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MIND

A QUARTERLY REVIEW
OF
PSYCHOLOGY AND PHILOSOPHY



I.—WITTGENSTEIN'S LECTURES IN 1930-33

BY G. E. MOORE

III

(B) IN the case of Logic, there were two most important matters with regard to which he said that the views he had held when he wrote the *Tractatus* were definitely wrong.

(1) The first of these concerned what Russell called "atomic" propositions and he himself in the *Tractatus* had called "Elementarsätze". He said in (II) that it was with regard to "elementary" propositions and their connexion with truth-functions or "molecular" propositions that he had had to change his opinions most; and that this subject was connected with the use of the words "thing" and "name". In (III) he began by pointing out that neither Russell nor he himself had produced any examples of "atomic" propositions; and said that there was something wrong indicated by this fact, though it was difficult to say exactly what. He said that both he and Russell had the idea that non-atomic propositions could be "analysed" into atomic ones, but that we did not yet know what the analysis was: that, e.g. such a proposition as "It is raining" might, if we knew its analysis, turn out to be molecular, consisting, e.g. of a conjunction of "atomic" propositions. He said that in the *Tractatus* he had objected to Russell's assumption that there certainly were atomic propositions which asserted two-termed relations—that he had refused to prophesy as to what would be the result of an analysis, if one were made, and that it might turn out that no atomic proposition asserted less than e.g. a

four-termed relation, so that we could not even talk of a two-termed relation. His present view was that it was senseless to talk of a "final" analysis, and he said that he would now treat as atomic all propositions in the expression of which neither "and", "or", nor "not" occurred, nor any expression of generality, provided we had not expressly given an exact definition, such as we might give of "It's rotten weather", if we said we were going to use the expression "rotten" to mean "both cold and damp".

In saying this he seemed to me to be overlooking both the fact that a man often says that he is going to use an expression in a certain definite way and then does not in fact so use it, and also the fact that many common words, *e.g.* father, mother, sister, brother, etc., are often so used that such a sentence as "This is my father" undoubtedly expresses a molecular proposition, although a person who so uses it has never expressly stated that he will so use it. These two facts, however, of course, do not prove that he was wrong in thinking that it is senseless to talk of a "final" or "ultimate" analysis.

(2) The second important logical mistake which he thought he had made at the time when he wrote the *Tractatus* was introduced by him in (III) in connexion with the subject of "following" (by which he meant, as usual, *deductive* following or "entailment"—a word which I think he actually used in this discussion) from a "general" proposition to a particular instance and from a particular instance to a "general" proposition. Using the notation of *Principia Mathematica*, he asked us to consider the two propositions " $(x) . fx$ entails fa " and " fa entails $(\exists x) . fx$ ". He said that there was a temptation, to which he had yielded in the *Tractatus*, to say that $(x) . fx$ is identical with the logical product " $fa . fb . fc . . .$ ", and $(\exists x) . fx$ identical with the logical sum " $fa \vee fb \vee fc . . .$ "; but that this was in both cases a mistake. In order to make clear exactly where the mistake lay, he first said that in the case of such a universal proposition as "Everybody in this room has a hat" (which I will call "A"), he had known and actually said in the *Tractatus*, that, even if Smith, Jones and Robinson are the only people in the room, the logical product "Smith has a hat, Jones has a hat and Robinson has a hat" cannot possibly be identical with A, because in order to get a proposition which entails A, you obviously have to add "and Smith, Jones and Robinson are the only people in the room". But he went on to say that if we are talking of "individuals" in Russell's sense (and he actually

here mentioned atoms as well as colours, as if they were "individuals" in this sense), the case is different, because, in that case, there is no proposition analogous to "Smith, Jones and Robinson are the only people in the room". The class of things in question, if we are talking of "individuals", is, he said, in this case, determined not by a proposition but by our "dictionary": it is "defined by grammar". *E.g.* he said that the class "primary colour" is "defined by grammar", not by a proposition; that there is no such proposition as "red is a primary colour", and that such a proposition as "In this square there is one of the primary colours" really is identical with the logical sum "In this square there is either red or green or blue or yellow"; whereas in the case of Smith, Jones and Robinson, there is such a proposition as "Smith is in this room" and hence also such a proposition as "Smith, Jones and Robinson are the only people in this room". He went on to say that one great mistake which he made in the *Tractatus* was that of supposing that in the case of *all* classes "defined by grammar", general propositions were identical either with logical products or with logical sums (meaning by this logical products or sums of the propositions which are values of fx) as, according to him, they really are in the case of the class "primary colours". He said that, when he wrote the *Tractatus*, he had supposed that *all* such general propositions were "truth-functions"; but he said now that in supposing this he was committing a fallacy, which is common in the case of Mathematics, *e.g.* the fallacy of supposing that $1 + 1 + 1 \dots$ is a sum, whereas it is only a *limit*, and that $\frac{dx}{dy}$ is a quotient, whereas it also is only a *limit*. He said he had been misled by the fact that $(x).fx$ can be replaced by $fa.fb.fc \dots$, having failed to see that the latter expression is not always a logical product: that it is only a logical product if the dots are what he called "the dots of laziness", as where we represent the alphabet by "A, B, C . . .", and therefore the whole expression can be replaced by an enumeration; but that it is not a logical product where, *e.g.* we represent the cardinal numbers by 1, 2, 3 . . ., where the dots are not the "dots of laziness" and the whole expression can not be replaced by an enumeration. He said that, when he wrote the *Tractatus*, he would have defended the mistaken view which he then took by asking the question: How can $(x).fx$ possibly entail fa , if $(x).fx$ is not a logical product? And he said that the answer to this question is that where $(x).fx$ is not a logical product, the proposition " $(x).fx$ entails fa " is "taken as a primary

proposition", whereas where it is a logical product this proposition is deduced from other primary propositions.

The point which he here made in saying that where we talk of the cardinal numbers we are not talking of a logical product was a point which he had made earlier, in (I), though he did not there point out that in the *Tractatus* he had made the mistake of supposing that an infinite series was a logical product—that it *could* be enumerated, though we were unable to enumerate it. In this passage in (I) he began by saying that by the proposition "there are an infinite number of shades of grey between black and white" we "mean something entirely different" from what we mean by *e.g.* "I see three colours in this room", because, whereas the latter proposition can be verified by counting, the former can not. He said that "There are an infinite number" does not give an answer to the question "How many are there?" whereas "There are three" does give an answer to this question. He went on to discuss infinite divisibility in the case of space, and said (as I have already mentioned p. 296), that the "linguistic expression" of "This line can be bisected" was "The words 'This line has been bisected' have sense", but that the "linguistic expression" of "This line can be infinitely divided" is certainly not "The words 'This line has been infinitely divided' have sense". He said that if we express "has been bisected", "has been trisected", "has been quadrisected", etc., by $f(1 + 1)$, $f(1 + 1 + 1)$, $f(1 + 1 + 1 + 1)$, etc., we see that an internal relation holds between successive members of this series and that the series has no end; and he concluded by saying that the "linguistic expression" of an infinite possibility is an infinite possibility in language. He also pointed out that $\sum 1 + \frac{1}{2} + \frac{1}{4} \dots$ approaches a limit, whereas a logical product does not approach any limit. And he said finally that the cases to which the *Principia* notations $(x) \cdot \phi x$ and $(\exists x) \cdot \phi x$ apply, *i.e.* cases in which the former can be regarded as a logical product and the latter as a logical sum of propositions of the form ϕa , ϕb , ϕc , etc., are comparatively rare; that oftener we have propositions, such as "I met a man", which do not "pre-suppose any totality"; that the cases to which the *Principia* notations apply are only those in which we could give proper names to the entities in question; and that giving proper names is only possible in very special cases.

