

David Paul Wittgenstein (1911, Fontana Library)

1 The Beginnings

Wittgenstein's philosophy belongs to two different periods in his life, the first of which began in 1912, when he met Russell in Cambridge. The work which he started soon afterwards leads up to the *Tractatus*, which first appeared in German in 1921, and in English in 1922.¹ After its publication he put aside philosophy. The second period began in the late 1920s, when he resumed philosophy, and it continued until his death in 1951. In this period there was a change not only in the character of his thought, but also in his attitude to publication. After the *Tractatus* he only released one other piece of philosophical work in his life, and that was a short article which appeared in 1929.² His other great work, *Philosophical Investigations*, was published posthumously in 1953. This withdrawal had an unnerving effect. A philosopher who was known to be one of the greatest, if not the greatest alive, had changed his mind, but the only people who had any direct knowledge of the change were the privileged few who had heard him lecture or had had discussions with him.

His work in both periods, like the work of almost every other linguistic philosopher, is part of the second wave of critical philosophy. But in his case there is, underneath this general link with the past, another more specific one. He took much of the framework of the *Tractatus* from Kant through Schopenhauer, whom he had read and admired, and, though he modified this framework in his second

1. It appeared in *Annalen der Naturphilosophie* in 1921. See Biographical Note p. 185.

2. 'Some Remarks on Logical Form' which appeared in Supplementary Vol. IX of the *Proceedings of the Aristotelian Society*.

period, he never destroyed it.

His early philosophy starts at a point which at first sight seems to have no connection with the Kantian framework. It starts as an investigation of the foundations of logic. For he discovered that Russell could not give an adequate explanation of logical necessity, and he believed that the only way to get one would be to go back to the very beginnings of logic, and examine its source in the essential nature of propositions. At first sight, this enterprise does not look particularly Kantian. It might lead to some kind of critique of language, but that would only give it a very general connection with the critical philosophy of Kant. How is it connected with the specifically Kantian character of the system of the *Tractatus*?

This question may be answered in summary form, and the details left to be filled in later. The task which Kant set himself was the demarcation of the limits of thought, and the parallel task which Wittgenstein set himself was the demarcation of the limits of language. Wittgenstein's task may seem to have nothing to do with an investigation of the foundations of logic. But he saw a close connection between the two undertakings because he thought that logic covers everything that is necessarily true, and so can be said in advance of experience; or, to put this in the old terminology, everything that is *a priori*. It is, for example, a contingent fact that the moon is smaller than the earth, and experience was needed to establish it: but it is an *a priori* or necessary truth that it either is or is not smaller than the earth, and that could have been said in advance. Now the limits of language, like the limits of thought were supposed to be necessary limits. So, given Wittgenstein's broad conception of logic, it would be logic that plots them. In this way his investigation of the foundations of logic came to include an inquiry into the limits of language.

The main lines of the system of the *Tractatus*, which give it its specific resemblances to Kant's *Critique of Pure*

Reason, all flow from this point. The limits of thought and the limits of language do not merely happen to lie where they do lie: their location is necessarily determined. So just as Kant maintained that thought necessarily ceases in the rarefied atmosphere beyond the boundary which he plotted, so too Wittgenstein maintained that language necessarily ceases at his line of demarcation, and that beyond it there can only be silence. Kant's boundary enclosed factual knowledge, and Wittgenstein's enclosed factual discourse. In each case the withdrawal from speculative metaphysics left religion and morality in an exposed position. Wittgenstein's solution to this problem, though not the same as Kant's, was very like it; he placed the truths of religion and morality not outside factual discourse, but in some mysterious way inside it without being part of it.

There are, however, several large differences between the two systems. One has already been mentioned: Wittgenstein's critique is an indirect critique of thought through the intermediary of language. Another, less obvious difference is that, although both Kant and Wittgenstein believed that philosophical propositions belong to the realm of necessity, they took very different views not only of philosophical truth but also of necessary truth.

Wittgenstein maintained that all necessity is logical necessity, and that the necessary truths of logic are all empty tautologies. The second of these two theses is his solution to the problem which, according to him, lay unresolved beneath Russell's great development of logic. The two theses, taken together, amount to a denial that there are any necessary truths about matters of substance; i.e. in the technical terminology, a denial that there are any synthetic *a priori* truths. Here, then, are some conspicuous differences between Kant's system and the system of the *Tractatus*. For Kant did not develop a comprehensive theory of logic, found tautologies uninteresting and, most important of all, maintained that there are certain substantial necessary

truths which hold within the bounds of possible experience. For instance, according to him, the statement that every event has a cause is a necessary truth of this kind. This example, which was mentioned earlier, is perhaps the most important one. But he also claimed to have established other substantial necessary truths, and his view was that together they form the framework of the system of factual knowledge.

If Kant and Wittgenstein agreed that philosophical truths are necessary truths, but disagreed about the nature of necessary truths, there must be consequential differences between their views about philosophical arguments and about the kind of result which they may be expected to establish. What exactly are these consequential differences? A brief answer cannot altogether avoid obscurity, because part of Wittgenstein's early view of the nature of philosophy is difficult to understand. But it is worth while to try to establish a general comparison between the two philosophers' views about their subject, even if it inevitably leaves some points in darkness for the time being.

Kant's view was that the philosopher's task is to establish that the substantial necessary truths, which form the framework of the system of factual knowledge, really do hold within that system, and do not hold outside it. Part of Wittgenstein's early view was that philosophers ought to analyse the meanings of various kinds of statement in order to clarify them. This part of his early view of the nature of philosophy is neither difficult to understand, nor original. Moore and Russell had already developed it, and the kind of result that it produces was familiar. Given that a word has a certain meaning, philosophical analysis can tell us exactly what will necessarily be the case if a statement containing that word happens to be true. Here the necessity will be tautological, or at least definitional, so the analysis will take the form of a statement which has no factual content, and is in that sense empty. For example, the analysis of the

phrase 'material object' will take the form, 'If anything is a material object, then the following requirements will necessarily be met . . .', and this will be an empty tautology. But that does not mean that the discovery and formulation of such analyses is a simple matter. They are not, as this example would demonstrate if it were worked out.

The more difficult side of Wittgenstein's early view of philosophy, which is the side which should be compared with Kant's view, begins to emerge when we note that the foregoing example is an example of a conditional necessity: given that a word has a certain meaning, something is necessarily true, but, if it has that meaning, the fact that it has it will only be a contingent fact. But philosophical arguments will have to take a different form when they try to establish absolute necessities. Now according to Wittgenstein, the necessity that the limits of language should lie where they do lie is an absolute necessity. So he tried to establish this absolute necessity by deducing it not from some contingent feature of language, but from the essential nature of language. He argued in a way that will be described in detail later that the essential nature of language can be discerned in any actual language; that it follows from this essential nature that any actual language can be analysed into a language of elementary propositions; and that these elementary propositions serve as a point of origin, from which the philosopher, using a logical formula, can calculate the limits of any possible language.

The details of this argument need not concern us for the moment. The important thing is to see the kind of thing that Wittgenstein was trying to do. He was working inside the structure of actual language, and he was trying to establish the limits of any possible language. It is as if a creature living inside the skin of an opaque bubble plotted its centre, and then used some hydraulic formula to calculate the maximum expansion of any possible bubble.

The difficult thing is to understand the status of Wittgen-

stein's conclusion, and of the argument which was supposed to establish it. The suggestion that the conclusion of the argument, or indeed any of its steps, is absolutely necessary, raises a problem to which his solution is obscure. Certainly this part of his early view of the nature of philosophy is much the more important part. It puts the *Tractatus* in the great tradition of western philosophy, and all the beauty and majesty of the book come from this source. But it is no good pretending that this side of his philosophy is clear.

The problem raised by the argument is that he treats every step in it, including its conclusion, as absolutely necessary, without apparently treating them as empty tautologies. This problem began to appear when we asked how he thought that the essential nature of language could be apprehended. Presumably he did not intend his account of it to be taken as an empty definition. But if the necessary truths of this part of philosophy are substantial, how are they apprehended? This is only the beginning of the problem. The deeper difficulty is that, however they are apprehended, they seem to be substantial necessary truths, and yet, according to him, there are no such necessary truths. The difficulty becomes more conspicuous when he takes a further step, and tries to deduce the structure of reality from the lattice of elementary propositions which he believed to be the basic structure of all languages. How is this ontological conclusion meant to be taken? It can hardly be meant as an empty tautology about reality in so far as it can be caught in the network of a language which satisfies his preferred definition. So is it supposed to be a substantial necessary truth about reality in so far as it can be caught in the network of any language? Or is it offered as a substantial necessary truth about reality without that qualification?

