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For my mother and father

The jewels of truth have been so often imported by others, that nothing was left for me to import but some splendid things that at a distance looked every bit as well.

Oliver Goldsmith
The Vicar of Wakefield

The depths of anti-realism to which one must sink will be directly proportional to the rigour with which the arguments are pursued.

Jan Zwicky
Lyric Philosophy

P R E F A C E

Geologists report that 250 tonnes of rock must be shifted in order to find a one carat diamond. I am certain that at least 250 tonnes of paper must be shifted in order to discover one good new idea. In the more than a dozen years I have been thinking about theories of truth, I must have sorted through very nearly that much paper. I do not mention this in the hope of generating sympathy for my labours. On the contrary, I agree with Congreve's remarks in the Prologue to *The Way of the World*. There he states that, when an author reports his writings to be the result of painful toil,

...if they're nought ne'er spare him for his Pains:
Damn him the more; have no Commiseration
For Dulness on mature Deliberation.

I simply want to let readers know that, if this essay contains no new ideas, it is not for want of looking. The trouble is that, at this late date in philosophical history, the pit-face of knowledge has been pretty well picked over. Perhaps, in my search for gems, I have only found some splendid things that, at a distance, look every bit as well.

If I have any new ideas, my friends and colleagues (two classes with many members in common) deserve much of the credit. In the course of writing this essay I greatly profited from their comments and criticisms. While they seldom share my ideas, their criticisms have enabled me to strengthen my position, which was probably the last thing they wanted. First and foremost I must thank Edwin Mares. He was always just down the hall as I was writing and he was always willing to discuss any problems which arose. He kindly read each

chapter as it was completed and offered constructive criticisms. (I soon learned to give him a chapter when he wanted an excuse to avoid grading some of his students' papers.) Given that Ed is completely out of sympathy with my views, his generosity with his time is all the more remarkable. Among my other colleagues in Victoria, Charles ("Danny") Daniels and Jeffrey Foss also deserve thanks. Danny read part of the manuscript and offered thoughtful and helpful objections. Danny and Jeff both asked probing questions at the departmental colloquia at which I presented some of the ideas in this book. During the 1992-93 academic year, we were privileged at the University of Victoria to have Steven Burns as a member of our department, while he was on sabbatical from Dalhousie. Steven, a model colleague, read the entire manuscript very closely, discovering more spelling, typing and grammatical errors than I would have thought possible. More importantly, he possesses a keen eye for the missing premiss as well as the missing word, and his vigilance helped me to improve my arguments immensely. Steven also checked my French. Our departmental secretary, Sandra Chellew, did not type a word of the manuscript but she still deserves thanks for help with the more arcane features of PCs and for cheerfully printing numberless drafts.

Among the others who deserve thanks are my friends William Campbell, R.L. Simpson, and Sheldon Wein. William Campbell, one of my former students, read and made valuable comments on a number of drafts. Although he was once my student, I regard him now as a colleague upon whose judgement I can rely, and he helped me improve this essay in a number of ways. He will receive his Ph.D. from the University of Toronto at about the time this book appears in print. I advise any department with a vacant position to hire him immediately. Dick Simpson saved me from a serious error in my formulation of the argument of Chapter Two and his comments on the penultimate version of the typescript helped streamline the argument. Most generously, Dick worked for hours preparing the camera-ready copy of this book. Sheldon Wein read and made detailed comments on the entire manuscript. He and I then spent an entire winter afternoon discussing it in a beach-front cafe in White Rock.

Some of the ideas expressed in this essay first took shape during my year (1987-88) as a Research Fellow at Melbourne University and I thank the Melbourne Philosophy Department for their generous hospitality during my stay in Australia. It is easily the friendliest philosophy department with which I have ever been associated. Barry Taylor and Allen Hazen, in particular, were always willing to discuss my work and their comments helped me refine my ideas. While I am speaking of the antipodes, I should say that thanks are due to J.J.C. Smart. For some years we have corresponded on a variety of issues, including some of those discussed in this essay. Although our views could scarcely be more opposed, Jack has always been a source of encouragement. I must also say that he is that rarest of birds: an Australian who responds

promptly to letters. Another Australian who deserves thanks is Peter Davson-Galle. He kindly sent me criticisms of some of my earlier work which helped me improve this book, particularly §22.

A few sections of this book draw upon previously published material. Section 4 is loosely based on “Global Anti-realism,” *Philosophy and Phenomenological Research*, 47 (1987). “The Metaphysics of Anti-realism,” *Metaphilosophy*, 23 (1992), is the source of most of the ideas in §5. Section 9 incorporates a few passages from “Coherence, Anti-realism and the Vienna Circle,” *Synthese*, 86 (1991). Sections 16 and 17 are most closely based on earlier work. They are a reworked version of “Holism and Meaning,” *Erkenntnis*, 37 (1992). A few sentences from “Relatively Speaking: The Coherence of Anti-realist Relativism,” *Canadian Journal of Philosophy*, 16 (1986) survive in §22. I am grateful to the publishers of these journals for permission to draw upon my earlier work. The material from *Synthese* and *Erkenntnis* is reprinted by permission of Kluwer Academic Publishers. Where the arguments offered in this essay differ from those in earlier publications, my earlier views are superseded.

This is the traditional place to thank one’s wife for her assistance and encouragement. I would avail myself of the opportunity to express such thanks but, unfortunately, I am not married. Instead, I would like to say, with a nod to Stephen Potter, that this book is for PHYLLIS, in the hope that one day God’s glorious gift of sight may be restored to her.

Victoria, Canada, 1994

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C H A P T E R O N E

What Is Global Anti-realism?

§1. WHAT IS TRUTH?

For centuries, philosophers have been asking themselves the question, ‘What is truth?’ Their efforts to answer this question cannot be said to have met with unqualified success. Given that philosophers have made such indifferent progress in their efforts to understand truth, the time has come to consider accepting the radical position presented in this essay: global anti-realism. In recent years, investigation of the nature of truth has frequently taken the form of inquiry into the relative merits of the realist and anti-realist conceptions of truth. Realism is the view that the truth of sentences is objective and independent of what speakers of the sentences can know, while anti-realism links truth to what can be known. A good many varieties of realism and anti-realism have been embraced and even more have been entertained. Realism has, perhaps, received the most backers but a fair number of philosophers have been willing to bet that anti-realism gives the best account of the truth of restricted classes of sentences. Global anti-realism, the view that the truth values of all sentences depend on what can be known, has been a decidedly dark horse. So dark, indeed, that it is frequently dismissed as incoherent and a non-starter. In fact, this unfancied position is a serious contender.

Before there can be any argument for global anti-realism, the terms of the debate must be clarified. Philosophers have been debating under the appellations ‘realism’ and ‘anti-realism’ for millennia. The striking feature of the current debate is that it is no longer always very clear what is at issue or even whether anything at all is at issue. A review of the proceedings will reveal a bewildering array of positions. If Arthur Lovejoy once distinguished thirteen varieties of pragmatism, he can be done (at least) one better when it comes to

realism. Internal, interior, external, semantic, epistemic, epistemological, empirical, scientific, pragmatic, naive, sophisticated, technical, intuitive and metaphysical realisms are all to be found in the literature. Very likely there are as many species of anti-realism. Most of these distinctions were introduced in efforts to illuminate the issues at stake but the net result has not been revelatory. The failure of these efforts notwithstanding, the rival positions themselves must be clarified before the debate can be resolved.

The bulk of §1 of this essay is, therefore, devoted to giving an account of realism and anti-realism. Although I think that I capture the essence of these positions as they have lately been discussed, notably by Michael Dummett, I do not claim to capture anyone's view in the positions I delineate. I mean simply to describe two philosophically interesting positions. Section 2 indicates how to choose between the two positions. Section 4 deals more specifically with the lineaments of global anti-realism and §5 is devoted to distinguishing between realism and anti-realism, as these terms are understood here, and metaphysical debates between other species of realists and anti-realists. Another, even more fundamental issue needs to be addressed before a resolution to the debate can be attained. This issue is the subject of §3. Perhaps because efforts to adjudicate between rival conceptions of truth have met with such indifferent success, a number of commentators have come to the conclusion that the whole debate is concerned with a pseudo-problem. Realism and anti-realism are both accounts of the property of truth but an increasingly large number of philosophers are persuaded that there is no such property. Consequently, a discussion of the debate should indicate that there really is something to be debated. Only when these preliminary problems have been resolved can the case for anti-realism clearly emerge.

Realism and anti-realism, as the terms are understood here, provide answers to the question, 'What is truth?' An answer to this question has at least three distinct parts. An answer should begin by specifying the sorts of items which are the bearers of truth values. An answer should, that is, indicate the sorts of things to which the predicates 'true' and 'false' are properly applied. The second, crucial stage of an answer gives an account of the property which is being predicated of truth bearers. Both realists and anti-realists can agree that truth and falsity are relational properties. That is, a truth bearer possesses the property of being true (or false) if and only if it stands in a given relation to the conditions under which it is true. Consequently, the second question about truth divides into two. The first is concerned with the nature of the conditions to which true sentences are related. Call the conditions to which, when true, a sentence stands in the appropriate relation, its truth conditions. The third part of an answer to the question will explicate the relation between truth bearers and truth conditions. The relation between a truth bearer and its truth conditions will be called a semantic relation.

Here I have little to say about the first part of the answer to the question,

‘What is truth?’ Three categories of candidates have been proposed as the bearers of truth values. One category consists of mental items: thoughts, beliefs or judgements are said to be true or false. According to some writers, truth bearers are linguistic items: (declarative) sentences or statements. Finally, certain sorts of abstract entities, particularly propositions, have been thought to be the bearers of truth values. A proposition is supposed to be that which is expressed by a sentence. So, for example, ‘The cat is on the mat’ and ‘*Le chat est sur le tapis*’ are supposed to express the same proposition. This proposition is supposed to be the sort of abstract thing that would exist even though neither sentence was formulated. Sentences and beliefs are simply graphic, phonetic or mental representations which can go in and out of existence but propositions are supposed to be eternal. Those who think of propositions as truth bearers tend to think of them as existing in the way platonists think numbers exist. I am sceptical about the existence of propositions since I incline to the naturalist view that only physical objects and their properties exist. Since propositions neither are, nor are properties of, physical objects, they are not countenanced by a naturalistic ontology.

