

certain other description (that is, whether there is a unique F which is also G). A definite description comes to have denotation, if it does, in virtue of the partial truth of such an existence claim (that is, in virtue of there being a unique F). So it is not that the meaning of a definite description determines a denotation, which in turn determines a truth-value; it is rather that the meaning of the description determines a truth-value, in virtue of which it may then have a particular denotation.

SUMMARY

In the semantic background to *TLP* a number of issues are in play: whether there is a distinction between sense and reference (between modes of thinking and thing thought about); whether thinking consists in a relation to an abstract entity; what an analysis of ordinary language should look like; and the proper semantics for names and definite descriptions.

3

Sinn and Bedeutung

The terms which Frege uses to express his contrast between sense reference are 'Sinn' and 'Bedeutung' respectively. It is well known that these terms occur frequently in *TLP*, for example in the claims that names have Bedeutung (3.203), and that only propositions have Sinn (3.3). But to what extent does the *TLP* use of the terminology coincide with Frege's?

3.1 PRELIMINARIES

Our terminological and exegetical task belongs within a wider debate over the nature of the semantics of *TLP*, which will occupy us throughout many of the succeeding chapters. The main issue is whether or not there is a sense/reference distinction at work in *TLP*; and if so, to what categories of expression it applies.

Some have naively assumed that Wittgenstein's use of the terms 'Sinn' and 'Bedeutung' is essentially similar to Frege's, with the former to be translated as 'sense' (as indeed it is in both English versions of *TLP*) and the latter '(Russellian) meaning'.¹ They have then seen him as accepting Frege's view that sentences have sense (whilst rejecting the idea that they refer to the truth-values), but as rejecting the Fregean doctrine that names have sense as well as reference, adopting in its place something like Russell's view, that to understand a name is to have direct knowledge of, or to be directly acquainted with, its bearer.

Although in my view this reading of the *TLP* terminology is determinately incorrect, that it finds a place within Wittgenstein's thinking for a notion similar to Fregean sense is at least something to recommend it. For the notion of understanding is not treated disparagingly by Wittgenstein, but seems, on the contrary, to be central to his concerns. Thus although the world 'verstehen' does

not occur very often in his presentation, a large part of the point of the Picture Theory, for example, is to provide an account of our capacity to understand new sentences. (See 4.02–4.0311.) Yet the notion of sense is, as we saw in the last chapter, intended to be the correlate of understanding: the sense of a sentence is what will be grasped, or immediately known, by anyone who understands it, in virtue of which it has the truth-conditions that does. Indeed it is hard to see how Wittgenstein could attempt an account of the notion of understanding *without* employing something like the notion of sense. For we know that he was devastatingly critical of Russell's attempt to characterize judgement (and hence also understanding) in terms of a direct cognitive relation to the objects with which the judgement deals.² And it is by no means clear how there can be room for any other alternative.

Others have attempted a purely referential reading of *TLP*, seeing Wittgenstein as rejecting the notion of sense altogether, as belonging to the province of psychology rather than of logic.³ On this view, both the notions of *Bedeutung* and of *Sinn* operate at the same semantic level: the level of reference, of what we talk about; '*Bedeutung*' being translated as something like 'reference', and '*Sinn*' by 'truth-condition' (rather than, as in Frege, a mode of thinking of a truth-condition).

Although the claim of pure referentiality is mistaken, this view too has something to recommend it. For as I shall argue later in this chapter, its reading of the '*Sinn/Bedeutung*' terminology is largely correct. Moreover it can point to the *TLP* insistence that all logically equivalent sentences should be counted as expressing the very same proposition, which is a thoroughly un-Fregean conception (4.461–4.465, 5.141). For it is crucial to Frege's idea of sense, remember, that there may be logically equivalent expressions with different senses, since sense is to explain cognitive content. Nevertheless I shall argue in chapter 4 that Wittgenstein does employ a notion of sense, although his doctrines concerning it are substantially different from Frege's.

3.2 SENTENCES AND NAMES

The one aspect of *TLP*'s use of the '*Sinn/Bedeutung*' terminology which is uncontroversial is that it is intended to emphasize the distinction between sentences on the one hand and names on the

other. For as 3.3 insists, only propositions may be said to have *Sinn*. (Whether we also take Wittgenstein to maintain that only names may strictly be said to have *Bedeutung*, will depend upon whether or not we think his use of the term is univocal throughout *TLP*. This will be discussed shortly). The point of so emphasizing the distinction is to facilitate a rejection of Frege's middle-period doctrine that sentences are a kind of complex name (like a definite description), referring to either the True or the False (which are treated as abstract objects).

