'; hence, they conclude, it must be a logical construct of the given. In accordance with Russell's principle, Carnap attempts to show that *all* the concepts of the empirical sciences can be *constructed* by purely logical operations upon a *single* fundamental relation and the fundamental elements between which it holds. This fundamental relation is taken to be directly *given*; everything else is to be defined in terms of it. Carnap selects for the fundamental relation 'remembrance of similarity' (*Aehnlichkeitserinnerung*). The elements between which the relation holds are momentary direct experiences. On this basis, Carnap believes, it is possible to translate any empirical scientific proposition into a set of propositions involving reference only to the relational structure of the given, i.e. to the fundamental elements and the fundamental relation holding between them.

Now, it is not necessary to my point to deny that such a

construction could be achieved; hence, it is not to my purpose to inquire whether Carnap has been successful in his attempt. My criticism bears upon a quite different consideration. It is that such logically constructed systems remain essentially *abstract*. I doubt it is both interesting and important to see just *what* can be achieved by selecting the fewest possible assumptions and the fewest possible undefined terms. This is exactly what Carnap attempts in his logical construction of the world, and it is very like what Eddington has attempted in his game of world-building. Doubtless it would be possible, by a judicious selection of the fundamental relation and by a judicious choice of applicational definitions (*Zuordnungsdefinitionen*) to construct a deductive system which would be susceptible of being interpreted as the system of the world. *If we knew enough*, that is, which we can hardly be said to know at present. We do not even know that the world is a system. Certainly it does not present the appearance of one. The world of the physicist may be a system. Physicists hope it is. They like to speak of a *Weltbild*; they regard this 'world-picture' as having the coherence of a work of art. But physics could present a system only because its world-picture is essentially abstract. Thus physics ignores what does not fit in. Carnap's construction of the world ought not to be abstract. I think that the Logical Positivists fail to see the defect of their attempts at construction because they have adopted the point of view of methodological solipsism. It is by no means impossible to suppose that a theoretical, abstract system may be adequate to describe what *I* suppose to be happening to *other* minds, or to bodies. Hence, there is a temptation—to which logicians are peculiarly prone—to suppose that such a construction is adequate even in the case of my *own* experience. If nothing is *given* except direct experience, and if direct experience is *my own experience now*, then we are indeed forced to solipsism-of-the-present-moment, and I may well try to order my own experience in a system *based* upon this directly given experience, and con-

structed by means of logical operations. This procedure would accord with views expressed by Eddington and by Russell.

You will have noticed how frequently I have in the course of this lecture tacitly denied solipsism. For instance, I just now said that (under certain conditions) '*we* are forced to solipsism'. This was not a slip; it was intentional. I have the best of grounds for denying solipsism, namely, that I *know* it to be false. You, who are listening to me, and enable me to speak in the plural, *also* know it to be false.[1] I suggest that there is something wrong with a theory which, as a consequence of its fundamental principles, involves solipsism in any form. I think Carnap's methodological solipsism results from his accepting Wittgenstein's criterion of verifiability, which leads to the consequence that *tables* and *other minds* must either be inferred entities—which, I agree, is nonsense—or be logical constructs of the directly given, namely, the subject's own experience.

Wittgenstein simply takes it for granted that *the given* is, and could be, nothing but *my own direct experience*.[2] From this assumption, combined with his interpretation of the principle of verifiability, it follows that every genuine proposition says, and can say, only something about my present or my future experience. From this two queer consequences follow. (1) Every proposition which *apparently* asserts a fact with regard to the past, e.g. *Queen Anne died in 1714*, asserts a number of hypothetical facts with regard to my own future experience, e.g. that *if* I consult such and such records I shall find that certain statements have been made to the effect that a certain event happened at a certain date.[3] (2) Every proposition about a material object, e.g. *this table*, likewise asserts a number of hypothetical facts

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[1] Cf. G. E. Moore, *Cont. British Philos.*, Series II, p. 203.

[2] I suppose he would say that the phrase "My own experience" is nonsensical. But there is no other way of saying shortly what must be said. I do not wish to suggest that I own experience as I own a coat.