Besides these two cardinal cases, in which he said that the views which he had held at the time when he wrote the *Tractatus* were certainly wrong, I think that the chief logical points which he made were as follows.

(3) One point which he made was that Russell was quite wrong in supposing that, if expressions of the form " $p \supset q$ " are used with the meaning which is given to " \supset " in *Principia Mathematica*, then it follows that from a false proposition we *can infer* every other proposition, and that from a true one we *can infer* any other true one. He said that Russell's holding this false opinion was partly due to his supposing that " $p \supset q$ " can be translated by "If p , then q ". He said that we never use "If p , then q " to mean merely what is meant by " $p \supset q$ "; and that Russell had admitted this, but still maintained that in the case of what he called "formal implications", *i.e.* propositions of the form $(x) . \phi x \supset \psi x$, such a proposition can be properly translated by "If . . . , then . . .". Wittgenstein said that this also was a mistake, giving as a reason that if, *e.g.* we substitute "is a man" for ϕ and "is mortal" for ψ , then the mere fact that there were no men would verify $(x) . \phi x \supset \psi x$, but that we never so use "If . . . , then . . ." that the mere fact that there were no men would verify "If anything is a man, then that thing is mortal".

(4) He also, on more than one occasion, said something about Sheffer's "stroke notation", and, on one occasion, about Tarski's "3-valued" Logic.

About the former he said that it resembled what are called mathematical "discoveries" in respect of the fact that Sheffer had no rule for discovering an answer to the question "Is there only one logical constant?" whereas there is a rule for discovering, *e.g.* the answer to a multiplication sum. He said that, where there is no rule, it is misleading to use the word "discovery", though this is constantly done. He said that Russell or Frege might quite well have used the expression " p/q " as short for " $\sim p . \sim q$ ", and yet still maintained that they had two primitive ideas, "and" and "not", and not one only. Plainly, therefore, he thought that Sheffer, though he admitted that Sheffer had actually defined " p/q " as meaning " $\sim p . \sim q$ ", had done something else. But what else? He said that Sheffer's "discovery" consisted in finding a "new aspect" of certain expressions. But I am sorry to say that I did not and do not understand what he meant by this.

On Tarski's 3-valued Logic he said that it was all right "as a calculus"—that Tarski had really "discovered" a new calculus. But he said that "true" and "false" could not have in it the meaning which they actually have; and he particularly emphasized that Tarski had made the mistake of supposing that his third value, which he called "doubtful", was identical with what we ordinarily mean by "doubtful".

(C) Of problems which are specifically problems in the philosophy of Mathematics, I think that those which he most discussed are the three following. But in this case I should like to remind the reader of what I said in my first article (p. 5) that I cannot possibly mention nearly everything which he said, and that it is possible that some things which I omit were really more important than what I mention; and also to give the warning that in this case it is particularly likely that I may have misunderstood or may misrepresent him, since my own knowledge of Mathematics is very small. But I think that what I say will at least give some idea of the *kind* of questions which he was eager to discuss.

(1) In (I) he said that there were two very different kinds of proposition used in Mathematics, "neither of them at all like what are usually called propositions". These were (1) propositions proved by a chain of equations, in which you proceed from axioms to other equations, by means of axioms, and (2) propositions proved by "mathematical induction". And he added in (III) that proofs of the second kind, which he there called "recursive proofs", are not proofs in the same *sense* as are proofs of the first kind. He added that people constantly commit the fallacy of supposing that "true", "problem" "looking for", "proof" always mean the same, whereas in fact these words "mean entirely different things" in different cases.

As an example of a proposition of the second kind he took the Associative Law for the addition of numbers, namely, " $a + (b + c) = (a + b) + c$ "; and he discussed the proof of this proposition at considerable length on two separate occasions, first in (I) and then later in (III). On both occasions he discussed a proof of it given by Skolem, though in (I) he did not expressly say that the proof discussed was Skolem's. He said in (I) that the proof seemed to assume at one point the very proposition which it professed to prove, and he pointed out in (III) that in one of the steps of his proof Skolem did actually assume the Associative Law. He said that since Skolem professed to be giving a proof, one would have expected him to prove it from other formulae; but that in fact the proof begins in an entirely different way, namely with a definition—the definition " $a + (b + 1) = (a + b) + 1$ "; and he maintained both in (I) and in (III) that it was quite unnecessary for Skolem to assume the Associative Law in one step of his proof, saying in (I) that the proof "really rests entirely on the definition", and in (III) that you don't in fact use the Associative Law in the proof at

all. He wrote the proof "in his own way" in order to show this, saying that if you write the definition in the form " $\phi 1 = \psi 1$ ", then all that is proved is the two formulae (a) $\phi(c + 1) = \phi c + 1$ and (b) $\psi(c + 1) = \psi c + 1$, and that to prove these two formulae is the same thing as what is called "proving the Associative Law for all numbers". He went on to say that the fact that this proof proves all we want "shows that we are not dealing with an extension at all"; that instead of talking of a *finite part* of the series "1, 2, 3 . . .", on the one hand, and of the *whole* series on the other hand, we should talk of a bit of the series and of *the Law which generates it*; that proving the Associative Law "for all numbers" can't mean the same sort of thing as proving it, e.g. for three numbers, since, in order to do this latter, you would have to give a separate proof for each of the three; and that what we have in the proof is a general *form* of proof for *any* number. Finally he said that the generality which is misleadingly expressed by saying that we have proved the Associative Law for "all cardinals", really comes in in the definition, which might have been written in the form of a series, viz. " $1 + (1 + 1) = (1 + 1) + 1$ " " $1 + (2 + 1) = (1 + 2) + 1$ " " $2 + (1 + 1) = (2 + 1) + 1$ " and so on; and that this series is not a logical product of which the examples given are a part, but a *rule*, and that "the examples are only there to explain the rule".