Wittgenstein does not appear to have chosen between the last two interpretations, and this may be because he did not

see any real difference between them. However, the difficulty still remains. Kant could use substantial necessary truths to construct the framework of his system, but Wittgenstein's theory of necessity left him in no position to follow Kant on this point.

It is not clear how he proposed to remove the apparent inconsistency. In fact, the criticisms of the *Tractatus* which he makes in *Philosophical Investigations* suggest that he had no effective way of removing it. However, there is a line of thought which may have once seemed to him to lead to a solution. He says again and again in the *Tractatus* that philosophical propositions do not lie within the limits of language. But what kind of a solution would lie in that direction? According to him, what lies beyond the limits of language cannot be asserted in language, but can only be shown. But what would be the status of something that can only be shown? Would it be a necessary truth, and, if so, what sort of necessary truth would it be? This avenue will now be explored, but no clear result is to be expected.

The first thing to be noted is that Wittgenstein's ontological conclusion is *recondite*. His view about the structure of reality was that it is composed of simple objects, which he calls 'objects' leaving the qualification to be understood, and that this structure is precisely mirrored in the structure of elementary propositions. A detailed exposition of this view is not required at the moment, because the point that needs to be made about it is a general one: we would not expect to find in ordinary factual discourse either the philosophical proposition in which the ontological thesis is expressed or any mention of things of the type which it mentions. So if this proposition describes the framework of factual discourse, that framework is remote and unfamiliar to us. There is here a sharp contrast with the way in which Kant sets up the framework of his system of factual knowledge. The philosophical propositions which he uses for this purpose are, or at least most of them are, not at all recon-

dite, and in the course of an ordinary factual inquiry there might well be mention of the kind of thing which they mention. For example, the proposition 'Every event has a cause' was not first formulated by philosophers, and the application of the concept of cause to particular cases is something very familiar. So Kant's framework stands out on the surface.

A concealed framework needs a penetrating investigation to establish its existence. This certainly explains one feature of Wittgenstein's early philosophy, its depth. But it does not explain what he meant when he said that philosophical propositions do not lie within the limits of language. For elementary propositions do lie within the limits of language, and yet they have precisely this recondit character.

At this point it is important to remember that, when Wittgenstein speaks of the limits of language in the *Tractatus*, he means the limits of factual discourse. Therefore his view about philosophical propositions is that at least they are neither factual nor contingent. But to what positive category do they belong? Is this negative characterization of them the only possible one? If so, his view about the nature of the propositions which belong to this part of his philosophy will suffer from the obscurity of excessive generality, and no solution to the present problem will have been reached. For, of course, tautologies too are neither factual nor contingent, and the problem at the moment is to establish a more specific categorization of his theory of language and his theory of reality. The two theories, which are really one, can hardly be meant to be tautological. So they must have some further characteristic which differentiates them. Yet that characteristic cannot be substantial necessary truth, if Wittgenstein is to be consistent.

Now he certainly offered a further specification of the theory of language and the ontology of the *Tractatus*, and he attached great importance to his further specification of them. He claimed that his theories were good metaphysical

theories. Admittedly, they made the general metaphysical mistake of trying to say what can only be shown. But he claimed that what they try to say is something valid. So the thesis that there must be objects would be a good metaphysical thesis. It is true that the concept of an object is a formal concept, and so we ought not to say that there are objects, because that makes their existence sound contingent, as if we were saying that there are coelocanthus. The correct way to present the existence of objects would be to use propositions in which their names occur. Then their existence could be seen through these propositions, but it would not be asserted by them, and could not properly be asserted by any proposition which contained the word 'object'. It is something that can be shown but not said. Similarly, the logical relation between the propositions 'p' and 'not-p' cannot properly be asserted by any third proposition. It can be seen in the form of the two propositions themselves, or it can be demonstrated by combining them in the tautology 'p or not-p'. But a tautology is not a factual proposition and it makes no assertion. So here is another thing that can be shown but not said.

But it is not clear that this further specification of the theory of language and the ontology of the *Tractatus* leads to any solution of the present problem. The difficulty is that Wittgenstein's ontological conclusion is not merely that there are objects, but that there must be objects. It is, therefore, not enough to apologize for using the formal concept of an object as if it were an ordinary concept. An explanation of the force of the word 'must' is also required. Does it or does it not express a substantial necessary truth? If this question is not unaskable, the answer would seem to be that it does express a substantial necessary truth. The argument for this answer has already been given: surely there is a difference between the necessary truth of a tautology and the necessary truth of the theory which is presupposed by the system of factual discourse. But what did Wittgenstein

take the difference to be? In default of a clear answer from him, it is natural to conclude that in the end his system is like Kant's, although on the way to this destination it exhibits many differences, one of which is incompatible with the journey.

This can hardly be a firm conclusion without a more detailed examination of Wittgenstein's early philosophy. But before that is undertaken, there is one last general remark which ought to be made. However much light may be thrown on his early system by the comparison and contrast with Kant's system, it would be a mistake to suppose that he merely revived Kant's themes in a new key with certain variations. His philosophy began as an investigation of the foundations of logic, and his point of departure was the great work already done on logic by Frege and by Russell, and Russell's teaching in Cambridge. Of course, it might still have been the case that, when he came to the question, what philosophy is, he derived his answer, that it is a critique of language, directly from Kant and Schopenhauer, with the familiar modulation from thought to language. But in fact this is not what happened. For when he arrived in Cambridge in 1912, philosophy had already begun to move into this new critical phase, largely under the influence of Russell and Moore. Wittgenstein's early philosophy must be seen for what it is, a complex work of genius, in which ideas of many different kinds are combined, and questions which seem to be almost out of earshot of one another find connected answers.

2 The Limits of Language

In his Preface to the *Tractatus* Wittgenstein says that the aim of the book is to plot the limits of language. But before he says this he says that the book deals with the problems of philosophy. He explains the connection between the two tasks by saying that the reason why the problems of philosophy are posed is that the logic of our language is misunderstood. He acknowledges his debt to Frege and Russell, but he does not attempt to explain how questions in the theory of logic are connected with either of the two tasks which he has just mentioned. He ends the Preface by making two claims for his book: it lays down the general lines of a final solution to the problems of philosophy, and it shows how little is achieved when those problems are solved.

Each of these assertions carries a heavy load of meaning. The second claim alludes to the greater importance of religion and morality. When he speaks of the limits of language, he means the limits of factual language, and the philosophical problems which he has in mind are posed, as they nearly always are posed, in terms which do not clearly distinguish them from factual problems. His first claim is that these philosophical problems are solved by a critique of language which fixes the limits of factual discourse. The curtailment of factual discourse leaves religion and morality in a position which he describes towards the end of the book. The Preface suggests that philosophy is finished, but it must be observed that, whatever has happened to the body of traditional philosophy, its spirit has certainly migrated into Wittgenstein's critique of language. The question, what the status of this critique is, is not raised in the Preface, and

it is not until the end of the book that we are told that it too tries to say in a factual way things which cannot be said in a factual way, and so after its other work has been done it must turn round and eliminate itself.

The text of the *Tractatus* is formidably difficult. Part of the difficulty is that the intricate construction of the book makes it hard to find a clear point of entry into it. Certainly the way in is not through its opening sentences. Fortunately, we possess some of the notebooks in which Wittgenstein worked out the ideas which later went into the *Tractatus*.¹ The *Tractatus* is brief, enigmatic, and therefore apparently confident, but when the same topics are discussed in the *Notebooks*, the treatment is more extended, and brings in conflicting arguments, and it is sometimes tormented by doubts. So when a comparison between the two books is possible, it throws a lot of light on the *Tractatus*. Now the *Notebooks* begin as an inquiry into the foundations of logic, and that point of entry into the system of the *Tractatus* was used in the summary account of it which has already been given. Here the system will be entered at a different point, which is suggested by what Wittgenstein says in his Preface. The first question that will be asked is the question how the task of plotting the limits of factual discourse is to be carried out.

