

The Picture Theory

Our task in this chapter is to argue for an interpretation of the mature Picture Theory which goes rather deeper than the thesis of isomorphic representation.

15.1 WITTGENSTEIN DISSATISFIED

We have already noted that as early as April 1914 Wittgenstein felt that the relations between the names in a sentence must have quite a different sort of relation to the relations between the corresponding things, than those names themselves have to their bearers (*NB* 111). This belief in a fundamental difference in mode of signifying between names and predicative expressions seems certainly to have survived into *TLP*. For as we had occasion to note in chapter 4, at 3.323 Wittgenstein remarks that proper names and adjectives do not merely have different *Bedeutungen*, but are *different symbols* (emphasis in original); the context making it clear that by this he means that they are associated with different kinds of modes of signification, their contributions to the truth-conditions of sentences in which they occur perhaps being as different in kind as is the contribution of a predicate from that of a quantifier.

Now notice that the strong isomorphism thesis fails to bring out such a difference. It does emphasize a distinction between names and predicative expressions, but one belonging wholly to the level of the sign rather than to the manner of signifying. It says only that the true sign for a relation is not (unlike a proper name) itself an object, but is rather a relation between signs, of which the relational sign forms only a part (call this 'a significant relation'). It remains silent on the question of the sort of referring effected by significant relations. So far as the strong isomorphism thesis goes, the kind of reference involved might be entirely analogous to that

which obtains between a name and its bearer. We might therefore expect that Wittgenstein would either have become dissatisfied with his early endorsement of the thesis, or would at least have wished to see it supplemented.

The evidence of Wittgenstein's dissatisfaction with early versions of the Picture Theory is striking. In September 1914 he is to be found identifying the question of how relations are correlated with relations, with the problem of truth (*NB* 6). A few days later he then articulates the Picture Theory of the proposition, for the first time using the analogies of pictures and models.¹ He then writes:

This must yield the nature of truth straight away (*if I were not blind*). [*NB* 7. Emphasis mine.]

He also remarks that it must be *possible* (my emphasis) to demonstrate everything essential by considering examples of picture-writing. So on the one hand he seems to feel that the analogy with pictures ought to provide a complete solution to the problem of truth; and yet on the other, he is unable to see how it does. Then in October of the same year he writes this:

Are we misled into assuming 'relations between relations' merely through the apparent analogy between the expressions: 'relations between things' and 'relations between relations'? *In all these considerations I am somewhere making some sort of FUNDAMENTAL MISTAKE*. [*NB* 10. Emphasis in original.]

From the use of the phrase 'relations between relations' in this passage, it is evident that he has in mind his thesis of strong isomorphism. So he has apparently come to feel that there is something very misleading about treating the semantics of significant relations as being analogous to the name/bearer relation (this relation being a 'relation between things').

What we have so far then, is firstly a feeling on Wittgenstein's part that the analogy between propositions and pictures ought to be able to provide the solution to the problem of representation; and secondly, an indication that he takes the strong isomorphism thesis to be in some respect fundamentally mistaken.² Now the interpretation of the mature Picture Theory which I shall provide in section 15.3 brings both of these strands together: the analogy with pictures being used to illustrate a thesis which would deny reference to predicative expressions altogether, at the same time providing a satisfying solution to the problem of the new sentence.

It therefore seems possible, at least, that in the autumn of 1914 Wittgenstein was taking his first tentative steps away from the strong isomorphism thesis, and towards a quite different version of Picture Theory. Indeed in his continued discussions of pictures and of the problem of representation through October and November, he does articulate suggestions in which we can see the beginnings of what I take to be the mature theory, as will emerge below.³

15.2 RELATIONS BETWEEN RELATIONS

It is likely that the source of Wittgenstein's dissatisfaction with the strong isomorphism thesis is (partly) a feeling that names and significant relations have quite different modes of signifying. But there are also hints of a rather more precise source of worry. For on the day after he first presents the analogy between propositions and pictures he remarks:

A picture can present relations which do not exist! How is that possible? Now once more it looks as if all relations must be logical in order for their existence to be guaranteed by that of the sign. [NB 8.]

A couple of months later he again returns to the idea. Having compared the way in which a proposition will present a possible connection between objects to a *tableau vivant*, he then asks:

But when I say: the connection of the propositional components must be possible for the represented things – does this not contain the whole problem? How can a non-existent connection between objects be possible? [NB 26.]

