ible to find anything to contrast with external negation in connection with predicates. But this would be utterly mysterious. For if (some) predicates really did have reference, then what could prevent us asserting, of the referent itself, that it is not instantiated in some given individual?

Although a semantic theory which takes immanent universals to be the referents of predicates is not generally adequate, this is not to say that there might not be any purposes for which we are required to recognize their existence. For example, Armstrong has argued that they are needed to form part of an adequate theory of causation.9 Rejecting both Humean and Covering Law theories, he thinks that we should explain how two things can share the same causal power by appealing to the presence, in them, of an identical nature (the very same immanent universal). But there is nothing in what we have said above, nor in a non-referential semantics for predicates, which is inconsistent with such an account. For it is one thing to claim that immanent universals exist, and quite another to claim that they enter into semantics as the referents of predicates.10

Moreover, it may need to be conceded that some types of predicate - namely natural kind terms - do refer to immanent universals. For suppose we agree that nothing could be water which was not in fact made of H₂O, no matter how much it resembled it in everyday properties.11 Then the sense of 'water' must imply a description of the form 'has the same fundamental constitution as most of the stuff normally identified as water', and the canonical mode of verifying 'The Thames consists of water' would be to locate the Thames, to identify the internal constitution of most of the stuff normally called 'water', and then to establish whether the Thames had that very constitution. This would fit the referential model exactly.12

SUMMARY

A non-referential view of predicates is able to account for the intelligibility of second-level quantification just as well as its rivals. Yet it does not suffer from any of the difficulties which beset the alternatives. Hence the Picture Theory, as we have interpreted it, marks a decisive advance over the semantic theories of other philosophers, including Frege and Russell.

I have been concerned to argue that TLP contains a set of semantic doctrines which are actually correct, and which are at least sufficiently plausible that they collectively deserve to be accorded the status of a semantic paradigm - serving, like the Fregean paradigm, as a focus for contemporary discussion and debate. Tractarian semantics are best presented in the form six interconnected doctrines.

1 There is a distinction between semantic content on the one hand (which is both that of which knowledge is required for understanding, and that which is conveyed in literal communication) and senses on the other (which are the cognitive contents expressed in the idiolects of particular speakers, in virtue of the confluence of which an expression has the semantic content which it does). In one respect the sense of an expression is merely psychological, in that it may vary from person to person, and since mutual knowledge of it is not required for linguistic understanding. But it is nevertheless essential that anyone who understands an expression should associate with it some sense or other. For one cannot think about or refer to elements of reality directly, but can only do so via some mode of representation. The Tractarian paradigm thus combines an acceptance of Frege's view that sense determines truth-conditions, with rejection of his idea that mutual knowledge of sense is required for communication.

2 The identity-condition for semantic content, at least within factual discourse, is sameness of truth-condition (or of contribution to truth-conditions). Hence all analytically equivalent sentences, and all atomic sentences making equivalent predications of the very same individuals, possess the same semantic content (say the very same thing). Mutual knowledge of truth-conditions then suffices for
understanding, despite the fact that speakers may attach widely differing senses to their sentences. The Tractarian paradigm thus combines referential and possible-worlds semantics on the one hand, with the claim that semantic content is determined by speakers' modes of thinking on the other.

3 Platonism is false, whether about propositions (senses) or universals. Thinking cannot consist in the subject coming to grasp a necessarily existing proposition, since there is no way of rendering intelligible how such an entity could guide a thinker's behaviour in the manner in which a cognitive content is supposed to do. Nor can thought involve reference to necessarily existing universals, both because of the problem of cognitive access between such entities and the human mind, and because universals fail to figure in the canonical modes of verification of atomic sentences, thus running foul of the principle of Semantic Relevance.

4 Private thinking and public language-using are isomorphic. Both are on a par with one another, consisting in structured arrangements of sign-tokens which are projected onto the world by virtue of the thinker/speaker's classificatory and identificatory capacities. Neither is logically prior to the other: it is not conceptually impossible for there to be a creature lacking a public language who is capable of conscious thinking, but nor are public utterances rendered meaningful by the thoughts which accompany them. In both cases the connection with the world is effected by the subject's capacities for the use of the component signs. (Whether such an account of the manner in which truth-conditions are determined is capable of underpinning our belief in the objectivity of truth, will be investigated in the sequel to this book, where I argue for a positive reply. See MT chapter 15.)