Propositions have been introduced primarily to capture the intuition (not universally shared) that truths are eternal, that is, the belief that if some truth bearer is true, it always has been and always will be, whether or not anyone ever knows that it is. (Sentences, such as ‘The cat is on the mat,’ which refer to particular times or places need to be relativised to time and place, but the realist believes that, once this is done, such sentences have their truth values just as eternally as any others.) Consequently, only realists are likely to find propositions attractive candidates for the bearers of truth values. Anti-realists are not committed to the eternity of truth and have no need of propositions. Anti-realists can opt for either a mental or linguistic account of truth bearers. For now, and for the sake of convenience, I will talk about declarative sentences (or, more briefly, simply of sentences) as truth bearers. I favour sentences as the bearers of truth values in part because I hold that to have a belief is simply to hold a sentence to be true. The more important reasons for believing that truth bearers are sentences will emerge in the course of the argument for global anti-realism. In the coming chapter we will see that semantic relations can only obtain between something publicly accessible, such as a sentence, and truth conditions. Those who are inclined to believe that truth-bearers are some sort of mental item can, however, accept most, if not all, of what I have to say about truth conditions and semantic relations.

Realists and anti-realists part company in earnest when they come to discuss the question concerning the nature of the property of truth. The first step in answering this question is to determine whether truth is a relational or an intrinsic property. There is room for some agreement between realists and anti-realists: they can both hold that truth is a relational property. The difference between relational and intrinsic properties is best explicated by

means of examples. The property of being round is an intrinsic property since something round does not depend on anything else for its roundness. Objects possess other properties, however, only in relation to something else. Something cannot, for example, possess the property of being loved unless someone loves it. Truth is a relational property since a sentence cannot be true except in relation to certain truth conditions. A sentence possesses the property of being true if and only if its truth conditions obtain. A sentence is false, on the other hand, if (and only if) these conditions fail to obtain. (Realists will hold that the failure of a sentence's truth conditions to obtain is necessary and sufficient for its falsity. For reasons which will soon emerge, anti-realists think that this failure is merely necessary for the falsity of a sentence.) The crucial difference between realism and anti-realism is to be found in their differing conceptions of these truth conditions.

The essential feature of realism is the claim that the conditions under which sentences are true are objective. In other words, according to realism, sentences have objective truth conditions. The truth conditions of a sentence are objective just in case the conditions may obtain even though speakers of the sentence cannot know that they do. A sentence is true, realists maintain, if and only if these objective conditions obtain. Realism can, perhaps, best be characterised as, very simply, the view that the world, without regard to our capacity to determine how it is, determines which sentences are true. So, for example, realists believe that the sentence, 'The cat is on the mat' is true if and only if a set of objective conditions exists which consists of the cat on the mat. In saying that these conditions are objective, realists commit themselves to the view that the sentence in question would still be true even if no one could detect that the cat is on the mat. This would be the case, perhaps, because the cat and mat were in some remote part of the universe, inaccessible to humans.

The central feature of anti-realism is the belief that the truth conditions of sentences (in some class) are, in all cases, recognisable or detectable by users of the sentences. Contrary to what realists claim, anti-realists believe that if the truth conditions of some sentence obtain, then, at least potentially, speakers can recognise that they do. Of course, it is incumbent upon anti-realists to indicate precisely what they mean by 'potentially' in this context. Anti-realists will also need to specify the sorts of conditions which speakers are able to recognise. Disagreement on this point leads to schisms within the anti-realist camp. In general, however, a sentence is true, on the anti-realist view, if and only if certain recognisable conditions obtain. A general feature of anti-realism is that it blurs the distinction between a sentence's being true and a sentence's being warranted. On the anti-realist view, the conditions under which a sentence is true are the conditions which speakers can (potentially) recognise as warranting the sentence.

A good example of the disagreement between the realist and anti-realist accounts of truth conditions is found in their treatment of sentences about the

remote past. A realist will hold that some such sentence is true if and only if the sentence is appropriately related to objective conditions which obtained in the past. The anti-realist, on the contrary, holds that the truth of some sentence about the past depends on the existence of historical evidence for the truth of the sentence. According to anti-realists, without such evidence, which gives speakers the capacity to recognise the truth of the sentence, the sentence cannot be true. According to realists, the sentence can be true in the absence of any evidence for its truth. If evidence becomes available, it simply warrants the assertion of the already existing truth. Anti-realists, on the other hand, hold that a truth comes into being when the proof becomes available.

Since realists and anti-realists differ about the nature of truth conditions, they differ about two fundamental properties of truth. In particular, realist and anti-realist conceptions of truth conditions lead to different views about the principle of transcendence and the principle of bivalence. According to the principle of bivalence, if a sentence does not possess the property of being true, then it possesses the property of being false and vice versa. In other words, every sentence is either true or false. Dummett has frequently suggested that one's attitude to the principle of bivalence makes one a realist or an anti-realist. In fact, the acceptance or rejection of the principle is a consequence of a more basic commitment to objective truth conditions. The principle of transcendence, on the other hand, states that truth may transcend what can be known or what speakers can be warranted in asserting. That is, a sentence can possess the property of being true, even though users of the sentence are unable to determine whether or not the sentence has this property. Realists accept both of these principles while anti-realism entails that both principles are to be rejected.

The principles of transcendence and bivalence are direct consequences of the realist view that truth conditions are objective. Consider first the principle of transcendence. If a sentence is true just in case certain objective conditions obtain, and objective conditions may be undetectable by speakers of the sentence, then truth is a property which a sentence can have independently of anyone's capacity to know that it has the property. Realists are similarly committed to the principle of bivalence and to the view that every sentence is either true or false. According to the realist, if the objective truth conditions of a given sentence obtain, then the sentence is true. If these objective truth conditions do not obtain, then the objective truth conditions of a contrary sentence obtain and this sentence is true. Since a sentence and a contrary sentence cannot both be true, the given sentence is false. Consequently, the realist is committed to the principle of bivalence.

The phenomenon of vagueness might seem to undermine the principle of bivalence, even for the realist. For example, a sentence such as 'Geoffrey is bald' might seem to be neither true nor false. Geoffrey's hair is thinning, say, but it is not clear that he is yet bald. Our reluctance to say that the sentence is

either true or false arises since we are not sure about the precise conditions under which to apply the predicate 'bald.' Realists will not, however, regard vagueness as a serious threat to the principle of bivalence. They will maintain that any sentence whose meaning is sufficiently carefully circumscribed is either true or false. Suppose, for example, that we decide to call people bald only if two or more adjacent square centimetres of their scalps are completely devoid of hair. The sentence 'Geoffrey is bald' will then have a determinate truth value. The realist believes that, if we are careful enough in specifying the truth conditions of sentences, they will all be true or false.

The anti-realist conception of truth conditions leads to the rejection of both the principle of transcendence and the principle of bivalence. If the truth conditions of sentences are recognisable, the principle of transcendence fails since there are no true sentences which cannot be known to be true. In other words, if a sentence has the property of being true, speakers can know that it does. On the other hand, the principle of bivalence fails since, for a given undecidable sentence, speakers can know neither that the given sentence nor any contrary sentence is true. Since the given sentence cannot be known to be true, the anti-realist reasons, it cannot be true. It does not follow, however, that the sentence is false. If a given sentence is false, some contrary sentence is true. But, in the cases of some sentences, no contrary sentence can be known to be true either. Therefore, the given sentence is neither true nor false. For example, speakers can know neither that 'Jane Austen wrote ten sentences on November 17th, 1807' is true nor that it is false. Neither, however, can any contrary sentence be known to be true, even if some contrary sentences can be known to be false. (Some contrary sentences, for example that which states that she wrote a billion sentences, can be known to be false, given what we know about human physiology and the length of days.) The initial sentence is, anti-realists conclude, not false. So the anti-realist view that sentences have recognisable truth conditions entails that some sentences are neither true nor false and the principle of bivalence is rejected.

Realists frequently charge that anti-realists have simply changed the topic: they claim to be illuminating the concept of truth but they are really talking about warranted assertability or something else other than truth. Realists might claim that they mean by 'truth' a property which sentences may possess independently of what anyone can know. In making such a claim, realists are on no firmer ground than the physicist who says that atoms are indivisible because the word means 'uncuttable.' Anti-realists claim that sentences never have had the property attributed to them by realists and the issue cannot be decided by appeal to meanings any more than issues in physics can be so decided. Of course, anti-realists could replace talk of truth by talk of some other property. They could, like Otto Neurath, include 'truth' on an *index verborum prohibitorum*. Certainly, physicists sometimes decide that they were so wrong about some matter that they need a new set of concepts and

philosophers might do the same. Even if anti-realists are right, however, they are still discussing the property possessed by sentences which are rightly assertable and this has usually been called truth. It is clear that we cannot do without the distinction between sentences which are rightly assertable and those which are wrongly assertable. Without this distinction, the very concept of meaning and the possibility of communication are undermined. It is convenient to have a word to describe the property possessed by sentences which are rightly assertable and lacked by those which are not rightly assertable. 'Truth' seems as good a word as any. Still, anyone who prefers some other word can substitute it for 'truth.'

Plainly, someone can be a realist with respect to some classes of sentences and an anti-realist with respect to other classes. So, for example, someone might be an anti-realist about mathematics but a realist with respect to sentences about the physical world. Such a person would hold that a mathematical sentence is true if and only if a proof of the sentence is available but concede that sentences about the physical world, even ones about inaccessible regions of space, are true just in case some objective conditions obtain. Such a person is a partial anti-realist and, naturally, a partial realist. Other common forms of partial anti-realism include anti-realism concerning sentences about the remote past, the future and other minds. Someone can be an anti-realist about any one of these classes and yet a realist in all other cases. Someone who believes that all classes of sentences have objective truth conditions, and who believes that the principles of transcendence and bivalence apply to all classes, is a global realist. A global anti-realist, of course, believes that the truth conditions of all classes of sentences are recognisable by speakers of the sentences and that the principles of transcendence and bivalence apply to no classes of sentences.

The third part of an answer to the question, 'What is truth?' is concerned with the nature of the semantic relations between sentences and their truth conditions. The first issue here is whether semantic relations are conventional or non-conventional. A non-conventional relation holds between items in virtue of the properties that they themselves possess. So, for example, an object stands in a non-conventional relation to another when it is heavier than the other. One object stands in the relation of being heavier than another simply because one of the objects has the property of being a given weight while the other has the property of having some lesser weight. This non-conventional relation holds independently of whether anyone believes that it does. Conventional relations, on the other hand, are not independent of someone's perspective. For example, some object stands in a conventional relation to another when it is preferred to the second thing. In this case the relation depends on someone's preferences and not merely on the properties of the two objects.

