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Author(s): G. E. Moore

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MIND

A QUARTERLY REVIEW
OF
PSYCHOLOGY AND PHILOSOPHY



I.—WITTGENSTEIN'S LECTURES IN 1930-33

BY G. E. MOORE

I

IN January, 1929, Wittgenstein returned to Cambridge after an absence of more than fifteen years. He came with the intention of residing in Cambridge and pursuing there his researches into philosophical problems. Why he chose Cambridge for this latter purpose I do not know: perhaps it was for the sake of having the opportunity of frequent discussion with F. P. Ramsey. At all events he did in fact reside in Cambridge during all three Full Terms of 1929, and was working hard all the time at his researches.¹ He must, however, at some time during that year, have made up his mind that, besides researching, he would like to do a certain amount of lecturing, since on 16th October, in accordance with his wishes, the Faculty Board of Moral Science resolved that he should be invited to give a course of lectures to be included in their Lecture List for the Lent Term of 1930.

During this year, 1929, when he was researching and had not begun to lecture, he took the Ph.D. degree at Cambridge. Having been entered as an "Advanced Student" during his previous period of residence in 1912 and 1913, he now found that he was entitled to submit a dissertation for the Ph.D. He submitted the *Tractatus* and Russell and I were appointed to examine him.

¹ The statement in the Obituary notice in *The Times* for 2nd May, 1951, that he arrived in Cambridge in 1929 "for a short visit" is very far from the truth. Fortunately I kept a brief diary during the period in question and can therefore vouch for the truth of what I have stated above about his residence in 1929, though there is in fact other evidence.

We gave him an oral examination on 6th June, an occasion which I found both pleasant and amusing. We had, of course, no doubt whatever that his work deserved the degree: we so reported, and when our report had been approved by the necessary authorities, he received the degree in due course.

In the same month of June in which we examined him, the Council of Trinity College made him a grant to enable him to continue his researches. (They followed this up in December, 1930, by electing him to a Research Fellowship, tenable for five years, which they afterwards prolonged for a time.)

In the following July of 1929 he attended the Joint Session of the Mind Association and Aristotelian Society at Nottingham, presenting a short paper entitled "Some Remarks on Logical Form". This paper was the only piece of philosophical writing by him, other than the *Tractatus*, published during his life-time. Of this paper he spoke in a letter to MIND (July, 1933) as "weak"; and since 1945 he has spoken of it to me in a still more disparaging manner, saying something to the effect that, when he wrote it, he was getting new ideas about which he was still confused, and that he did not think it deserved any attention.

But what is most important about this year, 1929, is that in it he had frequent discussions with F. P. Ramsey—discussions which were, alas! brought to an end by Ramsey's premature death in January, 1930.¹ Ramsey had written for MIND (October 1923, p. 465) a long Critical Notice of the *Tractatus*; and subsequently, during the period when Wittgenstein was employed as a village-schoolmaster in Austria, Ramsey had gone out to see him, in order to question him as to the meaning of certain statements in the *Tractatus*. He stayed in the village for a fortnight or more, having daily discussions with Wittgenstein. Of these

¹ In the Preface to his posthumously published *Philosophical Investigations*, where Wittgenstein acknowledges his obligations to Ramsey (p. x), Wittgenstein himself says that he had "innumerable" discussions with Ramsey "during the last two years of his life", which should mean both in 1928 and in 1929. But I think this must be a mistake. I imagine that Wittgenstein, trusting to memory alone, had magnified into a series of discussions continuing for two years, a series which in fact only continued for a single year. It will be noticed that in the letter from Ramsey himself which I am about to quote, and which is dated 14th June, 1929, Ramsey states that he had been in close touch with Wittgenstein's work "during the last two terms", i.e. during the Lent and May terms of 1929, implying that he had not been in close touch with it in 1928. And though I do not know where Wittgenstein was in 1928, he certainly was not resident in Cambridge where Ramsey was resident, so that it is hardly possible that they can have had in that year such frequent discussions as they certainly had in 1929.

discussions in Austria I only know that Ramsey told me that, in reply to his questions as to the meaning of certain statements, Wittgenstein answered more than once that he had forgotten what he had meant by the statement in question. But after the first half of the discussions at Cambridge in 1929, Ramsey wrote at my request the following letter in support of the proposal that Trinity should make Wittgenstein a grant in order to enable him to continue his researches.