Note that besides insisting that only propositions have *Sinn*, 3.3 also contains the claim that a name only has *Bedeutung* in the context of a proposition, which is an echo of Frege's famous Context Principle, annunciated in *FA*, but no longer mentioned in his middle and late writings. At least part of the significance of that principle had been to emphasize the primacy of the sentence within language – surely rightly, since it is only by means of a sentence that you can (non-parasitically) say anything; a sentence being the smallest linguistic unit with which you can, in general, effect an assertion. It is this primacy which is then lost in Frege's later doctrine that sentences are complex names. For in the presence of such a doctrine there is nothing to distinguish sentences, as against other sorts of name, as having an especially central position within language. Indeed the account of assertion to which Frege is then committed is that in asserting a sentence one is putting it forward as a name of the True. He is then obliged to regard it as merely a contingent psychological matter that we do not have, for example, a linguistic activity of Carruthersizing: of putting forward a name as a name of Carruthers, in such a way that 'That only British philosopher to have been born in Manila' might constitute a complete linguistic act, on a par with 'Carruthers is wise'.

In reserving the term '*Sinn*' as an attribute of sentences, Wittgenstein is meaning to reinstate the early Fregean doctrine of the centrality of the sentence within language. One consequence for semantics is immediate, and is emphasized at 3.31–3.314. It is that any sub-sentential expression ought properly to be presented by means of a propositional variable – so that 'x runs' would be presented by 'x runs', and 'Mary' would be presented by 'Mary \emptyset s' – since such expressions are, essentially, incomplete sentences.⁴ And it follows that to explain the meaning of such an expression must at the same time be to fix how it will contribute to the *Sinn* of any proposition in which it might occur. For with the centrality of the

sentence duly emphasized, what it is for a word to have meaning is just that it be capable of fitting together with other words to form a significant sentence. (See 3.263.)

Although this aspect of Wittgenstein's use of the 'Sinn/Bedeutung' terminology is perfectly genuine, it is at least partly independent of the issues which concern us – namely, to what extent this usage resembles Frege's, and the question whether there is a notion of sense at work in *TLP*. For example, it could consistently be claimed that Wittgenstein does indeed find room for a notion of sense which applies to all types of expression including sentences, but that he chooses not to express this notion using the term 'Sinn'; reserving the latter to mark, among other things, the centrality of the sentence within language. Indeed, a claim of precisely this sort will be defended in the next chapter.

3.3 SINN

It is obviously misleading to translate the *TLP* use of 'Sinn' as 'sense'. For when the notion of the Sinn of a picture is first introduced at 2.221 it is said to be *what* a picture represents, rather than (as we might have expected given Frege's famous metaphor of Sinn as the 'mode of presentation' of Bedeutung)⁵ the *way* in which it represents what it does. Even more clearly, at 3.13 we are told that a proposition – that is to say, a sentence standing in its projective relation to reality (3.12) – does not actually contain its Sinn, does not contain *what* is projected. This makes it obvious that for Wittgenstein the Sinn of a sentence is much more like its truth-condition – something belonging, as it were, to the level of reference – than its Fregean sense. (The contrast may have been obscured, in the minds of some, by Frege's statement at *BLA* 32 that the sense of a sentence may be identified with the thought that its truth-conditions are fulfilled. But it is clear that for Frege there may be many such thoughts – many sentences with different senses – determining one and the same truth-condition.⁶ Notice, however, that Frege's notion of a truth-condition differs from Wittgenstein's in that it is characterized extensionally. For Frege, but not, as we shall see, for Wittgenstein, sentences that differ only through substitution of coextensive predicates may be said to have the same truth-conditions.)

I believe that the above usage is consistent throughout *TLP*, with the exception of a few merely colloquial phrases such as 'in the ordinary sense' (4.011, 6.422) and 'in certain sense' (4.014, 4.122, 4.52). For even in those passages where the term 'Sinn' occurs in such a way that it might very naturally be interpreted to mean something like Fregean sense, the surrounding remarks make clear that this is not what Wittgenstein has in mind. Thus at 4.02, for example, he speaks of 'understanding the Sinn of a propositional sign', which would, on the face of it, suggest a Fregean reading. But then in the very next remark he says that to understand a proposition is to know the situation which it represents, which suggests that what is known in understanding (the Sinn) is the situation represented (i.e. the truth-condition). This impression is then confirmed in the next remark (4.022), where he explicitly equates the Sinn of a proposition with how things stand in the world if it is true. Similarly, at 4.03 Wittgenstein talks about a proposition using old expressions to communicate a new Sinn, but then in the very next sentence goes on to speak of the proposition communicating a situation to us (rather than a Fregean thought). So it is clear that by the Sinn of the proposition he means the situation communicated.