Someone could argue that semantic relations are non-conventional. The

relation between a picture and what it represents is, arguably, a non-conventional relation: the picture is a representation of something since it bears some inherent (visual) resemblance to that thing. Philosophers could hold that sentences stand to things in some resemblance relation. If they are right, a semantic relation could be a non-conventional relation. This view is quite heroically implausible: semantic relations are clearly conventional. There is nothing about the phonetic or graphic properties of, say, 'The cat is on the mat' in virtue of which it stands in a semantic relation to its truth conditions. The reflection that the same phonetic or graphic string could, in another language, have quite different truth conditions is enough to establish this point. Sentences stand in semantic relations to the conditions they do because of the way in which speakers use the sentences. If speakers altered their use of some phonetic or graphic string, it would no longer stand to some conditions in the same semantic relations. (The string could, however, continue to stand in at least some of the same non-conventional relations: the relation of having more words than some other sentence, for example.) As a result of the use speakers make of some sentence, it stands to its truth conditions in the conventional relation of being true if and only if those conditions obtain.

The recognition that semantic relations are conventional relations of this sort provides only a small part of a complete response to the third part of the present question and the story can be finished in a variety of ways. The most obvious way for realists to finish the story about semantic relations involves some version of the correspondence theory of truth. This may seem like a controversial claim, given that the correspondence theory has been widely criticised in recent years by, among others, many writers who consider themselves realists. The puzzle disappears when it is realised that a large number of very different theories have been called correspondence theories of truth. Usually those who advertise themselves as critics of the correspondence theory only reject some specific version of the theory, to which they give the general name. Here, 'the correspondence theory of truth' is used to describe any theory according to which a semantic relation is a conventional relation between truth-bearers and objective conditions. This conventional relation is established when speakers adopt the practice of asserting a sentence only when certain objective conditions obtain. When the theory is defined in these terms, many who have been critical of some version of correspondence theory count as correspondence theorists. Dummett has insisted that realism and the correspondence theory are separable but, given this account of the theory, some version of the correspondence theory of truth is unavoidable if realism is correct.¹ Realists have, however, considerable leeway when they come to fill in the details of the theory. On one version of the theory, the semantic relation between a sentence and its truth conditions is to be analysed in terms of reference relations between the constituent parts of the sentence and the objects of which the objective conditions consist. Alternatively, realists can

maintain that sentences as a whole stand in semantic relations.

Anti-realists also have a number of options when they come to give an account of semantic relations. Disagreements within the anti-realist camp about semantic relations are the result of the differing accounts anti-realists give of truth conditions. According to some (partial) anti-realists, truth conditions are simply conditions which speakers can experience. These conditions may be a subset of the truth conditions realists posit. Given this account of truth conditions, the anti-realist account of semantic relations will closely resemble the realist account. The principal difference would be that semantic relations can only hold between sentences and recognisable conditions. A consequence of this restriction would be that the principles of bivalence and transcendence would not apply to selected classes of sentences, namely those without observable truth conditions.

Some versions of anti-realism will, however, lead to a dramatically different account of semantic relations. Suppose that a coherence theory of knowledge is correct. According to such a theory, a sentence is warranted if and only if it can be inferred from, or is otherwise supported by, some system of sentences which speakers hold to be true or, what may be called, a system of beliefs. On this view, the conditions speakers recognise, when they assert sentences, are the conditions under which sentences cohere with a system of beliefs. Now, if the truth conditions of sentences are conditions speakers can recognise, the truth conditions of sentences will be provided by a system of beliefs. On this view, sentences will stand in semantic relations to beliefs or to other sentences which are held to be true. If this is the case, the correct account of semantic relations will suggest the coherence theory of truth. On such a theory, semantic relations are conventional relations between sentences in a system of beliefs and not relations between sentences and objective conditions.

§2. HOW TO ANSWER THE QUESTION

The previous section gives us working definitions of realism and anti-realism. Realism is the view that truth is the property of a truth bearer which results from a conventional semantic relation between that truth bearer and some objective conditions. This semantic relation can hold between the truth bearer and the truth conditions independently of anyone's capacity to know that it does. As a result, a truth bearer can possess the property of being true independently of anyone's capacity to know that it does and, if a truth bearer fails to be true, then it is false. Anti-realism, on the other hand, is the view that truth is a property of sentences which results from a conventional semantic relation between sentences and recognisable conditions. If a sentence possesses the property of being true, users of the sentences can know that it does but if a sentence does not possess the property of being true, it may or may not be false.

This understanding of realism and anti-realism makes clear what has to be done, if we are to answer the question, 'What is truth?' The key to providing an answer is found in the realisation that semantic relations between sentences and truth conditions do not just happen. They need to be established by speakers. Moreover, once established, the existence of semantic relations should be apparent in the use speakers make of their sentences. This being the case, we need to ask two questions of any theory about truth. The first question asks whether speakers are able to establish the sort of semantic relation posited by a theory. Obviously, a theory must be mistaken if it posits the existence of semantic relations which speakers cannot establish. The next question to ask concerns whether there is anything in the linguistic behaviour of some speakers which indicates that a semantic relation actually obtains between their sentences and the truth conditions posited by a theory of truth. We should be wary of a theory which states that semantic relations are established by the use speakers make of sentences but which also says that nothing in the speakers' linguistic behaviour indicates the existence of certain semantic relations. Since semantic relations are conventional, and dependent on how speakers use their language, we need only examine how speakers use their language. If speakers use their language in such a way that they can establish, and manifest the existence of, conventional semantic relations between sentences and objective conditions, then realism is correct. On the other hand, if speakers use sentences in such a way as to establish, and manifest the existence of, semantic relations between them and recognisable conditions, then anti-realism is correct.

Interestingly, if propositions were the bearers of truth values, truth bearers would stand to their truth conditions in a non-conventional relation. Recall that propositions are supposed to bear truth values eternally: they were bearing truth values before any linguistic community existed and will continue to bear them after all speakers have disappeared. A given proposition is supposed to have had its truth value before any speakers established a conventional semantic relation between the proposition and its truth conditions. If propositions are not endowed with truth values by the establishment of conventional relations, it is hard to see how they do get their truth values. In the absence of any intentionality or linguistic practice, a proposition cannot be about anything. This is one of the many problems with the view that propositions are bearers of truth values.

The basis of anti-realism is the premiss that cannot establish semantic relations between sentences and conditions which they cannot detect. Anti-realists will also maintain that nothing in the linguistic activity of speakers can possibly manifest the existence of semantic relations if the conditions to which sentences are supposedly related are undetectable. After all, the obvious way to establish and display the existence of a semantic relation is to use some sentence only when certain conditions obtain. If the conditions are undetectable, speakers will have no idea about when to assert the sentence.

Realists, on the other hand, hold that establishing semantic relations between sentences and detectable objective conditions is unproblematic. When objective conditions are undetectable, they are forced to display a little more ingenuity but, they believe, there are ways to establish the semantic relations. Even if speakers cannot detect objective conditions, they can still know what these conditions are. This knowledge is sufficient, realists believe, to enable speakers to establish a relation between the sentence and the objective conditions.

The debate between realist and anti-realists can, alternatively, be characterised as a conflict between rival conceptions of meaning. Realists and anti-realists can agree that the meaning of a sentence consists in its truth conditions. In other words, both camps can hold that speakers who know the meaning of a sentence, that is, who understand it, know the conditions under which it is true. A number of writers have suggested that realism depends on the view that meanings consist in truth conditions but anti-realism relies on a verification theory of meaning. For now, the question of whether a theory of meaning should be verificationist or truth conditional is an open question. Chapter Three returns to this question and presents the case for thinking that meanings consist in recognisable truth conditions. Here we need only note that only if meanings consist in truth conditions can reflection on meaning help resolve the present debate.

Suppose, then, that meanings consist in truth conditions. Realists and anti-realists agree on this much but disagree about the nature of these conditions. Suppose that some sentence means that certain objective truth conditions obtain. If so, the sentence is rightly assertable, or true, just in case the conditions do obtain and false otherwise. The sentence will be rightly asserted regardless of whether speakers can detect these conditions. On the other hand, suppose that a sentence means that given recognisable truth conditions obtain. The sentence will be true just in case those recognisable conditions actually obtain. If a sentence means that some recognisable conditions obtain, it makes no sense to say that the sentence might be true even though these recognisable conditions do not obtain. Neither does it make any sense to say that the sentence could be false even though the conditions do obtain. Consequently, realism will be correct if the meaning of a sentence consists in objective truth conditions and anti-realism is correct if the meaning of a sentence consists in recognisable conditions.

The only way to determine who is right involves reflection on what speakers know when they know the meaning of, or understand, a sentence. There are two questions to ask about theories of meaning, parallel to the two questions asked about the accounts of semantic relations given by theories of truth. In assessing a theory of meaning, we need to ask whether speakers are able to acquire the knowledge of meaning which the theory attributes to them. Plainly, speakers cannot possess an understanding which they could not

acquire. Since the ability to use a language is a practical ability, it is also necessary to ask whether speakers are able to manifest, in their linguistic activity, an understanding which consists in a knowledge of the sort of truth conditions in which meanings are supposed to consist. If the ability to understand a sentence is a practical ability, that is, an ability to use a language, any understanding speakers possess should be manifest in the use they make of their sentences.

The key arguments for anti-realism turn crucially on the fact that the truth conditions posited by realists are not always detectable. The meaning of a sentence can only consist in a given set of conditions if speakers can learn to assert the sentence when, and only when, these conditions obtain. Anti-realists hold that speakers cannot learn to assert sentences under conditions which they are incapable of detecting. It is reasonable to suppose that learning the meaning of a sentence is a matter of learning to assert it only when certain conditions can be seen to obtain. In effect, the meaning of a sentence is captured by a rule which says that the sentence can be rightly asserted only when certain conditions can be detected. If some conditions cannot be detected, the meaning of a sentence cannot be learned by mastering such a rule. Objective truth conditions cannot, realists admit, in all cases be detected. Anti-realists conclude that the meanings of sentences cannot consist in objective conditions. Rather, they must consist in conditions speakers can detect. The anti-realist account of meaning depends crucially upon epistemological considerations about what speakers can know.

