

ESSAYS ON  
Wittgenstein's  
*Tractatus*

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THE MACMILLAN COMPANY

New York

# Pictures and Form in Wittgenstein's 'Tractatus'<sup>1</sup>

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WITTGENSTEIN'S *Tractatus* is a series of propositions numbered in such a way as to indicate their respective importance within the whole and their logical dependence upon one another.<sup>2</sup> That a system of numeration so troublesome for an author to devise will give many useful indications to the interpreter, is a truth that has only to be stated to be acknowledged. It may fairly be assumed, for example, that the propositions beginning with the number 6 represent what he regarded as the chief results of his enquiry: this assumption is confirmed by the frequent echoes to be found in these propositions of what W said in the *Vorwort*.

The structure of the 6's is roughly as follows:<sup>3</sup> in 6 itself the general form of a proposition is announced. By this is meant the form that any expression which is to be a proposition must have: the 4's and 5's have been largely devoted to showing that this form will be identical with the form that any truth-function must have (4's) and to showing what form it is that any truth-function must have (5's). It is then shown, in the 6.1's, that the propositions of logic are tautologies, which say nothing and have no content. In the 6.2's it is

<sup>1</sup> From *Filosofia e Simbolismo*, *Archivio di Filosofia*, Fratelli Bocca Editori: Roma, 1956, pp. 207–28. Reprinted by permission of the editor and the author.

<sup>2</sup> *Tractatus Logico-Philosophicus*, by Ludwig Wittgenstein, London, Kegan Paul, 1922: KP (Italian translation: by G. C. M. Colombo, S.J., Milan, Fratelli Bocca 1954: FB). I am indebted to Fr. Colombo for the suggestion that I should write article and for frequent discussions: in this latter point I am also indebted to my colleague in Oxford, Mr D. F. Pears.

W explains his system of numeration in a footnote printed on KP, p. 30, FB, p. 164. In the remainder of this article simple numerals will indicate propositions of the *Tractatus*.

<sup>3</sup> By "the n's" I shall mean those propositions that begin with the number or numbers n.

shown that the propositions of mathematics are likewise pseudo-propositions: the essential thing here is that mathematics is a *part* of logic, as W says twice (6.2, 6.234). In the 6.3's W deals with the apparent a-priority of at least some parts of natural science. His conclusion here is in accord with Einstein's dictum about Geometry: some propositions of "science" are necessarily true, in the sense that they are necessary consequences of our choice of a particular method of describing the world: but these say nothing about the world. There will be other propositions in science that do say something about the world (6.3431) but these will not be necessarily true and are the only "scientific propositions" properly so called.<sup>1</sup> The 6.4's and 6.5's discuss those questions to which natural science doesn't even seem to give an answer. Ethics is clearly one field of such questions, and W claims that there are *no* ethical propositions. On other matters, such as the freedom of the will, the "meaning" of life and "the riddle" (perhaps this is the felt contingency of the world) there *can be* no questions, because there are no propositions that would be their answers. Finally W recommends philosophical analysis (to borrow a later term) as a cure, and mystical feeling as a substitute, for metaphysics. The book closes with the often-quoted warning not to try to put the data of this feeling into words (7): *Wovon man nicht sprechen kann, darüber muss man schweigen*.<sup>2</sup>

<sup>1</sup> This remark seems to me to follow not only from 6.34 but from the requirement of consistency with 4.111 from which it may be inferred that propositions which have content and are not *a priori* are coextensive with natural science. However it may well be felt that there is a lack of clarity in the 6.3's concerning the existence within what we normally call natural science of a distinction between *a priori* pseudo-propositions and real non-*a priori* propositions, and a complete absence of any indication how to assign a given proposition to one or other of these two classes. It may be questioned whether any very precise indications *could* be given.

<sup>2</sup> The sequence of the last four propositions is interesting and may briefly be commented on here. 6.522 alludes again to "the mystical" which is however something inexpressible. 6.53 describes "the correct method" of philosophizing—that is, philosophical analysis resulting in the demonstration of the meaninglessness of metaphysical propositions. 6.54 is another well-known proposition in which he describes his own propositions as nonsensical, and compares them to a ladder which one who has climbed it must throw away. A consideration of the context illuminates both 6.54 and 7: W is reproaching himself for not following the only strictly correct philosophical method. Instead of saying things like, "What is mystical is not what the world is *like*, but that there *is* a world", he ought to have confined himself to the demonstration of the senselessness of metaphysical propositions—the attempt to *say* anything about what is mystical—and to the silent practice of mysticism. Thus he does not wish others to produce "propositions" like his but to engage in a quite different activity. It is in virtue of this fact—that they lead to something quite different from themselves—that his propositions resemble a ladder. Remarks such as that logic is a mirror-image of the world (6.13) or that the existence of the world is mysterious (6.44) do not themselves convey a correct view of the world, since such a view will not consist in holding any propositions, but they may help others to attain such a view—provided those others see what is wrong with these propositions themselves (this, I think, is part of the force of "überwinden" in 6.54). These propositions (for it is to such that 6.54 principally applies, in my view) are right in what they deny—that logic is a theory, or that the

The assessment of what is "important" in the *Tractatus* will vary with judgment, interest and taste: about what the author regarded as his conclusions, he himself has left us in no doubt: they can be seen from the foregoing summary. He has examined the "propositions" of logic, mathematics, natural science, and traditional philosophy (principally metaphysics and ethics), and he has shown that of all of them only the non-*a priori* parts of natural science have a claim to the title of "proposition", the others are either contentless like those of logic, or nonsensical like those of metaphysics.<sup>1</sup>

This sketch of W's conclusions contains, of course, nothing new; but the consideration of them within the sequence of thought of the 6's and of the terms in which W actually puts them brings out two aspects to which I should like to draw attention. First is the way in which all these conclusions are announced as conclusions about the features of certain propositions or pseudo-propositions. This, of course, is not a property peculiar to the 6's, since throughout the *Tractatus* "*Satz*" is by far the most common technical term. It is not the terms used in them, we might say, but the sorts of combinations of terms of which they consist that characterize logic, mathematics and metaphysics, just as the world is the totality of facts, not the

<sup>1</sup> The distinction between a "proposition" that says nothing but is without content and even senseless (*sinnlos*), and one that is nonsensical (*unsinnig*), comes out very clearly not only from the well-known passage (4.461–4.4611) where tautologies and contradictions (!) are said to belong to the former but not to the latter class, but also from 5.5303: "Roughly speaking, to say of two things that they are identical is nonsense, and to say of one thing that it is identical with itself says nothing." It is true that the particular example of an *Unsinn* given here raises some difficulties, since it implies that, where *a* and *b* are two things, "*a = b*" is not a contradiction (otherwise, by 4.4611, it would not be an *Unsinn*); but if so, it should seem that "*a = a*" is not a tautology (a result that would also follow from the truth that a tautology is a particular kind of truth-function). If, however, "*a = a*" is not a tautology, why should not it too be an *Unsinn*? It is a weak defence to say that in a language properly adapted to the expression of thought (that is how I interpret "*Begriffsschrift*") the sign of equality would disappear. In my view W ought to have said that this sign did lead to sense when put between expressions one of which was a description, but would always lead to *Unsinn* when placed between names. This raises the question whether it is possible for one thing to have two names. None of this, however, affects the truth that W here draws a distinction between "*nichtssagend*" and "*unsinnig*".

nature of the world is mysterious—but wrong in what they seem to assert. Even construed as denials, they ought more properly to be put in the form of demonstrations that certain "propositions" about logic or the world are senseless, for when there is a "subject" about which nothing can be said, one ought *not* to say that nothing can be said about it, *but* one ought to say *nothing* about it and make others do likewise.

