with extreme caution. A similar conclusion can also be reached from a different direction. For on general methodological grounds, if we wish to understand and assess the contrasts between Wittgenstein's early and late philosophies, then we certainly ought not to assume at the outset that he later both understood and had the measure of all aspects of his earlier way of thinking. On the contrary, we ought at least to hold open the possibility that the later philosophy might have passed the earlier uncomprehendingly by, and perhaps also that the quality of Wittgenstein's thought might have gone steadily downhill (as Russell believed). Our preferred interpretation of the early writings should therefore be established before we begin to consider the later work.

1.5 FREGE AND RUSSELL

The last – but not the least – of aids to the interpreter is Wittgenstein's acknowledgement of the influence of 'the great works of Frege' and 'the writings of my friend Mr Bertrand Russell' in the preface to TLP. We may presume that he took many of his problems and ideas from them. It is also reasonable to assume, at least as a working hypothesis, that the different tones in which the acknowledgements were expressed reflect the degree of significance of their influence. We may therefore take the work of Frege, and to a lesser extent that of Russell, as providing the background against which the doctrines of TLP can be set. But obviously we need to be cautious. Ideas taken over from them may have been put to quite a new use, his readings of other philosophers having been more inspirational than interpretative. And he may, for the same reason, have badly misunderstood their views.

SUMMARY

Our interpretation of *TLP* will be founded on a balanced application of the twin principles of Textual Fidelity and Charity. We shall also make considerable, if cautious, use of *NB*, *PTLP* and letters written soon after 1918, as well as the known views of Frege and Russell. But we shall ignore almost wholly the evidence of Wittgenstein's later writings and reported remarks.

Background: Frege and Russell

My task in this chapter is to explain the main outlines of the semantic theories of Frege and Russell, in so far as they may be presumed to constitute the background for Wittgenstein's own investigations.

2.1 PRELIMINARIES

Frege and Russell are the only known influences on the philosophy of *TLP*. Each is acknowledged in the preface, and is mentioned many times in the body of the text. The only other philosophers mentioned in *TLP* are Moore (once), Whitehead (twice) – each in conjunction with Russell – Kant (once) and Hertz (twice). Indeed, Frege and Russell are the only significant philosophers whose writings we know Wittgenstein to have studied with any seriousness. (There is evidence that he once read – and hated – Moore's (1903). There is anecdotal evidence that he had read Schopenhauer as a boy. And there is some reason to think that he may have been influenced by the form, if not the detailed content, of Hertz's (1899). Hertz's (1899).

As for what exactly of Frege and Russell Wittgenstein would have read, I think it is reasonable to assume an acquaintance with all their major publications prior to the outbreak of the war in 1914.⁵ We also know that he saw at least a part of Russell's manuscript 'Theory of Knowledge' (now published in Russell, (1984)⁶), and that he wrote to Keynes in 1915 asking to be sent a copy of Russell's (1914), though we do not know whether or not Keynes ever complied .⁷ Clearly, however, our account of Frege's and Russell's views should not commit the anachronism of relying upon their later writings, particularly Russell's 1918 'Lectures on Logical Atomism' and Frege's 1918 papers 'Thoughts' and 'Negation'.

Since it will be one of the main themes of this book that the semantic doctrines of *TLP* are much more influenced by Frege than by Russell, I shall begin by explaining Frege's semantic theories, contrasting them with those Russell where appropriate. It should be said that my reading of Frege is substantially the same as – indeed derived from – that of Michael Dummett, though it differs slightly in emphasis.⁸ I regard Dummett's interpretation of Frege as controversial only in the sense that it has been controverted.⁹

2.2 SENSE AND REFERENCE

A central idea of Frege's middle-period writings is the distinction he draws between sense (Sinn) and reference (Bedeutung), which is applied to almost all expressions of natural language including sentences. The sense of a sign is that which competent speakers will grasp in virtue of their understanding of it (and the sense of a complete sentence is the content of the thought which it expresses for those who understand it); whereas the reference of a sign is that item in the world (in the case of a sentence, a truth-value) which we speak about when we use it. Reference is the object of, sense the content of, our thought and speech.

The relations between sense and reference are as follows: the truth-value of a sentence is held to depend upon the reference of the component expressions of that sentence, and the reference of those expressions, in turn, to depend upon their sense. There is thus a non-symmetric dependence of truth-value upon reference, and of reference upon sense, which can be expressed (with slightly misleading temporal and causal connotations) by saying that sense determines reference and reference determines truth-value. The idea is that it is in virtue of the fact that an expression has the sense which it does that it refers to the item in the world which it does; and that it is in virtue of having the reference which it does that sentences containing it have the truth-values which they do.