Although these remarks are hardly perspicuous, we can at least take it that there is supposed to be a problem for the Picture Theory (at this stage, for strong isomorphism) in explaining the possibility of falsehood: in explaining how a proposition can describe relations between objects, which fail to exist.

I believe we may here see Wittgenstein as setting himself a dilemma, arrived at by asking precisely what it is that the relation in 'aRb' is supposed to refer to. Is it, on the one hand, to refer to the relation R in general – a relation in which any number of different pairs of things might stand to one another? Or is it, on the other hand, supposed to refer to a particular instantiation (or token) of the relation R, which can obtain between the individuals a and b

alone? It is the second horn of this dilemma which appears to make falsity impossible. For if 'aRb' is false, then that particular token of the relation R does not exist, and so the relation between the names in 'aRb' would refer to nothing. Since this is obviously unacceptable – depriving false sentences of semantic content – what we need to understand is why the opposite horn of the dilemma would have been equally unacceptable.

Suppose, then, that the relation in 'aRb' refers to the relation R in general – to a relation-type, or universal. Since the relation referred to is general, and since it might have existed independently of the objects a and b (had 'aRb' happened to be false), there must surely be something which in fact connects the relation R with those objects. Since the relationship between the relation-type and the objects is not a logical ('internal') one, it must presumably be contingent. But then it looks as if we must be back with the doctrine of the copula once again: there must be some three-place relation-token obtaining in this case, linking the objects a and b to the relation-type R. So if there were no question of us believing in the copula, we should be forced to deny that significant relations refer to a relation-types – unless we could somehow overcome resistance to the idea that the relationship between R and a and b is an internal one. (Hence Wittgenstein's remark about it seeming as if all relations must be logical.)

What, then, is so wrong with the doctrine of the copula? Suppose, firstly, that we tried to combine such a doctrine with a version of isomorphism thesis. In that case just as the state of affairs aRb would be thought to contain four entities: the objects a and b, the relation-type R, and a three-place relation (copula) relating the other three; so too the sentence 'aRb' would be thought to contain the signs 'a', 'R' and 'b', together with a three-place signifying relation which holds between the other three signs.⁴ But now we can set just the same dilemma as before: if this significant relation refers to a three-place relation-token, then we shall be unable to explain how the sentence can have semantic content but be false; but if it refers to a relation-type, on the other hand, then there must be yet another relation, serving in this case to relate this relation-type to the other three elements in the state of affairs, and we shall be launched on a vicious regress.⁵

Then suppose, secondly, that we dropped the isomorphism thesis, maintaining that whereas the sentence 'aRb' consists of just

three elements (the signs 'a' and 'b', and the significant relation which holds between them), the state of affairs depicted consists of four (the objects a and b, the relation-type R, and the three-place copula). The trouble with this view, for Wittgenstein, would be that it conflicts with his belief in the priority of logic over metaphysics, to be discussed in detail in *MT*. For the freedom of movement allowed to items in the world would no longer be guaranteed by the set of significant combinations of their signs. Thus although 'bRa' is for us a significant sentence, it may be that there is some feature peculiar to the three-place copula which makes this combination of things metaphysically impossible. In which case, if we suppose ourselves to know that this is not the case, we should have to maintain that we possess a faculty of metaphysical insight, giving us language-independent access to the possibilities and necessities in nature. Wittgenstein's view, on the contrary, is that our knowledge of what constitutes a genuinely significant sentence (and hence a genuine possibility in the world) must flow from our understanding of the symbols involved.⁶

Either way then, the doctrine of the copula is for Wittgenstein untenable. What emerges is that, in so far as he still endorses the strong isomorphism thesis, he is caught on the horns of a dilemma. On the one hand he cannot have the significant relation in a sentence referring to a relation-type, on pain of needing to reintroduce the doctrine of the copula. But on the other hand he cannot have it refer to a relation-token either, or he will be incapable of explaining how a proposition can be both meaningful and false.⁷

15.3 RULES OF PROJECTION

Towards the end of October 1914 Wittgenstein began to write a sequence of remarks in which he talks about there being a method for comparing reality with a picture/proposition (*NB* 20–3). More particularly, he draws an analogy between the manner in which a proposition symbolizes, and a system of coordinates which projects a situation into a proposition (*NB* 20). These remarks are extremely suggestive, though there is no evidence that Wittgenstein at the time developed them in the way that I am about to do.