It will be clear that at the end of the *Tractatus* W is not saying that he has reached no results, for results, though unimportant ones, are what he lays claim to in the *Vorwort*: rather he is concerned lest his method shall have seemed to give a new handhold to metaphysical reflection about the world and about logic: it has been his principal aim to remove the temptation to such speculation, but in doing so he has attempted to do justice if not to the truth, at least to the legitimate feeling that underlay this temptation. It is by this generosity that he has incurred the danger against which he here attempts to guard.

totality of things (1.1). R. Carnap has suggested (in *The Logical Syntax of Language*, London, 1937, p. 303) that, in the formal mode of speech, this sentence would run: "Science is a system of sentences, not of words."<sup>1</sup>

That all the conclusions are expressed as conclusions about propositions is chiefly interesting here because of its connection with the second aspect of those conclusions that I have in mind, an aspect which brings us directly to the particular subject of this paper: namely that all of them are thought either to follow from or to be comments on the discovery of the general form of a proposition. The central parts of the 6's are intended to show that the propositions of logic, mathematics and the *a priori* parts of natural science are *not* results of the application of the operation of simultaneous negation to elementary propositions. The 6.4's start with the consideration that since what is good or bad is the existence of a state of affairs, an ethical proposition, if there were such a thing, would be the assertion of a proposition (compounded exclusively of elementary propositions) about the interior of the world (so to speak) plus an assertion *that* the truth of this assertion was a good or bad thing. As such it would involve the formation of a proposition out of elementary propositions by the use of operations other than of simultaneous negation. But the general form of a proposition does not permit this: ergo. Thus to think of something as good (if "think" is the right word) is not to assert anything about a state of affairs, but to have a distinct feeling about a state of affairs. Suppose a certain state of affairs which seems good to one man and bad to another: for each it will have the same *structure*, but the dimensions of it will seem larger to the one than to the other: thus the happy man's world will be (or

<sup>1</sup> 6.53 says, it is true, that in a metaphysical proposition there are certain signs to which no meaning (*Bedeutung*) has been given, but it may fairly be assumed that W has in mind words which in certain uses do have *Bedeutung*, but which are used in metaphysical propositions in a way in which they have none. His own favourite example of such a word is "*identisch*": the reason why "Socrates is identical" is nonsense, he says (5.4733, cf. 5.473), is that we have given no meaning to the word "identical" as a *property-word* (the word "*Eigenschaftswort*" is *gesperrt* in the text, which helps to make our point).

Further support for the view that metaphysics is characterized not by the use of meaningless words but by the use of meaningful words in nonsensical combinations comes from 3.323–3.324 where it is pointed out that our vernacular language gives rise to the confusion of which philosophy is full by, for example, allowing "identical" to look like a word for a property. Also from 4.003 where it is said that most of the questions raised and the propositions asserted by philosophers are rooted in misunderstandings of the logic of our language. It seems to me clear that the introduction of meaningless names would not naturally be the result of such misunderstandings, and that the example given of an extremely obviously nonsensical question (whether the good is more or less identical than the beautiful) is nonsensical because of the way the words are used rather than because of the words that are used. At any rate, the parallel, with the nonsense-example "Socrates is identical", suggests that what is wrong here is the misuse of "identical".

could be) of exactly the same structure as that of the unhappy man, but it will have, as it were, larger dimensions.<sup>1</sup> The structure of the world is expressible in language, these "dimensions" are not. The 6.5's chiefly deal with what are felt to be questions, even though we cannot think of any propositions that would be their answers.

Enough will have been said to make clear the importance of "the general form of a proposition" in the sequence of W's thought as he has presented it to us. Briefly the difficulties with which this confronts us are the following: in the first part of the *Tractatus*, notably in the 3's and early 4's, we seem to be told that the essence of a proposition is to be a picture, while in the later parts we are told that its essence is to be a truth-function, that is to say a result of applying the operation of simultaneous negation to elementary propositions. The "picture theory" requires further elaboration, and the truth-function account of what it is to be a proposition seems to involve a circularity by presupposing a prior understanding of what it is to be an elementary proposition. But a more serious difficulty is that the

<sup>1</sup> This is the best sense that I can at the moment see for 6.43. It might seem more consistent with 5.6–5.62 to understand talk about "the limits of the world" in 6.43 in such a way that by altering the limits of the world was meant altering the objects named and the elementary propositions possible within a man's own private language ("that language which I alone understand", as the translation should read at 5.62\*). In that case, the happy man (the man who thinks things good) would see more (or less or different) things than the unhappy man. There might be enough agreement between their private languages to permit the sort of communication we now have (this is a problem that will in any case arise for W, given the superficial meaning of the 5.6's), but the analysis of a given proposition in the public language into the elementary propositions of each man's private language will be different. Thus a change of a man's world, as opposed to a change *in* it, would be a change of the objects that constituted the form of his world, and thus a change of the analysis in his language of some propositions of the public language: a change of "the limits of his world" (5.6). On this view, if men could see the world in the same way they could all see that it was good (or bad).

There are two difficulties for this interpretation: first 2.022–2.023, from which it appears that all possible worlds have their objects (and thus, in one sense, their limits 5.5561) in common. Against this must be set 5.123, which speaks (presumably allegorically) of the *creation* of objects by God, and seems to envisage the possibility of His including or omitting certain objects from creation. It may be thought that the objects that form the limits of a man's world, also limit the worlds that he can at that time think of as possible. It is conceivable *that* he should change, but he can not conceive *how* he might. This would be of a piece with the inexpressibility of an ethical viewpoint. The second difficulty is that in 6.43 W speaks of the world's waxing or waning *as a whole* (my italics). It seems to me that this last phrase is more suited to my interpretation (where it is, as it were, the dimensions of every single fact that change) than to the mere adding, subtracting or change of some, not necessarily all, objects.

In either case it is to be noted that living the good and living the bad life are matters of *viewpoint*. This, I think, is also the lesson of 5.621–5.63. "The world and life are one. I am my world."