In drawing this distinction, Frege should be seen as arguing that there can be no such thing as bare knowledge of reference. His idea is that we cannot simply devise a theory which assigns referents to the various component expressions of the language, and hence which assigns truth-conditions to the completed sentences of the language, and leave it at that. For this is not something that any

speaker could be said to know, or at least not directly. Yet precisely what we want from a theory of meaning is an account of what it is for a speaker to understand their language, and understanding is surely a cognitive state of some sort. So with each expression there must be associated an immediate object of knowledge, which will constitute the speaker's mode of thinking about the referent. This will be the sense of that expression.

Note also that a purely referential theory would leave us puzzling over the question how it is possible for a sentence – most obviously a statement of identity - to convey information. Indeed this is Frege's most explicit argument for introducing the notion of sense, his claim being that it is needed to account for the cognitive significance of the different expressions of a language – for example, how a statement of identity can be informative, or how we can believe one of two logically equivalent sentences without believing the other.10 Thus not only should a speaker be credited with the knowledge that a particular individual is the referent (the bearer) of a proper name, but they should also be credited with some means of identifying, or 'picking out', that individual.11 And not only should they be credited with a knowledge of the extension, say, of a predicate, but must also be credited with a grasp of some rule for determining that extension.12 The mode of determining the reference of an expression which a speaker employs, in Frege's terminology, is the sense which that speaker attaches to it.

These reasons for the introduction of a notion of sense impose upon it very tight identity-conditions. If knowledge of sense is to constitute each speaker's mode of thinking about the referents of the expressions of their language, and if we are to use the notion of sense in explaining cognitive significance, then we shall have to equate sameness of sense with sameness of information-content. We must say that two sentences will possess the very same sense for a given speaker if, and only if, were they to believe the one to be true, they could not learn anything new on being told of the truth of the other. (Note the modality of this criterion. The idea is that sentences are identical in sense for a given speaker just in case that person cannot take differing cognitive attitudes towards them, no matter what else they happen to believe. For example, they cannot believe the one while doubting the truth of the other.) And two sub-sentential expressions will possess the same sense for a speaker -if, and only if, all sentences which differ only in that the one

expression has been substituted for the other will possess the same information-content. Frege explicitly commits himself to such criteria of identity of sense at a number of points in his writings. 13

The idea of sense thus far introduced is not especially social, or intersubjective, in character. (However, Frege would want to insist, at a minimum, that senses are at least possibly intersubjective that they are, as it were, within the public domain. For as we shall see, he maintains that senses are objective in their existence.) Rather, it provides us with a theory of speakers' understanding, of the knowledge which individual speakers have of their own idiolects. Nothing has as yet been said about what is required for there to be communication through the use of language, beyond the claim that speakers must at least be in possession of some means not necessarily the same for each speaker - of determining the referents of all the component expressions involved. But in fact Frege supposes that we may speak simply of the sense of such-andsuch an expression. He supposes, that is, that the idiolects of particular speakers will generally coincide, and that such speakers will only understand one another, in general, in virtue of knowing the senses of the expressions of their common language.14

This is the second major role for the notion of sense: to underpin a theory of communication. Frege's view is that understanding the statements of another requires you to grasp the thoughts expressed. You yourself must (at least on this occasion - you may know the speaker's idiolect to be non-standard) associate with the sentences which you hear the very same modes of determination of reference as the speaker does. Your way of taking each sentence must thus be such that, were the speaker to employ another sentence, to be understood in the way in which you understand their spoken sentence, then those two sentences would have the same information-content for the speaker (e.g. it would be impossible for them to believe the one while doubting the other). Let us coin the phrase 'cognitive content' to refer to the mode of thinking associated with an expression in the idiolect of a particular speaker. And let us employ the phrase 'semantic content' to refer to that of which mutual knowledge is required for linguistic communication (or what comes to the same thing: to refer to that which an expression contributes to what is communicated by the literal assertion of sentences containing it).15 Then Frege's thesis is that cognitive content and semantic content are one and the same. On

the other hand the *TLP* view (to anticipate) is that cognitive content (what may be informative to the individual) and semantic content (what is literally communicated) are distinct from one another.