Think, for example, of how we might designate a particular point on a flat surface using a two-dimensional system of coordinates.⁸

We might refer to it as 'the point ab', where 'a' and 'b' name lines on different axes. It is immediately apparent that there are two quite different aspects to such a designation: there are the individual names, referring to lines on the surface; and then there is the background rule of projection, which enables us to map this arrangement of names onto the surface in question. This is a rule telling us that a sign of the form 'xy' is to refer to the point where the lines x and y intersect. It is natural then to wonder whether this divergence in aspect might not find an analogue in propositions, in the distinction between proper names and predicative expressions: the proper names serving to refer to individual things, the predicative expression carrying with it a rule for determining, of the things referred to, whether or not the sentence expresses a truth about them.⁹

The idea of a rule of projection finds a place in *TLP*, at the heart of the exposition of the Picture Theory. At 4.0141 Wittgenstein writes as follows:

There is a general rule by means of which the musician can obtain the symphony from the score. . . . And that rule is the law of projection which projects the symphony into the language of musical notation.

The natural way to take this analogy for how an arrangement of names in a proposition manages to depict a possible state of affairs, is to treat the individual notes on the score as names of sounds of a particular pitch and duration. Then the general rule (the 'law of projection') will be one telling you that the linear arrangement of notes is to be transformed into a temporal sequence of the corresponding sounds. So there are two distinct aspects to the functioning of the score: there is reference to individual sounds (a task performed by the notes on the staff), and there is the general rule which enables you to map a given arrangement of notes onto a particular sequence of sounds.¹⁰

Think now of the spatial images which dominate the *TLP* presentation of the Picture Theory: the image of an arrangement of names presenting a situation like 'a *tableau vivant*' (4.0311), or the image of a proposition consisting of a spatial arrangement of tables, chairs and books (3.1431). If we read the *TLP* use of 'name' narrowly, so that the names involved here are proper names, then the natural way to take these images is as follows. Suppose I say 'Look, let this table stand for Paul, this chair for John, that chair for

George, and this book for Ringo; now *this* is how the Beatles used to stand relative to one another on stage' (arranging the objects on the floor of my office). In order for you to know what arrangement of objects is being represented here, you have to know two different sorts of thing: you have to know the referents of the individual elements, and you have to know the general rule that spatial arrangements of elements are to be taken to represent a similar arrangement of their referents, according to a certain (vaguely specified) scale. It is this general rule which would enable you to compare the model with the objects modelled, and which would thus enable you to assess the correctness (truth) of the model. It would then be this latter item of information which would correspond to the predicative element in a sentence.

The suggestion is that there are, on Wittgenstein's mature view, two very different aspects to picturing. On the one hand there is referring – a task which falls to the individual elements of the picture (the proper names). And on the other hand there are the rules for projecting pictures onto reality – i.e. for determining, of any given picture, whether or not it correctly represents the relations between the referents of its elements. If the suggestion that these rules are the analogue of the predicative element in a proposition is correct, then the idea is that the mode of signifying of such an expression is a rule for determining, with respect to the objects referred to in any atomic sentence in which it occurs, whether or not that sentence expresses a truth about them. And the mode of signifying of a simple predicate will consist in a rule for determining, of any given object, whether or not that predicate correctly applies to it.¹¹

If this account of the distinction between names and predicative expressions were correct, then a two-tier (referential) semantics would be unnecessary for the latter. Their semantic content would not be an item in the real world (a referent) which would determine, in conjunction with the referents of any names involved, the truth-value of the sentence. Rather it would consist in a rule (whose existence, note, is mind-dependent) for determining, with respect to any atomic sentence in which that expression occurs, whether or not it is a truth about the referents of the names involved. And the sense of a predicative expression would be similar: not a mode of determining an item in reality as referent, but rather a rule for mapping objects onto truth-values.

This is not to say, however, that on Wittgenstein's account there would be no room for a symbol/Bedeutung distinction in connec-

tion with predicative expressions. On the contrary, this is one of those places where the distinction between Bedeutung (semantic content, contribution to Sinn) and reference comes into its own. Wittgenstein is, on the above interpretation, rejecting the notion of reference for predicates. But this still leaves him able to say that there may be a number of distinct predicative symbols with the same Bedeutung – and not just because of mere differences in sign, either. For a number of distinct (cognitively distinct) rules may nevertheless be logically equivalent, making the very same contribution to the truth-conditions of sentences in which they occur; in which case they may all be said to possess the same semantic content.