\*(Note added in 1964). I no longer believe that there is a reference to a private language at 5.62: cf. the version in the translation by Mr Pears and myself (Routledge, 1961), "of that language which alone I understand". As far as it goes, this change of view renders unnecessary the argument of footnote <sup>1</sup> and confirms my 1956 interpretation of 6.43.



two accounts seem to be quite separate things, and, if this is so, cannot both be adequate accounts of what it is to be a proposition.<sup>1</sup>

That a proposition is a picture is first absolutely asserted in the 4's, at 4.01–4.012 and 4.021: unless it were a picture it could not assert anything (4.03) nor be true or false (4.06). Thereafter, apart from passing references at 4.462 and 5.156, the notion of the proposition as a picture disappears from the *Tractatus*. It has of course been previously implied, most clearly at 3.42 and 3–3.1, but also by the almost exact parallelism between the 2.1's, which discuss pictures, and the 3.1's to 3.4's, which discuss propositions. Russell in his introduction to the *Tractatus* (KP, p. 8, FB, p. 136) says that W is concerned with "the question: what relation must one fact (such as a sentence) have to another in order to be *capable* of being a symbol for that other. . . . In order that a certain sentence should assert a certain fact there must, however the language may be constructed, be something in common between the structure of the sentence and the structure of the fact. This is perhaps the most fundamental thesis of Mr Wittgenstein's theory." W himself puts this at 4.03, by saying that the essential connection that a proposition must have with a state of affairs, in order to communicate that state of affairs to us, is that it must be its logical picture. The particular aspects of being a picture that are stressed in the 4.0's are: being such that signs within the proposition deputize for (*vertreten*) objects (4.0312) and being logically articulated and composite (*logisch gegliedert, zusammengesetzt*: 4.032). There must be composition within the proposition, and composition of such a kind that a mere list of the names occurring within it is not sufficient to characterize it, rather each of them has a different rôle within the proposition, though all of them have the rôle of deputizing for objects.<sup>2</sup> In fact the notion of deputizing for an object is inseparable from that of playing a particular rôle in a proposition or picture.<sup>3</sup> It seems then that the essence of a pro-

<sup>1</sup> The existence and importance of this problem were first, to my knowledge, pointed out and many directions for its solution (on which I have drawn freely) given by Miss G. E. M. Anscombe in lectures at Oxford.

<sup>2</sup> We may here draw attention to a passage to which we must return: 3.14–3.142, of which 2.14–2.141 is a parallel. It is by being articulated that a proposition is a fact, the fact that its elements, the words, are related to one another (*sich zu einander verhalten*) in the way they are. And it is by being a fact that a proposition is distinguished from the set of names occurring in it.

<sup>3</sup> I think this is why W says: "The elements of a picture are, *in the picture*, deputies for objects" (2.13) and "A name is a deputy, *in a proposition*, for an object" (3.22, my italics in both cases). In any case 3.3 and 3.314 explicitly say that a name and an expression respectively have meaning only in the context (*Zusammenhang*) of a proposition.

These passages show, it seems to me, that what it is for a sign to be a deputy for an object is to be understood in terms of what it is for a fact to represent another fact, and not conversely. Ramsey in his review of the *Tractatus* (*Mind*, 1922, reprinted in *The Foundations of Mathematics*, p. 271 [p. 10]) maintained the opposite view, citing 5.542 (where W speaks of "a co-ordination of facts by means of a co-ordination of

position includes the deputizing for objects of its names and that this in turn involves that the proposition is articulated or composite in a way that a set of names is not. It is not my intention here to try to give all the reasons which may have led W to such conclusions, but it may be worth pointing out that one important premiss is the possibility of understanding a proposition or putting together a picture without knowing whether it is a true proposition or picture (4.021, 4.03).<sup>1</sup>

That the proposition or picture should consist of elements which deputize for objects, and that it should be compounded out of these elements in a quite definite way (so that a different composition would result in a different proposition), these are necessary conditions for the proposition to assert any fact, but more is required if it is to assert *the* fact that it does assert. It must be composed of elements that deputize for the objects whose combination is that fact; and those elements must have the same relation to one another as the objects have in the fact.<sup>2</sup> This requirement, which is brought out very clearly in the 2's and 3's, is the requirement of an identity of form (2.17) between the picture and the pictured. It will be clear that, since our interest is in the general form of a proposition, any remarks about the form of a proposition are important for us.

We meet the form of a fact in 2.033, of a picture in 2.15 (*die Form der Abbildung*) and of a proposition in 3.312 and 3.315. The first two have much in common but leave certain obscurities, which with the help of the third which is somewhat different we may be able to resolve.

Both for facts and for pictures the notion of form is introduced *via* the notion of structure. The structure of a fact or picture is the way in which its elements hang together (2.032, 2.15 . . . *Dieser Zusammenhang* . . .): The form is the possibility of the structure (2.033, 2.15). It is first of all necessary to see that two facts or pictures are of different *structure* if their objects (or elements) are arranged in the same way, but are different objects; in such a case however they will have the same *form*. Thus a fact and its picture may have the same form (must have, indeed) but cannot have the same structure.<sup>3</sup> Each

<sup>1</sup> I suspect that the same premiss is used in the proof of atomism. 2.0212 runs: It would then be impossible (sc. if there were no objects) to *essay* a depiction of the world. (This is a possible translation of "*entwerfen*", and the only one that fits the context, in my opinion.)

<sup>2</sup> It is sometimes suggested that an atomic fact is uniquely determined by the objects that occur in it: cf. Colombo, FB, p. 40. It seems to me that in this case a class of names would be sufficient to assert a fact, contrary to 3.142.

<sup>3</sup> This interpretation of "*Struktur*" was suggested by Ramsey in his review on the

their objects") as a proof that W regarded "deputizing" as the more intelligible notion, and "representing" as explicable in terms of it.

fact that we are aware of has its own structure: that *these* objects stand in *this* arrangement constitutes *this* structure. The structure of the fact that John loves Mary is the fact that John stands in the relation of loving to Mary. It will be obvious from this example that to assert the existence of the structure is nothing other than to assert the fact, and it will also seem that to say that a fact has a certain structure is to say nothing beyond what one has already said in asserting the fact. It does not seem to me, however, that this triviality is an objection to my interpretation of "*Struktur*". W says of *Form* that the logical form of reality cannot be represented in or expressed by a proposition, but is exhibited or shown by a proposition (4.12's passim, 6.124). A rough paraphrase of this for our purpose would be: the logical form of a proposition and of the fact that it states is perceived *eo ipso* by anyone who understands the proposition: but since, in order to understand any proposition  $P_n$  about a proposition  $p$ , you must already understand  $p$ , therefore the proposition  $P_k$  ascribing a certain logical form to  $p$  is bound to be otiose. It is evident that the same will hold of propositions about the structure of a proposition: indeed we find W using the fact that a proposition shows its own structure as a sort of illustration of the fact that it *shows* (rather than represents) the logical form of reality. "4.1211 Thus a proposition '*fa*' shows that in its sense the object *a* occurs." The occurrence of the particular object *a* is surely a feature of structure rather than of form.<sup>1</sup> Although it touches a more general question than we are here concerned with, the reader may wish to consider the suggestion that we feel a need to speak of structure and form only because our everyday speech disguises our thoughts (4.002), fails to make *obvious* the structure of our thoughts and of the facts that we state, though *implicitly* (*stillschweigend* 4.002) we do grasp those structures. Thus when we speak of the structure of the fact that

<sup>1</sup> It is perhaps worth saying that I cannot use 4.122 to prove my point, since the structures he there speaks of are those of complex facts (*Tatsachen*) and he speaks as if the structure of a complex fact is something that corresponds to the formal properties of an atomic fact.

grounds that it could be seen from the structure of propositions when one followed from the other (5.13, cf. 5.2, 5.22). Also 4.1211 says that the structure of two propositions shows when they contradict one another: if contradiction could be seen from the forms of propositions, then  $p$  would be the contradictory of not- $q$ . However 5.131 says that if one proposition follows from another, this is expressed by relations in which their forms stand to one another.