(2) Another problem in the philosophy of Mathematics, which he discussed on no less than three separate occasions, was what we are to say of the apparent question "Are there anywhere in the development of π three consecutive 7's?" (Sometimes he took the question "Are there *five* consecutive 7's?" instead of "Are there three?") He first dealt with this apparent question in (I), in connexion with Brouwer's view that the Law of Excluded Middle does not apply to some mathematical propositions; *i.e.* that some mathematical propositions are neither true nor false; that there is an alternative to being either true or false, viz. being "undecidable". And on this occasion he said that the words "There are three consecutive 7's in the development of π " are nonsense, and that hence not only the Law of Excluded Middle does not apply in this case, but that no laws of Logic apply in it; though he admitted that if someone developed π for ten years and actually found three consecutive 7's in the development, this would prove that there were three consecutive 7's *in a ten years' development*, and seemed to be admitting, therefore, that it is possible that there might be. The next time he discussed the question, early in (III), he said that if anyone actually found three consecutive 7's this would prove that there are, but that

if no one found them that wouldn't prove that there are not ; that, therefore, it is something for the truth of which we have provided a test, but for the falsehood of which we have provided none ; and that therefore it must be a quite different sort of thing from cases in which a test for both truth and falsehood is provided. He went on to discuss the apparent question in a slightly new way. He said we seem to be able to define π' as the number which, if there are three consecutive 7's in the development of π , differs from π in that, in the place in which three consecutive 7's occur in π , there occur in it three consecutive 1's instead, but which, if there are not, does not differ from π at all ; and that we seem to be able to say that π' , so defined, either is identical with π or is not. But he said here that, since we have no way of finding out whether π' is identical with π or not, the question whether it is or not "has no meaning" ; and, so far as I can see, this entails the same view which he had expressed in (I), *viz.* that the words "There are *not* three consecutive 7's anywhere in the development of π " have no meaning, since, if these words had a meaning, it would seem to follow that " $\pi' = \pi$ " also has one, and that therefore the question "Is π' identical with π ?" also has one. In the second passage in (III) in which he discussed this apparent question he expressly said that though the words (1) "There are five consecutive 7's in the first thousand digits of π " have sense, yet the words (2) "There are five consecutive 7's *somewhere* in the development" have none, adding that "we can't say that (2) makes sense because (2) follows from (1)". But in the very next lecture he seemed to have changed his view on this point, since he there said "We ought not to say 'There are five 7's in the development' has no sense", having previously said "It has whatever sense its grammar allows", and having emphasized that "it has a very curious grammar" since "it is compatible with there not being five consecutive 7's in any development you can give". If it has sense, although a "very curious" one, it does presumably express a proposition to which the Law of Excluded Middle and the other rules of Formal Logic do apply ; but Wittgenstein said nothing upon this point. What he did say was that "All big mathematical problems are of the nature of 'Are there five consecutive 7's in the development of π ?'" and that "they are therefore quite different from multiplication sums, and not comparable in respect of difficulty".

He said many other things about this question, but I cannot give them all, and some of them I certainly did not and do not understand. But one puzzling thing which he seemed to say in (III) was that, if we express the proposition that there is, in

the development of π , a number of digits which is immediately followed by five consecutive 7's, by " $(\exists n) .fn$ ", then there are two conceivable ways of proving $(\exists n) .fn$, namely, (1) by *finding* such a number, and (2) by proving that $\sim (\exists n) .fn$ is self-contradictory; but that the $(\exists n) .fn$ proved in the latter way could not be the same as that proved in the former. In this connexion he said that there is no "opposite" to the first method of proof. He said also that " $\exists n$ " means something different where it is possible to "look for" a number which proves it, from what it means where this is not possible; and, generally, that "The proof of an existence theorem gives the meaning of 'existence' in that theorem", whereas the meaning of "There's a man in the next room" does not depend on the method of proof.

(3) This last problem is connected, and was connected by him, with a general point which he discussed more than once in connexion with the question "How can we look for a method of trisecting an angle by rule and compasses, if there is no such thing?" He said that a man who had spent his life in trying to trisect an angle by rule and compasses would be inclined to say "If you understand both what is meant by 'trisecting' and what is meant by 'bisection by rule and compasses', you must understand what is meant by 'trisecting by rule and compasses'" but that this was a mistake; that we can't imagine trisecting an angle by rule and compasses, whereas we can imagine dividing an angle into eight equal parts by rule and compasses; that "looking for" a trisection by rule and compasses is not like "looking for" a unicorn, since "There are unicorns" has sense, although in fact there are no unicorns, whereas "There are animals which show on their foreheads a construction by rule and compasses of the trisection of an angle" is just nonsense like "There are animals with three horns, but also with only one horn": it does not give a description of any possible animal. And Wittgenstein's answer to the original question was that by proving that it is impossible to trisect an angle by rule and compasses "we change a man's idea of trisection of an angle" but that we should say that what has been proved impossible is the very thing which he had been trying to do, because "we are willingly led in this case to identify two different things". He compared this case to the case of calling what he was doing "philosophy", saying that it was not the same kind of thing as Plato or Berkeley had done, but that we may feel that what he was doing "takes the place" of what Plato and Berkeley did, though it is really a different thing. He illustrated the same

point in the case of the "construction" of a regular pentagon, by saying that if it were proved to a man who had been trying to find such a construction that there isn't any such thing, he would say "That's what I was trying to do" because "his idea has shifted on a rail on which he is ready to shift it". And he insisted here again that (a) to have an idea of a regular pentagon and (b) to know what is meant by constructing by rule and compasses, *e.g.* a square, do not in combination enable you to know what is meant by constructing, by rule and compasses, a regular pentagon. He said that to explain what is meant by "construction" we can give two series of "constructions", *viz.* (a) equilateral triangle, regular hexagon, etc., and (b) square, regular octagon, etc., but that neither of these would give meaning to the construction of a regular pentagon, since they don't give any rule which applies to the number 5. He said that in a sense the result wanted is clear, but the means of getting at it is not; but in another sense, the result wanted is itself not clear, since "constructed pentagon" is not the same as "measured pentagon" and that whether the same figure will be both "depends on our physics": why we call a construction a construction of a regular pentagon is "because of the physical properties of our compasses, etc."

In (I) he had said that in the case of Logic and Mathematics (and "Sense-data") you can't know the same thing in two independent ways; and that it was in the case of "hypotheses" and *nowhere else*, that there are different evidences for the same thing. But in (III) he said that even in the case of hypotheses, *e.g.* the proposition that there is a cylindrical object on the mantel-piece, he himself preferred to say that if the evidence was different, the proposition was also different, but that "you can say which you please". He did not say whether, in the case of Logic and Mathematics also, he now held that "you can say which you please".