§3. THE DEFLATION OF TRUTH

Before proceeding any further we should come to grips with the fundamental question about the debate between realists and anti-realists which was mentioned at the beginning of §1. A number of writers have alleged that a complete account of the concept of truth does not make any mention of the issues raised by realists and anti-realists. Realists and anti-realists agree that all true sentences share some property: they disagree only about the nature of the property they possess. In this sense, both positions present what may be called *substantial theories of truth*. The alternative to a substantial theory is a *deflationary theory of truth*. According to such a theory, realists and anti-realists have erred in seeking a philosophically interesting property shared by all true sentences. Advocates of such theories can adopt one of two perspectives on truth. They can adopt the hard-line deflationary perspective which says that truth is not a relational property at all. According to a somewhat more modest position, the truth of a sentence has something to do with its relations to truth conditions but true sentences do not share some relational property.² Realists and anti-realists need to close ranks long enough to establish the need for a substantial theory of truth. They can then resume their

accustomed bickering.

Advocates of a deflationary approach may suggest that their opponents have been led astray by a mistaken analogy. Each of the objects to which predicates such as 'red,' 'rectangular' and 'radioactive' apply, shares some property. Since there is a property shared by all items to which the predicate 'red' applies, they think that, similarly, there is some property shared by all sentences to which the word 'true' applies. Advocates of the deflationary theory hold that 'true' is applied to a certain range of sentences for quite different reasons. To say that a sentence is true is not to attribute some property to it. Rather, to predicate truth of a sentence is to adopt an attitude towards it. To say that a sentence is true is, for example, to agree with it, to emphasise it or to reiterate it.

On the deflationary view, a theory of truth becomes a study of how 'true' is used to express a view about sentences. One species of a deflationary theory is a redundancy theory. According to such a theory, the predicate 'is true' is always redundant. For example, to say that 'The cat is on the mat' is true is just to say that the cat is on the mat. At most, saying that a sentence is true can emphasise commitment to the sentence. Another deflationary theory is the prosentential theory. According to this theory, 'true' functions as a prosentence, a word which stands for a sentence. For example, suppose someone says, 'The cat is on the mat' and someone else replies by saying, 'True' or 'That's true.' Both of these replies are prosentences. They stand for the first speaker's sentence and saves the second person the trouble of repeating it. In other contexts, 'true' can be used to form prosentences which stand for a number of other sentences. Someone might, for example, say, 'Everything Jane Austen says is true' rather than reiterating all of her views. The common thread linking the redundancy theory, the prosentential theory and other deflationary theories is the view that philosophers should be investigating the use of the word 'true' rather than attempting to identify the common property shared by all true sentences.

Hard-line deflationary theorists will content themselves with inquiring into the use of the word 'true.' Proponents of a modest deflationary theory may, however, admit that the truth of a sentence has something to do with its relations to some truth conditions. They will hold, however, that there is no relational property shared by all true sentences. They will invite us to consider such diverse sentences as 'The cat is on the mat,' 'Jane Austen visited Lyme Regis in 1804' and 'Neutrinos have no rest mass.' Advocates of a substantial theory of truth hold that something is similar about the conditions under which all three sentences are true. Their opponents hold, however, that the conditions under which the sentences are true are as diverse as the sentences. The first sentence is true if and only if the cat is on the mat and second is true if and only if Jane Austen vacationed in Lyme Regis in 1804 and so on. Nothing philosophically interesting, deflationists maintain, is common to the cat on the

mat, Austen's vacation and the mass of neutrinos. Opponents of substantial theories conclude that such theories, which seek a common feature of all true sentences, are misguided. If nothing is common to these truth conditions, no common relational property is shared by all true sentences. Nothing of philosophical interest can be gained, on either the hard-line or modest deflationary approach, from inquiring into the relations between sentences and truth conditions.

From the perspective of a substantial theory of truth, deflationary theories leave unaddressed some essential questions about truth. Certainly, advocates of deflationary theories may have contributed to our understanding of the use of the word 'true.' Perhaps it is redundant and adds nothing to the meaning of sentences in some contexts. Perhaps 'true' does, on some occasions, function as a prosentence. Deflationary accounts of truth are, however, inadequate on the matter of truth conditions. The principal problem with deflationary theories is that they fail to realise that, for all their diversity, the truth conditions of sentences (in some class) have something in common. If a sentence is true, something has made it true, namely its truth conditions. Advocates of a deflationary theory tell us only that 'The cat is on the mat' is true if and only if the cat is on the mat and 'Jane Austen visited Lyme Regis in 1804' is true if and only if Jane Austen visited Lyme Regis in 1804. Presumably the sentence used on the right hand side of the biconditional describes the conditions under which these sentences are true. It is reasonable to ask whether the described conditions are objective or not, but holders of deflationary theories make no effort to address this question. This is a considerable oversight. When partisans of substantial theories hold that a property is common to all true sentences they are simply taking a stand on the question ignored by deflationary theories. Realists hold that 'The cat is on the mat' is true if and only if objective conditions are such that the cat is on the mat. Anti-realists, on the other hand, hold that the sentence is true if and only if certain recognisable conditions obtain.

Someone might, of course, hold that nothing of importance is at stake in asking whether or not truth conditions are objective. There are, however, at least two reasons why the question addressed by advocates of substantial theories seems unavoidable. The first reason is that we need to posit the existence of truth conditions in order to explain the difference between true and false sentences and, once truth conditions are posited, we are perfectly within our rights to wonder about whether or not they are objective. There is a difference between 'Jane Austen vacationed at Lyme Regis' and 'Jane Austen vacationed at Disneyland' and a complete account of truth must give an account of this difference. Something has been left out if we are simply told that "'Jane Austen vacationed at Disneyland" is true' is equivalent to 'Jane Austen vacationed at Disneyland' or that the use of 'true' in the first of these sentences is redundant or prosentential. The difference between these two

sentences is that something or other, namely its truth conditions, has made the first sentence true. The truth conditions of the second sentence, on the other hand, do not obtain and are unable to make the sentence true. For this reason, the hard-line form of deflationary theory, which completely ignores the relations between a sentence and its truth conditions, cannot be right. The more modest deflationary theory is mistaken because either the truth conditions of a sentence are objective or they are not. Either these conditions make sentences true independently of speakers' ability to determine whether they do, or they do not. Any account of truth which does not take a stand on this alternative has left out something important. Advocates of deflationary theories do not explicitly take a stand, I suspect, because they assume that truth conditions are objective without pausing to consider whether there is another option.

The second reason why inquiry into the nature of truth conditions is important is that, without such inquiry, we cannot determine whether the principles of bivalence and transcendence apply to given classes of sentences. Consider again the question of whether or not the predicate 'true' can properly be applied to sentences in some class, even when there is no way to tell whether some sentences in the class are true. This is, surely, a reasonable question to ask about some class of sentences. The question makes sense, however, only given that truth is a relational property of the sort posited by substantial theories. Only if true sentences in some class stand in semantic relations to objective conditions does the principle of transcendence apply to sentences in that class. That is, only if sentences are true under potentially unrecognisable conditions can the truth of sentences transcend what can be warranted. Of course, talk about the failure of the principle of transcendence only makes sense given that we can hold that truth conditions are in all cases detectable.

Similarly, a question might arise about whether truth is a property possessed by every sentence which does not possess the property of being false. Just as an inquiry about whether truth is a property which may be undetectable presupposes a substantial account of truth, a question about whether the principle of bivalence applies to a class of sentences only makes sense given the possibility of a realist answer to the question about the nature of truth conditions. That is, the principle of bivalence can apply to a class of sentences only if members of the class have objective truth conditions. Since it makes sense to ask whether the principles of bivalence and transcendence apply to a class of sentences, questions about whether truth conditions are objective or not are properly addressed by philosophers.

Another possible alternative to substantial theories of truth is sometimes thought to be provided by the writings of Alfred Tarski, which are, undoubtedly, among the most debated and influential discussions of truth. Although the interpretation of Tarski's position is the source of considerable controversy, two claims about Tarski are very common. The first is that Tarski

says everything that needs to be, or can rightly be, said about truth. The second is that what he says is not what he thinks he says. Tarski characterised his position as a correspondence theory of truth, yet virtually all interpreters believe that it is not. They frequently suggest that he provides some sort of deflationary view about truth. Other writers, including Donald Davidson, believe that, while the position is not a deflationary one, neither is it a correspondence theory.³ Davidson takes Tarski's views as an alternative to both realism and anti-realism. My views on Tarski differ from the usual views in two respects. I think that Tarski's position is a correspondence theory, just as he says it is, and, as such, a species of realism and a substantial theory of truth. And I think it is wrong.

Tarski's suggestion was that the question, 'What is truth?' be replaced by the question, 'What is the meaning of "true?"' In other words, Tarski suggests that philosophers ought to give a definition of truth. A definition of truth, as Tarski uses the term, is provided by a truth theory which gives an exhaustive specification of the truth conditions of every sentence in some language. Tarski actually showed how to construct a finite truth theory for a language which specifies the truth conditions of every sentence in the language. (I use 'truth theory' to describe such an exhaustive specification of truth conditions. 'Theory of truth' is reserved for a general perspective on the nature of truth.) The extent of Tarski's achievement is best appreciated when we reflect on the difficulties had by a philosopher such as F.P. Ramsey, writing before Tarski's work became generally known. He too thought that a definition of truth would indicate the truth conditions of every sentence in a language. Ramsey could, however, only list a few sentences, saying, for example, that 'The earth is round' is true if the earth is round and false otherwise.⁴ He then suggested that all sentences admitted of similar treatment. Ramsey despaired, however, of being able to list all sentences and their truth conditions, thinking that this would require making an infinitely long list. A Tarski-style truth theory for a language is a finite theory which specifies the truth conditions of sentences of a language, even though many languages have infinitely many sentences.

Tarski defines truth in terms of two more primitive semantic notions: reference and satisfaction. Reference is the relation between a name and the object or objects named. Satisfaction is the relation between predicates and the objects to which the predicates apply. Starting with the relations between words and objects, Tarski proceeds to build up a theory of truth which entails for every sentence of a language a theorem of the form, "'Philosophers use unimaginative examples'" is true if and only if philosophers use unimaginative examples.' Each such theorem has the name of a sentence of a language (usually the sentence itself, quoted) on the left hand side of the biconditional and a description of its truth conditions (given in a metalanguage, which can be the original language) on the right hand side. Tarski's method can be illustrated by considering a simple language which consists of only two names, 'Jane' and

'Cassandra,' and two predicates 'witty' and 'wise.'⁵ Reference for such a simple language can be very easily defined by means of a list. A name refers to some object if and only if the name is 'Jane' and the object is Jane or the name is 'Cassandra' and the object is Cassandra. Satisfaction can be similarly defined. A predicate is satisfied by some object if and only if the predicate is 'witty' and the object is witty or the predicate is 'wise' and the object is wise.