I can reconcile this with Ramsey's view and mine, about the contrast between "*Struktur*" and "*Form*", only by saying that if one proposition follows from another, then there must be *at least* a relation between their forms—though there must be more as well. When one proposition follows from another, there will always be between the forms of the two a relation much closer than that between  $p$  and not-not- $q$ . But, however close the formal relations between two propositions, it is always possible that, because of some difference in the objects named (a difference of structure, not of form), they should be logically independent of one another.

John loves Mary, as if this were something different from the fact that John loves Mary, we are really thinking of a translation of the statement that John loves Mary into a more explicit language (*eine Zeichensprache, die der logischen Grammatik . . . gehorcht* 3.325).

How, then, are we to understand the statement that the form of a picture or fact is the possibility of its structure? My view will be conveyed by the following analogy: suppose a system within which three or more of the letters *a*, *b*, *c* and *d* in immediate succession (repetitions being allowed), immediately preceded by the sign "(" and immediately followed by the sign ")", constitute a well-formed formula. Within such a system "*aba*" and "*aca*" will be structures, and they can be said to be of the form "*a a*", on the grounds that they are possible ways of turning "*a a*" into a well-formed formula. We may wish to say instead that they are of the form "*a ( ) a*" or "*axa*", a suitable rôle, that of a variable, having been ascribed to the letter *x* or the signs ( ). Alternatively, on similar grounds, we may wish to say that they are of the forms "*xyx*" or "*xyz*" or finally "*. . . xyz . . .*" The last alternative is of course equivalent to saying that they are well-formed formulae. But probably, if we had to choose which of all the possible candidates was *the* form of these structures, we should say that "*xyz*" was.

The application of the analogy will be obvious: that John loves Mary is (let us suppose) a fact, so it is a structure.<sup>1</sup> It is of the form "that *x* loves *y*" or of the form "that *x* loves but is not identical with *y*" or of the form "that *x* stands in a relation to *y*" or of the form "that something is true of an ordered couple of objects" or of the form "that something is true of one or more objects".<sup>2</sup> Of course *all* facts are of the last of these forms. The fact or the structure that John loves Mary can be said to be of each or all of these forms, for each of them defines a range of facts and states of affairs that may or may not hold, such that one fact or state of affairs among these, one possible instantiation of each of these forms, is: that John loves Mary. If we had to say which of all these was *the* form of the fact John loves Mary, we should probably say that "that *x* stands in a relation to *y*" (with a stipulation that we wished to indicate that range of facts which resulted if identical substitutions for *x* and *y* were excluded) was *the* form.<sup>3</sup> To avoid difficulties arising from the particular example and irrelevant to the general case, let us say that

<sup>1</sup> The last paragraph but one will make clear how saying that it *is* a structure is identical with saying that it *has* a structure.

<sup>2</sup> We cannot say, however, that it is of the form "that someone loves someone else" or of the form "that one thing stands in a relation to another" for these are themselves facts, or could conceivably be so. Just as "*a a*" is not a well-formed formula in my analogy, so in the *Tractatus* the form of a fact is not itself a fact. Otherwise it could itself be asserted by a statement, contrary to the 4.12's.

<sup>3</sup> For the stipulation, cf. the 5.53's.

the form *par préférence* of the fact that  $aRb$  (where “ $a$ ”, “ $R$ ” and “ $b$ ” designate constants, though  $W$  would not put it in this way) is “ $\Phi(x, y)$ ”.<sup>1</sup>

At first sight it may seem that a slightly different account has to be given of the form of a picture, as this is described in the 2.1's. 2.15–2.151 seem to mean the following: the structure of a picture (namely the fact that its elements are related to one another in a definite way: which fact, by 2.14, is identical with the picture itself) sets forth (*stellt vor*) that things are related to one another in this way: the picture's form of depiction (by which  $W$  means: that it is possible for the elements to stand in this relation to one another) is at the same time the possibility that objects should stand in this relation to one another. 2.151 may seem puzzling, but it should be evident that if form is the possibility of structure (2.033, 2.15) and if picture and fact are to have their form in common (2.17, 2.2, etc.), then to say that the one structure is possible will be to say also that the other is. Thus the structure or the fact that the part of the picture which deputizes for  $a$  (let us call this part: “ $a$ ”) stands in a certain relation to “ $b$ ” sets forth the structure or the state of affairs that  $aRb$ . Further, if it is possible for “ $a$ ” to stand in a certain relation to “ $b$ ”, then it is possible that  $aRb$ , and conversely.<sup>2</sup>

In reality, 2.15–2.151 agree very well with my previous account of

<sup>1</sup> For the use of “ $\Phi$ ” as opposed to “ $R$ ” in the indication of forms, cf. 3.333, 4.24.

There is evidence in pre-*Tractatus* MSS., to which I shall return, that  $W$  at one time spoke of two kinds of indefinable symbol, Names and Forms, understanding by the latter symbols for relations and properties. If we followed this way of speaking we could say that the fact that  $aRb$  was of the form “ $xRy$ ” rather than “ $\Phi(x, y)$ ”. But we have already seen that there are many different, because more or less general, “forms” of a particular fact. It might well be that “ $xRy$ ” was a form of the fact that  $aRb$  but not the form in the sense in which  $W$  was speaking of a unique form at 2.033.

“ $x$  loves  $y$ ” has a good claim to be the form of the fact that John loves Mary, but this is because, since “loves” is not an indefinable it confers logical (by which I mean inferential) properties on any proposition in which it occurs—e.g. whatever  $x$  and  $y$  may be, if  $x$  loves  $y$ , then  $x$  does not hate  $y$ . It cannot be for this sort of reason that  $W$  thought of indefinable relational symbols as “forms”.

One reason for regarding “ $R$ ” in “ $aRb$ ” as a form but not “ $a$ ” or “ $b$ ”, where all designate constants, is that, unlike a name, the symbol for a particular relation determines how many and what type of other symbols there must be in an elementary proposition. Thus knowing that the symbol for a particular relation occurs in a proposition tells us more about the form of that proposition, than knowing that a particular name does so.

<sup>2</sup> For further propositions where  $W$  says or implies that the existence of a picture guarantees the possibility of the state of affairs represented, see 2.203, 3.02, 3.4.

The particular way in which I have described the setting forth of a state of affairs by a picture is derived from 3.1432, a proposition which occurs more than once in pre-*Tractatus* MSS. On the analogy of that proposition it should seem that there will not be an element of the picture which deputizes for  $R$ . “ $a$ ” and “ $b$ ” are elements of the picture and deputize for  $a$  and  $b$ . That “ $a$ ” has a certain relation to “ $b$ ” sets forth that  $a$  has a certain relation to  $b$ , but there is no object  $R$  and no picture-element “ $R$ ”. See discussion below and note 1, above.