The task is a difficult one, because there is no Archimedian point outside all factual discourse on which the philosopher can take his stand and still speak in factual terms. 'All' really does mean 'all'. So he needs some way of working from inside factual discourse. The method used by Wittgenstein has already been described in a general way. He divided the task into two stages. First, he worked back from the skin of the bubble of ordinary factual discourse to its notional centre, elementary propositions. Then using a

1. *Notebooks 1914-1916*, edited by G. H. von Wright and G. E. M. Anscombe, with an English translation by G. E. M. Anscombe: Blackwell, 1961. See Bibliography, p. 187.

logical formula he worked outwards again to the limit of expansion of the bubble. These two stages now need to be described in detail.

But first something must be said about the general feel of the task, and the kind of results which might be expected if it were successfully carried out. Anyone who undertakes it will naturally tell himself that, as Wittgenstein puts it in his Preface, on the other side of the limit lies nonsense. But this needs to be qualified in more ways than one. For as he points out later in the *Tractatus*, there is no other side to the limit, and so the task of plotting it is more like calculating the curvature of space itself. If the senses of factual propositions are points in logical space, nonsense is nowhere.

There is also another qualification that is needed. If the limits of sense are the limits of factual discourse, all non-factual discourse will be nonsense. So it looks as if anyone who sees the task of demarcation in this way will be a positivist of the destructive type. However, there are two other possibilities. He might stretch the term 'factual discourse' to cover more than it usually covers, and in that case the space of factual discourse would acquire a more sinuous curve which would allow for the gravitational pull of whatever it is that is happening in the less scientific fields of thought. Or he might draw some subtle distinction between good and bad nonsense. Wittgenstein was completely opposed to the first of these two alternatives, but he developed the second in the way that has already been sketched. By refusing to locate the truths of religion and morality within factual discourse, he was not rejecting them, but trying to preserve them. They are non-sense because they lack factual sense. But to make this point about them is not to condemn them as unintelligible. It is to take the first step towards understanding them.

The first part of Wittgenstein's task of demarcation was to work back from ordinary factual propositions to the ele-

mentary propositions which, according to him, lie at its centre. But when he does this in the *Tractatus*, it is difficult to see exactly how he does it. It is, of course, evident that he takes over the kind of analysis that was practised by Russell and Moore, and builds a theory around it. But that is a very inadequate description of his procedure, because his theory is not a general account of the current practice of logical analysis, but an original and entirely general theory of factual meaning. This theory is based on two axioms, which for the moment will merely be labelled X and Y, because it would overburden the exposition to give their content immediately. The point to be borne in mind is that, according to Wittgenstein, X and Y, taken together, give the essence of language, and the question which was asked earlier, how this essence is apprehended, becomes the question, how X and Y are established.

First, it is necessary to describe Wittgenstein's general line of thought. His starting point was ordinary factual discourse. But like Russell he did not leave ordinary factual propositions in the form in which they are current in everyday life, or even in science. He believed that language disguises thought, and that the real forms of our thoughts would become apparent only when the language in which they are expressed had been analysed and broken down into its ultimate components, which according to him, are elementary propositions. His idea was that the assertion of an ordinary factual proposition is a gross move, which contains within itself a large number of minute moves. For example, merely to assert that the watch is lying on the table is to assert by implication many other propositions, which in this case might be propositions about the mechanism inside the watch. But this would only be the first generation of implications. For these propositions themselves would imply others, which would imply others, and so on, until we reached the ultimate components of the original proposition, at which

point the analysis would be complete. Naturally, Wittgenstein was not recommending that the assertion of each of these implied propositions should be a separate move in everyday life. The grossness of ordinary factual propositions is a blessing. His point was that an exact account of what they mean could be given only if they were analysed into their ultimate components, elementary propositions.

It is mystifying to introduce elementary propositions without immediately explaining what they are. But there is a real difficulty here. Wittgenstein did not claim to be able to give any examples of elementary propositions, because he thought that neither he nor any other philosopher had yet got down to the ultimate components of factual propositions. Now the point that must be borne in mind is that, even if logical analysis had penetrated to that level, so that he could have given examples of elementary propositions, he would still have needed his general theory of meaning. For he would not have been content with demonstrating that the complete analyses of certain factual propositions happen to contain elementary propositions: he had to prove that the complete analyses of all factual propositions are necessarily composed entirely of elementary propositions. This conclusion could not be established inductively by using logical analysis on a few chosen cases: it had to be deduced from a general theory of meaning. Nevertheless, some examples of elementary propositions would have been a help. In default of examples we have to rely entirely on Wittgenstein's specification of elementary propositions. He specifies them as a class of factual propositions which are logically independent of one another: the truth or falsity of one elementary proposition never implies the truth or falsity of any other elementary proposition.

So the first part of his task was to prove, as a deduction from his theory of meaning, that all factual propositions are analysable without remainder into minute factual pro-

positions which are logically independent of one another. There are three questions about this enterprise which have to be answered. What was his theory of meaning? How was it established? And how did the deduction proceed?

Any theory presupposes a question to which it is an answer. Wittgenstein's theory of meaning was an answer to the question, how factual propositions get their senses. Now it must not be forgotten that this question arose in Wittgenstein's mind out of another question, the question what logical necessity is. He believed that logical necessity could be explained only if it were traced back to its source in the essential nature of propositions. So when he asked how factual propositions get their senses, he was looking for an answer which would be rich in consequences.

His answer was a theory of meaning based on axioms X and Y, which must now be given. X says that every factual proposition has a precise sense: Y says that the way in which every factual proposition gets this sense is pictorial. A rough description of the relationship between these two axioms would be that X analyses the problem and Y solves it. To have a sense is to have a precise sense, and a factual proposition gets its precise sense only because its words represent things, just as a diagram says something only if its parts represent things.

But do things that are represented have to exist in order to be represented? There is a dilemma here. For if they do not have to exist, it is not clear how they get represented: and if they do have to exist, Y is open to the obvious objection that a factual proposition might well have a sense even if it contained a word which happened to represent something which did not exist. This can happen, just as it can happen that a certain part of a diagram represents something that does not exist, perhaps an invention. However, what can be said in such cases is that, if the whole diagram is going to be intelligible, that particular part of it must be divisible into elements which represent things that do exist.

For example, the first man to think of a watch spring could produce a diagram of it by drawing a wheel and an axle and a coil, and by showing the tension, and these types of things would already exist. This suggests a reformulation of Y which escapes the dilemma: a factual proposition gets its precise sense only because its words either themselves represent existing things or are analysable into other words which represent existing things. For the symbolization of facts is based on the representation of things by words, and a word cannot represent a thing unless it is correlated with it, and correlation with non-existent things is impossible. The sort of correlation which Wittgenstein had in mind is the correlation of a name with the thing named.

But what is the point of insisting, as X does, that the senses of all factual propositions must be precise? The sense of a proposition is a function of its implications: it depends on what is necessarily the case if the proposition is true. So to say that a proposition must have a precise sense is to say that it must be possible to draw a sharp line around everything that is necessarily the case if it is true. Within this enclosure all its implications would stand up to be counted. Together they would make a definite claim on reality, which would either satisfy the claim, in which case the proposition would be true, or not satisfy it, in which case the proposition would be false. There is no third possibility. So X states a requirement which any factual proposition must meet: what is required of it is that its analysis should not terminate until it is clear exactly how the law of excluded middle applies to it.

When X is developed in this way, it becomes clear that it is not a purely neutral reformulation of the problem, how factual propositions get their senses, but a substantial contribution towards its solution. Yet X is supposed to be a necessary truth. So here is one point at which Wittgenstein confronted the difficult question, how substantial necessary truths can be established—the second of the three questions

asked at the beginning of this discussion. Even if he were able to answer this question, there would still be the difficulty that there does not seem to be any place for substantial necessary truths in his system. But perhaps enough has been said about these difficulties, and all that we need to do now is to bring out the point of substance which X contains. It is a point of substance, and not a tautology that every proposition has a precise sense. For it would be possible, without denying the law of excluded middle, to deny that it can be applied to every factual proposition in the way that X applies it. Some factual propositions might be inherently vague. Wittgenstein himself makes this point against X in *Philosophical Investigations*, and raises the interesting general question, whether logic idealizes the structure of language and, if so, to what extent.