In Russell's writings from this period no trace of a sense/reference distinction appears. In its place we have a doctrine of direct acquaintance: that any proposition which I understand must be wholly made up of constituents with which I am acquainted. In understanding a sentence, my cognitive relation to what that sentence is about is to be direct, and unmediated by any mode of presentation or mode of thinking. There are said to be two sorts of thing with which we are acquainted: individual sense-data (and perhaps myself) on the one hand, and simple universals on the other. This then commits Russell to an ambitious programme of analysis of the sentences of ordinary language, in that all meaningful sentences must be shown to concern, ultimately, only sense-data and simple universals. We shall return to this idea in a later section.

It might be felt that Russell does in fact employ an analogue of the sense/reference distinction, in the contrast he draws between meaning and denotation with respect to certain sorts of complex expression, particularly definite descriptions. But this contrast is really quite different, since it does not satisfy the principle of semantic ordering essential to the sense/reference distinction. As we saw above, the role of an expression's sense is to determine its reference, which in turn contributes to determining the truth-values of sentences containing it. Russell's meaning, on the other hand, does not determine a truth-value via determining a denotation. On the contrary, as we shall see in more detail later, the meaning of a description only fixes a denotation via the determination of a truth-value. (This is part of what Russell has in mind in insisting that definite descriptions are not logical units.)

2.3 THOUGHTS AND THINKING

Frege calls the sense of a complete sentence 'a thought' (Gedanke). In thinking, he says, a subject comes to grasp a thought. And a case of successful communication consists in two subjects coming to grasp (and knowing that they come to grasp) the very same

thought. So far, perhaps, this is anodyne. But Frege also claims that thoughts are objective. He says they have an existence which is independent of the human mind and of the psychological processes which take place in acts of thinking. Indeed they have an existence which is at least omnitemporal, and perhaps necessary: they exist at all times in the actual world, and perhaps at all times in all possible worlds.19 His theory therefore is that in thinking one comes to stand in a cognitive relation ('grasping') to an objective, mind-independent, entity: a thought. He never says what the grasping-relation is supposed to consist in, though there is more than a suggestion in his writing that it is somehow linguistically mediated.20 But it is at least clear that it must be a real, as opposed to an intentional, relation. (That is, that one does not grasp a thought by virtue of mentally representing it.) For as we in effect saw in the previous section, it is the notion of sense itself which is to explain intentionality: it is by virtue of expressing different senses that different terms can be about the very same thing, and yet figure in different beliefs and different statements.

Such a theory of thinking faces very severe difficulties, as we shall have occasion to see in later chapters. But as we shall also see, Frege believed that it was forced upon him by his commitment to the objectivity of logic and of truth. He felt that the only alternative to his doctrine of the mind-independence of thoughts would be some version of psychologism: the doctrine that thinking reduces to private psychological processes, and that the laws of logic are merely the principles governing the (for the most part) actual operation of such processes. This was his lifelong enemy, to be overcome at all costs.

Although Frege certainly did hold the theory of thinking sketched above, it might be doubted whether Wittgenstein would have been aware of the fact. For it is most clearly articulated in the late paper 'Thoughts', whose publication in 1918 was too late to have influenced the author of *TLP*. Now one sort of reply to this would be to point out that most of the ideas presented in 'Thoughts' were by no means new. They had been fully worked out in a draft paper entitled 'Logic', probably composed in 1897, but never published in Frege's life-time.²¹ So it is possible that Frege gave Wittgenstein a copy of this paper, or explained his theory of thinking to him in the course of their conversations together. However, this must remain entirely conjectural, since the details of

their correspondence have been lost, and since we do not even know what general topics were covered in their discussions.

A better reply is that the doctrine of the omnitemporal existence of thoughts is very close to the surface of the tirade against psychologism which forms the bulk of the introduction to BLA, even if it is not explicitly enunciated there. For example he says that what is true or false (i.e. a thought) is something objective and independent of the judging subject. He then goes on to speak of there being a domain of objective entities, which although genuinely existing are not actual, in the sense that they do not affect our sense-organs (nor, presumably, have any other causal impact upon the world). Then a little later he says that the metaphor of 'grasping' is well suited to elucidate judgement, in that what we grasp with the mind in judging or knowing (i.e. a thought) exists independently of the human mind. Moreover, at number of points he employs his doctrine of the omnitemporality of truth in such a way as to suggest that what is true (a thought) must be omnitemporal also. It would have taken no great interpretative skills on the part of the young Wittgenstein to have extracted from BLA the theory of thinking sketched above.