Once definitions of reference and satisfaction are provided, a definition of truth can be given. A sentence which consists of a name and a predicate is true if and only if the object named exists and satisfies the predicate. In other words, a sentence such as 'Jane is witty' is true if and only if Jane is witty. This is one of the theorems of the Tarski-style truth theory for our small language. The other basic theorems of the truth theory for the language will be, "'Jane is wise" is true if and only if Jane is wise,' "'Cassandra is wise" is true if and only if Cassandra is wise,' and "'Cassandra is witty" is true if and only if Cassandra is witty.' A Tarski-style truth theory will also contain rules for giving the truth conditions of compound sentences. So, for example, a theorem of the truth theory for our small language will be, "'Jane is wise and Cassandra is witty" is true if and only if Jane is wise and Cassandra is witty.' Since sentences can be conjoined *ad infinitum*, even the truth theory for the present small language will entail an infinite number of theorems. More complex languages will also have rules governing the use of quantifiers such as 'all' and 'some.' (In dealing with such cases in complex languages, Tarski displayed his greatest ingenuity.)

Tarski believed that his definitions of truth were applicable only to formal languages. Natural languages with their ambiguities and complexities not found in formal languages are not such obvious candidates for a Tarski-style truth theory. These problems need not concern us here. Even if a complete definition of truth, such as Tarski envisaged, cannot be given for natural languages such as English, his basic idea is still deserving of attention. It is still worth considering whether definitions of reference and satisfaction can be used to generate theorems which specify the truth conditions of at least some of the sentences of a language. And we still need to ask whether a Tarski-style truth theory, when one can be given, is substantial or deflationary.

There has been considerable disagreement about whether Tarski's views amount to a substantial or deflationary theory of truth. On one interpretation, Tarski is advancing a species of redundancy theory. Like all deflationary theories about truth, a redundancy theory is not concerned with the questions addressed by a substantial theory of truth. Rather, according to such a theory, all that need or can be said about truth is that the predicate 'is true' can be removed from any sentence without any loss of meaning. So a sentence such as "'Jane is wise" is true' is equivalent to 'Jane is wise.' On another view, the theorems of a truth theory are truths of logic. They are simply the consequences of the definitions with which the theory begins. A substantial theory of truth, however, purports, at least, to tell us more than mere truths of

logic.

One can see why someone might think that Tarski has a sort of deflationary theory of truth. A substantial theory of truth is arrived at on the basis of an investigation of the use speakers actually make of their language. Tarski, however, simply offers a series of definitions and then deduces logical consequences: the theorems of a theory of truth are logical consequences of the definitions with which it begins. If the theorems of a truth theory are simply logical truths, the theory seems unlikely to be a substantial theory which actually tells us something about the truth conditions of sentences and the relations between true sentences and their truth conditions.

Nevertheless, it is less than clear that Tarski held a deflationary theory of truth. On the contrary, Tarski unblushingly refers to his position as a correspondence theory and I see no reason to doubt him. He wanted to explicate truth in terms of a relation between language and reality.⁶ This is the whole point of defining truth in terms of reference and satisfaction. The theorems of a truth theory follow logically from the definitions of reference and satisfaction but these definitions are meant to capture the relations in which names and predicates actually stand to objects. I think that Tarski thought of his definitions as actually being the result of the investigation about what names denoted and which objects satisfied which predicates. In the cases of formal languages, of course, one can simply arbitrarily decide what some name denotes. Some of Tarski's followers, notably Davidson, have made clear that, in the cases of natural languages, the specifications of reference and satisfaction cannot be arrived at by means of arbitrary definitions. Rather, they are the result of empirical investigation. By whatever means we arrive at the specifications of reference and satisfaction, the suggestion is that, since names and predicates stand in relations to objects, the theorems of a truth theory are expected to describe relations between sentences and conditions under which they are true.

Even if Tarski held that truth involves some relation between sentences and conditions, he could still be interpreted as advancing a modest deflationary theory. Every theorem of a truth theory for some language contains a sentence on the right hand side of the biconditional which describes the truth conditions of the sentence quoted on the left hand side, but perhaps there is no general property shared by these truth conditions and no general property shared by true sentences. In particular, there is some question about whether the conditions described are meant to be objective. Tarski is never explicit about the nature of the conditions to which true sentences are related. There is, however, little room to doubt that the theorems of a Tarski-style truth theory are supposed to specify objective truth conditions. If 'Jane' refers to Jane and Jane satisfies the predicate 'wise,' then 'Jane is wise' is true if and only if Jane is wise. This is the case even if there is no way to measure the extent of her wisdom. (Suppose there is no way to tell whether or not Jane is wise, perhaps

because she lived too long ago or because, prior to her demise, she never met with any circumstances which tested her sagacity.) Tarski seems committed, that is, to the principle of transcendence. Moreover, according to a Tarski-style truth theory, every sentence of a language is either true or false. Adherence to the principles of transcendence and bivalence only makes sense given a commitment to objective truth conditions. Consequently, a Tarski-style truth theory gives a realist definition of truth. As such, it is a species of substantial theory of truth.

Here it is important only to indicate that Tarski does not provide a deflationary alternative to substantial theories of truth. Still, it is worth mentioning where Tarski goes wrong. His trouble is that, in constructing a truth theory, we cannot begin with reference and satisfaction. Tarski thinks that he can define reference by fiat: he simply lists the items to which names refer. Similarly, he gives an arbitrary definition of satisfaction. This may be unobjectionable in the case of formal languages, but it will not do for natural languages. When it comes to natural languages it is only possible to determine what some name denotes, or which objects satisfy some predicate, by first learning the conditions under which sentences are true. Once we know the conditions under which a number of sentences are true, it is possible to infer what the names which occur in those sentences refer to and which objects satisfy the predicates they employ. So Tarski went about understanding truth backwards. We cannot determine the truth conditions of sentences on the basis of what words denote, particularly if reference and satisfaction have been determined by arbitrary definitions. Just the opposite is the case: we determine what words denote on the basis of what truth conditions sentences have. Only attention to the conditions under which speakers actually use sentences will justify a conclusion about the sort of truth conditions sentences have. If sentences turn out to be used, in all cases, under recognisable truth conditions, no definitions of reference or satisfaction will be of the least use to the realist. This point is treated in more detail in §6.

§4. HOW TO BE A GLOBAL ANTI-REALIST

Any form of anti-realism depends upon the basic premiss that the meanings of sentences cannot consist in objective conditions. If speakers lack the ability to detect certain objective conditions, the anti-realist argues, meanings cannot consist in these objective conditions. If anti-realists can successfully establish this point, they must still give an alternative account of the meanings of sentences. They need to restrict the range of conditions which can provide the meanings of sentences to conditions which can be detected by speakers. With the exception of some anti-realisms with respect to mathematical sentences, most forms of anti-realism have been motivated by empiricism. Empiricists have restricted the range of conditions which can provide meanings for

sentences to conditions which can be observed. Many empiricists have held that our senses cannot provide us with evidence for the existence of all ranges of objective conditions and our senses are the only source of evidence about the world. Partial anti-realists have used this view as a premiss in an argument for the view that the meanings of (some) sentences cannot consist in objective conditions. Instead, meanings can only consist in conditions about which our senses can provide evidence. Sometimes the empiricist can give a reductionist account of the meanings of certain classes of sentences. Whether or not empiricism involves reductionism, it leads only to some form of partial anti-realism and never to global anti-realism. Global anti-realism is only possible given an alternative account of the detectable conditions which constitute the meanings of sentences. Such an account is provided by a coherence theory of knowledge.

Reductionism is one common route from empiricism to partial anti-realism. An anti-realist treatment of sentences about other minds, or behaviourism, and certain forms of anti-realism about the past are good examples of partial anti-realisms which rely on reductionism. Empiricism suggests that we can have no evidence about many objective conditions which exist in the remote past. Neither is sensory evidence about the mental states of others attainable. Nevertheless, both sentences about the inaccessible past and sentences about other minds are meaningful. Since anti-realists hold that the meanings of these sentences cannot consist in the inaccessible objective conditions, they are forced to seek an alternative. One option is to say that the meaning of a sentence about other minds or the remote past is given by a sentence to which it can be reduced, rather than by objective conditions. Sentences in a given class (call it the *reduced class*) are reducible to sentences in another class (call this the *reduction class*) just in case sentences in the first class are translatable into sentences in the latter. So, for example, the behaviourist holds that the meaning of a sentence about the mental states of others consists in the sentences about behaviour to which it is reduced. 'Jane is wise' is to be reduced to statements about Jane's prudent actions, her insightful comments and so on.

Reductionism can be an essential part of partial anti-realism but certain forms of reductionism do not threaten realism at all, let alone lead to global anti-realism. Reductionism only threatens realism if it leads to the conclusion that the meanings of reduced sentences do not consist in objective conditions. This conclusion will not follow if sentences in some class are reduced to sentences whose meanings consist in objective conditions. Reductionism states that the meaning of a sentence in the reduced class consists in the sentence in the reduction class which is its translation. To say that a sentence is a translation of another is just to say that they share the same meaning, that is, they are true under the same conditions. Reductionists will hold that the meanings of sentences in some reduction classes consist in objective

conditions. (If they do not, sentences in the reduction class are ultimately reducible to sentences whose meanings do consist in objective conditions.) Consider, for example, the reduction of sentences about mental states to sentences about brain processes. Suppose that the meanings of sentences in this latter class consist in objective conditions. Reductionism entails that a sentence in the reduced class is true if and only if some sentence in the reduction class is true. If the sentence in the reduction class is true if and only if certain objective conditions obtain, then so is the reduced sentence. When, as in the present case, the meaning of the reduction sentence consists in objective conditions, so does the meaning of the reduced sentence. If meanings consist in objective conditions, then realism is correct.

Empiricism can only lead to anti-realism via a reductionism which reduces sentences to reports of observable conditions. Not all sentences in a reduction class need be reports of observable conditions. Empiricism can lead to global anti-realism only if the only sentences in the reduction class to which sentences are actually reduced are such observation reports. So for example, sentences about mental states cannot be sentences about behaviour of people who cannot be observed (because they are too distant in space or time). If a reductionism is accepted which limits reduction sentences to reports of observations, it seems that the meanings of sentences in the reduced class do not consist in objective conditions. Instead, the meaning of a sentence in a reduced class consists in the same observable conditions which provide the meaning of the reduction sentence. A reduced sentence is true if and only if certain observable conditions obtain. Since the meaning of the reduced sentences consists in observable, not objective, conditions, realism is undermined for the reduced class. 'Jane is wise,' when reduced to a sentence about behaviour, means that Jane can be observed to behave in a certain way. Or consider, for example, a sentence about the remote past which is to be reduced to sentences about evidence available in the present: 'Jane Austen sneezed ten times on November 17th, 1804' is true if and only if certain observable conditions, in this case the existence of medical records, obtain. In this case, the observable conditions do not obtain, nor can any contrary sentence be reduced to a sentence about observable conditions which do obtain. It follows that there are cases where the principle of bivalence will not apply to reduced classes. Similarly, of course, the principle of transcendence will not apply to the reduced class since sentences in this class cannot be true unless some reduction sentence can be known to be true (because observable conditions obtain).