[3] From lack of time I cannot make this statement with sufficient precision, but the required improvements are easily made.

with regard to my future experience, e.g. that *if* I lean against this table, the table will not rise into the air, and so on. This view closely resembles Mill's theory of material things as permanent possibilities of sensation. With regard to both theories, it seems to me that an objection—once urged by Moore against Mill—is conclusive. Owing to lack of time, I must state the objection briefly, in my own words.[1] Although when I do know that I perceive this table I *also* know certain hypothetical facts of the form, *If such conditions were fulfilled I should have such and such experiences*, yet, in knowing what these conditions are I am knowing that if this, or that, *material thing* were in such and such positions, then so and so would be the case. Thus the material thing has not been reduced to my own direct experience.

In my opinion Wittgenstein's conception of *verifiability* depends upon a serious equivocation with regard to *the given*, and hence upon a muddle with regard to the notion of *direct experience* and *content*, as these are understood by the Logical Positivists. *This table* is not *an experience* of mine. Hence, in saying 'I perceive this table', I am *not* saying 'I perceive an experience of mine'. Perceiving, I should contend, is neither direct nor inferential. To suppose that these alternatives are exhaustive is a prime mistake of Logical Positivism. Perceiving is certainly *indirect*; but it is a non-inferential, indirect *knowing*.[2] Hence, in the case when I do perceive this table, *this table* is indirectly *given*. Accordingly, I see no reason for supposing that Wittgenstein is correct in supposing that every genuine proposition is a proposition about my own experience. Thus there would seem to be no justification for his view that every such proposition can only refer either to the present or to the future.

Wittgenstein's mistakes with regard to verifiability arise, I think, from an erroneous conception of the way in which

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[1] Op. cit., p. 222.

[2] This statement is excessively dogmatic, owing to the need for brevity. I have touched on this point in a paper published in *Aristotelian Society: Supplementary Volume*, ix, p. 154 seq.

the philosopher is concerned with questions of symbolism, and hence, from an unduly restricted view of the possible *kinds* of analysis and of the different *kinds* of facts which it is the business of philosophy to analyse.

There are various kinds of analysis. For my present purpose it is sufficient to refer to four different kinds, and two of these I have time barely to mention. These four kinds are: (1) analytic definition of a symbolic expression; (2) analytic clarification of a concept; (3) postulational analysis; (4) directional analysis.

(1) Under the analytic definition of symbolic expressions I have time to consider only the analysis of complete *sentences*. Let E and E' be two different complete sentences. Then "E' is an analysis of E" is to be defined as follows: "(i) E' says what E says; (ii) if '*a*' is a symbol occurring in E, then what '*a*' refers to is not less distinctly referred to in E', and there is some symbol '*b*' occurring in E' but not occurring in E".[1] Russell's analysis of "The author of *Waverley* is Scotch" would be an example of this kind of analysis; so would the analysis of a relative product into its constituent factors. It must be observed that the symbols occurring in "E'", the definiens, are being *used* but are not being *talked about*; whereas the symbols occurring in "E", the definiendum, *are being talked about*, and what is being said about the symbols constituting the definiendum is that they *mean* the definiens. Such an analysis may involve a clarification of our thoughts, because in using "E'" we may understand more clearly what we were saying when we used "E". Russell has effected such a clarification of thought in his theory of descriptions, which Ramsey calls 'that paradigm of philosophy'.

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[1] This definition could also be expressed as follows: "E and E' have the same reference, and there are more symbols in E' than in E, and these symbols more distinctly refer to what E also refers". To complete this statement it is necessary to define "more distinctly referring to". This is impossible here. (See my *A Modern Introduction to Logic*, ch. xxii, §§ 1, 4, and *Proc. Arist. Soc.*, N.S. xxxiii, pp. 83–4.)