Y too is a substantial thesis about factual propositions, and not a tautology. But before demonstrating this point, it would be as well to answer the third question on the list, by putting X and Y together, in order to show how Wittgenstein deduced from them the conclusion that the complete analyses of all factual propositions are necessarily composed entirely of elementary propositions.

His deduction is complicated by the fact that it requires an auxiliary assumption, Z. Z is the thesis that, whenever two propositions are logically related to one another, there will be within one of the two, or within both, some logical complexity which analysis could reveal. For example, the propositions 'p' and 'not-p' are logically incompatible with one another, and so at least one of the two must contain some logical complexity which would explain the incompatibility. In this case, however difficult it may be to give a general account of logical necessity, it is evident that 'not-p' is the culprit. Now from Wittgenstein's original specification of elementary propositions it follows that 'p' and 'not-p' cannot both be elementary, because there is that logical relationship between them, and it is plain that, even if 'p'

happens to be elementary, this cannot be the case with 'not-p'.

The plot thickens when Z is applied to propositions whose logical relationships are based on words which, unlike the word 'not', purport to represent things. For though Z clearly works in some cases of this kind, in others it breaks down, or at least appears to break down. It works with the incompatible pair 'This creature is a mammal' and 'This creature is a fish', and perhaps even with the incompatible pair 'This town is Dartmouth' and 'This town is Exmouth'. For the word at the end of each of these four propositions is logically complex, or, to put the same point in what Carnap called 'the material mode of speech',² the thing which each of these words purports to represent is logically complex: and at least in the case of the first pair logical analysis could bring the complexity to the surface by substituting definitions for the final words. But Z seems to break down on the incompatible pair. 'This thing is blue' and 'This thing is yellow'. For what definitions of the two colour-words would explain this logical relationship? Of course, a proponent of Z is not forced to admit that it breaks down at this point, because he can still maintain that there must be hidden definitions of the two colour-words, and that the discovery of their definitions would be a triumph of logical analysis which would vindicate Z in this kind of case as well as in the easier kind of case.

Whatever the fate of Z, it is at least clear that it contains a point of substance, because it can be denied without self-contradiction and so cannot be tautological. For it is not self-contradictory to suggest that, though the incompatibility between the two colour-words is logical, it does not depend on their internal complexity, because, though colour-words form a system, their systematic connections with one another cannot be packed into definitions of the

2. R. Carnap: *The Logical Syntax of Language*, Routledge & Kegan Paul, London, 1957, pp. 237 ff and 286 ff.

individual words. As a matter of fact, Wittgenstein abandoned Z before X and Y, and when he abandoned it, he moved off in this direction. But the details of his retraction can wait till later.

What led him to accept Z at the time when he compiled the *Tractatus*? A possible answer is that the kind of logical pluralism which Z expresses is very satisfying, because it frames things separately and presents them for contemplation one by one. It is also a theory which is particularly well adapted to the practice of logical analysis, because it suggests that piecemeal work may be rewarded by definite progress. However, though these two points may explain why Russell accepted logical pluralism, they do not explain why Wittgenstein's acceptance of it so well. For Wittgenstein always had a strong bent towards holism, or monism, as the theory which is opposed to pluralism is sometimes called. In his case part of the explanation lies in the historical accident of his early association with Russell. But there is also a powerful theoretical reason behind his acceptance of Z. In his hands Z led, via the deduction which will now be set out, to his theory of elementary propositions, and this theory is a version of logical atomism which yields a uniform explanation of all necessary truths except the philosophical propositions which belong to the system of the *Tractatus*. This advantage of logical pluralism will be explained later. Logical atomism is, as its name suggests, the extreme development of logical pluralism: analysis can go no further.

We are now in a position to set out Wittgenstein's deduction of the thesis that the complete analyses of all factual propositions are necessarily composed entirely of elementary propositions. His argument takes the form of a *reductio ad absurdum*. The hypothesis which has to be proved absurd is, of course, the denial of his own conclusion: he has to prove the absurdity of the suggestion that the complete analysis of a factual proposition might con-

tain some non-elementary propositions.

His original specification of elementary propositions distinguished them as a class of factual propositions which are logically independent of one another. All other factual propositions, which are non-elementary, do have logical relations with one another. Now it follows from Z that non-elementary propositions, since they are logically related to one another, must have some internal complexity, which would be revealed by logical analysis. Therefore, if a non-elementary proposition occurred in the complete analysis of a factual proposition, it would contain a complex word which purported to represent a complex thing. At this point Y must be brought into the argument. Y says that a factual proposition gets its sense only because its words either represent existing things or are analysable into other words which represent existing things. But the second alternative is ruled out in this case, because the hypothesis is that the analysis in which the complex word occurs is already complete. Therefore, on this hypothesis, the original factual proposition will have a sense only if that word really does represent an existing complex thing.

So far, no absurdity has been found in the hypothesis. But the trouble begins to emerge when Wittgenstein points out that, if the complex thing exists, it follows logically that a further proposition, which analyses its complexity and asserts its existence, will be true: for example, it will be true that there is a town at the mouth of the river Dart. So if the original factual proposition has a sense, it follows logically that this further proposition, which lies beyond the termination of its analysis, will be true. Moreover, if the original factual proposition is true, it must have a sense, and so, if it is true, it follows logically that the further proposition beyond the termination of its own analysis will be true.

But what is absurd about this? Nothing, until we bring in X. For according to X the sense of a proposition includes

everything which is necessarily the case if it is true, and from this it follows that the further proposition must be included in the sense of the original proposition. But this really is absurd, because it contradicts the hypothesis that the analysis of the original proposition had terminated before the further proposition had been reached. Furthermore, suppose that, guided by X, we did include the further proposition in the analysis of the original proposition, just as we might include the details of anything complex, which was represented by a picture, in the message conveyed by the whole picture. Then exactly the same argument could be used again at the next stage, and it would push the limit of analysis one notch further out. But Y requires that the sense of a factual proposition should be precise, and so that there should be an end to this process of aggrandizement. A country, whose frontier was always a little further out than at any moment it was deemed to be, would not really have a frontier, and so would not be a territorial unit at all. Similarly, the aggrandizement of the sense of a proposition must come to a halt. There must be a definite limit to what is being asserted, and so there must be a definite limit to the view into reality which is presented by a picture or a factual proposition. Both may have a very fine grain, but in each case there must be a definite limit to the fineness of the grain.

This is an abstract argument, based on a general theory of meaning, and Wittgenstein did not claim to be able to produce any examples of complete analyses which might reinforce its conclusion, or even illustrate it. He merely specified elementary propositions as a class of logically independent factual propositions, and he left the precise nature of their elements, which he called 'names', shrouded in mystery. Now these names were pure names, which, unlike the name 'Dartmouth', had no concealed factual content. So their meanings could only be the simple objects, or, as he puts it, leaving the qualification to be understood, the

'objects', which they represented. But what sort of thing is an object?

This question, to which there is no answer in the *Tractatus*, is rather like a question about the first years of Hamlet's life. Wittgenstein's theory of meaning lays down certain general requirements for elementary propositions, and the full characterization of them may be anything that satisfies these requirements. It is, therefore, no good expecting to find an answer to the question whether the objects of the *Tractatus* are material particles or the sense-data of human observers. As a matter of fact, he uses examples of both these kinds, but without committing himself to either, because, of course, his theory of factual meaning was entirely general, and he did not want its application to be restricted by irrelevant arguments drawn from the theory of knowledge. His elementary propositions are mysterious, and that is a fact about the *Tractatus* which has to be accepted.

It is, incidentally, a fact which explains the kind of influence exerted by the *Tractatus* between the two wars. Although the method of analysis which it described was not new, the systematic theory which he built around it, and the great claims which he made for it increased the impetus of the linguistic movement in philosophy: but the theory helped to produce this result only in an indirect way, because, though it was new, it was not the sort of thing that could be used, and the description of elementary propositions gave more inspiration than guidance, like the pictures which are sometimes found inset in old maps.