Although I remarked earlier that Sinn, for Wittgenstein, belongs at the level of reference – the level of what we talk about – there is a clear respect in which this is misleading. For the situation represented by a proposition (the Sinn) may not actually exist in the world, because the proposition may be false. But still the remark has a point, since 4.1211 implies that the Sinn of a proposition 'Fb' will contain the object b itself. So it is the referents of those component expressions in a sentence which have reference, and not their Fregean senses (supposing that they have such senses) which figure in its Sinn. In the respect 'Sinn' is like Russell's 'proposition', in that the Sinn of a sentence will contain the actual entities with which that sentence deals, and substitution of co-referring terms within a sentence will leave it with the very same Sinn. But the Sinn will also involve a representation of those entities being related to one another in a certain way, and whether or not this is true (whether the represented situation exists or fails to exist) will depend upon the state of the world. Then since a Sinn consists of merely possible arrangements of actually existing things it is, as it were, partly of this world and partly not.

From the remarks which occur between 4.02 and 4.031 (some of

which have already been mentioned above) it is a clear that Wittgenstein takes the Sinn of a proposition to be the object of both linguistic understanding and of communication. What is communicated by a proposition is its Sinn, and what you know when you understand a proposition is its Sinn. Now recall from the last chapter the notion of semantic content, which was whatever you must know about a sentence in order to understand it and communicate with it. (This was one of the functions to be performed by Frege's notion of sense.) The *TLP* use of 'Sinn' can then be seen to embody a theory of semantic content. The idea is that it is sufficient for the understanding of a sentence that you know the situation it represents (rather than requiring, as Frege would have it, knowledge of the particular manner in which the situation is represented). We shall return to this in more detail later.

3.4 BEDEUTUNG

Let us begin our discussion of the *TLP* use of 'Bedeutung' by considering the famous 3.203, where we are told that a name bedeutet an object, the object being the name's Bedeutung. We might try using as our translation here 'refer' and 'referent' respectively, so that these remarks would tell us that a name refers to an object, the object being its referent.⁷ This would certainly have the ring of truth about it, if not of truism. But there are at least two difficulties with the suggestion.

The first problem is that such a reading of 'Bedeutung' cannot be maintained throughout the whole of *TLP*. For there are many passages where Wittgenstein speaks of the Bedeutung of expressions where he is either explicit that they do not refer, or where a good interpretative case be made for saying that he thinks they do not. To take just some of the most obvious examples: At 5.02 we are told that both the argument 'P' in '-P', and the affix 'c' in '+_c', enable us to recognise the Bedeutungen of '-P' and '+_c' respectively.⁸ Yet it is extremely doubtful, to say the least, whether Wittgenstein would regard either a sentence or the plus-sign as having reference. Then at 5.451 we are told that piecemeal definition would leave it in doubt whether the Bedeutung of '-' was the same in both '-P' and '-(P v Q)'. Yet Wittgenstein is of course explicit that the logical connectives do not refer (5.4). Again, at 6.232 he speaks of both

'1 + 1' and '2' having the same Bedeutung. Yet it is surely part of the import of 6.02–6.03 and 6.2–6.241 that Frege is wrong to believe numbers to be objects, and in thinking that numerals serve to refer to them. (Quite what is the positive import of these passages is another and more difficult question, to which I shall return briefly in *MT* chapter 2.) It may also be worth noticing 3.314–3.315, where Wittgenstein is apparently prepared to speak of any expression whatever ('any part of a proposition which characterizes its Sinn' – 3.31) as having Bedeutung. If we take this literally, and read 'Bedeutung' as 'reference', then it would conflict with many of his explicit doctrines.

Of course this argument is by no means conclusive. It is possible that the *TLP* use 'Bedeutung' is not consistent, and that in the passages mentioned above it may be translated simply as 'meaning' (which is, after all, the normal German sense of the term). But the argument does at least create a *presumption* against taking the word to mean 'reference' at 3.203. For in the absence of considerations to the contrary it is surely reasonable to assume that the terminology of *TLP* – or indeed any text – is univocal. Claims of ambiguous usage need to be argued for on the basis either of Textual Fidelity or of Charity.