(2) The analytic clarification of a concept differs considerably from the other three kinds of analysis I have mentioned. It consists in the elimination of elements supposed to be referred to whenever we use a symbol "S", but which are not such that these elements *must* be referred to whenever we so use a sentence containing "S" that the sentence says what is true. Examples of concepts which have been thus clarified are *mass, force, simultaneity*. The need for such analytic clarification is due to the fact that we often manage to say something which is true although in so saying we believe ourselves to be referring to what is not in fact the case, and are thus also saying something false. This happens when we understand to some extent what we are saying but do not understand clearly *exactly* what we are saying; hence, we suppose something to be essential to the truth of what we say which is, however, not essential. Certainly Newton did not clearly understand what he was referring to when he spoke of "force", but he often said what was nevertheless true when he used sentences containing "force". A striking example is provided by the concept of *simultaneity*. Before Einstein had asked the question how we determine whether two events are simultaneous, we thought we knew quite well what was meant by saying 'happening at the same time in London and New York'. Einstein has made us see that we did not know quite well what we meant; we now understand that what we thought to be essential is not so. This analytic clarification of a concept cannot be made quite tidy. It involves a change in the significance of all statements in which the concept occurs. I have not time to deal fully with this kind of analysis, but it is important for my purpose to refer to it.

(3) Postulational analysis is the kind of analysis used in the construction of a deductive system.[1] I take this kind of

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[1] In a paper on 'The Method of Analysis in Metaphysics' (*Proc. Arist. Soc.*, N.S. xxxiii) I used the phrase 'symbolic analysis' instead of 'postulational analysis', but it seems to me that the former phrase is misleading.

analysis to be familiar. It is sufficient here to remind you that postulational analysis may very well be circular, and must be systematic. Analytic definition of a symbolic expression must not be circular; analytic clarification of a concept *could* not be circular and *cannot* be systematic. The purpose of every kind of analysis is to enable us to understand something more clearly. It is important in this connexion to remember, as Ramsey has pointed out, that 'we must realize the vagueness of our whole idea of understanding, the reference it involves to a multitude of performances any of which may fail and require to be restored'.[1] Wittgenstein seems to me to forget this. Otherwise he could not have said, 'That logic is a priori consists in the fact that we *cannot* think illogically' (5·4731). In my opinion Ramsey is right in insisting that our chief danger 'apart from laziness and woolliness, is *scholasticism*, the essence of which is treating what is vague as if it were precise and trying to fit it into an exact logical category'. I want to urge that it is a grave mistake to suppose that the alternatives are *understanding*, on the one hand, and *simply not understanding*, on the other. We understand more or less clearly. In the endeavour to understand more clearly we *use* words and sentences, and then reflect upon *how* we are using them, and whether we are so using them as to say what is true, or what might have been true although it happens to be false. Such reflection is required in the case of directional analysis.[2]

(4) A directional analysis of a sentence "S" consists of a set of steps such that (i) each step results in a sentence (to be called 'a resultant') which is such that this sentence reveals more clearly the multiplicity of the fact (expressed

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[1] *Foundations of Mathematics*, p. 264. I am very much indebted to Ramsey's 'Last Papers', published in this volume. But I know that I have not always understood what he has said.

[2] In the paper already referred to, on 'The Method of Analysis in Metaphysics', I dealt with the nature of directional analysis. My treatment in that paper is very unclear, but I cannot, within the limits of this lecture, attempt to state the position more clearly.

both by "S" and by the resultant) so that the resultant shows more clearly the structure of the fact expressed; and (ii) if the analysis were completed, the *final* resultant would have the *same* multiplicity as the fact expressed by "S" and by the resultant at each step. Thus the final resultant would reveal the form, the elements, and the mode of their combination.