(D) He spent, as I have said in my first article (p. 5), a great deal of time on this discussion, and I am very much puzzled as to the meaning of much that he said, and also as to the connexion between different things which he said. It seems to me that his discussion was rather incoherent, and my account of it must be incoherent also, because I cannot see the connexion between different points which he seemed anxious to make. He said very early in the discussion that the whole subject is "extraordinarily difficult" because "the whole field is full of misleading notations"; and that its difficulty was shown by the fact that the

question at issue is the question between Realists, Idealists and Solipsists. And he also said, more than once, that many of the difficulties are due to the fact that there is a great temptation to confuse what are merely experiential propositions, which might, therefore, not have been true, with propositions which are necessarily true or are, as he once said, "tautological or grammatical statements". He gave, as an instance of a proposition of the latter sort, "I can't feel your toothache", saying that "If you feel it, it isn't mine" is a "matter of grammar", and also that "I can't feel your toothache" means the same as "'I feel your toothache' has no sense"; and he contrasted this with "I hear my voice coming from somewhere near my eyes", which he said we think to be necessary, but which in fact is not necessary "though it always happens". In this connexion he gave the warning "Don't be prejudiced by anything which is a fact, but which *might* be otherwise". And he seemed to be quite definite on a point which seems to me certainly true, *viz.* that I might see without physical eyes, and even without having a body at all; that the connexion between seeing and physical eyes is merely a fact learnt by experience, not a necessity at all; though he also said that "the visual field" has certain internal properties, such that you can describe the motion of certain things in it as motions towards or away from "your eye"; but that here "your eye" does not mean your physical eye, nor yet anything whatever which is *in* the visual field. He called "your eye", in this sense, "the eye of the visual field", and said that the distinction between motion towards it and away from it was "on the same level" as "the distinction between 'curved' and 'straight'".

However, he began the discussion by raising a question, which he said was connected with Behaviourism, namely, the question "When we say 'He has tooth-ache' is it correct to say that his tooth-ache is only his behaviour, whereas when I talk about my tooth-ache I am not talking about my behaviour?"; but very soon he introduced a question expressed in different words, which is perhaps not merely a different formulation of the same question, *viz.* "Is another person's toothache 'tooth-ache' in the same sense as mine?" In trying to find an answer to this question or these questions, he said first that it was clear and admitted that what verifies or is a criterion for "I have tooth-ache" is quite different from what verifies or is a criterion for "He has tooth-ache", and soon added that, since this is so, the *meanings* of "I have toothache" and "he has tooth-ache" must be different. In this connexion he said later, first, that the

meaning of "verification" is different, when we speak of verifying "I have" from what it is when we speak of verifying "He has", and then, later still, that there is no such thing as a verification for "I have", since the question "How do you know that you have tooth-ache?" is nonsensical. He criticized two answers which might be given to this last question by people who think it is not nonsensical, by saying (1) that the answer "Because I feel it" won't do, because "I feel it" means the same as "I have it", and (2) that the answer "I know it by inspection" also won't do, because it implies that I can "look to see" whether I have it or not, whereas "looking to see whether I have it or not" has no meaning. The fact that it is nonsense to talk of verifying the fact that I have it, puts, he said, "I have it" on "a different level" in grammar from "he has it". And he also expressed his view that the two expressions are on a different grammatical level by saying that they are not both values of a single propositional function " x has tooth-ache"; and in favour of this view he gave two definite reasons for saying that they are not, namely, (1) that "I don't know whether I have tooth-ache" is always absurd or nonsense, whereas "I don't know whether he has tooth-ache" is not nonsense, and (2) that "It seems to me that I have tooth-ache" is nonsense, whereas "It seems to me that he has" is not.

He said, that when he said this, people supposed him to be saying that other people never really have what he has, but that, if he did say so, he would be talking nonsense; and he seemed quite definitely to reject the behaviourist view that "he has tooth-ache" means only that "he" is behaving in a particular manner; for he said that "tooth-ache" doesn't in fact only mean a particular kind of behaviour, and implied that when we pity a man for having toothache, we are not pitying him for putting his hand to his cheek; and, later on, he said that we *conclude* that another person has toothache from his behaviour, and that it is legitimate to conclude this on the analogy of the resemblance of his behaviour to the way in which we behave when we have toothache. It seemed, therefore, that just as to his first question he meant to give definitely the answer "No", so to his second question he meant to give definitely the answer "Yes; the word "toothache" is used in the same sense when we say that he has it (or "you have it") as when we say that I have it, though he never expressly said so; and though he seemed to throw some doubt on whether he meant this by saying "I admit that other people do have tooth-ache—this having *the meaning which we have given it*".

It seemed, therefore, that he did not think that the difference between "I have tooth-ache" and "He has tooth-ache" was due to the fact that the word "tooth-ache" was used in a different sense in the two sentences. What then was it due to? Much that he said seemed to suggest that his view was that the difference was due to the fact that in "He has toothache" we were necessarily talking of a physical body, whereas in "I have tooth-ache" we were not. As to the first of these two propositions he did not seem quite definite; for though at first he said that "my voice" means "the voice which comes from my mouth", he seemed afterwards to suggest that in "He has toothache" (or "You have") we were not necessarily referring to a *body*, but might be referring only to a *voice*, identified as "his" or "yours" without reference to a body. But as to the second proposition, the one about "I have tooth-ache", the point on which he seemed most anxious to insist was that what we call "having tooth-ache" is what he called a "primary experience" (he once used the phrase "direct experience" as equivalent to this one); and he said that "what characterizes 'primary experience'" is that in its case "I" does not denote a possessor". In order to make clear what he meant by this he compared "I have tooth-ache" with "I see a red patch"; and said of what he called "visual sensations" generally, and in particular of what he called "the visual field", that "the idea of a person doesn't enter into the description of it, just as a [physical] eye doesn't enter into the description of what is seen"; and he said that similarly "the idea of a person" doesn't enter into the description of "having tooth-ache". How was he here using the word "person"? He certainly meant to deny that the idea of a physical body enters necessarily into the description; and in one passage he seemed to imply that he used "person" to mean the same as "physical body", since he said "A description of a sensation does not contain a description of a sense-organ, nor, *therefore*, of a person". He was, therefore, still maintaining apparently that one distinction between "I have toothache" and "He has toothache" was due to the fact that the latter necessarily refers to a physical body (or, perhaps, to a voice instead) whereas the former does not. But I think this was not the only distinction which he had in mind, and that he was not always using "person" to mean the same as physical body (or, perhaps, a voice instead). For he said that "Just as no [physical] eye is involved in seeing, so no Ego is involved in thinking or in having toothache"; and he quoted, with apparent approval, Lichtenberg's saying "Instead of 'I think' we ought

to say 'It thinks'' ('it' being used, as he said, as "Es" is used in "Es blitzet"); and by saying this he meant, I think, something similar to what he said of "the eye of the visual field" when he said that it is not anything which is *in* the visual field. Like so many other philosophers, in talking of "visual sensations" he seemed not to distinguish between "what I see" and "my seeing of it"; and he did not expressly discuss what appears to be a possibility, namely, that though no person enters into what I see, yet some "person" other than a physical body or a voice, may "enter into" my seeing of it.