The further question arises and must be discussed, whether “ $a$ ” stands to “ $b$ ” in the

the form of a fact. Since a picture is a fact (2.141) it has a certain form, say “that  $x$  is to the left of  $y$ ” or “that  $x$  stands in a relation to  $y$ ”, and since there are just as many elements in the picture as there are objects in the fact it represents,<sup>1</sup> therefore this form will also be that of the fact. And this is indeed the case, for the fact that  $a$  is to the left of  $b$  has the form “that  $x$  is to the left of  $y$ ” or “that  $x$  stands in a relation to  $y$ ”. Both fact and picture are possible instantiations of this form.

We can also explain why  $W$  speaks of “the form of depiction” of a picture, rather than simply of its form. The reason is that a picture may have many alternative “forms” some of which may be irrelevant to its rôle as a fact that depicts. For example, a picture showing forth that  $aRb$  might contain as a deputy for  $a$ , a complex pattern of strokes,  $A1, A2, \dots An$  in that order, whereas  $a$  was a simple and undefinable object. Let us call  $A1, A2, \dots An$  in that order “ $a$ ”. Clearly one way of giving the structure of the picture will be “that  $A1, A2, \dots An$  in that order have a certain relation to ‘ $b$ ’”, the corresponding form being: “that  $x1, x2, \dots xn$  in that order have a relation to  $y$ ”. Another way of giving its structure and form will be: “that ‘ $a$ ’ has a certain relation to ‘ $b$ ’”, and “that  $x$  has a relation to  $y$ ”, respectively. Now, though both structures and both forms in a sense belong to the picture, it is clearly in virtue of the latter pair that it is called a picture of the fact that  $aRb$  (where  $a$  and  $b$  are indefinables): being of the latter form is a necessary and sufficient condition for it to be a possible picture of, a possible way of depicting, the fact that  $aRb$ . So this is the form of depiction of the picture. A picture as a fact has many forms, its form of depiction is that form which includes all and only (or at any rate only) what the picture has in common with the fact it represents. We shall automatically arrive at this form if we recognize into what elements the picture *qua* the picture that it is must be divided.<sup>2</sup> Conversely we can say that the form of a fact (we

<sup>1</sup> This is the first feature of pictures that  $W$  mentions, at 2.13, and therefore, by implication, a very significant one. He stresses it again, of course, e.g. at 4.0312. I think that whatever may be true of the propositions and pictures that we are used to, it can be shown that the thoughts (cf. the 3's) which they express must possess the same multiplicity as the facts they state or represent. For one suggestion about the premisses that may have led  $W$  to his view cf. note 1, p. 143, and the text to it.

<sup>2</sup> This is one reason why the depicting relation, that is to say, the coordinations of the elements of the picture with things, belongs to the picture (2.153–2.1514). To recognize what picture it is, we must know what count as its elements when it is regarded as a picture, and what these elements stand for.

same relation that  $a$  is said to stand in towards  $b$ . 3.1432 appears to go against, and (on a certain interpretation of the German word “so”) 2.15 seems to support, this view. Even if the elements of the picture and of the fact stood in the same relation to one another (as would be the case if the fact that “ $a$ ” was to the left of “ $b$ ” set forth that  $a$  was to the left of  $b$ ), the structure of the picture would be distinct from that of the fact, since the elements of the two are different.



were seeking previously a criterion for *the* form) is the least that a fact must, or the most that it can, have in common with a fact which is to depict it.

The alternative in this last suggestion will help us to show that there is a range of generality or specificity within the form of depiction itself. A picture which represents that *a* is to the left of *b* by putting "*a*" to the left of "*b*" has as its form of depiction "that *x* is to the left of *y*" and is a spatial picture (2.171), and has spatial form (2.18) in common with reality. On the other hand, a picture which represents that *a* loves *b* by putting "*a*" to the left of "*b*" has as its form of depiction "that *x* stands in a relation to *y*" and is a logical picture, having logical form in common with reality (cf. the 2.18's). It will be clear that a spatial form of depiction is one kind of, and thus presupposes, a logical form of depiction (2.182). It should seem that generally in a spatial picture or model there will be grounds for saying that the relation in which the elements of the picture stand to one another is the same as the relation in which the objects in the fact which it shows forth stand to one another, while in a logical non-spatial picture this is not so. This will perhaps explain the discrepancy, remarked in note 2, p. 146, above, between 3.1432 where W is speaking of propositions, i.e. logical pictures, and 2.15 where he may have principally spatial pictures in mind.

There is one difficulty, alluded to in notes 1 and 2, p. 146, above, that must be mentioned here. In some unpublished writings prior in date to the *Tractatus*,<sup>1</sup> W spoke of symbols for properties and relations as *forms*, in contrast to the symbols for objects, which were *names*. Some may see the persistence of that terminology in 2.0251: Space, time and colour (colouredness) are forms of objects, though I find that proposition obscure. Certainly, such symbols are not thought to be names: I think this is clear from 3.1432 (see note 1, p. 146) and 4.24 (where "*f*" and "*Φ*" are functions of names, not themselves names). This latter proposition occurs precisely in a context in which W asserts that an elementary proposition is a complex or concatenation of names. We must assume that, e.g., "*R*" in "*aRb*" is not itself a name but that its occurrence between them is (part of) the way in which the names "*a*" and "*b*" are connected to form the proposition: there is thus no *object* corresponding to "*R*".<sup>2</sup> We have

<sup>1</sup> The MSS. in question are: "*Notes on Logic*", 1913, listed by Colombo in his Bibliography (FB, p. 316), and "*Notes dictated to G. E. Moore in Norway*", April, 1914. I have been enabled to consult the latter through the kindness of Miss G. E. M. Anscombe, one of Wittgenstein's literary executors. (Note added in 1964): Versions of these notes have now been published in L. Wittgenstein, *Notebooks 1914-1916*, Blackwell, 1961.

<sup>2</sup> It has been thought that 4.123 affords proof that properties also are objects. But W expressly points out there that the word "object" is improperly used there. That he does so does not however prove *our* point, since the impropriety may be due to the fact

explained how this way of speaking may be accommodated in our account of form: a particular relation may be called a characteristic of the structure *or* of the form of a fact: when a picture shows forth a fact by putting its elements into the *same* relation as the objects in the fact, then we may say that that particular relation is a characteristic of the form of depiction of that picture. Otherwise the form of depiction of a picture in which the elements stand in a particular two-termed relation will be "that *x* has a relation to *y*". The *Tractatus*, however, raises a new problem: for it seems to imply that not all predicates of *n* places are of the same logical form, whereas we have assumed the contradictory of this. The implication arises from the talk about the form of an object 2.0141, and 2.0233 (cf. 2.0121 and 2.0131). If two objects have different logical forms, then there are states of affairs in which the one can figure and the other cannot, in the way that a colour can be bright and a weight cannot. So we might think that there would be on the one hand objects which could have with one another only certain two-place relations, and on the other hand two-place relations which could hold only between certain ranges of objects. Thus the form of depiction of a picture showing forth that *aRb* would be *either* "that *x* has a relation to *y*" or "that *x'* has a relation to *y*" or . . . different styles of variable being used according to the different types of object and relation involved in the state of affairs pictured. We should have different types of the same multiplicity, or on the same level, and a ramified theory of types. Words like "object" would be typically ambiguous.