While reductionism can, in this fashion, lead to partial anti-realism, it cannot, by itself, lead to global anti-realism. Any reductionist account of the meanings of the sentences in some class presupposes that there is another class of sentences whose meanings are not given by means of a reduction. If some reduction class is itself reduced, there must be some other class which is not reduced. Without a non-reduced class there would be an infinite regress of

reduced classes. If reductionism is the only alternative to the view that meanings consist in objective truth conditions, then there is at least one class of sentences which admits of a realist treatment and global anti-realism is ruled out. A behaviouristic account of sentences about other minds, for example, presupposes a non-reductionistic account of sentences about behaviour or a non-reductionist account of sentences about material objects, if sentences about behaviour are reducible to sentences in this class.

Empiricists could try to argue for global anti-realism by giving an account of some reduction class which is neither reductionist nor realist. They would have to identify some non-reduced class of sentences whose meanings consist in observable conditions and then reduce all other classes to this one class. So, for example, a sentence in the non-reduced class may be about Jane's behaviour. The meaning of this sentence consists in Jane's observable behaviour. The meanings of all other classes of sentences, such as those about Jane's mental states, could then be specified by means of reduction. This account of meaning may seem to make global anti-realism possible since the meanings of no sentences consist in undetectable objective conditions. The meanings of all sentences consist either in observable conditions or in sentences which are reducible to sentences about observable conditions. Such an empiricist attempt to establish global anti-realism faces profound practical difficulties. Reductionist attempts to capture the meanings of sentences are frequently controversial. It is not at all obvious that the meanings of sentences about other minds can be captured by sentences about behaviour, nor is it clear that sentences about electrons can be translated into sentences about observable phenomena. Moreover, an empiricist argument for global anti-realism would need to be supplemented by an argument for anti-realism with respect to non-empirical sentences, such as those of mathematics.

Still, it may seem that an empiricist route to global anti-realism is available. If such a route to global anti-realism could be found, it should be noted, it would not represent a complete rejection of the realist account of meaning. Anti-realists who rely upon empiricism to restrict the range of conditions which can provide truth conditions for sentences agree with realists about the meanings of all those sentences whose objective truth conditions are detectable. So, for example, the empiricist and the realist can be in agreement about the conditions under which 'The cat is on the mat' is true, so long as the cat and mat in question are accessible and observable. Still, empiricism seems a route to global anti-realism, if global anti-realism is the view that the truth conditions of all sentences are detectable.

There is, however, a reason why, in principle, empiricist scruples about the inaccessibility of objective conditions, combined with reductionism, cannot lead to global anti-realism. The empiricist who wants to be a global anti-realist is committed to saying that all sentences in the basic reduction class (sentences about observable objects) have empirically recognisable truth conditions. This

position is untenable since we have good reason to suppose that speakers will be unable to detect the supposed truth conditions of some sentences in this class. Consider the case of sentences in the basic reduction class which are about objects which are not available for inspection, perhaps because they are in a remote and inaccessible region of space. An example of such a sentence is 'A copy of *Persuasion* can be found on the other side of the universe.' Such sentences are surely meaningful but as a member of the basic reduction class, its meaning does not consist in the sentences to which it is reducible. On the other hand, its meaning does not consist in observable conditions. Typically, empiricists will maintain that this sentence means a permanent possibility of perception exists. No other account of the meaning of the sentence seems available to empiricists. This account seems, however to commit them to saying that the meaning of this sentence amounts to conditions consisting of the existence, on the other side of the universe, of a certain permanent possibility of perception. The conditions responsible for this permanent possibility, whatever they may be (the mind of God, according to Berkeley, material objects according to other empiricists), are, apparently, objective. They go on existing, even though no one will be aware of them. Consequently, empiricists are committed to the view that the meanings of some sentences consist in objective conditions.

A coherence theory of knowledge provides a more promising route to global anti-realism than does empiricism. Recall that anti-realism depends on the basic premiss which states that speakers are unable to detect certain objective conditions and, therefore, meanings cannot consist in these conditions. Empiricists hold that some objective conditions are unobservable and that realism cannot apply to all classes of sentences. Advocates of a coherence theory of knowledge take a stronger line and hold that the only conditions speakers can detect are the conditions under which sentences cohere with a system of beliefs. Strictly speaking, speakers never recognise that objective conditions obtain. Rather, they recognise that sentences positing the existence of certain conditions cohere with a system of beliefs.

Those who adopt a coherence theory of knowledge hold that a sentence coheres with a set of sentences just in case it is warranted by those sentences. A sentence is warranted if and only if it can be inferred from, or receives strong inductive support from or is otherwise supported by sentences which are held to be true and part of what I have called a system of beliefs. The coherence theory of knowledge provides, then, an account of the conditions under which sentences are warranted which is very different from that provided by empiricists. Empiricists hold that observations provide the conditions under which (non-reduced) sentences are warranted. Their opponents hold that the conditions under which sentences are warranted are provided by a system of beliefs. For example, the conditions under which 'The cat is on the mat' is warranted are the conditions where a system of beliefs is so constituted that

this sentence is warranted. These are the conditions under which a sentence is warranted, perhaps, but this presents no threat to realism. Certainly these conditions are detectable: if a sentence coheres with a system of beliefs, speakers can know that it does. Realism is only threatened, however, if the truth conditions of sentences are limited to detectable conditions. The coherence theory of knowledge only poses a threat to realism if it can be shown that the conditions under which sentences are true are identical to those under which they are warranted. If such an identity could be established, a coherence theory of knowledge would give rise to a coherence theory of truth which would amount to a global anti-realism. Such a coherence theory of truth would be anti-realistic, since the truth conditions of sentences would be recognisable. And the theory would be global since the coherence theory of knowledge provides an account of the conditions under which all classes of sentences are warranted.

There are reasons for thinking that the required identity cannot be established. A number of writers have attempted to move from a coherence theory of knowledge to a coherence theory of truth and all of them have been thwarted by the same difficulty. Usually coherentists have argued that coherence is such a good test of truth that truth must also consist in coherence with a system.⁷ (The name 'coherentism' will be reserved for the coherence theory of truth and 'coherentist' for partisans of such a theory of truth.) It might seem clear that a sentence could be warranted by coherence with a system of beliefs and yet be false. The opponents of coherentism have always found good reason to suppose that every system of beliefs contains some falsehoods. Apparently, moreover, a sentence could be true and yet not be warranted by any system of beliefs. It is certainly the case, an opponent of the proposed identification might hold, that many true sentences are not warranted and very reasonable to hold that many true sentences will never be warranted. In short, realists might hold that truth could transcend what coheres with a system of beliefs. This, however, is precisely what anti-realists deny.

Suppose that coherentists are right in holding that the only grounds speakers can have for asserting a sentence is the recognition that it coheres with a system of beliefs. If this is the case, a speaker's grounds for the assertion of a sentence cannot be the recognition that certain objective conditions obtain. Since speakers do not have the capacity to assert sentences only when objective conditions obtain, they cannot learn to assert sentences only when such conditions obtain. The only conditions under which speakers can learn to assert sentences are the conditions under which a sentence coheres with a system of beliefs. Since these are the only conditions under which speakers can learn to assert sentences, speakers can only establish semantic relations between their sentences and these conditions. At the same time, the meanings of sentences consist in the conditions under which they are systematically used. These are, again, the conditions under which a sentence coheres with a

system of beliefs. If these recognisable conditions do obtain, then the sentence is true. Consequently, the recognisable conditions under which a sentence is warranted are also the conditions under which the sentence is rightly asserted, or true.

The argument for global anti-realism can be summarised in the following terms. The first premiss is common to all sorts of anti-realism: the meanings of sentences consist in conditions which speakers can recognise, which warrant assertion of the sentence. Next comes the premiss that the conditions under which all sentences are warranted are the conditions under which they cohere with a system of beliefs. From these premisses follows the conclusion that the meaning of any sentence consists in the conditions under which it coheres with a system of beliefs. These conditions are recognisable by speakers: if a sentence coheres with a system of beliefs, speakers can know that it does. If the meaning of a sentence consists in recognisable conditions, the sentence is true if and only if these recognisable conditions obtain. Global anti-realists conclude that, since all sentences have recognisable truth conditions, anti-realism provides the correct account of the truth conditions of all sentences. Any sentence is true if and only if it coheres with a system of beliefs.

This argument for global anti-realism could, of course, be challenged on a number of grounds. Realists can deny that a coherence theory of knowledge is correct. Alternatively, they can concede that coherence theory of knowledge is correct but hold that it is not incompatible with the recognition that objective truth conditions obtain. They could hold, that is, that the coherence of a sentence with a system of beliefs is a good indication that its objective truth conditions are satisfied. These objections are considered in Chapter Two. Realists can also, of course, take issue with the anti-realist account of meaning. They can, for example, argue that the meanings of sentences can consist in objective conditions even if speakers lack the capacity to recognise these conditions. Alternatively, realists can claim that sentences have objective truth conditions even if the meanings of sentences consist in recognisable conditions. A response to these objections and the case for the anti-realist account of meaning is found in Chapter Three. The present section is intended only to show how a coherence theory of knowledge and the anti-realist account of meaning can jointly entail global anti-realism.

Global anti-realists will also face the challenge of clarifying the nature of the system with which true sentences cohere. They seem to have two options. They could opt for the view that true sentences cohere with some ideal system of beliefs. An ideal system of beliefs is that adopted at the ideal limit of inquiry, when all the evidence is in. If global anti-realists choose this option, a sentence is true if and only if it coheres with the ideal system of beliefs. This option has a number of advantages. In particular, it preserves the intuition that a sentence can be true and yet not currently warranted. It also has a number of disadvantages: the very idea of a single ideal end of inquiry is notoriously

problematic. They could maintain that a sentence is true if it coheres with any system of beliefs at all. The alternative account of the system of beliefs with which true sentences cohere would commit global anti-realists to relativism. Such a course would have to contend with all of the standard objections to a relativist treatment of truth. Sections 18 and 19 will adjudicate between the options available to global anti-realists.