The second (and, together with the first, conclusive) reason against taking 'Bedeutung' to mean 'reference' in 3.203, is that this would give us a reading of those remarks which clearly fails to encapsulate Wittgenstein's views on the semantics of names. (Indeed as we have already noted, thus interpreted it becomes entirely truistic.) For example, just a few remarks later at 3.24 he says that a proposition which mentions a complex will not be nonsensical (unsinnig) if the complex does not exist, but simply false. The implication is that a proposition mentioning a Simple which failed to exist (*per impossibile*, in the light of the supposed necessary existence of Simples – see 2.022–2.0272) would, in contrast, be nonsensical. That is to say (since in *TLP* usage, a name is a name of a Simple – see 3.2–3.26): that a sentence containing a bearerless name will lack Sinn.⁹ So, as we have already seen above in our brief discussion of the *TLP* notion of Sinn, Wittgenstein's idea would seem to be that the Bedeutung of a name (a simple object) will itself figure in the Sinn of sentences in which it occurs, in such a way that in the absence of the object there would be no Sinn. All this would be missed by our wholly anodyne reading of 3.203.

A quite different suggestion might be to translate the occurrence of 'Bedeutung' in 3.203 as 'Russellian meaning'. This would at least have the advantage that the *Bedeutung* of a name would itself then constitute its semantic content; that is to say: its contribution to the semantic content (*Sinn*) of sentences in which it occurs. But it is still subject to the first set of objections raised against the previous suggestion. For a Russellian meaning is always an item in the real world, with which we are supposed to be directly acquainted. Yet Wittgenstein speaks of 'Bedeutung' in connection with expressions such as the negation-sign, where it is quite clear that he does not think of them as standing for items in reality.

Once again this point is not by itself conclusive. But it does mean that it is incumbent upon a defender of the suggestion to do each of two things. Firstly, they must show that Wittgenstein does indeed accept the Russellian doctrine of direct acquaintance with the objects of our thoughts. And secondly, that he chose to express this, for that class of expressions for which he accepted the doctrine, by using the word 'Bedeutung'; while yet continuing to use that term in the ordinary sense of 'meaning' in connection with all other expressions.

We shall consider the supposed Russellianism of *TLP* in chapters 4, 9, and 15, where it will be wholly rejected. So in my view the first *desideratum* cannot be met. But even if it could, if there is an alternative way of taking the term 'Bedeutung' at 3.203 which both leaves open the possibility of Russellianism and makes possible a consistent reading of it throughout *TLP*, then it is hard to see how the second could be. If there are two interpretations of a term, one of which enables it to be taken univocally throughout a text and the other of which does not, but where both are equally compatible with the substantive doctrines which our best interpretation otherwise ascribes to the text, then surely the former of the two is to be preferred. In my view there is indeed such a reading of 'Bedeutung' available, as I shall now try to show.

The suggestion is simple: that we take 'Bedeutung' throughout *TLP* to mean 'semantic content'.¹⁰ The *Bedeutung* of a sub-sentential expression would be its contribution to the semantic content of sentences in which it occurs; which in turn would be the *Sinn* of those sentences (the truth-condition, or situation represented). Then 3.203 would tell us that the semantic content of a name is the object to which it refers, which of course entails the claim that the object

itself figures in the *Sinn* of the sentences containing the name. But it would be left open whether or not a doctrine of direct acquaintance with such objects is being endorsed. Moreover, there would be no objection to speaking of the negation-sign, for example, as having *Bedeutung*. For on any account of the matter such a sign will make a contribution to the semantic content of sentences. (The crucial point being that the semantic content – the *Bedeutung* – of a sign need not be a item in the real world.) Even sentences themselves may be said to have *Bedeutung* on this reading, as Wittgenstein appears to do at 5.02. For the semantic content of a sentence is its *Sinn*. Indeed, *Sinn* is a kind of *Bedeutung*: it is the distinctive kind of semantic content that sentences have.

Since this suggestion has all of the advantages, and none of the disadvantages, of the others, I propose to adopt it; subject of course to future correction in the light of our later discussions. The one minor awkwardness involved is that the noun 'semantic content', unlike 'Bedeutung', has no associated verb. Here I propose that we might co-opt the verb 'to signify' (German 'bezeichnen'), since Wittgenstein does in any case appear to use this as an equivalent of 'bedeuten'. (A sign may either *bedeuten* or *bezeichnen* its *Bedeutung* – see 3.203, 3.317, 3.322, 3.3411, and many others.) I therefore propose to read 3.203 as saying that a name signifies an object, the object being its semantic content.