At the very least it must be said that W overlooks or neglects this. All his examples of type-differences, of differences of logical form, are of the order of the difference between *n*-placed predicates and *n* + 1-placed predicates,<sup>1</sup> or between propositions, facts and things. He says, at 3.331 (cf. 3.333), that the *whole* "Theory of Types" is contained in the observation that a propositional sign cannot be its own argument. Confusions arise (3.323) because what is really a relational word looks like a property-word (cf. 5.4733): he never mentions that ordinary language doesn't distinguish between *property*-words of different type, though this, one would imagine, would be a more abundant source of confusions. His example of a conceivable special

<sup>1</sup> In the "*Notes dictated to G. E. Moore*" (see note 1, p. 148) things, properties and relations are called "types": at *Tractatus* 5.5351 they are called "prototypes" (*Urbilder*).

that a certain blue colour is a complex with logical, inferential, properties, rather than to the fact that it is a property.

The temptation to think of properties and relations as objects arises from W's talk about the proposition as a concatenation of names; it is hard to see how "*fa*" could be so described, unless "*f*" too were a name. However at 4.24 W seems to rule this out, so he must be thinking that "*fa*" is the limiting case of a concatenation of names.

form of elementary proposition is one containing a sign for a twenty-seven-place relation (5.5541).

In view of this silence, and this preference for a certain kind of example, I am tempted to conclude that W did not recognize difference of type or logical form within objects properly so-called, properties, or  $n$ -placed relations. His main interest, as in the 4.04's, was in multiplicity. The proposition which seems to suggest a contrary view need not necessarily do so: "2.0233 Two objects of the same logical form are distinguished from one another (if we ignore their external properties) only in that they are different". This is a general remark asserting that distinguishability demands *a*) external properties or *b*) difference of logical form: there is no absolute implication that objects ever do differ in logical form from one another.<sup>1</sup> This will give us a true "logical atomism" with no two particulars differing in type, no difference of type, for example, between mental and physical particulars: neutral monism.

We may now turn to the description of the form of a proposition in the 3.31's, which suggested and now confirms our account of the form of a fact or picture. He is speaking of what he calls an expression or symbol. This is something that characterizes (3.31) and presupposes (3.311) the form of a number of propositions. It is exhibited or presented by the general form of a class of propositions (3.312), that is to say by a propositional variable (3.313). We are told in 3.315 how such a variable may be constructed: we are to put a variable in place of some constituent part of the proposition, e.g. " $aRx$ " for " $aRb$ ". By so doing we shall have determined a class of propositions: all those that assert that  $a$  has the relation  $R$  to a thing. But of course *what* propositions belong to this class will depend on the meaning we attach to " $a$ " and " $R$ ". We can of course put variables in the place of any sign to which we have arbitrarily assigned a meaning: thus we should obtain the expression or symbol " $xRy$ ", and finally, when all such signs have been replaced, we obtain the expression " $\Phi(x, y)$ ", which characterizes the class of all two-termed relational propositions. This, W tells us, corresponds to or, as I should say, presents to us, a logical form, a logical prototype (*Urbild*). What class of propositions this symbol determines does not depend on any arbitrary

<sup>1</sup> It seems to me that some support is given to this view by the consideration that it makes the form of one object give us knowledge of all states of affairs that are possible (cf. 2.014–2.0141). That in turn makes it easier to understand how one proposition "gives us" the whole of logical space, 3.42. If there was a type of object whose form was unknown to us, then (it should seem) we could very well understand a single proposition, or very many propositions, and yet be unaware of many of the possibilities and impossibilities that make up logical space.

It may be thought, however, that the 5.55's go against this point.

My view also depends upon finding a satisfactory interpretation of 2.0251, which I have not been able to do.

assignment of meaning.<sup>1</sup> It would be idle to pretend that the selection of a particular typographical sign, such as " $\Phi(x, y)$ ", for a variable was non-arbitrary: I have introduced it into my account of 3.315 purely for expository convenience. It is by our arbitrary convention that this sign designates the class of two-termed relational propositions: what is not arbitrary is that any propositional sign which expresses such a proposition (or in other words: which states that one object has a relation to another) will consist in the fact that one name is put in a relation to another. *Any* way of putting one name into relation with another *could* (by an arbitrary convention) express this same proposition: and nothing save such a fact or what was recognized as being linguistically equivalent to such a fact could express that proposition. Further, any object whatever could be a name (3.3411), therefore the general form of this class of propositions (3.312) is "that  $x$  has a relation to  $y$ " which we choose to express by the variable: " $\Phi(x, y)$ ".

Thus the fact that  $aRb$  is depicted by the fact that something deputizing for  $a$  (whether an element of a picture or, less generally, a name in a propositional sign) stands in a certain relation to something deputizing for  $b$ . Fact, picture, proposition and thought have the same form "that  $x$  stands in a relation to  $y$ ". The existence of the picture or proposition guarantees the possibility of the fact—it shows that there *can* be facts of this form by *being* a fact of this form.

It might be thought that I have erred, or even that W erred, against the principle that a picture cannot depict its form of depiction (2.172–2.174) and that we cannot represent the logical form of a proposition of a fact by a proposition (4.12–4.121). However the full subtlety of his position is brought out by the fact that I have not erred in this way. I have not *explained* what the logical form of anything is, I have merely produced other things of the same logical form, thus presupposing that the logical form of the fact I began with and the logical form of the facts I produced were equally easy to grasp. To say that "John loves Mary" is of the form " $\Phi(x, y)$ " is merely to say that we *could* have used any of the following signs to assert that John loves Mary: " $aRb$ ", " $bRa$ ", " $ab$ ", " $ba$ ", " $aRSb$ " . . . and in general any sign consisting in the fact that one object is put into relation with another. If, however, we used a sign of which this was not true, then we should be said to be asserting that John loved

<sup>1</sup> This interpretation demands that the sign " $R$ " in the propositional sign " $aRb$ " shall have a meaning (*Bedeutung*). It might therefore be argued that " $R$ " must be a name and  $R$  an object, contrary to my conclusions above. 3.314 however implies that expressions other than names have *Bedeutung*. Likewise at 3.333 W speaks of the *Bedeutung* of functions, while at 4.24 he distinguishes functions from names.