“ In my opinion Mr. Wittgenstein is a philosophic genius of a different order from any one else I know. This is partly owing to his great gift for seeing what is essential in a problem and partly to his overwhelming intellectual vigour, to the intensity of thought with which he pursues a question to the bottom and never rests content with a mere possible hypothesis. From his work more than that of any other man I hope for a solution of the difficulties that perplex me both in philosophy generally and in the foundations of Mathematics in particular.

“ It seems to me, therefore, peculiarly fortunate that he should have returned to research. During the last two terms I have been in close touch with his work and he seems to me to have made remarkable progress. He began with certain questions in the analysis of propositions which have now led him to problems about infinity which lie at the root of current controversies on the foundations of Mathematics. At first I was afraid that lack of mathematical knowledge and facility would prove a serious handicap to his working in this field. But the progress he has made has already convinced me that this is not so, and that here too he will probably do work of the first importance.

“ He is now working very hard and, so far as I can judge, he is getting on well. For him to be interrupted by lack of money would, I think, be a great misfortune for philosophy.”

The only other thing I know about these discussions with Ramsey at Cambridge in 1929 is that Wittgenstein once told me that Ramsey had said to him “ I don't like your method of arguing ”.

Wittgenstein began to lecture in January, 1930, and from the first he adopted a plan to which he adhered, I believe, throughout his lectures at Cambridge. His plan was only to lecture once a week in every week of Full Term, but on a later day in each week to hold a discussion class at which what he had said in that week's lecture could be discussed. At first both lecture and discussion class were held in an ordinary lecture-room in the University Arts School; but very early in the first term Mr. R. E. Priestley (now Sir Raymond Priestley), who was then

University Registrar and who occupied a set of Fellows' rooms in the new building of Clare, invited Wittgenstein to hold his discussion classes in these rooms. Later on, I think, both lectures and discussion classes were held in Priestley's rooms, and this continued until, in October, 1931, Wittgenstein, being then a Fellow of Trinity, was able to obtain a set of rooms of his own in Trinity which he really liked. These rooms were those which Wittgenstein had occupied in the academic year 1912-13, and which I had occupied the year before, and occupied again from October, 1913, when Wittgenstein left Cambridge and went to Norway. Of the only two sets which are on the top floor of the gate-way from Whewell's Courts into Sidney Street, they were the set which looks westward over the larger Whewell's Court, and, being so high up, they had a large view of sky and also of Cambridge roofs, including the pinnacles of King's Chapel. Since the rooms were not a Fellow's set, their sitting-room was not large, and for the purpose of his lectures and classes Wittgenstein used to fill it with some twenty plain cane-bottomed chairs, which at other times were stacked on the large landing outside. Nearly from the beginning the discussion classes were liable to last at least two hours, and from the time when the lectures ceased to be given in the Arts School they also commonly lasted at least as long. Wittgenstein always had a blackboard at both lectures and classes and made plenty of use of it.

I attended both lectures and discussion classes in all three terms of 1930 and in the first two terms of 1931. In the Michaelmas term of 1931 and the Lent term of 1932 I ceased, for some reason which I cannot now remember, to attend the lectures though I still went to the discussion classes ; but in May 1932, I resumed the practice of attending the lectures as well, and throughout the academic year 1932-33 I attended both. At the lectures, though not at the discussion classes, I took what I think were very full notes, scribbled in note-books of which I have six volumes nearly full. I remember Wittgenstein once saying to me that he was glad I was taking notes, since, if anything were to happen to him, they would contain some record of the results of his thinking.

My lecture-notes may be naturally divided into three groups, to which I will refer as (I), (II) and (III). (I) contains the notes of his lectures in the Lent and May terms of 1930 ; (II) those of his lectures in the academic year 1930-31 ; and (III) those of lectures which he gave in the May term of 1932, after I had resumed attending, as well as those of all the lectures he gave in the academic year 1932-33. The distinction between the three

groups is of some importance, since, as will be seen, he sometimes in later lectures corrected what he had said in earlier ones.