3.5 T←F CONDITIONS

Although I regard our proposals for reading the *TLP* terminology of 'Sinn' and 'Bedeutung' as well established, what does require some explanation is that 'Sinn' should have been chosen to express Wittgenstein's theory of the semantic content of sentences. For such a use of the term is no more natural in German than would be the corresponding use of 'sense' in English, and it flies in the face of an already established Fregean terminology. What, for example, would have been wrong with 'truth-conditions' ('Wahrheitsbedingungen') itself, which Wittgenstein does in any case use occasionally in talking about the truth-functions?

The crucial clue is to be found at 3.144, which says that names are like points whereas propositions, like arrows, have *Sinn*. On the face of it this remark is puzzling. A first thought might be that the

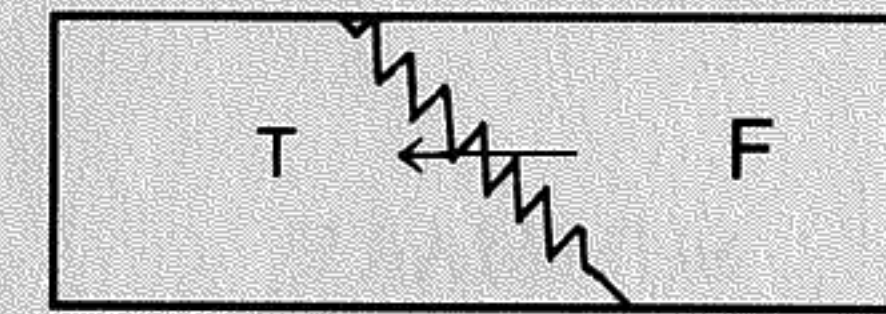
intended contrast is between expressions which can, and those which cannot, be used to *say* anything. But this would render the metaphor very lame. For of course a point can 'say something' just as well as an arrow can. (A point marked on the stage can say to an actor 'Stand here', just as an arrow on a road-sign can say 'Go this way'.) In fact the only relevant differences are that a point is one-dimensional whereas an arrow is both two-dimensional and has direction.

The first aspect of the metaphor we can grasp immediately if we recall the *TLP* doctrine of the bi-polarity of the proposition, according to which any genuine proposition will be associated with two poles: true and false. (A genuine proposition is both capable of being true and capable of being false – see 4.2, 4.461–4.5.) So in the sense in which a name points in just one direction – towards the object which is its bearer – a proposition points in two directions at once: to the circumstances under which it is true, and to the circumstances under which it is false. This is sufficient to give us a difference in dimensionality between the semantics of names and propositions. But what of the aspect of directionality? Why should Wittgenstein not have said that names are like points whereas propositions are like *lines*?

This can be explained by referring to Wittgenstein's belief in the priority of truth over falsity, which I shall discuss in some detail in *MT* chapter 11. On this view a proposition is not, as it were, neutral between the two sets of circumstances. Rather it directs us *from* the one set (the circumstances under which it would be false) *towards* the other (the circumstances under which it would be true). Hence the semantic content (Sinn) of a sentence may itself be characterized as having a direction. For in understanding it you must of course grasp which of the two sets of circumstances you are being directed towards.

Within the framework of the doctrines of *TLP*, the Sinn of an elementary proposition is a directed pair of possible situations. The possible situation which the proposition directs us towards is called a 'state of affairs' ('Sachverhalt'). If that state of affairs exists then the proposition is true, if it does not then the proposition is false (2, 2.12–2.15, 2.201–2.221). All other propositions are truth-functions of elementary propositions (4.4, 5). The Sinn of such a truth-function is a directed division within the set of possible assignments of truth-values to the component elementary propositions, between those in which the truth-function is true and those in which it is

false (4.3–4.52). These two ideas together, when combined with the characteristic metaphysical theses of *TLP*, yield the wider conception of the Sinn of a proposition as directed division within the set of all possible worlds.¹¹ Then if we represent the set of such worlds by a box, we can picture the Sinn of a proposition thus:



This explains the metaphor of the arrow: the semantic content of a proposition is essentially directional.

But why should the directional character of semantic content make the term 'Sinn' appropriate to designate it? The answer is simple: it can literally *mean* 'direction'. Consider first the English cognate 'sense'. Its use to mean 'direction' is not very common in ordinary discourse (though I have seen a novelist write of 'traveling beside a river, but in the opposite sense'; and in a piece with which Wittgenstein would almost certainly have been familiar, Russell characterizes directional relations – such as being larger than – by saying that they have sense).¹² But it is quite frequent in science, where one may speak, for example, of the sense of a force. A similar use of 'Sinn' is equally common in scientific German, and would have been extremely familiar to Wittgenstein through his background in mechanics.