Mary only if we were prepared to adopt instead some sign of which it was true.<sup>1</sup>

The general form of a *class* of propositions (3.311–3.312), for the expression of which we are given instructions in 3.315, is obviously something more specific than the general form of a proposition. Nor can we reach an expression for the latter by further conversion of symbols with arbitrarily assigned meaning into variables, since “ $\Phi(x, y)$ ” is already a completely variable expression. Nor can we hope to give *a priori* a list of all the special forms of propositions (5.554, 5.555), that is to say of all the classes of propositions, that there are: we cannot say *a priori* that we shall need or that we shall not need a sign for a 27-termed relation—experience will decide (5.5541). It remains for us to determine what can be seen to be necessarily true of every proposition from the examples of the form of a proposition that have already been given, or are implicit, in the *Tractatus*.

Two closely interconnected features of a proposition are of overriding importance here: First that a proposition is a fact and has the form of a fact, second that a proposition is composite (*zusammengesetzt* 3.1431, 4.032, 5.5261; *gegliedert* 4.032; *artikulierte* 3.141, 3.251): a propositional sign consists not in a set of names (3.142) but in some fact about certain names.<sup>2</sup> All propositions, then, will have the form: “that such and such is the case” or in other words “that such and such is true of such and such objects”. Now these are pre-

<sup>1</sup> For the importance of “possible ways of symbolizing” cf. 3.3421. The last sentence of this paragraph requires more explication and argument than can be given here.

<sup>2</sup> Facts, as opposed to objects, must be composite: what is a fact is that something is true of some objects. But why should what asserts a fact be composite? Clearly it will be so, if every proposition contains (or must be translatable into something containing) words whose function is to stand for objects without implying, by their occurrence in the proposition, any fact about those objects. Thus if in a fully analysed proposition there must be names that deputize for objects (*der Prinzip der Vertretung* 4.0312), then every proposition must be composite (4.032).

Whenever the occurrence of a word in a proposition implies a certain fact about an object, we can replace that proposition by another one in which that fact is explicitly stated, in a way which Russell in his article “On Denoting” (*Mind*, 1905) was the first to point out. Application of this method wherever possible will produce fully-analysed propositions containing names (3.24).

It can also be seen that such an analysis *must* be possible if we are capable of forming propositions which are *essentially* connected with the states of affairs they inform us of and thus are capable of communicating “a new sense with old words” (4.027–4.03). In other words analysis of all propositions into elementary propositions must be possible if we can understand a proposition without knowing whether it or any other proposition is true. (2.0211, cf. note 1, p. 143, and the text to it.)

W appears to have thought it obvious that this condition was fulfilled. It could easily be maintained however (to mention but one counter-example) that no ethical proposition could be understood without prior knowledge of several matters of fact.

Finally it must be noted that the assertion at the head of this note, that facts are composite and objects simple, is itself thought to be established by these considerations about sense and understanding.

cisely the accounts of the general form of the proposition that are given at 4.5 and 5.47 respectively, only that the intervening argument allows further conclusions to be drawn, which are then stated, without a repetition of the premisses, in the early 6's.

The chief point made in the 4.1's to 4.5's is that every fact is either an atomic fact (*Sachverhalt*) or consists in the existence or non-existence of certain atomic facts.<sup>1</sup>

Thus every proposition either asserts that an atomic fact exists, in which case it is an elementary proposition,<sup>2</sup> or it is equivalent to the assertion or denial of some set of elementary propositions. Obviously the former alternative is a limiting case of the latter, so we can describe the general case by saying that every proposition is some truth-function of elementary propositions (5).

If an atomic fact were defined as a fact that does not consist in the existence or non-existence of other facts, the above argument would be logically impeccable. W however assumes that an atomic fact so defined will at the same time be a combination of objects (2.01), or in other words that an elementary proposition will consist of names in immediate combination (4.221). It might well be thought that there must indeed be elementary propositions in this sense, but that there are propositions compounded out of these in such a way that they are not merely truth-functions of elementary propositions. W does not allow this possibility: as he says at 5.54, in discussing the general form of a proposition he has assumed that propositions occur in other propositions only as bases of truth-operations. All cases of intensional inoccurrence, such as the propositions that someone knows a certain proposition to be true, or that such and such a state of affairs is bad and ought to be remedied, are ruled out in advance: it is hard not to find this exclusion somewhat arbitrary.<sup>3</sup> It may be argued on epistemological grounds that there must be elementary propositions; it cannot be argued on logical grounds that all propositions are truth-functions of them. This assertion seems rather to be an arbitrary definition or a metaphysical thesis.

It is these conclusions which give content to the assertion at 4.5

<sup>1</sup> Cf. 2.06: The existence and non-existence of atomic facts is reality.

<sup>2</sup> This term is introduced at 4.21.

<sup>3</sup> W gives some justification for the exclusion of former example at 5.542, claiming that “A says p” is of the form “p says p”, so that we are dealing not with the coordination of a fact and an object, but with the coordination of two facts *via* the coordination of their objects. This seems to mean that we are saying (1) that a conformation of a certain kind is occurring in the man's mind (cf. “*Gegenstände des Gedankens*” at 3.2. Perhaps W is thinking of the words of the proposition going through the man's mind). (2) that this conformation says that . . . The chief objection to this account is that in order for the words or whatever it may be in the man's mind to project the possible state of affairs he has to “think the sense of the proposition”, cf. 3.11. I do not say this is a refutation of W, but it points to a serious lacuna in his argument.

that the general form of a proposition is expressed by the variable (4.53): "*Es verhält sich so und so*"—which we must translate "Such and such combinations (scil. of objects) hold".<sup>1</sup> I.e. every proposition asserts or denies some combinations of objects, or in other words the existence or non-existence of some atomic facts. Thus every proposition is a truth-function of elementary propositions. At the same time every proposition, since it is a fact, will itself consist in certain combinations of objects: "*Es verhält sich so und so*" is a form of which a proposition and the fact it states are two different possible specifications.<sup>2</sup>

By 5.47, where the next reference occurs, this description of propositional form in general can be carried further, since W is in a position to show that all truth-functions of elementary propositions can be arrived at by the application of one fundamental truth-operation (see the 5.5's). The operation in question is the joint negation of a set of propositions: any alternation, conjunction, implication, equivalence or negation of elementary propositions can be represented as a joint negation. He further holds that anyone who is capable of asserting a proposition is thereby capable of asserting, and also of denying, a set of propositions. Thus, if you grasp any one proposition, you thereby grasp all the possible ways in which complex propositions can be constructed out of elementary propositions.<sup>3</sup> Since all propositions are truth-functions of elementary propositions, the general form of propositions can be given by describing the operation which produces any truth-function.

<sup>1</sup> Colombo's "*Le cose stanno così e così*" makes this point (FB, p. 219). "Such and such is the case" in KP obscures it. W thinks it worthwhile to explain (2) that what is the case is the existence of atomic facts (*Sachverhalte*) and ein *Sachverhalt* = *dass sich die Sachen (Dinge Gegenstände) so und so zu einander verhalten*. Cf. the frequent use of *sich verhalten* to describe the rôle of objects in an atomic fact: 2.031, 2.14, 2.15–2.151, 3.14, see also 5.5423.