In this connexion, that in "I have toothache" "I" does not "denote a possessor", he pointed out that, when I talk of "*my* body", the fact that the body in question is "mine" or "belongs to me", cannot be verified by reference to that body itself, thus seeming to imply that when I say "This body belongs to me", "me" is used in the second of the senses which he distinguished for "I", *viz.* that in which, according to him, it does not "denote a possessor". But he did not seem to be quite sure of this, since he said in one place "*If* there is an ownership such that I possess a body, this isn't verified by reference to a body", *i.e.* that "This is *my* body" can't possibly mean "This body belongs to this body". He said that, where "I" is replaceable by "this body" "I" and "he" are "on the same [grammatical] level". He was quite definite that the word "I" or "any other word which denotes a subject" is used in "two utterly different ways", one in which it is "on a level with other people", and one in which it is not. This difference, he said, was a difference in "the grammar of our ordinary language". As an instance of one of these two uses, he gave "I've got a match-box" and "I've got a bad tooth", which he said were "on a level" with "Skinner has a match-box" and "Skinner has a bad tooth". He said that in these two cases "I have . . ." and "Skinner has . . ." really were values of the same propositional function, and that "I" and "Skinner" were both "possessors". But in the case of "I have tooth-ache" or "I see a red patch" he held that the use of "I" is utterly different.

In speaking of these two senses of "I" he said, as what he called "a final thing", "In one sense 'I' and 'conscious' are equivalent, but not in another", and he compared this difference to the difference between what can be said of the pictures on a film in a magic lantern and of the picture on the screen; saying that the pictures in the lantern are all "on the same level" but that the picture which is at any given time on the screen is not "on the same level" with any of them, and that if we were to

use "conscious" to say of one of the pictures in the lantern that it was at that time being thrown on the screen, it would be meaningless to say of the picture on the screen that it was "conscious". The pictures on the film, he said, "have neighbours", whereas that on the screen has none. And he also compared the "grammatical" difference between the two different uses of "I" with the difference between the meaning of "has blurred edges" as applied to the visual field, and the meaning of the same expression as applied to any drawing you might make of the visual field: your drawing might be imagined to have sharp edges instead of blurred ones, but this is unimaginable in the case of the visual field. The visual field, he said, has no outline or boundary, and he equated this with "It has no sense to say that it has one".

In connexion with his statement that "I", in one of its uses, is equivalent to "conscious", he said something about Freud's use of the terms "conscious" and "unconscious". He said that Freud had really discovered phenomena and connexions not previously known, but that he talked as if he had found out that there were in the human mind "unconscious" hatreds, volitions, etc., and that this was very misleading, because we think of the difference between a "conscious" and an "unconscious" hatred as like that between a "seen" and an "unseen" chair. He said that, in fact, the grammar of "felt" and "unfelt" hatred is quite different from that of "seen" and "unseen" chair, just as the grammar of "artificial" flower is quite different from that of "blue" flower. He suggested that "unconscious toothache", if "unconscious" were used as Freud used it, might be necessarily bound up with a physical body, whereas "conscious toothache" is not so bound up.

As regards Solipsism and Idealism he said that he himself had been often tempted to say "All that is real is the experience of the present moment" or "All that is certain is the experience of the present moment"; and that any one who is at all tempted to hold Idealism or Solipsism knows the temptation to say "The only reality is the present experience" or "The only reality is *my* present experience". Of these two latter statements he said that both were equally absurd, but that, though both were fallacious, "the idea expressed by them is of enormous importance". Both about Solipsism and about Idealism he had insisted earlier that neither of them pretends that what it says is learnt by experience—that the arguments for both are of the form "you can't" or "you must", and that both these expressions "cut [the statement in question] out of our language".

Elsewhere he said that both Solipsists and Idealists would say they "couldn't imagine it otherwise", and that, in reply to this, he would say, "If so, your statement has no sense" since "nothing can characterize reality, except as opposed to something else which is not the case". Elsewhere he had said that the Solipsist's statement "Only my experience is real" is absurd "as a statement of fact", but that the Solipsist sees that a person who says "No : my experience is real too" has not really refuted him, just as Dr. Johnson did not refute Berkeley by kicking a stone. Much later he said that Solipsism is right if it merely says that "I have tooth-ache" and "He has tooth-ache" are "on quite a different level", but that "if the Solipsist says that he has something which another hasn't, he is absurd and is making the very mistake of putting the two statements on the same level". In this connexion he said that he thought that both the Realist and the Idealist were "talking nonsense" in the particular sense in which "nonsense is produced by trying to express by the use of language what ought to be embodied in the grammar"; and he illustrated this sense by saying that "I can't feel his toothache" means "'I feel his toothache' has no sense" and therefore does not "express a fact" as "I can't play chess" may do.

(E) He concluded (III) by a long discussion which he introduced by saying "I have always wanted to say something about the grammar of ethical expressions, or, *e.g.* of the word 'God'". But in fact he said very little about the grammar of such words as "God", and very little also about that of ethical expressions. What he did deal with at length was not Ethics but Aesthetics, saying, however, "Practically everything which I say about 'beautiful' applies in a slightly different way to 'good'". His discussion of Aesthetics, however, was mingled in a curious way with criticism of assumptions which he said were constantly made by Frazer in the "Golden Bough", and also with criticism of Freud.

About "God" his main point seemed to be that this word is used in many *grammatically* different senses. He said, for instance, that many controversies about God could be settled by saying "I'm not using the word in such a sense that you can say . . .", and that different religions "treat things as making sense which others treat as nonsense, and don't merely deny some proposition which another religion affirms"; and he illustrated this by saying that if people use "god" to mean something like a human being, then "God has four arms" and

"God has two arms" will both have sense, but that others so use "God" that "God has arms" is nonsense—would say "God *can't* have arms". Similarly, he said of the expression "the soul", that sometimes people so use that expression that "the soul is a gaseous human being" has sense, but sometimes so that it has not. To explain what he meant by "grammatically" different senses, he said we wanted terms which are not "comparable", as *e.g.* "solid" and "gaseous" are comparable, but which differ as, *e.g.* "chair" differs from "permission to sit on a chair", or "railway" from "railway accident".

He introduced his whole discussion of Aesthetics by dealing with one problem about the meaning of words, with which he said he had not yet dealt. He illustrated this problem by the example of the word "game", with regard to which he said both (1) that, even if there is something common to all games, it doesn't follow that this is what we mean by calling a particular game a "game", and (2) that the reason why we call so many different activities "games" need not be that there is anything common to them all, but only that there is "a gradual transition" from one use to another, although there may be nothing in common between the two ends of the series. And he seemed to hold definitely that there is nothing in common in our different uses of the word "beautiful", saying that we use it "in a hundred different games"—that, *e.g.* the beauty of a face is something different from the beauty of a chair or a flower or the binding of a book. And of the word "good" he said similarly that each different way in which one person, A, can convince another, B, that so-and-so is "good" fixes the meaning in which "good" is used in that discussion—"fixes the grammar of that discussion"; but that there will be "gradual transitions", from one of these meanings to another, "which take the place of something in common". In the case of "beauty" he said that a difference of meaning is shown by the fact that "you can say more" in discussing whether the arrangement of flowers in a bed is "beautiful" than in discussing whether the smell of lilac is so.