So my suggestion is that Wittgenstein selected the word 'Sinn' to refer to the semantic content of a sentence characterized in terms of truth and falsity conditions because of his belief in the essential directedness of such content.¹³ It is not easy to find a simple translation which reflects these features. The best that I can propose would be 'T←F conditions'. This is barbaric, but does at least capture everything required. But because of the barbarity, I shall in future either leave 'Sinn' untranslated, or will use 'semantic content of a sentence' or 'truth-conditions' according to the needs of the context.

Note finally that in terms of the idea that the semantic content of a sentence is a directed division within the set of all possible worlds it is easy to make sense of Wittgenstein's remark at 4.0621, that 'P' and '¬P' have *opposite* Sinn. For to these two propositions correspond one and the same division within that set; the only difference

lying in the direction in which they point (namely, towards opposite sides of it). Similarly with the remark that negation reverses the Sinn of a proposition (5.2341): for attaching the negation-sign to a proposition leaves the associated division within the set of worlds unaffected; what changes is which of the two sets the proposition points as towards.

SUMMARY

The *TLP* use of the terms 'Sinn' and 'Bedeutung' may be said both to mark the primacy of the complete sentence within semantics, and to embody a substantial theory of semantic content. 'Bedeutung' may reasonably be translated as 'semantic content' throughout, leaving it open that the Bedeutungen of some expressions are not items in the real world. Sinn, which is the kind of semantic content possessed by sentences, is to be understood as a directed division within a set of truth and falsity conditions.

4

In Search of Sense

The interpretation of the *TLP* terminology of 'Sinn' and 'Bedeutung' provided in chapter 3 leaves open that Wittgenstein might in addition have employed a notion which is more closely analogous to Fregean sense. In the present chapter I shall argue that this possibility is in fact realized.

4.1 SYMBOL AND SENSE

At 3.31 Wittgenstein explicitly introduces the notion of a symbol, saying that by a symbol he means any part of a proposition which characterizes its Sinn. He also there treats 'symbol' as the equivalent of 'expression' ('Ausdruck'), an equivalence which I believe is maintained throughout *TLP*. I shall argue that a symbol, or expression, is a sign together with its Fregean sense (though without Frege's commitment to the mind-independent existence of senses).

There are at least two possible ways of reading 3.31, depending upon how the verb 'to characterize' is understood. On the one hand it may mean that a symbol is any part of a proposition which *determines* a contribution to the semantic content (Sinn) of the whole. A symbol would then be any part of a proposition which contributes to the latter's truth-condition by determining a semantic content (Bedeutung) for itself. This would certainly echo one aspect of Frege's notion of sense, since the sense of a sign is supposed to contribute towards determining the truth-conditions of sentences in which it occurs, via the determination of a Bedeutung (referent). Yet on the other hand 'characterize' may only mean 'contribute to' rather than 'determine a contribution to'. That is, 3.31 may merely tell us that a symbol is any part of a proposition which has associated with it something which contributes to the semantic content of the whole. This would leave us with something

5 The details of the evidence are as follows. In the case of Russell, not only are both *The Principles of Mathematics* and *Principia Mathematica* mentioned explicitly in *TLP* (at 5.5351 and 5.452 respectively), but there is also evidence that Wittgenstein was unhappy with the inexactness of the proofs provided in *Principia*, and proposed to rewrite the first eleven chapters – see Blackwell (1981), pp. 12–13; and see appendix I of Coope et al. (1971) for a table of correspondences between *TLP* and *The Principles of Mathematics*. We also know from Russell's letters that Wittgenstein read, and apparently disliked, *The Problems of Philosophy* – see Blackwell (1981), p. 16. Moreover there is an admiring reference to Russell's *Philosophical Essays* (containing 'On the Nature of Truth and Falsehood') in the letter to Russell mentioned in note 2 above. Beyond this we know nothing for sure, though it seems highly likely that Wittgenstein would have got to know Russell's papers from the period which immediately precedes the time of their association in Cambridge (between autumn 1911 and autumn 1913), particularly 'On the Relations of Universals and Particulars' and 'Knowledge by Acquaintance and Knowledge by Description' (reproduced in Russell, 1956 and 1918 respectively).