Russell's theory is very different (although as we shall see, it does have an element in common with Frege). It is that judgement (as well as other psychological attitudes such as wondering and supposing) is a relation between a thinker and the elements of the world which make up what Russell calls 'a proposition', the relation somehow being mediated by the thinker's acquaintance with those elements. Thus if Mary judges that Jack loves Jill, then there is a direct cognitive relation obtaining between Mary, Jack, Jill and the relation of loving.22 (Or there would be on the supposition that 'Jack loves Jill' were a simple sentence. In fact Mary's judgement will be analysed in such a way that the objects of the judgement are all either sense-data or simple universals.) The judgement is not mediated by any mode of presentation of, or any mode of thinking about, its objects. Here the differences with Frege are just what one might expect, given the manner in which Russell tries to do without a sense/reference distinction.

The one point of contact is that Russell too holds that thinking must always involve a direct cognitive relation to an abstract, presumably omnitemporal, entity, namely a universal. For all propositions must contain at least one universal, and the thinking

of that proposition must then, on Russell's view, presuppose acquaintance with that universal. But here, unlike the case of Frege, the abstract entity is itself the object of the judgement; whereas for Frege it constitutes its content. Russell has little more to say than Frege about what a cognitive relation to an abstract omnitemporal entity might be supposed to consist in. But he does appear to have attempted a marriage of Platonic ontology with empiricist epistemology. For he says that we become acquainted with simple universals by abstraction, when we notice that a number of sensible objects have a feature in common.²³

2.4 THE IDEA OF ANALYSIS

Both Frege and Russell have a programme of analysis of ordinary language. Indeed both are concerned to construct an ideal, or logically perfect, language, and see this as being the key to progress in philosophy. They are also in considerable agreement as to what the construction of such a language might be expected to achieve. It is to display the structures of propositions in such a way that their consequences can be worked out in a wholly rigorous manner; it is to represent in a syntactically distinct way notations which are semantically very different from one another, emphasizing the gulf, in particular, between concepts of first order (such as those expressed by 'is red' and 'loves') and concepts of second order (such as those expressed by 'all' and 'some'); and most importantly, it is to provide a mode of representing both the contents and proofs of mathematical propositions, so that it can be demonstrated that they reduce ultimately to the truths of logic. (In this last desideratum their motives are partly epistemological: to explain how we can have knowledge of the truths of mathematics.)24

It is worth noting that Frege has some difficulty in providing space for an adequate account of the role of analysis. For recall that he lays down very tight criteria for identity between thoughts. In order for two sentences to express the same sense, it must be the case that no one could believe the one while doubting the other, for example. It follows from this that the *analysans* and *analysandum* in any proposed analysis of a sentence cannot share the same sense unless the differences between them are entirely trivial and uninformative. So an analysis, if it is enlightening, cannot be regarded as

elucidating the content of the analysed sentence. It must rather be thought of as a reconstruction. The role of analysis is then not to throw light upon the contents of our sentences, but rather to replace them with a distinct, but logically equivalent, set of contents. Although different, these are to be preferred to the originals because they are better suited to the pursuit of truth.

Frege also has other reasons for accepting a reconstructive account of analytical activity. In particular, he thinks that natural languages have features which prevent the laws of logic applying to them, thus rendering them unsuitable for use in science. (Here 'science' just means, I think, any systematic enquiry after truth.) The defects in question are that natural languages may contain names which fail to refer to anything, and predicates which are vague. In both cases Frege thinks we need to engage in reconstruction.

One major difference between Frege and Russell is over the idea of what a complete analysis would look like. In Frege's case this just means that a notation has been provided which is logically unexceptionable, and whose syntax perspicuously displays the important semantic distinctions between types of expression. But Russell demands in addition that analysis should break up the contents of our thoughts into what he believes must be their simplest elements. A completely analysed language would contain, as primitives, only names referring to sense-data and predicative expressions which refer to universals abstractable out of acquaintance with those sense-data. Frege, on the other hand, is quite happy to retain without further analysis terms referring to physical objects, as well as concepts which apply to such objects.