Elementary propositions lie at the centre of the system of factual discourse, and constitute its inner limit. The first stage in Wittgenstein's demarcation of the system was to fix this inner limit, because it was the point of origin from which he was to work outwards and calculate its outer limit, the maximum expansion of the bubble. The second stage, the calculation of the outer limit, is much easier to

describe. This is partly because it is less complicated, and partly because his method of calculating the outer limit is really the reverse operation of his method of fixing the point of origin. For if the complete analyses of all factual propositions are necessarily composed entirely of elementary propositions, it follows that all factual propositions can be constructed entirely out of elementary propositions. The process of synthesis is simply the process of analysis in reverse.

But although this is true, it leaves many details to be filled in. For too little has been said about the process of analysis, and so it is not sufficiently informative to say that it was simply put into reverse. Also not enough has been said about *Y*, and a detailed account of the method of constructing factual propositions would fill this gap too.

3 Pictures and Logic

Wittgenstein's theory of factual propositions depends on a single fundamental idea, the idea of exclusion. A factual proposition always excludes, or shuts out a certain possibility. In the simplest case the proposition '*p*' asserts the possibility *not-p* out of existence, or rather, since speech does not have magical powers, it claims that it does not exist, and to do this is to show it the door. Moreover, that is all that it does. For to exclude the possibility *not-p* is to say '*not-not-p*', and '*not-not-p*' is logically equivalent to '*p*'. It is a logical necessity that there be no third possibility between *p* and *not-p*, as it were *half-p*, and this logical necessity is expressed in the law of excluded middle.

It is, of course, essential to distinguish the exclusion of *half-p*, which is logically necessary, from the exclusion of *not-p*, which is done by the factual proposition '*p*'. For what is excluded by a logical truth could not be the case, whereas what is excluded by a factual proposition might be the case, and all that the factual proposition does is to claim that it contingently is not the case. So perhaps it would be better to mark this difference by saying that the proposition '*p*' shuts out the possibility *not-p*, rather than that it excludes it.

Now it must be remembered that Wittgenstein had to work out a theory of factual propositions which would yield an adequate explanation of logical necessity. So he had to discover a connection between the shutting out which is done by factual propositions and the excluding which is done by logical propositions. The connection which he found was that what is shut out by a factual proposition is something, whereas what is excluded by a

logical proposition is nothing.

But taken out of its context this is only an obscure epigram, and Wittgenstein's theory needs to be built up visibly around it. So let us look next at a more complicated case. Suppose that 'p' is a non-elementary proposition, and that its analysis is 'q and r' (this analysis need not be complete, and so 'q' and 'r' may be non-elementary too). Then what 'p' shuts out is the possibility *either not-q or not-r or both*. A moment's reflection shows that 'p' is really shutting out three separate compound possibilities: the first is the possibility *not-q and r*, the second is the possibility *q and not-r* and the third is the possibility *both not-q and not-r*. Moreover, since the relevant compound possibilities are all constructed out of the two basic possibilities *q* and *r*, there is only one more which can be constructed, viz. *q and r*. Because this is the only remaining possibility, the proposition 'q and r' is asserting its existence by shutting out the other three possibilities. Or, to put the same point in the other way, the proposition 'not (either not-q or not-r or both)' is logically equivalent to the proposition 'q and r', and so logically equivalent to the original proposition 'p', of which 'q and r' is the analysis. Thus the entire sense of 'p' is given by saying which of the four compound possibilities it shuts out.

Wittgenstein's next step is to generalize this result. According to him, the entire sense of every factual proposition is given by constructing the complete list of relevant possibilities in the way in which it was constructed in the last example, and by saying which of these possibilities the proposition shuts out. Now the method of construction used in that example was first to take the proposition 'p' and analyse it into 'q and r'; then to take 'q' and 'r' and add their negations 'not-q' and 'not-r'; and then finally to take the four corresponding possibilities, *q, r, not-q, and not-r*, and combine them to form the four relevant compound possibilities, *q and r, q and not-r, not-q and r, and not-q and*

not-r. This method of construction will always yield 2^n relevant possibilities, where n is the number of propositions in the analysis at the original proposition. Then, according to Wittgenstein, the entire sense of any factual proposition is given by saying which of the 2^n possibilities it shuts out. To put the same point in another way, the truth or falsity of any factual proposition depends solely on the truth or falsity of the propositions in its analysis: or, to put this in the usual technical terminology, any factual proposition is a truth-function of the propositions in its analysis. This controversial thesis is called 'the thesis of extensionality'.

One more step is needed to complete Wittgenstein's task. If the limit of language is to include all factual propositions, the thesis of extensionality must be applied to elementary propositions. For if he applied it to non-elementary propositions, he would leave out some of the possible truth-functions, because the base to which it was applied would be incompletely analysed: just as an architect who worked with prefabricated units would have fewer possibilities open to him than one who worked with bricks. So his final conclusion is that all factual propositions are truth-functions of elementary propositions.

Although this theory of factual discourse fixes its outer limit in relation to elementary propositions, it does not fix it absolutely. For there is no answer to the question precisely what type of proposition elementary propositions are, and so there is no exact fix for the point of origin of the whole survey. Wittgenstein was careful not to commit himself to the view that acquaintance with the objects named in elementary propositions would have to be sensory, or to the view that it could not be sensory. Between alternatives such as these his theory of factual propositions is entirely neutral. However, it is not this neutrality which proves that he was not a positivist of the destructive type. For it is clear that he did not include the propositions of

religion and morality among factual propositions, and so his neutrality about the point of origin of the system of factual propositions was certainly not intended to allow for the possibility that some of them might be non-empirical. What proves that he was not a positivist is his attitude to the propositions of religion and morality after he has put them outside the factual domain.

The aloofness of this theory of meaning and its detachment from any particular theory of knowledge are conspicuous. What is not so easy to discern is how it came to be so detached. In this case the theory of knowledge which is the opposite number is empiricism, the theory that all factual knowledge is based on sensory experience. Maybe this is too vague to be called a theory, and perhaps it becomes a theory only when the precise nature of the base has been specified. Certainly it becomes an instrument of destruction only if all claims to non-factual knowledge are automatically rejected, as they are by extreme positivists. It becomes a theory of meaning, if it maintains that the sensory material which it specifies forms the base from which the meanings of all factual propositions are constructed. This kind of theory of meaning becomes a weapon in the hands of the extreme positivist because he automatically rejects all non-factual propositions as utter nonsense, and not merely as non-sense.

Now three points have been made about Wittgenstein's theory of factual meaning. It contained nothing which would make it impossible to apply it to an empirical base, as the philosophers of the Vienna Circle¹ applied it: but

1. The Vienna Circle included M. Schlick, F. Waismann and R. Carnap. The *Tractatus* had been studied by the Circle before 1927, when Schlick persuaded Wittgenstein to meet Waismann and Carnap, and have philosophical discussions with them. After 1929 Wittgenstein excluded Carnap from these discussions. See R. Carnap: 'Autobiography', in *The Philosophy of Rudolf Carnap*: ed. P. A. Schilpp: now published by The Open Court Publishing Co., La Salle, Illinois. Wittgenstein's discussions with Schlick and Waismann between

this would only be one possible application of it, because it did not include empiricism as part of itself; and, even if it had, it would not have been positivistic. A fourth point, which was made earlier, was that the reason why Wittgenstein kept his theory of meaning detached from empiricism was that he did not want its application to be restricted by irrelevant arguments drawn from the theory of knowledge. But none of these points explains how the detachment came about. This question can be presented in a precise form. For it is really a question about Z. In Russell's hands Z was an axiom of empiricism, taken over from Hume and translated out of the primitive psychological terminology of the eighteenth century into the new logical terminology. But though it is easy to see that Z underwent a much greater change of character in Wittgenstein's hands, it is not so easy to see how this change came about.

A large part of the answer to this question is that Wittgenstein did not share Russell's concern with the way in which the senses of factual proposition are learned. He was concerned with the basic structure of their senses, and it made no difference to him that this structure lay below the level at which learning takes place. This is the point at which he really diverges from Russell. It is comparatively unimportant that Russell's simple particulars are sense-data, whereas the precise nature of Wittgenstein's objects is left unspecified. For if perception were explained in the right way, it might become clear that the senses of factual propositions are not really learned through acquaintance with sense-data; and if sense-data were analysed in the right way, it might become clear that the basic structure of the senses of factual propositions really is exhibited by sense-data. But on the second of these two issues Wittgenstein had not formed an opinion, and he did not need to form one, be-

1929 and 1932 are recorded in *Ludwig Wittgenstein und der Wiener Kreis*, ed. B. F. McGuinness, Suhrkamp Verlag, 1967.

cause he took his stand on the requirement that elementary propositions must be logically independent of one another. He was not unduly worried by the fact that neither Russell's sense-datum propositions nor any other type of proposition which anyone had yet suggested, met this requirement. But the really crucial point is that he was not interested in the first issue, because he was not concerned with the way in which the senses of factual propositions are learned.