As for Frege, only *BLA* is explicitly mentioned in *TLP*, at 5.451. But it is safe to assume that Wittgenstein would have read Frege's earlier masterpiece *FA* (especially since *TLP* 3.3 is very nearly a quotation from *FA* 60 and 62), as well as those of Frege's writings mentioned by Russell in his appendix on Frege in *The Principles of Mathematics*: including *Begriffsschrift* (reproduced in Frege, 1972), 'Function and Concept', 'On Concept and Object' and 'On Sense and Reference' (all reproduced in Frege, 1984). For so far as we can gather, it was through reading this appendix that Wittgenstein came to study Frege in the first place – see Malcolm (1958), p. 4. In addition, 3.263 closely echoes the remarks on explaining primitive signs in Frege's 'Foundations of Geometry 2' – see Frege (1984), pp. 300–1.

- 6 See Blackwell (1981), p. 16.
- 7 See Wittgenstein (1974), p. 111.
- 8 See in particular Dummett (1973) and (1981b).
- 9 Most notably in Sluga (1980) and Baker and Hacker (1984).
- 10 See Frege (1984), pp. 157–63.
- 11 However, the means of identification need not, in Frege's view, be an effective one; see *BLA* 56.
- 12 Frege's actual view is that the reference of a predicate is an 'incomplete' but purely extensional entity. See his (1979), p. 118ff.
- 13 See Frege (1984), pp. 145, 162 and 185–7.
- 14 See Frege (1984), pp. 159–60. Of course he would allow that there can be understanding where idiolects diverge, provided that speakers know what sense the others attach to their expressions.
- 15 This use of 'semantic content' is very similar to Salmon's use of 'information content' – see his (1986), p. 13. In both cases the intention is to designate that which is communicated by the literal

meaning of a statement, or that which must be known by one who understands it. However, Salmon's choice of terminology is unfortunate, since there is an already established use of 'information content' to mean what I am here calling 'cognitive content'.

- 16 See Russell (1917), p. 159, and (1912), p. 32.
- 17 See Russell (1917), pp. 153–5, and (1912), pp. 26–8.
- 18 See 'On Denoting' in Russell (1957), as well as his (1917), p. 162–6.
- 19 See the introductions to Frege's *FA* and *BLA*, as well as his paper 'Thoughts' in his (1984) and the second of the two papers entitled 'Logic' in his (1979). But the terminology of possible worlds is not Frege's.
- 20 See Dummett's discussion of this issue in ch. 3 of his (1981b).
- 21 See the second of the two papers which bear that title in Frege's (1979).
- 22 See the final essay of Russell's (1910a).
- 23 See Russell's (1912), p. 58.
- 24 This is emphasized by Currie in his (1982a).
- 25 See Frege (1979), pp. 207–12. As Currie points out in his (1982b), these difficulties occasionally lead Frege to employ a notion of sense for which the criterion of identity is logical equivalence; which had also been the notion of content employed in his earlier *Begriffsschrift*. See for example Frege (1984), p. 143.
- 26 See Frege (1984), p. 148 and (1952), p. 159.
- 27 The terminology is introduced in Tugendhat (1970) and taken up by Dummett in his (1973).
- 28 See Russell (1912), p. 28.
- 29 See Russell (1917), pp. 156–8.

CHAPTER 3 SINN AND BEDEUTUNG

- 1 See for example Kenny (1973), pp. 60–2 and Pears (1987), pp. 75 and 110. This is also the line apparently taken by Anscombe, who proposes that 'Bedeutung' in *TLP* should be translated by 'reference' (with our knowledge of reference being a matter of acquaintance) and 'Sinn' by 'sense'; explicitly asserting that Wittgenstein's conception of sense is the same as Frege's (see her 1959, pp. 17 and 26). But in fact she does not go as far wrong as this would suggest, for she herself goes on to use 'sense' to mean 'truth-conditions' in expounding *TLP* (*ibid.*, pp. 59–63), which is the view I shall adopt myself. This is because she badly misunderstands Frege. She correctly notes (p. 60) that for Frege the sense of a sentence – a thought – is the thought that its truth-condition is fulfilled (see *BLA* 32), but wrongly takes this to mean that the thought may be identified with the truth-condition. Rather, for Frege there may be many different thoughts of – many different ways of

presenting – one and the same truth-condition. (It is clear from the context of *BLA* 32 that we fix the truth-condition of a sentence by assigning referents to each of its component terms, implying that he takes truth-conditions to belong, not at the level of sense, but of reference.)