The chief topics with which he dealt fall, I think, under the following heads. First of all, in all three periods he dealt (A) with some very general questions about language, (B) with some special questions in the philosophy of Logic, and (C) with some special questions in the philosophy of Mathematics. Next, in (III) and in (III) alone, he dealt at great length, (D) with the difference between the proposition which is expressed by the words "I have got tooth-ache", and those which are expressed by the words "You have got tooth-ache" or "He has got tooth-ache", in which connexion he said something about Behaviourism, Solipsism, Idealism and Realism, and (E) with what he called "the grammar of the word 'God' and of ethical and aesthetic statements". And he also dealt, more shortly, in (I) with (F) our use of the term "primary colour"; in (III) with (G) some questions about Time; and in both (II) and (III) with (H) the kind of investigation in which he was himself engaged, and its difference from and relation to what has traditionally been called "philosophy".

I will try to give some account of the chief things he said under all these heads; but I cannot possibly mention nearly everything, and it is possible that some of the things I omit were really more important than those I mention. Also, though I tried to get down in my notes the actual words he used, it is possible that I may sometimes have substituted words of my own which misrepresent his meaning: I certainly did not understand a good many of the things he said. Moreover, I cannot possibly do justice to the extreme richness of illustration and comparison which he used: he was really succeeding in giving what he called a "synoptic" view of things which we all know. Nor can I do justice to the intensity of conviction with which he said everything which he did say, nor to the extreme interest which he excited in his hearers. He, of course, never read his lectures: he had not, in fact, written them out, although he always spent a great deal of time in thinking out what he proposed to say.

(A) He did discuss at very great length, especially in (II), certain very general questions about language; but he said, more than once, that he did not discuss these questions because he thought that language was the subject-matter of philosophy. He did not think that it was. He discussed it only because he thought that particular philosophical errors or "troubles in our thought" were due to false analogies suggested by our actual use of expressions; and he emphasized that it was only necessary

for him to discuss those points about language which, as he thought, led to these particular errors or "troubles".

The general things that he had to say about language fall naturally, I think, under two heads, namely (a) what he had to say about the meaning of single words, and (b) what he had to say about "propositions".

(a) About the meaning of single words, the positive points on which he seemed most anxious to insist were, I think, two, namely (α) something which he expressed by saying that the meaning of any single word in a language is "defined", "constituted", "determined" or "fixed" (he used all four expressions in different places) by the "grammatical rules" with which it is used in that language, and (β) something which he expressed by saying that every significant word or symbol must essentially belong to a "system", and (metaphorically) by saying that the meaning of a word is its "place" in a "grammatical system".

But he said in (III) that the sense of "meaning" of which he held these things to be true, and which was the only sense in which he intended to use the word, was only one of those in which we commonly use it: that there was another which he described as that in which it is used "as a name for a process accompanying our use of a word and our hearing of a word". By the latter he apparently meant that sense of "meaning" in which "to know the meaning" of a word means the same as to "understand" the word; and I think he was not quite clear as to the relation between this sense of "meaning" and that in which he intended to use it, since he seemed in two different places to suggest two different and incompatible views of this relation, saying in (II) that "the rules applying to negation actually describe my experience in using 'not', *i.e.* describe my understanding of the word", and in one place in (III), on the other hand, saying, "perhaps there is a causal connection between the rules and the feeling we have when we hear 'not'". On the former occasion he added that "a logical investigation doesn't teach us anything about the meaning of negation: we can't get any clearer about its meaning. What's difficult is to make the rules explicit".

Still later in (III) he made the rather queer statement that "the idea of meaning is in a way obsolete, except in such phrases as 'this means the same as that' or 'this has no meaning'", having previously said in (III) that "the mere fact that we have the expression 'the meaning' of a word is bound to lead us wrong: we are led to think that the rules are responsible to something not a rule, whereas they are only responsible to rules".