Russell's motives in this are epistemological. He thinks that all our knowledge of the physical world must be founded on knowledge of truths which are intuitively certain, which means truths about our own sense-data, or involving simple relations between universals. These basic truths, in turn, can only be certain if they are wholly concerned with things with which we are immediately acquainted. The process of analysing what we know, or at least have reason to believe, must then consist in showing how the content of such knowledge is related to the objects of our acquaintance.

2.5 NAMES AND DESCRIPTIONS

In one respect both Frege and Russell are agreed about the semantics of singular sentences. They both hold that the contribution made by a singular referring expression to the truth-value of sentences in which it occurs (sometimes spoken of nowadays as the 'semantic role' of the expression)²⁷ is exhausted by the object to which it refers. Singular sentences express truths or falsehoods about the bearer of the referring expression, in such a way that if the expression were to lack a bearer, then the sentence would be neither true nor false. But from this point onwards their views diverge radically.

Frege is extremely liberal over what he will allow to be genuine referring expressions. He counts as belonging to this category not only all ordinary proper names and demonstratives, but also all definite descriptions of the form 'The such-and-such'. (Indeed he even classifies sentences themselves as a species of complex name, which refer either to the True or the False.) And although the contribution made by a referring expression to the truth-value of sentences in which it occurs is exhausted by its referent, its contribution to the thought expressed is not. On the contrary, he holds that each referring expression will have a sense, in virtue of which it has the reference which it does, and which must be known by anyone who is to understand sentences containing it. In the case of expressions which fail to refer, his view is that they will characteristically still have a sense. So he holds that there are sentences in natural language which express a complete thought but lack a truth-value. This is one of the defects of natural language which it is the business of analysis (philosophical reconstruction) to eradicate.

As to what the sense of an ordinary proper name might look like, Frege is often credited with a version of description-theory. On this account, each proper name will be correlated, by convention, with a particular definite description (or perhaps a cluster of such descriptions), in such a way that an understanding of sentences in which the name occurs requires knowledge of the appropriate description. But in fact Frege nowhere commits himself to this theory. True enough, whenever he gives examples of senses of proper names he uses definite descriptions, but this may simply be for ease of exposition. It would certainly be consistent with what he

says to suppose that the sense of a name can at least be partly constituted by a recognitional capacity. Since this is so, and since such a reading would make his theory much more plausible, Charity requires that we should interpret him thus.

Russell, on the other hand, is extremely sparing as to what he will allow to be a genuine singular referring expression. In his view this category includes only the demonstratives 'this' and 'that' (when used to refer to sense-data), and perhaps 'I'. (He has doubts as to whether we really have acquaintance with ourselves.)28 All ordinary proper names and demonstratives are to be analysed as expressing definite descriptions, which are supposedly added in thought by the person using that expression on a particular occasion(not necessarily the same description each time).29 And definite descriptions themselves are analysed in accordance with his famous Theory of Definite Descriptions. On this view, expressions of the form 'The such-and-such' do not really have any meaning on their own, but only in the context of a sentence which will typically have the form 'The such-and-such is so-and-so'. If we represent this as 'The F is G', then Russell's theory is that such sentences may be analysed as saying: 'There is one and only one F and that thing is G'.

It is an immediate advantage of the theory that sentences containing bearerless proper names or uninstantiated (or multiply instantiated) definite descriptions come out false, rather than neither true nor false. If 'Vulcan is hot' may be analysed as saying something like 'The planet closer to the sun than Mercury is hot', and this in turn is analysed in accordance with Russell's Theory of Definite Descriptions, then naturally it may be accorded the truth-value False when it is discovered that there is no such planet. For it is then false that there is one and only one planet closer to the sun than Mercury. This saves natural language from conflict with the principles of logic (particularly Excluded Third), and means that no reconstruction is necessary.

Russell does allow that definite descriptions may be said to 'denote' the unique thing which instantiates them (if there is such a thing). But it is now easy to see why this is quite unlike according them reference. For it is not facts about the denotation, in the first instance, which render sentences containing the description true or false. Rather what makes them so is whether or not there exists a unique object satisfying a certain description, which also satisfies a

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.

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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'. 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

that some of Wittgenstein's doctrines concerning the N-operator commit him the existence of a decision-procedure for predicate logic; whereas there is demonstrably no such thing.