- 2 See *TLP* 5.54–5.5422 and Wittgenstein (1974), p. 23. See also the excellent reconstruction of the debate between Wittgenstein and Russell in Blackwell's (1981), especially pp. 18–24.
- 3 See for example Dummett (1973), pp. 590, 663 and 680.
- 4 Frege had of course maintained that predicates and concepts are essentially 'incomplete' whereas names are not – see his 'Function and Concept'. But it does not follow that there is nothing of significance left of this doctrine once we accept that all words are incomplete sentences – see my (1983b) where I extract a number of different strands from the incompleteness-metaphor. Nor does it follow that Wittgenstein is then free to reject Frege's distinction between concepts and objects as some have held (for example Allaire, 1963, p. 336).
- 5 See Frege (1984), p. 158.
- 6 As we saw in note 1 above, Anscombe falls into this trap.
- 7 This is urged by Anscombe (1959), p. 17.
- 8 '+' is Russell's addition-sign restricted to the case of cardinal numbers.
- 9 I here slip past the *TLP* distinction between senselessness and non-sense, which I will be expounded in ch. 6.
- 10 This suggestion should be distinguished sharply from the one made by McGuinness in his (1981), that 'Bedeutung' in *TLP* is best explicated in terms of Tugendhat's (1970) notion of semantic role or truth-value potential. On this account two expressions may be said to possess the same Bedeutung just in case they always produce sentences with the same truth-value when combined with the same expressions; and to say that an expression has Bedeutung is just to say that it does figure in true or false sentences. Here the Bedeutung of an expression is wholly a matter of its contribution to truth-value, whereas on my account it is its contribution to the content communicated by sentences containing it.

One thing wrong with McGuinness' suggestion is that it ignores the realism involved in saying that the Bedeutung of a name is an object (and is intended by him to do so). On this matter I am in agreement with Malcolm (1986) and Pears (1987), both of whom discuss this issue extensively – the objects of *TLP*, which make up the unchanging substance of the world and exist in all possible worlds, are wholly independent of the human mind and of language. But another thing wrong with the McGuinness suggestion is that it implies that the Bedeutungen of all types of expression are purely extensional. Whereas I shall argue in ch. 5 that the criterion of sameness of Bedeutung for all other types of expression besides proper names is logical equivalence.

- 11 The theses in question are (1) that the objects occurring in states of affairs have necessary existence, (2) that elementary propositions are logically independent of one another and (3) that a complete assignment of truth-values to the set of all elementary propositions gives a complete description of a possible world. Then when an elementary proposition directs us to the existence of a particular state of affairs we are in fact directed towards the set of all worlds in which that state of affairs exists and away from the remainder. And if we are directed towards the set of all worlds in which a given state of affairs exists, then we are directed towards the existence of that state of affairs itself and away from its non-existence.
- 12 See Russell (1910a), p. 158.
- 13 Anscombe, too, notices the directional connotations of 'Sinn'; see her (1959), p. 17.

CHAPTER 4 IN SEARCH OF SENSE

- 1 This temptation will eventually be vindicated by the discussion which follows in this and succeeding chapters. Quite a different temptation is to say that what gives life to the perceptible sign – what turns it into a symbol – is an imperceptible act of thinking on the part of the user of the sign. See for example McDonough (1986), pp. 62–5 and Malcolm (1986), ch. 4. In my view this interpretation is certainly incorrect, and it will be countered in ch. 8–10.
- 2 See Frege (1984), p. 158.
- 3 On this issue I am in broad agreement with Griffin. See his (1964), p. 95ff.
- 4 However, this should not be taken to imply that for Wittgenstein (as for Frege) senses are detachable from sentences; see ch. 8.
- 5 As Blackwell shows in his (1981), Wittgenstein's main criticism of Russell's theory of judgement was that the latter could not allow for the integrity – the wholeness or completeness – of the judged proposition (ibid. p. 23). For in order to account for the possibility of falsehood whilst holding onto the idea that judgement involves a direct relation to the things which the judgement concerns, Russell had been forced to construe it as a relation between the thinker and an ordered set of individuals and universals, thus losing hold of the essential wholeness of what is judged. I think Wittgenstein came to feel that the only solution was to give up the idea that judgement can be a direct relation to things in the world, moving rather towards the Fregean view that it always involves a mode of presentation of them. This then surfaces in non-Russellian use of 'proposition' throughout most of *TLP*, the integrity of the contents of judgements being preserved at the level of symbols (sign plus sense), in the wholeness of the propositions which thinkers employ to express their judgements.
- 6 Goldstein does have other arguments for this same conclusion. But