5 As for proper names (and singular referring expressions generally), besides possessing a logical grammar which may be shared by many different names, the distinctive semantic content of any particular name is exhausted by its reference. Yet each name will express a sense - a mode of thinking about its bearer - in the idiolect of any speaker who understands it, in virtue of which it comes to have, for that speaker, the reference which it does. So reference is determined by fit with the mode of thinking which a speaker associates with a name, which may include recog-nitional capacities as well as implying definite and indefinite descriptions. Yet mutual knowledge of (any aspect of) modes of thinking is unnecessary for communication.

6 Predicates and relational expressions (and indeed all other types of word which make a contribution to semantic content, except singular referring expressions, and perhaps also natural kind terms) lack reference. They serve rather to express rules for determining the truth-values of sentences; one-place predicates, for example, expressing rules for mapping objects onto truth-values in virtue of the property-tokens which those objects possess. Yet even here the distinction between sense and semantic content can be made out, since there may be a number of predicates which differ in cognitive content while nevertheless being analytically equivalent; in which case the differences between them will have no significance for factual communication.

I have argued, in as much detail as space has permitted, that these six doctrines are actually correct. At any rate they are clearly defensible, and are indeed superior to the doctrines of the Fregian paradigm with which they should be contrasted. However, in the above presentation of Tractarian semantics I have engaged in the fiction that its claims are restricted to factual discourse. This is false to Wittgenstein's intentions, but necessary to preserve truth. If we are to extend the theory to cover the contents of sentences belonging to all forms of discourse, then we need a concept of semantic content which is purpose-relative. I therefore propose that the Tractarian paradigm should be emended through the addition of a seventh doctrine.

7 The semantic content of a token utterance is relative to the purposes operative in the context of that utterance. In order to understand (know the semantic content of) someone's utterance on a given occasion, it is both necessary and sufficient that you know sufficiently much about the mode of thinking expressed by that utterance for the purposes in hand. In a priori discourse the condition for understanding will be mutual knowledge of sense
(cognitive content); in imperative discourse it will be mutual knowledge of causal equivalence; and in other modes of discourse, and in other contexts, the identity-conditions for semantic content may be different again.

Thus emended, the one respect in which the semantics of TLP deviates from the above paradigm concerns its treatment of ordinary proper names. For at the same time as endorsing thesis 5 above, Wittgenstein thinks that the semantic content of ordinary names may be subjected to analysis, holding that they may be replaced by descriptions of the manner in which their bearers are constructed out of their parts. Here he overlooks the distinction between conceptual and metaphysical necessity. For while it may plausibly be claimed in connection with at least some types of physical object that the manner of their construction out of their parts is metaphysically necessary, it certainly is not conceptually or analytically so. This additional doctrine of Wittgenstein's is thus best quietly dropped, the question of why he might have felt himself obliged to maintain it being held over to the sequel. The answer in fact lies deep within the foundations of the TLP programme of analysis (see MT chapters 7 and 12).

Notes

1 I here assume that there are issues and problems which are a-historical, at least in the limited sense of being the common property of philosophers belonging to different philosophical eras. But this is not to say, of course, that all issues are a-historical in this sense. Sometimes coming to understand a past philosopher's treatment of (what one takes to be) a given issue, one will discover that it was not really the issue they were addressing, but rather one which is now of merely historical interest.

2 It is remarkable how many commentators have undervalued the influence of Frege on TLP, as a glance at the comparative frequency with which Frege and Russell are mentioned in their indexes will reveal. In some cases—e.g. Malcolm (1986)—he is not even mentioned at all. Distinguished exceptions to this trend are Angove (1959) and Griffin (1964).

3 I strongly disagree with McDonough (1986), who believes that all the main features of Wittgenstein's semantic system can be demonstrated from the thesis that the logical connectives do not refer, together with a characterization of the nature of tautologies. One telling point against him, is that the argument he attributes to Wittgenstein simply helps itself to the thesis that all necessary propositions are tautologies; whereas this clearly needs arguing for, and indeed presupposes a whole programme of analysis which must receive its justification from elsewhere (see MT chs. 7 and 13). Another point is that even granting McDonough's account of the nature of tautologies (which is in fact only partly accurate—see ch. 6), his attempt to demonstrate all the other features of TLP is extremely weak. For example, his argument to show that all genuine propositions are contingent (ibid. pp. 77–9) can only succeed by making assumptions about what it is to say something which would need to be independently argued for; and once such an argument is provided, we can in fact derive the thesis that all genuine propositions are contingent without having to appeal to the nature of tautologies (see chs. 5–7).

4 Fogelin points out in his (1976) that Wittgenstein's account of the quantifiers is expressively inadequate, there being no way in which the N-operator can be used to construct propositions of mixed multiple generality, such as '∃x∀yFx'; although Grach shows in his (1981) how this defect may easily be remedied. More seriously, Fogelin also shows