As to (α) although he had said, at least once, that the meaning

of a word was "constituted" by the grammatical rules which applied to it, he explained later that he did not mean that the meaning of a word *was* a list of rules; and he said that though a word "carried its meaning with it", it did not carry with it the grammatical rules which applied to it. He said that the student who had asked him whether he meant that the meaning of a word *was* a list of rules would not have been tempted to ask that question but for the false idea (which he held to be a common one) that in the case of a substantive like "the meaning" you have to look for something at which you can point and say "This is the meaning". He seemed to think that Frege and Russell had been misled by the same idea, when they thought they were bound to give an answer to the question "What is the number 2?" As for what he meant by saying that the meaning of a word is "determined by" (this was the phrase which he seemed to prefer) the "grammatical rules" in accordance with which it is used, I do not think he explained further what he meant by this phrase.

(β) As to what he meant by saying that, in order that a word or other sign should have meaning, it must belong to a "system", I have not been able to arrive at any clear idea. One point on which he insisted several times in (II) was that if a word which I use is to have meaning, I must "commit myself" by its use. And he explained what he meant by this by saying "If I commit myself, that means that if I use, *e.g.* 'green' in this case, I have to use it in others", adding "If you commit yourself, there are consequences". Similarly he said a little later, "If a word is to have significance, we must commit ourselves", adding "There is no use in correlating noises to facts, unless we commit ourselves to using the noise in a particular way again—unless the correlation has consequences", and going on to say that it must be possible to be "led by a language". And when he expressly raised, a little later, the question "What is there in this talk of a 'system' to which a symbol must belong?" he answered that we are concerned with the phenomenon of "being guided by". It looked, therefore, as if one use which he was making of the word "system" was such that in order to say that a word or other sign "belonged to a system", it was not only necessary but *sufficient* that it should be used in the same way on several different occasions. And certainly it would be natural to say that a man who habitually used a word in the same way was using it "systematically".

But he certainly also frequently used "system" in such a sense that *different* words or other expressions could be said to belong to the *same* "system"; and where, later on, he gave, as

an illustration of what he meant by "Every symbol must essentially belong to a system", the proposition "A crotchet can only give information on what note to play in a system of crotchets", he seemed to imply that for a sign to have significance it is *not* sufficient that we should "commit ourselves" by its use, but that it is also necessary that the sign in question should belong to the same "system" with other signs. Perhaps, however, he only meant, not that for a sign to have *some* meaning, but that for *some* signs to have *the significance which they actually have in a given language*, it is necessary that they should belong to the same "system" with other signs. This word "system" was one which he used very very frequently, and I do not know what conditions he would have held must be satisfied by two different signs in order that they may properly be said to belong to the same "system". He said in one place in (II) that the "system of projection" by which " $2 + 3$ " can be projected into " 5 " is "in no way inferior" to the "system" by which " $11 + 111$ " can be projected into " 11111 ", and I think one can see, in this case, that " $2 + 3 = 5$ " can be properly said to belong to the same "system" as, *e.g.* " $2 + 2 = 4$ ", and also can properly be said to belong to a different "system" from that to which " $11 + 111 = 11111$ " and " $11 + 11 = 1111$ " both belong, though I have no clear idea as to the sense in which these things can properly be said. Nor do I know whether Wittgenstein would have held, *e.g.* that in the case of *every* English word, it could not have the significance which it actually has in English unless it belonged to the same "system" as other English words, or whether he would have held that this is only true of *some* English words, *e.g.* of the words "five" and "four", and of the words "red" and "green".

But besides these two positive things, (α) and (β), which he seemed anxious to say about the meaning of words, he also insisted on three negative things, *i.e.* that three views which have sometimes been held are mistakes. The first of these mistakes was (γ) the view that the meaning of a word was some image which it calls up by association—a view to which he seemed to refer as the "causal" theory of meaning. He admitted that sometimes you cannot understand a word unless it calls up an image, but insisted that, even where this is the case, the image is just as much a "symbol" as the word is. The second mistake was (δ) the view that, where we can give an "ostensive" definition of a word, the object pointed at is the meaning of the word. Against this view, he said, for one thing, that, in such a case "the gesture of pointing together with the object pointed at can be