It seems to me that Moore's philosophical practice has often been concerned with problems of directional analysis. At least, I believe that it is from him that I have learnt what directional analysis is, and why it is important. The set of simple facts terminating a directional analysis I call *basic facts*. In my opinion the fact expressed by "This is a table" is based upon a set of basic facts, each of which is an absolutely, specific fact. If I judge truly that *this is a table*, then *this is a table* entails the set of basic facts upon which *this is a table* is based. But it is not true, conversely, that the set of basic facts entails *this is a table*. Hence, the conjunction of the set of absolutely simple sentences, each indicating a basic fact, which constitute the final resultant does not yield a complete analysis of the expression "This is a table", for an analysis must both entail and be entailed by the analysed expression. Accordingly, to complete the analysis we have to consider not only the symbols but also *how* they are *being used* in a given case. Thus we require further a theory of generality.[1]

In my opinion Logical Positivism fails in its treatment of analysis. Wittgenstein and the other Logical Positivists talk much about analysis, but they do not consider the various kinds of analysis, nor do they show in what sense philosophy is the analysis of facts. They make use of analytic definition of a symbolic expression, and of the analytic clarification

[1] It is not only lack of time but also incompetence which prevents me from completing the treatment of directional analysis by providing a theory of generality. I think some help in this problem may be afforded by Ramsey's treatment of variable hypotheticals (see op. cit., pp. 237–54).

of a concept, but they do not distinguish between them. They also employ postulational analysis. But they do not seem to understand directional analysis, and, accordingly, they fail to apprehend the need for it. In this way they depart, in my opinion, from the practice of Moore. Not only is their conception of analysis defective, but, further, their conception of the *kinds* of facts to be analysed is inadequate. They treat all facts as *linguistic facts*. Hence, they suppose that the first problem of philosophy is to determine the principles of symbolism, and *from these principles* to draw limits with regard to what we *can* think. This assumption has two important consequences. First, it leads to the view that philosophy is 'the activity of finding meaning', to quote Schlick's statement.[1] The second consequence is that they are apt to place too much reliance upon the construction of postulational systems. A few words must be said about each of these consequences.

Schlick's answer to the question in what sense Wittgenstein holds that philosophy is an activity is given in the statement I have just quoted. I do not know how far Wittgenstein would accept Schlick's development of his views, so that I confine my criticism to Schlick's treatment. He says, 'before the sciences can discover the truth or falsity of a proposition they have to get at the meaning first. And sometimes in the course of their work they are surprised to find, by the contradictory results at which they arrive, that they have been using words without a perfectly clear meaning, and then they will have to turn to the philosophical activity of clarification, and they cannot go on with the pursuit of truth before the pursuit of meaning has been successful.' I hope I am not misinterpreting what Schlick has said, but this statement suggests to me that he supposes that 'the pursuit of meaning' precedes the determination of the truth or falsity of a proposition. This is, I think, quite precisely wrong. In my opinion our procedure must be as follows. Understanding more or less unclearly

[1] Op. cit., p. 58.

what we say, we nevertheless may know that what we say is true. We then inquire what must be the case if what we have said is true. In this way we may come to see more clearly what it is we were knowing. It is correct to assert that scientific concepts must be clarified, but it is a muddle to suppose that this clarification is a pursuit of meaning. The word 'meaning' is too ambiguous, unclear, and vague, to be helpful in this connexion. I think that Schlick's example of the clarification of the concept of simultaneity shows that he has fallen into some confusion. This point would repay detailed consideration but I have not time to spare for it now.

The second point relates to the use of postulational analysis. The Logical Positivists have, in my opinion, been misled, first, by accepting Wittgenstein's equivocal conception of *the given*; secondly by relying exclusively upon Russell's supreme principle of scientific philosophizing. Consequently, they regard *tables*, for instance, as *constructs of the given*. But a *table* is not a *construct*. It is true that we speak correctly when we say that 'tables are logical constructions', but in so saying we are saying something about the way in which the word "table" may be used in ordinary sentences; we are *not* saying that what the word "table" refers to is itself a *construct*.[1] *Points and electrons* may be constructs; *tables* certainly are not.