5 Wittgenstein clearly thinks that we are required to employ just a single logical connective in order to avoid the illegitimate procedure of piecemeal definition (5.451, 5.46, 5.47). He thinks that if we had to employ a plurality of connectives, then there would be insuperable problems over the order in which they should be introduced. For if we introduce one connective in advance of another, then we should not be able to take the latter for granted in giving the former's definition. Yet any adequate explanation of a connective must get across the significance, not just of attaching it to elementary propositions (or, in the case of the quantifiers, to elementary propositional functions), but also to propositions (and propositional functions), which themselves contain logical connectives. It seems that we should first have to explain the negation-sign as it applies to elementary propositions, for example, and then later redefine it as applying to general propositions once the quantifiers have been introduced; which is precisely piecemeal definition.

There is a perfectly real problem here, which had barely been recognized at the time when TLP was written. But it is simply false that we need a single ubiquitous connective in order to overcome it. For as has now long been recognized, we can achieve the same effect through the use of definitions which are recursive. (This was pointed out to me by Jack Copeland.)

PRINCIPLES OF INTERPRETATION CHAPTER 1

1 Here I am in agreement with Stenius (1960), ch. 1. See also the appendix in Favrholdt (1964).

2 I do not necessarily mean here our interests. For it may be that the author is not addressing issues with which we ourselves are concerned. I intend Charity to be a principle of historical interpretation rather than of rational reconstruction (a distinction I get from Janaway, 1988). Sometimes maximizing the interest of a text from the point of view of the author's contemporaries may mean minimizing its interest to us. But not, I think, in the case of TLP.

3 See ch. 4 for some examples.

4 In a letter to the publisher Ficker, Wittgenstein describes TLP as 'strictly philosophical and at the same time literary'. Quoted in McGuinness (1988), p. 288.

5 See the letter from Russell quoted by Blackwell (1981), p. 8.

- 6 See von Wright's 'Historical Introduction' in PTLP. McGuinness (1988, p. 265), however, conjectures the PTLP may have been written in the autumn of 1917.
- 7 For the conversations with Waismann, see Waismann (1979). For notes

- taken at Wittgenstein's Cambridge lectures, see Lee (1980), as well as Ambrose (1979) and Diamond (1976).
- 8 Wittgenstein's remark in the preface to PI explaining his desire to see PI and TLP published together in a single volume is certainly insufficient to establish that TLP can be identified with the 'Augustinian picture' which forms the target of attack throughout the early sections of PI. That PI can only be understood in contrast with TLP (with which I agree) does not mean that all its early remarks about Simples, names and so on necessarily refer to TLP doctrines. On the contrary, Wittgenstein may have used the 'Augustinian picture' as a convenient focus to bring out points both of agreement and disagreement with TLP. For further discussion see my (1984a).

9 See the Editor's preface to Wittgenstein (1979), pp. 12 and 15, and Wittgenstein (1974), pp. 114-18.

10 See von Wright's 'Historical Introduction' PTLP.

- 11 McGuinness (1988) argues that at the beginning of the summer Wittgenstein had been bent on suicide, only being disuaded from it by a chance meeting with his uncle Paul, who took an interest in his philosophy, and who offered him a home at Hallein in which to work (ibid. p. 264). This is consistent both with my claim of urgency, and with the corollary that Wittgenstein was not writing in a relaxed and leisurely frame of mind.
- 12 See von Wright's 'Biographical Sketch' in Malcolm (1958), pp. 12-13. See also the topics covered in PR, written between 1929 and 1930. Of course it is controversial to claim that Phenomenalism was a new

interest, since some interpret the simple objects of TLP to be sensedata. Arguments against this reading will be given in MT ch. 8.

13 The assessment is von Wright's, and is clearly correct. See Malcolm (1958), p. 20.

14 My impression is that Wittgenstein was always partly contemptuous of Russell as a philosopher; whereas Frege he revered from the beginning to the very end of his career.

CHAPTER 2 BACKGROUND: FREGE AND RUSSELL

1 Moore is mentioned at 5.541, Whitehead at 5.252 and 5.452, Kant at 6.36111 and Hertz at 4.04 and 6.361.

2 See his 1912 letter to Russell, Wittgenstein (1974), p. 9.

- 3 See von Wright's 'Biographical Sketch', in Malcolm (1958), p. 5. However Pears (1987) makes a convincing case for a direct influence at least in point of phraseology - of Schopenhauer on a number of the remarks in TLP and NB.
- 4 See Griffin (1964), ch. VIII. But it is possible that Wittgenstein only knew of Hertz's work via the account provided by Russell in ch. LIX of The Principles of Mathematics.

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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 occassionally 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