In spite of this he talks about his objects in a way that suggests that the meanings of his pure names could be learned from them. He also refers to the possibility of acquaintance (*kennen*) with them, and 'acquaintance' is Russell's word for the cognitive relationship between people and his simple particulars, which are sense-data. This borrowing of the apparatus of empiricism is surprising. The explanation can only be that Wittgenstein did not rule out the possibility of acquaintance with his objects, or even of learning the senses of elementary propositions from them. His theory may be regarded as a speculative projection of the apparatus of empiricism. When he took over the logical ideas on which Russell's theory of analysis was based, he developed them in the darker manner of German Idealism. The *Tractatus* belongs to the same tradition as the work of Freud. It is, of course, neither a psychological treatise nor a philosophical treatise presented in psychological terms. But it offers a speculative theory about something which is usually supposed to take place in the clear light of consciousness, the correlation of words with things, through which factual propositions get their senses. In the case of Wittgenstein's elementary propositions this correlation takes place in total obscurity. If it is something that we do, we do not do it consciously or intentionally.

This is not the only case in which Wittgenstein borrows an idea from the theory of knowledge, and, because he is detached from such issues, is able to transform it and use it

in his own way. The process is characteristic of his thought in the *Tractatus*, and more generally of his very unusual kind of originality. Old ideas take root in his mind and begin a new life. In the *Tractatus* the most striking example is his treatment of Solipsism, which he connects with his theory about the limits of language.

The Solipsist's predicament is that, when he denies the existence of everything except himself and the world of his own experiences, he is unable to point to what it is that, according to him, does not exist, because it lies outside his world. So, to use one of Wittgenstein's later analogies, when he points to himself and his own world and claims that they do exist, he is like a man who carefully constructs a clock, and then attaches the dial to the hour-hand so that they both go round together. There is no contrast with anything outside his world. Wittgenstein's predicament, when he sets out to plot the limit of factual discourse, is that he is unable to say that certain named objects exist and that certain others do not exist, because their names are pure names, and the objects themselves would be the meanings of such names. Therefore he draws the limit from the inside, and, if the existence of certain objects could be directly inferred from language, that would not be because their existence was asserted in any propositions, but because it was reflected in the pure names correlated with them. Again there is no contrast, because there is no possibility of going on to name objects which do not exist.

So there is something in the point that the Solipsist is trying to make about what exists. Only certain things exist, but that they exist is something that cannot be said. It can only be shown, and the Solipsist's mistake is to try to express it in a factual proposition, or perhaps in a substantial necessary truth. He himself would probably resist this description of his case. He would object that he can identify the experiences that he means without going outside his world for a contrast: he can identify them as 'the ones that

belong to me, to my unique self'. Therefore, he will claim, he has a substantial thesis. But what is this unique self, of whose existence he feels assured? It is neither his body nor his soul nor anything else in his world. It is only the metaphysical subject, which is a kind of focal vanishing point behind the mirror of his language. There is really nothing except the mirror and what the mirror reflects. So the only thing that he can legitimately say is that what is reflected in the mirror is reflected in the mirror. But that is neither a factual thesis nor a substantial necessary truth about what is reflected in the mirror, but a tautology. It means only that whatever objects exist exist. So when Solipsism is worked out, it becomes clear that there is no difference between it and Realism. Moreover, since the unique self is nothing, it would be equally possible to take an impersonal view of the vanishing point behind the mirror of language. Language would then be any language, the metaphysical subject would be the world spirit, and Idealism would lie on the route from Solipsism to Realism. Wittgenstein takes all three of these steps in the *Notebooks*, but in the *Tractatus* he takes only the first, which is also associated with Realism. However, this does not affect his two main points: that all such metaphysical theses are attempts to say things which cannot be said in language but can only be shown, and that Solipsism is a good metaphysical thesis, because there is something in the point that it is trying to make. Many of these ideas came from Schopenhauer, but Wittgenstein's use of them is his own.

Z came from Russell, and X came from Frege. What was the origin of Y, the so-called 'picture theory' of propositions? This was Wittgenstein's own idea, unlike X and Z, which he did not originate, however original his development of them was. Now Y's contribution to the task of demarcating factual language has been described, but the point of substance which Y contains has not yet been isolated, and Wittgenstein's explanation of logical neces-

sity, which depends on Y, still remains to be given.

According to Y, a factual proposition gets its sense only because its words either themselves represent existing things or are analysable into other words which represent existing things. But it has also been pointed out that Wittgenstein maintained that the entire sense of a factual proposition is given by constructing the complete list of relevant possibilities and saying which of them the proposition shuts out. This thesis has been left hanging in the air, as if it might be another axiom or independent assumption in his theory of meaning. But in fact it is not independent, but part of the development of Y.

The simplest way to see this is to start from the fact that the German word 'Bild' means not only 'picture' but also 'model'. Now suppose that someone silently produces a model in order to convey a piece of information; for example, an astronaut makes a clay model of his lost vehicle. In such a case the model may be thought of as something which shuts out of existence the possibility which does not conform to it, just as the proposition 'p' shuts out the possibility *not-p*.

But this does not take the assimilation of propositions and models very far. It only amounts to the platitude that, if a model is used instead of the proposition 'p', it will take over the logical characteristics of the proposition. But now visualize the shutting out as a mechanical process: the model actually moves into the space which had been reserved for the realization of the possibility *not-p*. Next suppose that the space reserved for the realization of the possibility *p* is everywhere else. Then the space in which this particular model operates will be divided exhaustively into two, the *p*-reserve and the *not-p*-reserve. So when the model denies the *not-p*-reserve to reality, it forces it into the *p*-reserve: 'not-not-p' is logically equivalent to 'p'.

This is not Wittgenstein's only way of using the idea of logical space in the *Tractatus*, but it is his basic way of

using it. It can, of course, be translated into two dimensions, in which case the 'Bild' will be what is ordinarily meant by 'a picture', but it is easier to begin with its application to three-dimensional models. It gives an intuitively satisfying account of the way in which an ordinary factual proposition operates: the claim made against reality by the proposition 'p' shows it the door out of the not-p-reserve in the appropriate logical space, and thereby forces it into the p-reserve.

So the idea of 'shutting out' is part of the development of Y. But is this any more than an elaborate analogy? Does it contain any point of substance, or is it merely a way of presenting familiar truths in paint and powder?

Y has always proved difficult to interpret, partly because of its brilliant surface, and partly because most of the points of substance which it contains were worked out by Wittgenstein before he thought of assimilating propositions to pictures. Here it must be remembered that he came to philosophy through the work done on the foundations of logic by Frege and Russell. For the points of substance contained in Y were all either taken over by him from Frege or Russell, or worked out by him as criticisms and modifications of their doctrines. Since most of these ideas came to him before he thought of Y, the content of Y is the nucleus of the system of the *Tractatus*.

The question which Y was to answer is the question how a factual proposition acquires its sense. Part of Y's answer is that somewhere in its analysis words must represent existing things. Now it must be noted that, according to Y, what is represented must exist. For this is the first point of substance in Y: the relation between a word and what it represents is like the relation between a proper name and its bearer. Later, in *Philosophical Investigations*, Wittgenstein singles out this point for criticism.

Valid or not, how exactly did he use this point in the *Tractatus*? Part of this question has already been

answered: he used it to establish the linkage with reality through which a factual proposition acquires its sense. But there is a difficulty here. Names by themselves do not say anything. How then can it possibly come about that, when they are combined in a proposition, which is only a concatenation of names, they do say something?

The dramatic answer to this question is the strongly visualized account of shutting out which has already been given. But inside this account there are two more points of substance which have yet to be isolated. First, Wittgenstein maintained that there is no possible way of construing a proposition as a compound name. For there is movement within a proposition, and this movement has a certain direction, or sense. It is worth observing that, before he thought of the mechanical analogy, he illustrated this point from the theory of electricity: a proposition has two poles, one positive and the other negative, and its truth or falsity depends on whether its current flows with reality or against it. But this analogy is in various ways less satisfactory than the mechanical one.