§5. THE METAPHYSICS OF ANTI-REALISM

The anti-realism with which this essay is concerned neither is nor entails a metaphysical position. The title of this section is, thus, something of a misnomer. A misleading title is, however, rather appropriate since the anti-realism in question is an ill-named doctrine. The names ‘realism’ and ‘anti-realism’ have been applied to a variety of metaphysical positions over the years. This was reasonable enough: these were positions about what is and is not real. More recently, the names have been applied to the theories about truth which are discussed here. If the extension of these names to theories about truth had resulted only in ambiguity, the new uses of the words would not be too lamentable. Unfortunately, the results have been much more pernicious. A number of writers have argued against various metaphysical doctrines, in particular idealism, and then taken themselves to have refuted the anti-realist account of truth. Unfortunately, some defenders of anti-realism, notably Dummett, have invited such arguments.⁸ Dummett believes that debates about metaphysics can be resolved by appeal to the theories of meaning which underlie realist and anti-realist accounts of truth. In fact, however, the theory of meaning on which anti-realism depends does not have any metaphysical consequences. The version of anti-realism advanced in this essay does not rise or fall according to the fortunes of any theory about the existence or ontological status of any range of objects.

A variety of metaphysical debates have been or can be described as disputes between realists and anti-realists. Scientific realists affirm, and their instrumentalist and empiricist opponents deny, the existence of unobservable theoretical entities. A platonist is a sort of realist who posits the existence of universals while a nominalist is an anti-realist with respect to such entities. Common- or garden-variety realists, endemic to Australia, claim that there are real, mind-independent material objects while their (extinct?) phenomenalist opponents hold that no such entities exist. Similar debates exist with respect to numbers, minds and other sorts of objects. Common to all of these debates is the question of whether some range of objects (either theoretical entities, numbers, material objects or whatever) possesses real or independent existence. They are not debates about the nature of truth. Someone who is a realist when it comes to any of these metaphysical debates can hold an anti-realist theory of truth and any of their “anti-realist” opponents can have realist

views about truth.⁹

Consider the case of Berkeley, the paradigmatic opponent of a realist metaphysics. Berkeley denies the mind-independent existence of material objects: they are simply ideas in the mind caused by God. But he can still believe that sentences about material objects have objective truth conditions. In order to see that this is so, reflect that Berkeley could believe that some conditions obtain but are undetectable by humans and yet sentences about these conditions are true. Consider ‘A copy of *Persuasion* can be found on the other side of the universe.’ Suppose that God is disposed to cause in anyone on the other side of the universe an idea of Austen’s last completed novel and God has this disposition independently of our capacity to know that it does. If God can have this disposition, Berkeley has the option of adopting a realist account of truth and can hold that the sentence, ‘A copy of *Persuasion* can be found on the other side of the universe’ is true if and only if objective conditions are such that God has certain dispositions. Suppose, similarly, God is not disposed to cause in anyone properly situated the idea that Jane Austen wrote ten sentences on November 17th, 1807. Berkeley could, then, be a realist about ‘Jane Austen wrote ten sentences November 17th, 1807’ and hold that it is false, even though no one can tell that it is.

Some forms of opposition to realism in metaphysics can have consequences for truth. Suppose, for example, that opposition to some metaphysical hypothesis takes the form of a denial that certain sorts of entities exist. Nominalists who deny the real existence of universals oppose a realist metaphysics in just this fashion. If nominalism is correct, certain sentences held to be true by platonists are false. For example, ‘Universals exist mind-independently in the world of forms’ is false. Similarly, if instrumentalism or some other alternative to scientific realism is correct, certain scientific hypotheses cannot be true. In this sense, a metaphysical position can have semantic consequences. But it is important to notice that these consequences have no implications for the debate between realist and anti-realist conceptions of truth. Of course, if some entities do not exist, there are no true sentences about them. To deny, however, the existence of some range of conditions is not to take a stand on the issue of whether truth conditions are objective.

Although metaphysical and semantic questions are clearly quite separate, Dummett believes that the former reduce to the latter. He is fond of quoting a remark by Georg Kreisel in support of his views.¹⁰ Kreisel held that the debate between mathematical platonists and intuitionists is not a debate about the existence of a range of mathematical entities. Rather, he held, it is a debate about whether or not a realist conception of truth applies to the sentences of mathematics. Dummett believes that the same can be said about any metaphysical debate. He believes that metaphysical claims about the existence and ontological status of ranges of objects are merely “pictures” and that the content of each picture consists in the conception of meaning and truth which

underlies it. Although Dummett is wrong on this point, his views have been influential, and pausing to see where he went wrong is worthwhile.

In order to understand Dummett's efforts to reduce questions about metaphysics to questions about meaning, it is helpful to see his position in the context of a long empiricist tradition. This tradition stretches through Carnap, back at least as far as Hume. Empiricists have always had difficulty understanding how metaphysical speculation can have content. Metaphysical questions typically do not admit of empirical solution. No evidence admitted by a strict empiricist will, for example, determine whether phenomenalism or physicalism presents the correct account of the ontological status of material objects. Although Dummett does not say so explicitly, his assimilation of metaphysical and semantic issues can be seen as an empiricist's effort to give content to metaphysics. The justification for this effort involves an appeal to the actual debates between advocates of rival metaphysical theses. When mathematical platonists and intuitionists offer reasons for their conflicting views, they argue about the correct theory of meaning for mathematical sentences. Other debates, including the debate about the reality of minds, are often conducted in such a way that they seem to come down to what sentences about minds mean. Even the dispute between the garden-variety realist and the phenomenalist often slips into a more comfortable semantic attire: their dispute seems to come down to the question of whether or not the meanings of sentences about physical objects can be captured in sentences about sense-perceptions. Since he thinks that the practical import of these metaphysical issues is captured by semantic theses, Dummett is inclined to say that these issues are semantic *au fond*.

Although Dummett stands in a long empiricist tradition, his perspective on metaphysical issues differs importantly from that of, for example, Carnap. Carnap, in accordance with his principle of tolerance, believed that we are free to adopt phenomenalism, physicalism or any other metaphysical position we fancy. He distinguished between (what he called) internal and external questions.¹¹ Internal questions are decidable within the system of beliefs adopted by some community of speakers. Questions, for example, about whether there are tables or chairs or wombats are internal questions. External questions are concerned with system form, or the ontological status of the objects posited by a system of beliefs. The question of whether tables and chairs and wombats are physical objects or ideas in the minds of perceivers is an external question. The answers to external questions, according to Carnap, are chosen on the basis of convenience or convention. Dummett differs from Carnap in holding that there can be reasons for choosing one metaphysical position rather than another: these reasons are given by theories of meaning. But Dummett preserves an essential feature of the empiricist perspective on metaphysics. Metaphysical questions, he believes, as does Carnap, are different in kind from questions about whether or not particular objects exist.

While the latter sort of question is answered by appeal to empirical evidence, the former involves recourse to theories about meaning.

Dummett's distinction between metaphysical issues and questions about the existence of particular objects is untenable for precisely the same reasons W.V.O. Quine gave for rejecting Carnap's distinction between internal and external questions.¹² According to Quine, the distinction between metaphysical hypotheses and statements about the existence of particular objects is dependent on the distinction between analytic and synthetic judgements, between, that is, issues decidable on the basis of meaning and those decidable only after investigating matters of fact. Since, on Quine's view, the latter distinction is untenable, so is the former. Quine's point can be made (in terms he would not find entirely congenial) in terms of the sort of evidence we can have for sentences. The distinction between analytic and synthetic judgements rests on a supposed difference between two sorts of evidence we can have for sentences. Both Carnap and Dummett are very much in the empiricist tradition of thinking that there are different sorts of evidence for different classes of sentences. Some sentences, statements about the existence of wombats, for example, are supported by experience. Other classes of sentences are known to be true given an understanding of the meanings of their constituent terms. If there are two sorts of evidence, there can be two quite distinct classes of judgements and metaphysical hypotheses can be very different from hypotheses about the existence of particular things.

A quite different perspective on metaphysical questions emerges if empiricism is rejected. Quine never explicitly abandons empiricism: in all probability he will go to his grave claiming to be an empiricist. Nevertheless, it is his distinctive account of how sentences are warranted which enables him to collapse the distinctions between analytic and synthetic judgements and internal and external questions. According to Quine, sentences, all sentences, are supported by others in a web (or system) of beliefs. Such an account of warrant is, at least, a huge step in the direction of a coherence theory of knowledge. According to the coherence theory of knowledge, there can only be a single sort of evidence for all classes of sentences. Even rules of inference, logical laws and mathematical sentences are warranted, not by the meanings of words, but by their coherence with a system of beliefs. If the coherence theory of knowledge is correct, Dummett's perspective on metaphysical questions is mistaken.

Suppose that a coherence theory of knowledge is correct. (The case for such a theory is provided in §9.) The evidence supporting metaphysical hypotheses will be of a kind with the evidence supporting particular claims about the existence of particular objects. In both cases, evidence will be provided by speakers' beliefs. Questions about, say, the ontological status of material objects or of numbers will be on all fours with questions about whether or not there are tables and chairs, wombats or electrons. Sentences in

both classes are accepted or rejected, as Quine might say, as speakers construct a convenient conceptual scheme for science on the basis of what they already believe. It follows that Dummett is wrong in thinking that metaphysical questions are settled by appeal to theories about meaning. Theories about meaning, certainly, make up part of speakers' system of beliefs and they may be taken into account in settling any metaphysical question. But Dummett's view requires that there be very different sorts of evidence for metaphysical hypotheses and statements about particular objects and, from the perspective of a coherence theory of knowledge, this is not possible. Metaphysical hypotheses are not, therefore, decided on the basis of theories of meaning. In particular, the anti-realist account of meaning has, by itself, no metaphysical consequences.

Someone could argue that, if a theory of meaning has implications for truth, it must also have implications for reality. As we have seen, the anti-realist theory of meaning leads to an account of truth conditions which, in turn, leads to the rejection of the principle of bivalence. If the principle of bivalence is rejected, there are some matters about which there are no truths. Now, someone might reason, whether or not sentences are true depends on how the world is, so if there is no truth about some matter, there is no matter in the world either. Anti-realism seems, then, to lead to the conclusion that where there are gaps in what is true, there are also gaps in reality.¹³ Anti-realism seems linked with a metaphysics every bit as radical as phenomenalism. However, a key premiss in this argument is one which anti-realists should reject. Truth is not a result of the way the world is but, rather, a result of what can be warranted.