used *instead* of the word", *i.e.* is itself something which has meaning and has the same meaning as the word has. In this connexion he also pointed out that you may point at a red book, either to show the meaning of "book" or to show the meaning of "red", and that hence in "This is a book" and "This is the colour 'red'", "this" has quite a different meaning; and he emphasized that, in order to understand the ostensive definition "This is 'red'", the hearer must already understand what is meant by "colour". And the third mistake was (ϵ) that a word is related to its meaning in the same way in which a proper name is related to the "bearer" of that name. He gave as a reason for holding that this is false that the bearer of a name can be ill or dead, whereas we cannot possibly say that the meaning of the name is ill or dead. He said more than once that the bearer of a name can be "substituted" for the name, whereas the meaning of a word can never be substituted for that word. He sometimes spoke of this third mistake as the view that words are "representative" of their meanings, and he held that in no case is a word "representative" of its meaning, although a proper name is "representative" of its bearer (if it has one). He added in one place: "The meaning of a word is no longer for us an object corresponding to it."

On the statement "Words, except in propositions, have no meaning" he said that this "is true or false, as you understand it"; and immediately went on to add that, in what he called "language games", single words "have meanings by themselves", and that they may have meaning by themselves even in our ordinary language "if we have provided one". In this connexion he said, in (II), that he had made a mistake (I think he meant in the *Tractatus*) in supposing that a proposition must be complex. He said the truth was that we can replace a proposition by a simple sign, but that the simple sign must be "part of a system".

(b) About "propositions", he said a great deal in many places as to answers which might be given to the question "What is a proposition?"—a question which he said we do not understand clearly. But towards the end of (III) he had definitely reached the conclusion "It is more or less arbitrary what we call a 'proposition'", adding that "therefore Logic plays a part different from what I and Russell and Frege supposed it to play"; and a little later he said that he could not give a general definition of "proposition" any more than of "game": that he could only give examples, and that any line he could draw would be "arbitrary, in the sense that nobody would have

decided whether to call so and so a 'proposition' or not". But he added that we are quite right to use the word "game", so long as we don't pretend to have drawn a definite outline.

In (II), however, he had said that the word "proposition", "as generally understood", includes both "what I call propositions", also "hypotheses", and also mathematical propositions; that the distinction between these three "kinds" is a "logical distinction", and that therefore there must be some grammatical rules, in the case of each kind, which apply to that kind and not to the other two; but that the "truth-function" rules apply to all three, and that that is why they are all called "propositions".

He went on to illustrate the difference between the first two kinds by saying that "There seems to me to be a man here" is of the first kind, whereas "There is a man here" is a "hypothesis"; and said that one rule which applies to the first and not to the second is that I can't say "There seems to me to seem to me to be a man here" whereas I can say "There seems to me to be a man here". But, soon after, he said that the word "proposition" is used in *two* different ways, a wider and a narrower, meaning by the wider that in which it included all three of the kinds just distinguished, and by the narrower, apparently, that in which it included the first two kinds, but not the third. For propositions in this narrower sense he seemed later very often to use the expression "experiential propositions", and accordingly I will use this expression to include propositions of both the first two kinds. The things which he had to say about experiential propositions, thus understood, were extremely different from those which he had to say about the third kind; and I will therefore treat these two subjects separately.

(α) Of experiential propositions he said in (I) that they could be "compared with reality" and either "agreed or disagreed with it". He pointed out very early something which he expressed by saying "Much of language needs outside help", giving as an example your use of a specimen of a colour in order to explain what colour you want a wall painted; but he immediately went on to say (using "language" in a different sense) that in such a case the specimen of a colour is "a part of your language". He also pointed out (as in the *Tractatus*) that you can assert a proposition or give an order without using any words or symbols (in the ordinary sense of "symbol"). One of the most striking things about his use of the term "proposition" was that he apparently so used it that in giving an order you are necessarily expressing a "proposition", although, of course, an order can


be neither true nor false, and can be "compared with reality" only in the different sense that you can look to see whether it is carried out or not.

About propositions, understood in this sense, he made a distinction in (II) between what he called "the sign" and what he called "the symbol", saying that whatever was necessary to give a "sign" significance was a part of "the symbol", so that where, for instance, the "sign" is a sentence, the "symbol" is something which contains both the sign and also everything which is necessary to give that sentence sense. He said that a "symbol", thus understood, is a "proposition" and "cannot be nonsensical, though it can be either true or false". He illustrated this by saying that if a man says "I am tired" his mouth is part of the symbol; and said that any explanation of a sign "completes the symbol".