He went on to say that specific colours in a certain spatial arrangement are not merely "symptoms" that what has them *also* possesses a quality which we call "being beautiful", as they would be, if we meant by "beautiful", *e.g.* "causing stomach-ache", in which case we could learn by experience whether such an arrangement did always cause stomach-ache or not. In order to discover how we use the word "beautiful" we need, he said, to consider (1) what an actual aesthetic controversy or

enquiry is like, and (2) whether such enquiries are in fact psychological enquiries "though they look so very different". And on (1) he said that the actual word "beautiful" is hardly ever used in aesthetic controversies: that we are more apt to use "right", as, *e.g.* in "That doesn't look quite right yet", or when we say of a proposed accompaniment to a song "That won't do: it isn't right". And on (2) he said that if we say, *e.g.* of a bass "It is too heavy; it moves too much", we are not saying "If it moved less, it would be more agreeable to me": that, on the contrary, that it should be quieter is an "end in itself", not a means to some other end; and that when we discuss whether a bass "will do", we are no more discussing a psychological question than we are discussing psychological questions in Physics; that what we are trying to do is to bring the bass "nearer to an ideal", though we haven't an ideal before us which we are trying to copy; that in order to show what we want, we might point to another tune, which we might say is "perfectly right". He said that in aesthetic investigations "the one thing we are not interested in is causal connexions, whereas this is the only thing we are interested in in Psychology". To ask "Why is this beautiful?" is not to ask for a causal explanation: that, *e.g.* to give a causal explanation in answer to the question "Why is the smell of a rose pleasant?" would not remove our "aesthetic puzzlement".

Against the particular view that "beautiful" means "agreeable" he pointed out that we may refuse to go to a performance of a particular work on such a ground as "I can't stand its greatness", in which case it is disagreeable rather than agreeable; that we may think that a piece of music which we in fact prefer is "just nothing" in comparison to another to which we prefer it; and that the fact that we go to see "King Lear" by no means proves that that experience is agreeable: he said that, even if it is agreeable, that fact "is about the least important thing you can say about it". He said that such a statement as "That bass moves too much" is not a statement about human beings at all, but is more like a piece of Mathematics; and that, if I say of a face which I draw "It smiles too much", this says that it could be brought closer to some "ideal", not that it is not yet agreeable enough, and that to bring it closer to the "ideal" in question would be more like "solving a mathematical problem". Similarly, he said, when a painter tries to improve his picture, he is not making a psychological experiment on himself, and that to say of a door "It is top-heavy" is to say what is wrong with it, *not* what impression

it gives you. The question of Aesthetics, he said, was not "Do you like this?" but "Why do you like it?"

What Aesthetics tries to do, he said, is to give *reasons*, e.g. for having this word rather than that in a particular place in a poem, or for having this musical phrase rather than that in a particular place in a piece of music. Brahms' *reason* for rejecting Joachim's suggestion that his Fourth Symphony should be opened by two chords was not that that wouldn't produce the feeling he wanted to produce, but something more like "That isn't what I meant". *Reasons*, he said, in Aesthetics, are "of the nature of further descriptions": e.g. you can make a person see what Brahms was driving at by showing him lots of different pieces by Brahms, or by comparing him with a contemporary author; and all that Aesthetics does is "to draw your attention to a thing", to "place things side by side". He said that if, by giving "reasons" of this sort, you make another person "see what you see" but it still "doesn't appeal to him", that is "an end" of the discussion; and that what he, Wittgenstein, had "at the back of his mind" was "the idea that aesthetic discussions were like discussions in a court of law", where you try to "clear up the circumstances" of the action which is being tried, hoping that in the end what you say will "appeal to the judge". And he said that the same sort of "reasons" were given, not only in Ethics, but also in Philosophy.

As regards Frazer's "Golden Bough", the chief points on which he seemed to wish to insist were, I think, the three following. (1) That it was a mistake to suppose that there was *only one* "reason", in the sense of "motive", which led people to perform a particular action—to suppose that there was "one motive, which was *the* motive". He gave as an instance of this sort of mistake Frazer's statement, in speaking of Magic, that when primitive people stab an effigy of a particular person, they believe that they have hurt the person in question. He said that primitive people do not *always* entertain this "false scientific belief", though in some cases they may: that they may have quite different reasons for stabbing the effigy. But he said that the tendency to suppose that there is "one motive which is *the* motive" was "enormously strong", giving as an instance that there are theories of play each of which gives *only one* answer to the question "Why do children play?" (2) That it was a mistake to suppose that *the* motive is always "to get something useful". He gave as an instance of this mistake Frazer's supposition that "people at a certain stage thought it useful to kill a person, in order to get a good crop". (3) That it was a

mistake to suppose that why, *e.g.* the account of the Beltane Festival "impresses us so much" is because it has "developed from a festival in which a real man was burnt". He accused Frazer of thinking that this was the reason. He said that our puzzlement as to why it impresses us is not diminished by giving the *causes* from which the festival arose, but is diminished by finding other similar festivals: to find these may make it seem "natural", whereas to give the causes from which it arose cannot do this. In this respect he said that the question "Why does this impress us?" is like the aesthetic questions "Why is this beautiful?" or "Why will this bass not do?"

He said that Darwin, in his "expression of the Emotions", made a mistake similar to Frazer's, *e.g.* in thinking that "because our ancestors, when angry, wanted to bite" is a sufficient explanation of why we show our teeth when angry. He said you might say that what is satisfactory in Darwin is not such "hypotheses", but his "putting the facts in a system"—helping us to make a "synopsis" of them.

As for Freud, he gave the greater part of two lectures to Freud's investigation of the nature of a "joke" (Witz), which he said was an "aesthetic investigation". He said that Freud's book on this subject was a very good book for looking for philosophical mistakes, and that the same was true of his writings in general, because there are so many cases in which one can ask how far what he says is a "hypothesis" and how far merely a good way of representing a fact—a question as to which he said Freud himself is constantly unclear. He said, for instance, that Freud encouraged a confusion between getting to know the *cause* of your laughter and getting to know the *reason* why you laugh, because what he says sounds as if it were science, when in fact it is only a "wonderful representation". This last point he also expressed by saying "It is all excellent similes, *e.g.* the comparison of a dream to a rebus". (He had said earlier that all Aesthetics is of the nature of "giving a good simile".) He said that this confusion between *cause* and *reason* had led to the disciples of Freud making "an abominable mess": that Freud did not in fact give any method of analysing dreams which was analogous to the rules which will tell you what are the causes of stomach-ache; that he had genius and therefore might sometimes by psycho-analysis find the *reason* of a certain dream, but that what is most striking about him is "the enormous field of psychological facts which he arranges".