15.4 STATES OF AFFAIRS

Clearly we cannot simply say that names refer to objects and predicates express rules for classifying those objects, and leave it at that. For consider the sentence 'Susan has freckles'. Suppose it is true. Then our account will claim that this is so in virtue of the fact that the rule of classification expressed by 'has freckles' applies to Susan. But there must be more to it than this. It cannot merely be Susan herself who exists on the referential end of things, since after all she would still be there whether she had freckles or not. Rather, there must be some difference *in Susan* between the case where she has freckles and the case where she does not. It must be in virtue of something about her that the rule of classification applies (or does not). So our account must at least recognize the existence of property- and relation-*tokens*, such as the particular instance of freckledness which is present in Susan, or the particular case of loving which obtains between Socrates and Plato. Note that these tokens are unique, Paul's case of freckles being different from Susan's no matter how similar. They are also spatiotemporal entities: being located in space, and having a beginning and an ending in time. Thus the token of freckledness present in Susan is positioned wherever she is, moving around with her. And it did not exist before she did (perhaps not until puberty), and will cease to exist when she dies or has a skin graft.

This idea can also be approached by considering the semantics of whole sentences. To understand a sentence is, we are supposing, to know its truth-condition. But if an atomic sentence is true, then

there must be something in the world which makes it so. So understanding such a sentence is a matter of knowing what, in the world, would make it true. Call this 'a state of affairs'.¹² Then what sort of state of affairs would render 'Fb' true? Clearly the state of affairs of b being F – of the object b possessing a token of the property Fness. For even if we supposed the predicate 'F' to refer to the universal Fness, there would still have to be something present in b in virtue of which it participates in that universal. (Even Platonists are obliged to bring property-tokens into their ontology.) In which case, to understand 'Fb' is to know that it would be made true by the state of affairs of b being F. And to understand the component predicate is to grasp a rule of classification which applies, or fails to apply, to things in virtue of the property-tokens they do or do not possess. (But as we saw earlier, this is not to say that the predicate may then be thought of as referring to those tokens.)¹³

The ontology yielded by our semantics is thus that the world contains both individuals and the states of affairs into which they enter, where a state of affairs consists of one or more individuals together with a property or relation token.

15.5 ARGUMENTS FOR THE INTERPRETATION

As we have seen, our interpretation of the Picture Theory gives us a fairly natural reading of 4.0141, where Wittgenstein talks about rules of projection. It also gives us an explanation of why he should have felt the comparison between a proposition and a picture to be so illuminating. For it would enable him to encapsulate the claim that there are two very different aspects of statement making: on the one hand referring, which falls to the individual elements (the names) of the picture; and on the other hand the rules for determining, of the referents of those elements, whether or not they stand to one another in the way represented by the picture (this task falling to predicates).

A further argument for the interpretation is this. We have already seen chapter 11 that there is a strong case for taking the terminology of 'name' and 'object' in *TLP* narrowly, to cover only proper names and individual things respectively. But then it might seem puzzling that Wittgenstein should have been so confident that his programme of analysis would 'obviously' bring us, in the end, to

propositions consisting only of proper names (4.22–4.221). For since he was not actually in a position to provide such an analysis, how could he have been so confident? Who could have said where analysis would eventually lead us? (See 5.55–5.5571.) But this would be to overlook the fact that analysis, on Wittgenstein's conception of it, is not just a matter of constructing ever more detailed representations of the truth-conditions of sentences. As we shall see in *MT* chapter 7, he agrees with Frege and Russell in thinking it is also a matter of constructing notations which will be logically, or philosophically, perspicuous (3.325).

Here, then, is the reason why analysis must produce a sign-language which will enable us to do without the use of any predicative expressions: it is because we are overly tempted, as philosophers, to assimilate the use of such expressions to the use of proper names.¹⁴ (See 3.32–3.325.) It is only when we see the possibility of a language which contains, in addition to logical connectives, only proper names (a language in which it is manifest that propositions are models of reality), that it will become transparent that there are two completely different aspects to statement making: referring, and the rules for comparing sentences with reality. We should then be supposed to see that it is this latter role which is performed, in natural language, by predicates and relational expressions.