Here, therefore, he seemed to be making a distinction between a proposition and a sentence, such that no sentence can be identical with any proposition, and that no proposition can be without sense. But I do not think that in his actual use of the term "proposition" he adhered to this distinction. He seemed to me sometimes so to use "proposition" that every significant sentence *was* a proposition, although, of course, a significant sentence does not contain everything which is necessary to give it significance. He said, for instance, that signs with different meanings must *be* different "symbols". And very often he seemed to me to follow the example of Russell in the Introduction to *Principia Mathematica* in so using the word "proposition" that "propositions", and not merely sentences, could be without sense; as, for instance, when he said at the beginning of (II) that his object was to give us some "firm ground" such as "If a proposition has a meaning, its negation must have a meaning". And, towards the end of (III), in connexion with the view at which he had then arrived that the words "proposition", "language" and "sentence" are all "vague", he expressly said that the answer to the question whether, when you say "A unicorn looks like this" and point at a picture of a unicorn, the picture is or is not a part of the proposition you are making, was "You can say which you please". He was, therefore, now rejecting his earlier view that a proposition must contain everything which is necessary to make a sentence significant, and seemed to be implying that the use of "proposition" to mean the same as "sentence" was a perfectly correct one.

In connexion with the *Tractatus* statement that propositions, in the "narrower" sense with which we are now concerned, are

“ pictures ”, he said he had not at that time noticed that the word “ picture ” was vague ; but he still, even towards the end of (III), said that he thought it “ useful to say ‘ A proposition is a picture *or something like one* ’ ” although in (II) he had said he was willing to admit that to call a proposition a “ picture ” was misleading ; that propositions are not pictures “ in any ordinary sense ” ; and that to say that they are, “ merely stresses a certain aspect of the grammar of the word ‘ proposition ’—merely stresses that our uses of the words ‘ proposition ’ and ‘ picture ’ follow similar rules ”.

In connexion with this question of the similarity between experiential “ propositions ” and pictures, he frequently used the words “ project ” and “ projection ”. Having pointed out that it is paradoxical to say that the words “ Leave the room ” is a “ picture ” of what a boy does if he obeys the order, and having asserted that it is, in fact, *not* a “ picture ” of the boy’s action “ in any ordinary sense ”, he nevertheless went on to say that it is “ as much ” a picture of the boy’s action as “ $2 + 3$ ” is of “ 5 ”, and that “ $2 + 3$ ” really is a picture of “ 5 ” “ *with reference to a particular system of projection* ”, and that this system is “ in no way inferior ” to the system in which “ $11 + 111$ ” is projected into “ 11111 ”, only that “ the method of projection is rather queer ”. He had said previously that the musical signs “ \sharp ” and “ \flat ” are obviously not pictures of anything you do on the keyboard of a piano ; that they differ in this respect from what, *e.g.* “  ” would be, if you had the rule that the

second crotchet is to stand for the white key on the piano that is next to the right of that for which the first crotchet stands, and similarly for the third and second crotchet ; but nevertheless, he said, “ \sharp ” and “ \flat ” “ work in exactly the same way ” as these crotchets would work, and added that “ almost all our words work as they do ”. He explained this by saying that a “ picture ” must have been given by an explanation of how “ \sharp ” and “ \flat ” are used, and that an explanation is always of the same kind as a definition, *viz.* “ replacing one symbol by another ”. He went on to say that when a man reads on a piano from a score, he is “ led ” or “ guided ” by the position of the crotchets, and that this means that he is “ following a general rule ”, and that this rule, though not “ contained ” in the score, nor in the result, nor in both together, must be “ contained ” in his intention. But he said, that though the rule is “ contained ” in the intention, the intention obviously does not “ contain ” any *expression* of the rule, any more than, when I read aloud, I am