As for what Freud says about jokes, he said first that Freud makes the two mistakes (1) of supposing that there is something

common to all jokes, and (2) of supposing that this supposed common character is the meaning of "joke". He said it is not true, as Freud supposed, that *all* jokes enable you to do covertly what it would not be seemly to do openly, but that "joke", like "proposition", "has a rainbow of meanings". But I think the point on which he was most anxious to insist was perhaps that psycho-analysis does not enable you to discover the *cause* but only the *reason* of, *e.g.* laughter. In support of this statement he asserted that a psycho-analysis is successful only if the patient agrees to the explanation offered by the analyst. He said there is nothing analogous to this in Physics; and that what a patient agrees to can't be a *hypothesis* as to the *cause* of his laughter, but only that so-and-so was the *reason* why he laughed. He explained that the patient who agrees did not think of this reason at the moment when he laughed, and that to say that he thought of it "subconsciously" "tells you nothing as to what was happening at the moment when he laughed".

(F) In (I), rather to my surprise, he spent a good deal of time in discussing what would usually be called a question about colours, namely, the question how the four "saturated" colours, pure yellow, pure red, pure blue and pure green, which he called "primary", are distinguished from those "saturated" colours which are not "primary". He drew a circle on the blackboard to represent the arrangement of the saturated colours, with a vertical diameter joining "yellow" at the top to "blue" at the bottom, and a horizontal diameter joining "green" on the left to "red" on the right. And he seemed to be maintaining with regard to these four colours that they are distinguished from the other saturated colours in the two following ways, *viz.* (1) that the sense in which any purple is "between" pure red and pure blue, and in which any orange is "between" pure yellow and pure red is very different from the sense of "between" in which pure red is "between" any orange and any purple; a difference which he also expressed by saying that whereas an orange can be properly called a "mixture" of yellow and red, red cannot possibly be called a "mixture" of orange and purple; and (2) that whereas pure red can be properly said to be "midway" between pure yellow and pure blue, there is no colour which is "midway" between pure red and pure blue, or "midway" between pure yellow and pure red, etc. He said that, for these reasons, the arrangement of the saturated colours in a square, with the four "primaries" at the four corners, is a better picture of their relations than the arrangement of them in a circle.

I say only that he *seemed* to be making these assertions, because he emphasized from the beginning that "primary" is not an adjective to "colour" in the sense in which "black" may be an adjective to "gown", but that the distinction between "primary" and "not primary" is a "logical" distinction—an expression which he explained later on by saying that, just as sounds are not distinguished from colours by the fact that something is true of the one which is not true of the other, so red, blue, green and yellow are not distinguished from the other saturated colours by the fact that anything is true of them which is not true of the others. He emphasized to begin with that the sentences "blue is not primary" and "violet is primary" are both of them "nonsense", and I think there is no doubt he held that, since this is so, their contradictories "blue is primary" and "violet is not primary" are also nonsense, though there is a sense in which the two last are true, and the two former false. In other words, I think he certainly held that "blue is primary" is a "necessary proposition"—that we can't imagine its not being true—and that therefore, as he said (p. 16), it "has no sense". It would seem to follow that if, as he seemed to be, he was really talking about the *colours*, red, blue, green and yellow, all that he said about them was "nonsense". According to what he said elsewhere, he could only have been talking sense, if he was talking, not about the colours, but about certain words used to express them; and accordingly he did actually go on to say that "red is primary" was only a proposition about the use of the English word "red", which, as I said (p. 311), he cannot seriously have held. The question I am here raising is the question which I discussed at length in my second article, and I have nothing to add except to give one quotation which I ought to have given there. He actually said, in one place in (II), "What corresponds to a necessity in the world must be what in language seems an arbitrary rule". I do not think he had succeeded in getting quite clear as to what relation he wished to assert to hold between what he called "rules of grammar", on the one hand, and "necessary propositions", on the other.

(G) With questions about Time he dealt, at considerable length, in two places in (III).

The earlier discussion was in connexion with his view that the "troubles in our thought" which he was concerned to remove, arise from our thinking that sentences which we do not use with any practical object, sound as if they "ought to have sense",

when in fact they have none. And in this connexion his main point seemed to be that, since we talk of Time "flowing" as well as of a river "flowing", we are tempted to think that Time "flows" in a certain "direction", as a river does, and that therefore it has sense to suppose that Time might flow in the opposite direction, just as it certainly has sense to suppose that a river might. He said, in one place, that some philosophers have actually made the muddle of thinking that Time has a "direction" which might conceivably be reversed. Later on he made a distinction, as to the meaning of which I am not clear, between what he called "memory-time" and what he called "information-time", saying that in the former there is only earlier and later, not past and future, and that it has sense to say that I remember that which in "information-time" is future. This distinction seemed to be connected with one he had made earlier, when he said that, if we imagine a river with logs floating down it at equal spatial distances from one another; the interval between the time at which, *e.g.* the 120th log passed us and that at which, *e.g.* the 130th passed, might *seem* to be equal to that between the time at which the 130th passed us and that at which the 140th passed us, although, *measured by a clock*, these intervals were not equal. He went on to ask: "Supposing all events had come to an end, what is the criterion for saying that Time would have come to an end too, or that it still went on?" and to ask: "If there were no events earlier than a hundred years ago, would there have been no time before that?" He said that what we need to do is to notice how we use the expression "Time"; and that people ask "Has Time been created?" although the question "Has 'before' been created?" has absolutely no meaning.

But he said a good many things in this discussion which I have failed to understand, and I may easily have omitted points which he would have considered of the first importance.

In his second discussion he was trying to show what was wrong with the following statement which Russell made in his "Outline of Philosophy": "Remembering, which occurs now, can not possibly prove that what is remembered occurred at some other time, because the world might have sprung into being five minutes ago, full of acts of remembering which were entirely misleading." But I cannot help thinking that, in what he said about this statement, he made two quite definite mistakes as to what Russell was implying by it. In order to explain why I think so I must, however, first explain what I take it that Russell was implying.

It will be noted that Russell speaks as if "acts of remembering" could be "entirely misleading"; and he seems not to have noticed that we so use the term "remember" that if an act, which resembles an act of remembering, turns out to be entirely misleading, we say that it was not an act of remembering. For instance "I remember that I had breakfast this morning" is so used that, if it turns out that I did not have breakfast this morning, it *follows logically* that I do *not* remember that I did: from "I remember that I had it" it *follows logically* that I did have it, so that "acts of remembering, which are entirely misleading" is a contradiction in terms; if an act is entirely misleading, it is not an act of remembering. It is plain, therefore, that Russell was using the expression "acts of remembering" in a different sense from any in which it can be correctly used; and his view could be more correctly expressed as the view that it is *logically possible* that we never remember anything. I say "logically possible", because when he says "the world *might* have sprung into being five minutes ago", I think he certainly means by "might", merely that it is *logically possible* that it did.