I do not wish to imply that for W all propositions were ultimately relational, though it would have given greater simplicity to his theories if this were so: in *Der Logische Aufbau der Welt* (Berlin, 1928) Carnap developed many of W's theses in a manner which did involve this assumption. W explicitly rejected it in "Notes on Logic" (see note 1, p. 148) and seems still to do so at 5.553. 2.01, etc., when taken in conjunction with 4.24 imply the doctrine, however odd it may sound, that a proposition such as "*fa*" asserts a "*sich verhalten*" or "*Verbindung*" of the object *a*.

<sup>2</sup> We do not however generally represent the fact that certain objects do not stand in a certain relation by the fact that certain signs do not stand in a certain relation. Instead we use a sign of negation. This may seem to be a difference in form between a complex proposition and the fact that it states.

Cf., however, 5.512 where W says that the general rule for forming the negation of a proposition "mirrors negation". I take this to mean that in virtue of this general rule there can be said to be an identity of form even between a negative proposition and the fact it asserts.

<sup>3</sup> To take simple examples: "*p*" itself is the negation of the negation of "*p*", "*p*  $\supset$  *q*" is the joint negation of "*p*" and the negation of "*q*".

Space compels me to present in a rough and undocumented fashion what I take to be W's argument here.

Now this is precisely the programme announced at 5.47 and the result produced at 6. We have seen that proposition and fact alike are essentially composite (*zusammengesetzt*); a fact does not consist of a set of objects, nor a proposition of a set of names—each consists in something's holding of some objects or names. Thus when a man apprehends such composition, he apprehends that something holds or is true of some objects, and this (in the terminology of 4.24) is the apprehension that a function is satisfied by certain arguments. But the apprehension that any proposition is true implies the capacity to conceive that it should be false, and indeed to conceive that all of any set of propositions are false, which in turn involves the capacity to construct any truth-function whatever of propositions. Thus ability to employ the fundamental logic operation is a necessary condition of the apprehension of any form of composition. It is at the same time a sufficient condition—that is to say, if a man can negate elementary propositions, he can obviously frame them.

These considerations make 5.47 comprehensible: ". . . Where composition is to be found, argument and function are to be found also, and where these are, all the logical constants are implicit.—You might say: the sole logical constant is what all propositions, by their nature, have in common with one another. This, however, is the general form of a proposition." It is also clear how, at 6 and 6.001, W is able to regard a description of this logical operation as a sufficient characterization of the general form of the proposition. It is significant that the first point about this that he chooses to stress is that it gives us the only way in which one proposition can be formed from another (6.002).

We are thus brought back to our starting-point in the 6's and our first aim has been achieved—namely to show the unity of W's account of a proposition and its form throughout the *Tractatus*. This was part of the general work of exegesis, which, particularly for this book, has to precede criticism. For that reason we have often delayed over particular propositions on our way. At the end however it may be possible to draw some general conclusions.

The following seem to be the most questionable among the premisses that led W to the wholesale devaluation of ranges of propositions that we find in the 6's.

1: that there are elementary propositions in which names deputize for objects. More explicitly this is the thesis that all propositions which presuppose a fact can be so re-formulated as to state that fact rather than to presuppose it. (Some indication of W's reasons for this view are given in my notes 1, p. 143, and 2, p. 152, above.)

2: that the objects referred to in such propositions are of one type. More explicitly: that the occurrence of apparent type-differences

between objects referred to in a pair of propositions shows that at least one of those propositions is not fully analysed. (I have argued that W did hold this view in note 1, p. 150, and the text to it.)

3: that the truth or falsehood of any complex proposition is wholly determined by that of the elementary propositions occurring in its analysis. (This is what I have called the rejection of intensional inoccurrence, and I have argued, in note 3, p. 150, and the text to it, that W gives no good reason for it.)

Even if these premisses be rejected, there is one lesson, which seems to me of great epistemological importance, to be drawn from what we have seen of W's account of propositions. I mean his insistence on the truth that having a thought, seeing a picture or entertaining a proposition is not merely a means towards the apprehension of a fact, but is itself the apprehension of a fact. There could be no process by which people were taught to apprehend a fact, since all instruction takes place through the presentation of facts to the pupil. Likewise there can be no true explanation of our ability to apprehend a fact: we must regard it simply as an inexplicable human capacity (perhaps a way of thinking similar to this is discernible at 4.002). The considerations thus vaguely indicated seem, or seemed to W, to suggest that in our ability to apprehend a fact we have a sort of *a priori* knowledge, which there is no way of expressing. In our awareness of the essence of a proposition we are aware of the essence of a fact and thus of the essence of the world (5.4711). Further, in our knowledge of any fact there is implicit all our *a priori* knowledge of logical truth (5.47, cf. 3.42), and W certainly thinks that logic shows us or mirrors for us something about the world (5.511, 6.12, 6.124, 6.13).

I have suggested above that the rejection of ethical propositions seems arbitrary, if all that supports it is the fragmentary argument against intensional inoccurrence that W gives. But perhaps its true basis is the inexpressible metaphysic constituted by our intuition (if I may use the word) of what it is to be a fact: ethical "facts" do not measure up to its standards. If this is so, then it seems likely that W will prove guilty of circularity in the following way: his metaphysic of silence is supported by the logical and epistemological doctrines which precede the 6's, but these themselves depend at their crucial points on that metaphysics. But I must leave this suggestion to be explored by the reader.

## On Wittgenstein's 'Solipsism'<sup>1</sup>

JAAKKO HINTIKKA

THE main difficulties people have had in trying to understand Wittgenstein's pronouncements on solipsism in the *Tractatus Logico-Philosophicus* (London, 1922) are connected with the proposition 5.62 of the book. This proposition has recently been quoted by Professor J. O. Urmson<sup>2</sup> in the following form:

In fact what solipsism *intends* is quite correct, only it cannot be *said*, but it shows itself. That the world is *my* world shows itself in the fact that the limits of language (*the* language, which I alone understand) means the limits of my world.

The clause in the brackets is, beyond reasonable doubt, a mistranslation. The German original reads: "... die Grenzen der Sprache (der Sprache, die allein ich verstehe) die Grenzen *meiner* Welt bedeuten." The joker here is the word 'allein'. In all the relevant examples that I have seen quoted in the dictionaries, this word is used to qualify the word it *follows*. The same is the case with all the other (relevant) instances of 'allein' that I have come across in the *Tractatus* (cf. 2.224 and 5.631). One of the dictionaries (Sanders, *Wörterbuch der deutschen Sprache*) states that one of the nearly synonymous words *nur*, *bloss*, *einzig* is used instead of *allein* (to mean 'alone') in all the contexts where the position of the word could make it ambiguous. The parenthetical clause would be a case in point if 'allein' there meant 'alone'.

It is obvious, then, that a correct translation of the words in the brackets is "the only language that I understand". In fact, this is the way Russell reads the passage (see his introduction to the *Tractatus*, p. 18); and it is essentially the way the passage is rendered in English in the copy of the book I have at my disposal (third impression, 1947).

<sup>1</sup> From *Mind*, N.S., vol. 67, no. 265, January, 1958, pp. 88-91. Reprinted by permission of the editor and the author.

<sup>2</sup> J. O. Urmson, *Philosophical Analysis*, Oxford, 1956, p. 135.