Earlier in this lecture I said that Wittgenstein's principle of verifiability 'seemed innocuous enough'. It is true that we do not understand a proposition unless we know *what is the case* if the proposition is true. But the expression "what is the case" is not a *clear* expression; it is, indeed, excessively unclear. It is their interpretation of this expression which has led the Logical Positivists towards solipsism. This interpretation needs to be questioned. Wittgenstein says: 'Die Welt ist alles, was der Fall ist. Die Welt ist die Gesamtheit der Tatsachen . . . die Gesamtheit der Tatsachen

[1] See my *A Modern Introduction to Logic*, and J. Wisdom, 'Logical Constructions', in *Mind*, 1931–3.

bestimmt was der Fall ist und auch, was alles nicht der Fall ist . . . Was der Fall ist, die Tatsache, ist das Bestehen von Sachverhalten.'[1] Thus it seems that Wittgenstein holds that a 'fact' is 'what is the case', and that what is the case is a definite state of affairs. Thus interpreted, Wittgenstein is in agreement with the ordinary usage of the word "fact". Now, it is usual to say that a *fact* is what *makes a proposition true or false*. Thus Russell explicitly states, 'If I say "It is raining", what I say is true in a certain condition of weather and is false in other conditions of weather. The condition of weather that makes my statement true (or false as the case may be) is what I should call "a fact".'[2] At first sight there does not appear to be a divergence between Russell's statement of what a *fact* is and Wittgenstein's conception of *a fact*. But to suppose that they are in agreement would be to fall into a serious mistake. On Russell's view a fact is what *makes* a proposition true, or false; on Wittgenstein's view a fact is what *verifies* a proposition, and what verifies a proposition is an experience of mine. Hence, to take Russell's example of 'the condition of weather', we cannot say, according to Wittgenstein, that the proposition 'It is raining' is made true by, or corresponds to, a certain determinate fact, which could be described by 'the rainy-condition of weather'. On the contrary, 'It is raining' *means* a set of *hypothetical* facts concerning my own experience, present or future; those hypothetical facts *verify* the proposition.

I have already pointed out that Moore's objection to Mill's theory of material things seems to me to hold also against Wittgenstein's interpretation of verifiability. I want now to suggest that an important point of difference between Moore's practice and Wittgenstein's theory seems

[1] *Tractatus Logico-Philosophicus*, 1, 1·1, 1·12, 2. I have quoted from the German instead of from the English translation because it seems to me that in some respects the English translation may misrepresent Wittgenstein's views.
[2] *The Monist*, vol. xxviii (1918), pp. 500–1.

to arise with regard to their conception of the relation of propositions to facts. The point at issue could be formulated in the question whether there are *final* facts. Can we say that there are facts which make propositions true, or can we only say that propositions are verifiable by reference to my own experience? In my opinion there are final facts, and these final facts are the facts which make propositions true (or false).

In conclusion I wish to state very briefly how, in my opinion, philosophy is concerned with language. What we ordinarily say, we say unclearly. We speak unclearly because we think unclearly. It is the task of philosophy to render our thoughts clear. Hence, it is not incorrect to say that the 'object of philosophy is the logical clarification of thoughts'. But, though not incorrect, this statement is not itself a *clear* statement. We cannot clarify our thoughts by thinking about thinking, nor by thinking about logic. We have to think *about* what we *were* thinking about. The philosopher considers a *given expression*, and analyses it in order to find *another expression* which says *more* clearly what the original expression said *less* clearly. This investigation is not linguistic. We must first *know* what facts are the case before we can fruitfully employ analysis for the purpose of clarifying our thoughts about the world. Accordingly, Logical Positivism fails, I think, in so far as it attempts to start from *a priori* assumptions with regard to the nature of language and the principles of symbolism, and, by means of these, to draw limits with regard to what we *can* think. Their mistake is that they seek to make *everything* clear at once. But it is not in this way that philosophy can develop. We must proceed step by step, beginning with propositions which we *know* to be true, not ruling out initially what does not fit in. Wittgenstein's statement, 'What can be said at all can be said clearly', is gravely misleading. If it be interpreted as asserting that philosophy is not concerned with what is *inexpressible*, then the statement is true. Certainly, about the inexpressible, *nothing* can be said. If, however,

it be interpreted as asserting that what is said is either clear or is nonsense, then it is false. But I believe that Wittgenstein does intend his assertion to be given this second interpretation. In that case, his fundamental principle should, in my opinion, be rejected. For, as Ramsey has well said, 'we can make several things clearer, but we cannot make anything clear'.