The last point of substance in Y is the most important one. It is that a name is not a complete and self-sufficient semantic unit, like a label or tag. If names were like labels, the question, how by merely putting them together we could produce a proposition which says something, would be unanswerable. But, according to Y, they are not mere labels. Certainly we can think of them in isolation, and it is even true that they have their meanings in isolation, their meanings being the objects with which they are individually correlated. But this truth has to be qualified. When we think of a name in isolation, we have to think of it as something which must be combined with some other name, and perhaps also as something which must not be combined with certain other names. For a name is an abstraction from a proposition, and, since a proposition is a semantic fact, a name is an element abstracted from a semantic fact.

A name is not an *objet trouvé*, which may be put in any spatial context, and so, when it is considered in isolation, is an abstraction from any spatial fact. A name is an abstraction from a semantic fact. So when we think of it in isolation, we must take it together with its necessities of combination with other names. It is, therefore, a mistake to regard a name as something static. Its contribution to the kind of movement which a proposition makes is written into it from the beginning.

One more step is needed to complete this development of Y. For there is still the question, from what source these necessities are derived. Wittgenstein's answer is that they reflect the necessities governing the combinations of the objects with which the names are correlated. So propositions are pictures constructed according to, and therefore reflecting, the necessities which govern the structure of reality. These necessities limit the total space of possibilities within which the actual structure of reality takes shape. In this space a proposition makes a movement which shuts out certain possibilities out of their reserves, and thereby forces the realization of certain others. The movement is a legitimate one only because the proposition has already absorbed the relevant necessities into itself. This is how a proposition acquires and uses its sense, and this is the fundamental point of analogy between a proposition and a picture or model.

Wittgenstein's early theory of logical necessity is derived from Y. A factual proposition shuts out some but not all of the possibilities on its list. But a factual proposition is only one of the three kinds of truth-function. There are also tautologies, which shut out none of the listed possibilities, and contradictions, which shut out all of them. The tautology 'p or not-p' is always true, because what it shuts out is nothing. For 'p' is the only proposition in its analysis, and 'p or not-p' will be true whether 'p' is true or 'p' is false. The contradiction 'p and not-p' is never true, because what it

shuts out is everything. For again the only proposition in its analysis is 'p', and 'p and not-p' will be false whether 'p' is true or 'p' is false. Tautologies and contradictions are the two limiting cases of truth-functions. A contradiction tries to move into the whole of the relevant logical space, and a tautology leaves the whole of it empty.

It follows that tautologies and contradictions lack factual sense. But though they lack it, they express the necessary connections between other propositions which do not lack it. An argument is valid if the combination of its premises with its conclusion is a tautology: given the premises, the conclusion must be true. For example, it is tautological to say that, given 'p', and given 'if p, then q', 'q' will be true. To put the same point negatively, an argument is valid if the combination of its premises with the negation of its conclusion produces a contradiction.

This is a beautifully simple theory of logical necessity. Taken together with the theory of elementary propositions it provides a uniform explanation of all the necessary truths which people actually use. Naturally, the explanation does not cover the necessary truths of Wittgenstein's own system. But given the theory of elementary propositions, it can be extended to cover all necessary truths which are built into ordinary descriptive words, and can be elicited by logical analysis. For if that theory is correct, the explanation of a necessary truth of this kind will always be that the relevant descriptive word is definable. For example, the word 'crooked' can be defined as 'not straight', and this definition can be used in a very simple way to reduce the necessary truth that, if a thing is crooked it is not straight, to a tautology. The point at which this extension of the explanation of necessary truth might be doubted, has already been indicated: it is dubious whether the necessary truth, that if a thing is blue it is not yellow, really depends on analytical definitions of the colour-words which have yet to be discovered. But the advantage of ex-

tending the explanation, if it could be done, is plain. It would yield a uniform theory of all necessary truth. All sources of necessity would be exhibited in the structure of language, and there would be no sources of necessity which had to be left unanalysed in the natures of particular things.

4 Beyond

Wittgenstein's theory of logical necessity is so elegant that it attracts all the attention, and his next step sometimes goes unnoticed. His next step is to argue that, though the propositions of logic are tautologies and not substantial theories, the fact that logic exists does indicate something about the nature of reality: it presupposes the necessary truth that reality consists ultimately of simple objects, or, leaving the qualifications to be understood, of objects. This necessary truth is substantial, and it cannot be reduced to a tautology. So although he leaves no sources of necessity unanalysed in the natures of particular things, he allows that this entirely general necessary truth about reality cannot be analysed out in the usual way.

His argument for this connection between the existence of logic and his ontology can be broken down into stages, some of which have already been traversed. The existence of logic depends on the possibility of combining factual propositions to form tautologies. But that requires the possibility of first constructing factual propositions without which there would be nothing to combine; and this, in its turn, involves the possibility of elementary propositions, and the ultimate granulation of reality. Read in this direction the argument is a transcendental one, which in the spirit of Kant seeks to show how the *a priori* propositions of logic are possible. From this point the argument can be traced back in the reverse direction, from objects to elementary propositions and thence, by the application of the truth-functional formula, to the limit of language, which is fixed by the possible permutations and combinations of elementary propositions, however much this may be dis-

guised by the convenient grossness of factual discourse.

So there is a close connection between the two main tasks which Wittgenstein undertook in the *Tractatus*: the investigation of the foundations of logic, with which the *Notebooks* begins, and the fixing of the limit of language, which is the task emphasized in his Preface to the *Tractatus*. The connection is that logic covers everything that can be said in advance of experience, everything that is *a priori*. Experience can only give us a world of facts, but this world floats in a space of possibilities which is given *a priori*. When logic discloses the structure of factual discourse, it also discloses the structure of reality which factual discourse reflects. These two structures, which are really one, may be regarded as a framework, or grid of co-ordinates, spreading through the whole space of possibilities in which the world of facts floats. The limit of this space, which is reflected in the limit of factual discourse, is determined by logic. For the point of origin from which the limit is calculated is plotted by logic, and the formula by which it is calculated is a logical formula.

It may seem surprising that logic should reveal the essential structure of reality if the propositions of logic are tautologies, and lack factual sense. How can something which is empty have a content? But Wittgenstein does not suggest that tautologies say anything about reality. His suggestion is that the fact that, when certain factual propositions are combined, a tautology is produced, indicates the essential structure of reality. This structure is something which can only be shown.

But why, it might be asked, does he confine this suggestion to tautologies? Why does he not extend it to necessary truths which depend on the definitions of descriptive words, and say that they too show something about the essential nature of reality? There would be three things wrong with the suggested extension. First, the adoption of a certain definition of a descriptive word is always optional,

and, where there is a choice, the necessity which the choice produces will only be conditional. Secondly, from the fact that language contains a descriptive word defined in a certain way no conclusion about reality follows, because there might not be anything answering to the description. Thirdly, even from the fact that language contained a certain pure name it could not be inferred that the object named existed necessarily. Certainly, its existence would be conditionally necessary, the condition being the existence of the name. But it would not be unconditionally necessary. Logic only settles what can be said in advance. It cannot settle the question, what objects exist, or the question, what types of object exist, because the answers to these questions would be, at best, only conditionally necessary, and so experience would be needed to settle them.

Behind all these conditional necessities, which depend on the way in which language happens to have developed, Wittgenstein saw one very general unconditional necessity. According to him, the general framework of any factual language is fixed objectively in advance. This framework is a truth-functional structure based on elementary propositions. When human beings devise a particular factual language, they must connect it up to this pre-existing structure. They have certain options about the ways in which they make the connections, but the structure itself is rigid.

The *Tractatus* is a philosophical study of this structure, and the medium through which it works is logic. This explains why the book contains so little detailed analysis of particular types of proposition. Wittgenstein was concerned with the general theory of factual language, and with the general theory of reality which he believed that he could deduce from it. By comparison the details of particular analyses seemed unimportant, because the necessities which they revealed could only be conditional.