Another argument for the interpretation is that it enables us to explain (in a way that the isomorphism thesis does not) why Wittgenstein should think that the Picture Theory can provide a solution to the problem of the new sentence (4.02). We are capable of understanding new sentences, on this account, because the form of our understanding of the predicative expressions of the language already contains generality within it. For remember, the idea is that the semantic content of a predicate will consist in a rule for determining, of any given object (of the appropriate sort), whether or not that predicate applies to it. And this rule would, of course, be something which a competent speaker would know: for it is something linguistic, as opposed to extralinguistic. Indeed it is the analogue of the sense of a proper name rather than its reference, in that any competent speaker will govern their use of the predicate in accordance with that (or a logically equivalent) rule. Then given Wittgenstein's belief that the relationship between a rule and its application is wholly objective (as we shall see in *MT* chapter 4) the truth-condition of each new sentence would be rendered entirely determinate in advance. And the speaker may then be thought of as

knowing that truth-condition by virtue of their grasp of the rule.

The comparison between a proposition and a picture provides a graphic illustration of the point. Consider the famous example of the use of models in the Paris law-courts to depict traffic accidents (*NB* 7). Here, as before, there are two different kinds of thing which you have to know in order to understand such representations. You have to know what things in reality are designated by the various elements in the depiction (this model pram stands for the pram, this model car stands for the taxi, that one the car driven by the defendant, and so on). And you have to know the general method of representation – for instance that the relative spatial positions of the objects at a certain time and place are to be represented by the relative spatial positions of the models on the surface of the desk, in accordance with a certain scale. Once you know all this (once you understand the predicate) then of course any new combination of the models on the desk will show you what combination of objects is being represented *without more ado*.

Our interpretation of the Picture Theory is certainly consistent with the text of *TLP*, and enables us to explain aspects of Wittgenstein's thought which would otherwise remain puzzling – that elementary propositions are to consist only of proper names, and that the Picture Theory is intended to solve the problem of the new sentence. But the strongest argument in its support is once again the principle of Charity. As we shall see in the chapter which follows, there are powerful arguments for denying reference to predicative expressions. So adopting the proposed interpretation will enable us to see *TLP* as marking a decisive advance over the semantic theories of Frege and Russell.

SUMMARY

We have set out the evidence that Wittgenstein was dissatisfied with the strong isomorphism thesis, and have developed and argued for an interpretation of the Picture Theory which would involve its rejection. The idea is that the predicative expression in a sentence serves not (as names do) to refer to an item in reality, but to provide the mode of comparison between the sentence and the world.

Predicate Semantics

Our task in this chapter is to deploy Charity in support of our interpretation of the Picture Theory, arguing for a non-referential account of the semantics of predicative expressions. For the sake of simplicity the discussion will be confined to one-place predicates, but our conclusions would be readily generalizable.

16.1 PRELIMINARIES

Recall from chapter 2 that the sense/reference distinction embodies a principle of semantic ordering. If an expression has both sense and reference then there is a non-symmetric dependence of truth-value upon reference, and of reference upon sense – it will be in virtue of the fact that the expression has the sense that it does that it has the reference that it does, and it will be in virtue of having the reference that it does that sentences containing it have the truth-values that they do. Put differently (with slightly misleading temporal connotations) you could say that to apply the sense/reference distinction to an expression is to claim that its contribution to the truth-values of sentences in which it occurs will be a *two-step process*: sense determining reference determining truth-value. Then applying the distinction to predicates as well as proper names will yield an account of the semantics of an atomic sentence 'Fb' which looks like this: the sense of the name 'b' determines an individual as its bearer; the sense of the predicate 'F' determines some entity as its referent; then the bearer of the name somehow fits (or fails to fit) together with the referent of the predicate to determine that the sentence is true (or false).

We might represent such an account diagrammatically thus (where the arrows represent non-symmetric dependence):

- 7 Only if the wide interpretation is adopted can 'in the same way' be read as literal identity. Otherwise a spatial picture, for example, would be incapable of depicting anything other than spatial states of affairs. If we adopt the narrow interpretation, then 2.15 has to be read as saying that the elements in a picture and the individuals in the state of affairs depicted are related to one another in an analogous way (by means of a relation allowing the same 'degrees of freedom'). The original German literally says 'represents that things are so combined with one another', which is ambiguous between identity and likeness.
- 8 This is not strictly accurate. There are also the suggestions made by Pears, that Wittgenstein found the analogy with pictures illuminating in bringing out why a sentence cannot represent its own mode of representation (see his 1987, p. 143), and by Anscombe, that the analogy helps us to understand propositional negation (see her 1959, ch. 4). No doubt these ideas are present in the Picture Theory – like any fruitful metaphor, one would expect this one to be many-faceted. But each of the above suggestions is consistent with either the wide or the narrow reading of the *TLP* terminology of 'name' and 'object', and so cannot help us in choosing between them.
- 9 Note that if Sellars is right, then 'relations between names' would include, as a limiting case, a proper name signifying by means of some significant property of itself that a Simple possesses a non-relational attribute. See the discussion in ch.11, and Sellars (1962a).
- 10 This is the interpretation offered by Long in his (1969).
- 11 This gives us the sense in which predicative expressions carry with them the form of the sentences in which they can occur, which makes it natural for Wittgenstein to speak of such expressions as 'forms'. See the discussion and notes in ch. 11.
- 12 I am told that something like this possibility is realized in Latin.