conscious of the rules I follow in translating the printed signs into sounds. He said that what the piano-player does is "to see the rule in the score", and that, even if he is playing automatically, he is still "guided by" the score, provided that he *would* use the general rule to judge whether he had made a mistake or not. He even said in one place that to say that a man is "guided" by the score "means" that he *would justify* what he played by reference to the score. He concluded by saying that, if he plays correctly, there is a "similarity" between what he does on the piano and the score, "though we usually confine 'similarity' to projection according to certain rules only"; and that in the same sense there is a "similarity" between automatic traffic-signals and the movements of traffic which are guided by them. Later on he said that for any sign whatever there *could* be a method of projection such that it made sense, but that when he said of any particular expression "That means nothing" or "is nonsense", what he meant was "*With the common method of projection* that means nothing", giving as an instance that when he called the sentence "It is due to human weakness that we can't write down all the cardinal numbers" "meaningless", he meant that it is meaningless if the person who says it is using "due to human weakness" as in "It's due to human weakness that we can't write down a billion cardinal numbers". Similarly, he said that surely Helmholtz must have been talking nonsense when he said that in happy moments he could imagine four-dimensional space, because *in the system he was using* those words make no sense, although "I threw the chalk into four-dimensional space" would make sense, if we were not using the words on the analogy of throwing from one room into another, but merely meant "It first disappeared and then appeared again". He insisted more than once that we are apt to think that we are using a new system of projection which would give sense to our words, when in fact we are not using a new system at all: "any expression" he said "*may* make sense, but you may think you are using it with sense, when in fact you are not".

One chief view about propositions to which he was opposed was a view which he expressed as the view that a proposition is a sort of "shadow" intermediate between the expression which we use in order to assert it and the fact (if any) which "verifies" it. He attributed this view to W. E. Johnson, and he said of it that it was an attempt to make a distinction between a proposition and a sentence. (We have seen that he himself had in (II) made a different attempt to do this.) He said that it regarded the supposed "shadow" as something "similar" to the fact

which verifies it, and in that way different from the expression which expresses it, which is not "similar" to the fact in question ; and he said that, even if there were such a "shadow" it would not "bring us any nearer to the fact", since "it would be susceptible of different interpretations just as the expression is". He said, "You can't give any picture which can't be misinterpreted" and "No interpolation between a sign and its fulfilment does away with a sign". He added that the only description of an expectation "which is relevant for us" is "the expression of it", and that "the expression of an expectation contains a description of the fact that would fulfil it", pointing out that if I expect to *see a red patch* my expectation is fulfilled if and only if I do *see a red patch*, and saying that the words "see a red patch" have the same meaning in both expressions.

Near the beginning of (I) he made the famous statement, "The sense of a proposition is the way in which it is verified"; but in (III) he said this only meant "You can determine the meaning of a proposition by asking how it is verified" and went on to say, "This is necessarily a mere rule of thumb, because 'verification' means different things, and because in some cases the question 'How is that verified?' makes no sense". He gave as an example of a case in which that question "makes no sense" the proposition "I've got tooth-ache", of which he had already said that it makes no sense to ask for a verification of it—to ask "How do you know that you have?" I think that he here meant what he said of "I've got tooth-ache" to apply to all those propositions which he had originally distinguished from "hypotheses" as "what I call propositions"; although in (II) he had distinguished the latter from "hypotheses" by saying that they had "a definite verification or falsification". It would seem, therefore, that in (III) he had arrived at the conclusion that what he had said in (II) was wrong, and that in the case of "what he called propositions", so far from their having "a definite verification", it was senseless to say that they had a verification at all. His "rule of thumb", therefore, could only apply, if at all, to what he called "hypotheses"; and he went on to say that, in many cases, it does not apply even to these, saying that statements in the newspapers could verify the "hypothesis" that Cambridge had won the boat race, and that yet these statements "only go a very little way towards explaining the meaning of 'boat-race'"; and that similarly "The pavement is wet" may verify the proposition "It has been raining", and that yet "it gives very little of the grammar of 'It has been raining'". He went on to say "Verification determines the meaning of a proposition

only where it gives the grammar of the proposition in question ” ; and in answer to the question “ How far is giving a verification of a proposition a grammatical statement about it ? ” he said that, whereas “ When it rains the pavement gets wet ” is not a grammatical statement at all, if we say “ The fact that the pavement is wet is a *symptom* that it has been raining ” this statement is “ a matter of grammar ”.

(To be continued)