But what is the status of the general theory of language, and of the ontology which was deduced from it? This ques-

tion can now be resumed at the point at which it was left before the detailed account of the system of the *Tractatus* was given. Must it be concluded that these two theories are substantial necessary truths of a Kantian kind, or does the doctrine of showing offer a genuine alternative to this conclusion?

A firm answer to this question can now be extracted from the detailed account of the system. If the two theories were not substantial necessary truths that would be because they were, like Solipsism, deep tautologies. According to Wittgenstein, what the Solipsist offers is a piece of good metaphysics. He expresses the valid point that factual discourse is limited from the inside, because the base on which it is constructed is what exists. His mistake is that he gives this point the wrong kind of expression. He ought to allow it to be shown in the avowed tautology 'What is reflected in the mirror of language is reflected in the mirror of language', or, more simply, 'There is what there is'. These would be deep tautologies, because there is something beneath them which is trying to get out and find a different kind of expression. The Solipsist's mistake is to give it the kind of expression that it wants, by casting it in the form of a substantial necessary truth about what does exist.

Now the question is, whether the thesis, that objects must exist, can be treated in the same way. The answer is that it cannot, because it really is meant as a substantial thesis about the character of what does exist. If it were transformed into a tautology, the tautology would be 'Reality has the character that it has', which was not Wittgenstein's point. He was trying to make the point that reality must have a certain character which he specified. But why must it have this specific character? Because the essential nature of language indicates that it must have it. But how is the essential nature of language discovered? And, however it is discovered, what is the status of the propositions which describe it?

It is clear that these questions cannot be avoided by giving Wittgenstein's theories the transcendental treatment which he gave Solipsism. His theories cannot be treated as deep tautologies. Now a natural way of answering the questions would be to say that either language may be defined, or its nature may be investigated empirically, and that the first of these two alternatives will yield an empty necessary truth, while the second will yield a substantial contingent truth. The Kantian way between the horns of this dilemma was to argue that there are substantial necessary truths. If there is another way between them, it certainly is not indicated by Wittgenstein's doctrine of showing. There is, then, something wrong with this doctrine, or at least with the way in which he applies it to philosophy. What is wrong with it is that it offers the false hope of a non-Kantian way between the horns of the dilemma. Now the doctrine of showing is the semantic aspect of Wittgenstein's so-called 'mysticism': there are things which cannot be said, but only shown. So when he claimed in a letter to Russell¹ that his doctrine of showing was important, he was right. If it had opened up a new way between the horns of the old dilemma, that would have been an important achievement. But it did not open up a new way, and the doubts which Russell expresses about it in his Introduction to the *Tractatus* were well founded.

Wittgenstein's other applications of the doctrine of showing, to religion, morality and aesthetics, are at first sight very different. It is hard to see anything more than a negative point of analogy with the way in which he applies it to philosophy. The negative point is that, according to him, all four lie outside factual discourse. But what else do they have in common?

A natural answer would be that philosophy has nothing else in common with the other three. In order to see how natural this answer is, it is only necessary to recall the

1. *Notebooks 1914-1916*, Appendix III, p. 130.

predicament in which the critical philosopher's treatment of speculative metaphysics puts religion and morality. The withdrawal of pseudo-scientific support leaves them like stranded Leviathans, enormously important but dubiously viable. Obviously it is no good trying to settle their claim to be directly based on material of their own by using the formula which was proposed for philosophy. For religion and morality are certainly not critiques of any further modes of thought. Any attempt to preserve them must allow them their independence. This is what makes the task so difficult.

But it is an important task for reasons which have nothing to do with pure philosophy. Wittgenstein even said that the point of the *Tractatus* was ethical, and that the more important part of the book was the part that he did not write.² He meant that, among the things that cannot be said, those which he did not even try to put into words, religion, morality and aesthetics, are more important than the one that he did try to put into words, philosophy. From this point of view, which is, of course, not the point of view of pure philosophy, what makes the demarcation of the limit of factual discourse important is that it prevents encroachment and preserves the three from discrediting pseudo-scientific treatment. It would, of course, be a mistake to infer from this that what Wittgenstein did say in the *Tractatus* seemed to him to have no intrinsic importance.

Preserving religion and morality from this kind of encroachment is not sufficient. It is not enough that there should be a place where they are not to be found. Something more positive is needed. Wittgenstein's doctrine of showing at first sight seems not to meet this need. But in fact it is associated with an important idea which does go some way towards meeting it.

2. *Letters from Ludwig Wittgenstein with a Memoir*: Paul Engelmann: Blackwell, 1967, pp. 143-4. See Biographical Note p. 185.

This idea, which has already been mentioned, is the idea that the world of facts can be seen as a whole. The *Tractatus* is an attempt to say about all possible facts something which cannot really be said, because it is not itself factual, but which can be discerned through the world of facts. There is here a positive analogy between philosophy and religion. For the religion at which Wittgenstein hints in his early writings is a form of pantheism. In the *Tractatus* he says that God does not reveal himself in the world, and this means that he does not reveal himself in any particular fact or set of facts. In the *Notebooks* he goes further and says that God is the world. So the object of philosophical inquiry is also the object of religious feelings. But though the object is the same, it is approached in two different ways, and there is no suggestion that the logic and ontology of the *Tractatus* are a form of theology.

It is not easy to see how this idea can be extended to morality and art. Since Wittgenstein says less about art, the general shape of his shadowy doctrine may best be seen from the way in which he tries to extend it to morality. He points out that, if any kind of thing has intrinsic value, it is not a contingent fact that it has it. Nor, of course, is it an ordinary tautology. So an ascription of intrinsic value would seem to have the same puzzling character that he found in Solipsism and in other metaphysical theories: it would seem to be a substantial necessary truth. Can it then be vindicated in the same way, as an attempt to say about the world of facts, taken as a whole, something which, though valid, cannot be said? But what ascriptions of intrinsic value could be interpreted in this way? At this point the trail of ideas becomes fainter. He is inclined to say that happiness alone is intrinsically good. Moreover, he seems to think that this ascription of intrinsic value to happiness does contain a valid point about the world of facts seen as a whole. For, according to him, to be happy is to see the world of facts as a whole with expanding limits, whereas

an unhappy man would feel that the same limits, enclosing the same facts, were pressing in on him. If it is the happy man's view of the world which alone has intrinsic value, it is perhaps understandable that the ascription of intrinsic value to it should neither be a tautology nor a factual proposition about anything in his world, but, rather, a transcendental judgement. Although it would be true that his world had a certain character, he could not express this truth as a substantial thesis, but only as a deep tautology.

But when happiness is construed in this way, how is it connected with ordinary human actions? Wittgenstein had no complete answer to this question. He pointed out that it is not logically necessary that willing should produce the action willed. So if the intrinsic value of good willing accrued to it from the actions willed, it would belong to it contingently. But since intrinsic value never belongs to any kind of thing contingently, the intrinsic value of good willing, if it has any, cannot accrue to it from the actions willed. Moreover, if we try to identify the kind of willing which could have intrinsic value non-contingently and non-tautologically, we find that it always recedes into the background, leaving nothing but its contingent consequences to be recorded, just as the metaphysical subject receded into the background, leaving nothing but its thoughts and experiences to be recorded. When all these contingent consequences have been rejected as irrelevant, we are driven to the conclusion that, if any will has intrinsic value, it is not the psychological will that has it, but the transcendental will, which, like the metaphysical subject, is not a part of the world. But does any will have intrinsic value? Wittgenstein suggests that it does, and hints that the good will is happiness.

Here again many of the ideas are Schopenhauer's, but, though Wittgenstein begins to use them in his own way, his line of thought is not fully worked out. However, two points can be made about it. First, whatever the exact posi-

tive analogy that he saw between philosophy and ethics, it is obvious that he did not think that a philosophical investigation of language would lead to any conclusions in ethics. Secondly, though he like Kant wished to keep ethics safe from the encroachments of science, there is a striking difference between their ethical views. Kant tried to establish that certain ethical theses, which can be applied to ordinary human life and action, are substantial necessary truths. This kind of solution was not open to Wittgenstein. Nor was it possible for him to treat value judgements as factual propositions or as ordinary tautologies. So he gave them the transcendental treatment which he gave to Solipsism and other metaphysical theories. He insisted that they must have the kind of necessity which can scarcely be accommodated in his system, and so he priced his ethical theory out of this world.