Now Wittgenstein pointed out, quite justly, that when Russell says "The world might have sprung into being five minutes ago" his choice of "five minutes ago" as the time when the world might have "sprung into being" is "arbitrary": Russell's view requires that it is equally true that it might have "sprung into being" two minutes ago or one minute ago, or, says Wittgenstein, that it might have begun to exist *now*: he actually said that Russell *ought* to have said "The world might have been created *now*". And I think it is true that Russell does imply this. But Wittgenstein said that in the statement quoted, Russell was "committing the precise fallacy of Idealism". And surely this is a complete mistake! From what I have quoted (p. 15) it appears clear that what Wittgenstein regarded as the "fallacy of Idealism" was some such statement as "It is logically impossible that anything should be real except the present experience". And Russell's statement certainly does not imply this. It looks to me as if, for the moment, Wittgenstein was confusing the two entirely different propositions, (1) "It is logically possible that nothing exists except the present experience" which Russell may be said to imply, and (2) "It is logically impossible that anything should exist except the present experience", which he certainly does not imply.

But it seems to me that he also made another complete mistake as to what Russell's view implied; and this was a criticism into which he went at some length. He began by asking us to

consider the question "What is the verification for the proposition 'The world began to exist five minutes ago'?" saying that, if you admit no criterion for its truth, that sentence is "useless", or, as he afterwards said, "meaningless". And his criticism of Russell here consisted in saying that "Russell is refusing to admit as evidence for 'the world began more than five minutes ago' what we all admit as such evidence, and is therefore making that statement meaningless". He compared Russell's statement to the statement "There is a rabbit between A and B, whenever nobody is looking" which he said "seems to have sense, but is in fact meaningless, because it cannot be refuted by experience". But surely Russell would admit and can perfectly consistently admit, that some of those events, which he calls incorrectly "acts of remembering" do constitute very strong evidence that the world existed more than five minutes ago. He is not concerned to deny that they constitute *strong* evidence, but only that they constitute *absolutely conclusive* evidence—that they "prove" that it did. In other words, he is only asserting that it is *logically possible* that the world did not. Wittgenstein seems to me to have overlooked the distinction between denying that we have *any* evidence which Russell does not do, and denying that we have *absolutely conclusive* evidence, which I think Russell certainly meant to do.

But later on Wittgenstein seemed to me to be suggesting another quite different argument, which, if he did mean what he seemed to mean, and if what he seemed to mean is true, would really be a valid refutation of Russell's statement. He introduced again the phrase "memory-time", saying that a certain order of events might be so called, and then going on to say that all these events "approach a point such that it will have no sense to say 'B occurred after the present in memory-time'"; that "now" "should be a point in an order"; and that when we say "The clock is striking now", "now" means "the present of our memory-time", and cannot mean, *e.g.* "at 6.7" because it has sense to say "It is 6.7 *now*". I think all this suggests that his view was that "now", in the sense in which we commonly use it, and in which Russell was undoubtedly using it, has a meaning such that part of what we are saying when we say that an event is happening "now", is that it was preceded by other events which we remember; and, if this is true, it would certainly follow that Russell was wrong in implying that it is logically possible that nothing should have happened before *now*.

(H) I was a good deal surprised by some of the things he said about the difference between "philosophy" in the sense in which what he was doing might be called "philosophy" (he called this "modern philosophy"), and what has traditionally been called "philosophy". He said that what he was doing was a "new subject", and not merely a stage in a "continuous development"; that there was now, in philosophy, a "kink" in the "development of human thought", comparable to that which occurred when Galileo and his contemporaries invented dynamics; that a "new method" had been discovered, as had happened when "chemistry was developed out of alchemy"; and that it was now possible for the first time that there should be "skilful" philosophers, though of course there had in the past been "great" philosophers.

He went on to say that, though philosophy had now been "reduced to a matter of skill", yet this skill, like other skills, is very difficult to acquire. One difficulty was that it required a "sort of thinking" to which we are not accustomed and to which we have not been trained—a sort of thinking very different from what is required in the sciences. And he said that the required skill could not be acquired merely by hearing lectures: discussion was essential. As regards his own work, he said it did not matter whether his results were true or not: what mattered was that "a method had been found".

In answer to the question why this "new subject" should be called "philosophy" he said in (III) that though what he was doing was certainly different from what, *e.g.* Plato or Berkeley had done, yet people might feel that it "takes the place of" what they had done—might be inclined to say "This is what I really wanted" and to identify it with what they had done, though it is really different, just as (as I said above, p. 9) a person who had been trying to trisect an angle by rule and compasses might, when shown the proof that this is impossible, be inclined to say that this impossible thing was the very thing he had been trying to do, though what he had been trying to do was really different. But in (II) he had also said that the "new subject" did really resemble what had been traditionally called "philosophy" in the three respects that (1) it was very general, (2) it was fundamental both to ordinary life and to the sciences, and (3) it was independent of any special results of science; that therefore the application to it of the word "philosophy" was not purely arbitrary.

He did not expressly try to tell us exactly what the "new method" which had been found was. But he gave some hints

as to its nature. He said, in (II), that the "new subject" consisted in "something like putting in order our notions as to what can be said about the world", and compared this to the tidying up of a room where you have to move the same object several times before you can get the room really tidy. He said also that we were "in a muddle about things", which we had to try to clear up; that we had to follow a certain instinct which leads us to ask certain questions, though we don't even understand what these questions mean; that our asking them results from "a vague mental uneasiness", like that which leads children to ask "Why?"; and that this uneasiness can only be cured "either by showing that a particular question is not permitted, or by answering it". He also said that he was not trying to teach us any new facts: that he would only tell us "trivial" things—"things which we all know already"; but that the difficult thing was to get a "synopsis" of these trivialities, and that our "intellectual discomfort" can only be removed by a synopsis of *many* trivialities—that "if we leave out any, we still have the feeling that something is wrong". In this connexion he said it was misleading to say that what we wanted was an "analysis", since in science to "analyse" water means to discover some new fact about it, *e.g.* that it is composed of oxygen and hydrogen, whereas in philosophy "we know at the start all the facts we need to know". I imagine that it was in this respect of needing a "synopsis" of trivialities that he thought that philosophy was similar to Ethics and Aesthetics (p. 19).

I ought, perhaps, finally to repeat what I said in my first article (pp. 5-6), namely, that he held that though the "new subject" must say a great deal about language, it was only necessary for it to deal with those points about language which have led, or are likely to lead, to definite philosophical puzzles or errors. I think he certainly thought that some philosophers now-a-days have been misled into dealing with linguistic points which have no such bearing, and the discussion of which therefore, in his view, forms no part of the proper business of a philosopher.