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- 1 It is here that he mentions the use of models in the Paris law-courts to represent accidents.
- 2 Let me stress the very close proximity to one another of these two strands in the text of *NB*. This is in marked contrast to the passage which Pears selects as setting the problem which the Picture Theory is designed to solve, which does not occur until a full month after the introduction of the comparison with pictures (see Pears, 1987, pp. 117 and 130). This is at *NB* 21 where Wittgenstein writes thus:

This is the difficulty: How can there be such a thing as the form of P if there is no situation of this form? And in that case, what does this form really consist in?

Pears sees the difficulty in question, as arising for the theory of judgement developed by Russell in his 1913 manuscript 'Theory of

Knowledge' (now published in his 1984), which Wittgenstein had seen. There Russell had claimed that judgement requires acquaintance not just with the things for which the individual words in a sentence stand (namely individuals and universals), but also with logical forms. So the judgement [that aRb] would require acquaintance with a , b , the relation R and the logical form $\theta\alpha\beta$. Pears claims that the Picture Theory is designed to refute such a view.

There are a number of points to be made about this. The first is that when Wittgenstein speaks of 'form' in the above passage it is by no means obvious that he has in mind something of the same sort as $\theta\alpha\beta$. For there is the evidence of the 'Notes on Logic', where he speaks of 'xRy' (i.e. a relational expression) as being the form of the sentence 'aRb' (*NB* 98). And as we saw in ch. 11, there is some reason to think that this use continues into *TLP* itself. So the difficulty raised in the passage above might not be a difficulty for Russell, but rather the problem of what the relation (the form) in 'aRb' is to stand for in a case where that sentence is false. On this see the discussion in the next section of this chapter.

No doubt Pears is correct that Wittgenstein rejects the existence of forms such as $\theta\alpha\beta$. For this is the same as saying that he denies the existence of copulae (see the next section of this chapter). But it is quite another matter to characterize the point of the Picture Theory in such terms. Indeed it is hardly very likely that Wittgenstein would have given such prominence to the theory, if its point had been to refute a doctrine whose falsity he was able to see at a glance. (See Blackwell, 1981, p. 16ff, for an account of Wittgenstein's reaction to 'Theory of Knowledge'.)

- 3 But it seems that he himself did not immediately appreciate their significance. For in the very last remark relating to the Picture Theory which occurs in *NB*, dated April 1915, he laments that he cannot even bring out the sense in which a proposition is a picture, and says that he is almost inclined to give up all his efforts (*NB* 41).
- 4 This would be the relation which holds between two names and a relational expression when one of the names is followed by the relational expression which is followed by the other name.
- 5 This regress is, of course, just another version of the regress generated by any version of Platonism about universals which construes participation in a universal as being yet another universal.
- 6 Much of the reasoning in this paragraph is implicit in Wittgenstein's January 1913 letter to Russell (*NB* 121).
- 7 To get around this problem we might try equating the reference of a significant relation with a *set* of relation-tokens. But this would run into trouble over the principle of Semantic Ordering. (This is the principle that sense determines reference which determines truth-value – see ch. 2). The argument to show this is essentially the same as that developed in the next chapter against the view that the reference of a predicate is a set of objects.
- 8 This example is similar to one of Wittgenstein's own – see *NB* 20–1.

- 9 This suggestion is natural for two distinct reasons. Firstly, because if the coordinate system is to be an analogy for a proposition, it is clear that the signs 'a' and 'b' must be the analogue of proper names, leaving the background rule of projection as the only candidate to play the role of a predicate. And secondly, because of Frege's famous identification of functions (such as that expressed by 'the point xy') with concepts, which Wittgenstein would of course have been aware of. See for example 'Function and Concept' in Frege (1984).
- 10 Note that 4.0141 does not occur in *PTLP*, only being added to the final draft of *TLP*. This may be an indication of the difficulty Wittgenstein had in seeing his way clear of the strong isomorphism thesis.
- 11 Similar interpretations of the Picture Theory are provided by Ishiguro (1979) and Bell (1979), pp. 131–3.
- 12 Strictly speaking, in the terminology of *TLP*, an existing state of affairs.
- 13 Anscombe, too, sees *TLP* states of affairs as involving only individuals and property- or relation-tokens (i.e. as not involving universals – see her 1959, ch. 7). But she thinks that a fully analysed sentence would employ names of these tokens. I can see no reason for this interpretation. Indeed it faces severe problems if Simples (referents of simple names) have necessary existence, as I argue in *MT* ch. 8 that they do.
- 14 I here disagree strongly with Baker and Hacker, who see the semantics of *TLP* as dominated by the Augustinian thesis that all words are names (see their 1980, pp. 57–9). This leads them entirely to misrepresent the nature of the contrast between Wittgenstein's earlier and later philosophies, as I argued at length in my (1984a).

CHAPTER 16 PREDICATE SEMANTICS

- 1 Hintikka and Hintikka use this as one of their main arguments for claiming that *TLP* is committed to the existence of universals, and hence for their wide reading of the *TLP* use of 'name' and 'object'. See their (1986), pp. 35–7.
- 2 See for example Mates (1972).
- 3 In practice the range of the quantification will often be restricted by the context; for example to 'Susan and Mary share some obvious feature of their appearance'.
- 4 For Frege's unequivocal commitment to this view, see his posthumously published paper 'Comments on Sense and Meaning' in his (1979).
- 5 It is noteworthy that Frege's argument for extensional reference for predicates (in 'Comments on Sense and Meaning') occurs as part of an argument supporting extensional against intensional *logic*.
- 6 In fact we can here deploy the arguments we used against Frege's theory of thinking in ch. 9.

- 7 On the non-referential account we are causally related to objects-having-property-tokens, it being the fact that there is a token of freckledness present in Susan which causally underlies my classification of her as being freckled. But there is no problem about this (in the way that it is problematic how we could be causally related to objects participating in transcendent necessarily existing universals); for property-tokens, remember, form part of the ordinary physical realm.
- 8 I am not aware of any philosopher who actually endorses such a view (though no doubt some do); I mention it only as a possibility. Armstrong has been prominent in defending immanent universals, but he is at some pains to distinguish his doctrine from any form of semantic theory for predicates. See his (1978).
- The only place I know of where immanent universals are used as objects of reference is Ishiguro (1969), pp. 48–9, where instantiations of simple properties are said to be the Simples referred to by the names of *TLP*. See note 4 to ch. 11.
- 9 See Armstrong (1983).
- 10 What acceptance of Armstrong's view would mean, however, is that we could not allow our ontology to be driven purely by semantic considerations (unless that view could somehow be interpreted as a proposal for the semantics of 'cause'). There is then a criticism of *TLP* latent here, since as I shall show in *MT*, for Wittgenstein semantics is the beginning and end of ontology. For he is surely mistaken in thinking that there can be no reason for believing in the existence of a certain class of entities except where this is required of us by the demands of an adequate semantics.
- 11 This was persuasively argued by Putnam (following Kripke) in 'The Meaning of "Meaning"', reprinted in his (1975). The idea is that besides having a nominal essence which guides their ordinary application (e.g. for 'water', being colourless, tasteless etc.), natural kind terms are used with the intention of designating whatever property fundamentally explains the features which go to make up that nominal essence in most (at least) of the cases of the kind with which we are acquainted.
- 12 It is then a further criticism of *TLP* that it assumes that the semantics for all types of predicative expression will take essentially the same form. However, it is another question to what extent terms such as 'water' are actually used *as* natural kind terms – that is, in such a way as to refer to an inner constitution, whatever it may be. It is arguable that in many contexts such terms are used as ordinary (non-referential) predicates. For suppose it had turned out that the stuff we had been calling 'water' was in fact composed, in differing circumstances, of a heterogeneous range of chemical substances sharing only their superficial characteristics. Would it then have been *false* that there is water in the Thames (as it would have been were 'water' attempting, but failing, to refer to a natural kind)? This is implausible. See my (1987b) for some further discussion.