Truth and reality are usually thought to be very closely linked: what is real determines what is true and what is false. The present attempt to link an anti-realist account of meaning to metaphysical consequences presupposes the realist notion that truth conditions are objective conditions in the world. Anti-realism, however, leads to the divorce of questions about truth from questions about existence. According to anti-realism, a given sentence is true if and only if detectable conditions obtain and false if and only if the detectable conditions obtain under which a contrary sentence is true. If neither sort of condition obtains, the sentence is neither true nor false. Therefore, if a sentence lacks a determinate truth value, we cannot validly infer that any objective conditions fail to obtain. All that follows is that the detectable conditions which warrant the given sentence do not obtain and neither do the conditions which warrant a contrary sentence. The assignment of a truth value to a sentence entails nothing about objective conditions. Only conclusions about detectable conditions can be drawn from such an assignment. So, again, no metaphysical conclusions about objective conditions follow from an anti-realist account of truth.

As we have seen, the combination of a coherence theory of knowledge and an anti-realist account of meaning leads to a position very like the traditional

coherence theory of truth: the detectable conditions under which sentences are true are the conditions under which they are warranted by coherence with a system of beliefs. The coherence theory of truth has usually been linked to an idealist metaphysics but now we can see that there is no necessity to this linkage. If questions about truth and reality are divorced (and here the anti-realist is a marriage-breaker), a commitment to truth conditions which are internal to a system of beliefs does not carry with it a commitment to idealism. Advocates of a coherence theory of truth can believe that there are objective conditions in the world. But they do not believe that these objective conditions are the conditions under which sentences are true.

Denying that there are semantic relations between sentences and objective conditions does not commit anti-realists to denying that sentences and objective conditions stand in other sorts of relations. In particular, anti-realists are not committed to denying that sentences stand in causal relations to mind-independent reality. Anti-realists are free, qua anti-realists, to be naturalists and maintain that speakers are natural objects in a world of natural objects. Nothing in their position conflicts with the view that speakers are caused to hold beliefs and to assent to sentences by their interaction with other objects. Neither, on the other hand, are anti-realists committed to naturalism. They may be idealists. However, if both naturalism and anti-realism are correct, the causal relations between speakers and their sentences, on the one hand, and the physical world, on the other, are not semantic relations.

The anti-realist's view that certain objective conditions can exist without truth about these conditions gains credence when we reflect again that truth is the result of a conventional relation speakers establish between sentences and truth conditions. Aquinas noted, in *De Veritate*, that "if, *per impossibile*, there were no intellects at all, but things continued to exist, then there would be no such reality as truth." (St. Thomas adds the '*per impossibile*' because he thought that the mind of God exists necessarily. Plainly, however, this addition is optional.) If all speakers in the universe ceased to exist, tables and chairs and wombats might continue to exist but no truths about these things would exist. On the other hand, when the first language user came into existence, not every truth popped into being. When our ancestors could only remark on the presence or absence of sabre-toothed tigers and similar mid-sized items, there were no truths about quarks. Not until semantic relations are established do truths come into existence. This is enough to establish that objective conditions can exist without these conditions bringing truths into existence. If speakers never establish semantic relations between sentences and objective conditions, these conditions will never be truth conditions.

C H A P T E R T W O

Correspondence and Coherence

§1. REFERENCE AND CORRESPONDENCE

One conclusion of Chapter One is that any true sentence owes its truth to the existence of a conventional semantic relation between itself and its truth conditions. On this much realists and anti-realists can agree. They begin to part company on the question of the nature of the semantic relations in which sentences stand. Of course, quite different accounts of semantic relations follow from different accounts of the conditions to which sentences bear semantic relations. Realism involves commitment to the view that semantic relations are correspondence relations between sentences and objective conditions. Global anti-realism, on the other hand, is a form of coherence theory of truth. Semantic relations obtain between a sentence and the other sentences in a system of beliefs which entail it. The present chapter is devoted to demonstrating the shortcomings of the correspondence theory of truth and the advantages of the coherence theory.

Before the advantages and disadvantages of the correspondence theory can be weighed, some basic questions about the theory need to be resolved. These questions are addressed in §6. Many attempts have been made to hobble the correspondence theory of truth before it can even reach the starting gate. There is nothing to which sentences can correspond, according to one objection. According to another, sentences can correspond to too many items. In the face of these objections, anti-realists must pull the correspondence theory to its feet before knocking it out. Section 7 is devoted to showing that the correspondence theory is a worthy opponent. The correspondence theory is mistaken, but not in any simple-minded fashion. The only way to refute the correspondence theory emerges in §8. Although it is immune to many standard

objections, the theory can be refuted when its realist props are knocked away. Section 9 presents the case which establishes that the coherence theory is correct and that the correspondence theory is mistaken. Just as the correspondence theory faces a number of preliminary attempts to have it scratched, so must the coherence theory cope with a number of standard efforts to render it a non-starter. The coherence theory is, for example, frequently said to be incoherent or unable to distinguish between truths and patent fictions. These objections are confuted in § 10.

A preliminary question needs to be addressed before the prospects of the correspondence theory of truth can be evaluated. As mentioned in § 1, correspondence theorists can hold that sentences as a whole correspond to truth conditions. Alternatively, they can hold that the correspondence relations between sentences and their truth conditions are parasitic upon relations between the constituents of sentences and objects: a sentence only corresponds to some set of conditions, on this view, because its component parts refer to (or are satisfied by) certain objects. According to this account of correspondence, for example, the sentence 'Caesar crossed the Rubicon' corresponds to a given set of objective conditions because 'Caesar' refers to Julius Caesar, 'the Rubicon' refers to the Rubicon and 'crossed' denotes a relation in which Caesar stood to the Rubicon.¹⁴ Correspondence theorists would be well-advised to hold that whole sentences correspond and that correspondence does not depend on reference. There is good reason to believe that the concept of truth is not to be understood in terms of the concept of reference. On the contrary, only when the concept of truth is understood can the concept of reference be derived. Moreover, the correspondence theory can avoid a range of troublesome objections if the first of the two courses is adopted.

A number of reasons can be advanced for thinking that the semantic relations between sentences and their truth conditions are not to be understood in terms of reference relations between words and their referents. For a start, sentences could correspond to given truth conditions, even though there were no referential relations between words and objects. Imagine a language which consisted entirely of sentences which were not differentiated into words or, rather, a language whose sentences had, at most, one word. Such a language would be almost impossibly unwieldy if it were concerned with anything more than a very small number of matters. Nevertheless, there seems to be no principled reason why such a language could not exist. In such a language, unlike English, a sentence which states that Caesar crossed the Rubicon would have no elements in common with a sentence which states that Caesar crossed the Tiber. We could not speak of a part of a sentence in this language referring to Caesar. Rather, we could only say that an entire (one word) sentence is true if and only if a set of conditions (say, Caesar crossing the Rubicon) obtains. Sentences in this unwieldy language could be said to correspond even though there are no referential relations at all. Consequently, correspondence cannot,

in general, be analysed in terms of reference.

This argument may not be completely persuasive. After all, most languages have sentences which are differentiated into words which refer. It might be thought that, even if the correspondence relations in which some sentences stand cannot be analysed in terms of the reference of words, some correspondence relations can be so analysed. This hope is undermined when we reflect that the referents of terms can only be identified after the truth conditions of sentences are fixed. Frege is widely quoted as saying that only in the context of a sentence does a word have meaning. When he made this remark, he did not distinguish between sense and reference. Consequently, Frege could just as easily be interpreted as saying that only in the context of a sentence does a word have reference. In any case, only in the context of sentences do words refer. More precisely, words acquire referents in virtue of being used in systematic ways in various sentences. The referential relations between words and their referents are established only after semantic relations are fixed between sentences and truth conditions.

In order to see that this is the case, reflect for a moment on radical interpretation, a matter which will be considered at some length in the next chapter. Radical interpretation is the process of acquiring an understanding of a wholly unknown language. The starting point of such interpretation is the knowledge that speakers utter certain sentences under particular circumstances. By paying attention to the conditions under which some sentence is asserted, interpreters can acquire a knowledge of the conditions under which a sentence is true. They might, however, still have no idea about what the individual components of the sentence denote. Indeed, they might have no idea about whether the sentence can be parsed into smaller components. It sometimes happens, when speakers are engaged in the ordinary acquisition of a second language that they acquire an ability to use certain sentences without knowing how to break the sentence into words. Similarly, only fairly late in the game, when radical interpreters have noticed that certain parts of sentences recur, can they divide up sentences into words and identify their referents. Still, prior to the point at which the referents of words were identified, the interpreters could still know that the sentence was true if and only if a given range of conditions obtained. The semantic relation is this conventional relation between the sentence as a whole and its truth conditions and this can be established in complete ignorance of referential relations. What is true of an unknown language is true of our own. Speakers can establish semantic relations between their sentences and truth conditions even though they are ignorant of the referents of the words used in the sentences. Therefore, correspondence does not depend on reference.

For these reasons, correspondence theorists are well-advised to hold that correspondence is a relation between a sentence as a whole, on the one hand, and its truth conditions, on the other. If such a version of the correspondence

theory is adopted, realists must solve two closely related problems. First, they need to show how speakers go about establishing semantic relations between sentences and objective truth conditions. Next, realists need to provide evidence that sentences stand in semantic relations to objective conditions. In other words, realists are expected to indicate the sorts of practices speakers must engage in, if semantic relations are to be established between sentences and objective conditions, and then give some reason to believe that speakers have successfully engaged in these practices.

When the truth conditions of sentences are detectable, it is quite easy to show what speakers must do to correlate their sentences with truth conditions and equally easy to provide evidence that they have been successful. Speakers can establish a semantic relation between a sentence and some detectable conditions simply by asserting the sentence only when the conditions are observed to obtain. Evidence that the sentence has given truth conditions is provided by noting the linguistic practices of users of the sentence. Those who doubt that a sentence has given detectable truth conditions need only pay attention to how, and under which conditions, speakers use the sentence. Matters are not always as easy as this for realists since, on their own account, not all truth conditions are detectable. Realists will not face much difficulty showing that the correspondence theory applies to all those sentences whose objective truth conditions happen to be directly observable. (Of course, global anti-realists deny that any such sentences exist.) They will experience more difficulty when dealing with sentences whose objective truth conditions are supposed to be indirectly detectable. And they will need considerable ingenuity when confronted by sentences whose supposed objective truth conditions are in no way detectable.

The correspondence theory apparently works quite well for sentences such as, 'The cat is on the mat.' Advocates of the theory may plausibly hold that users of the sentence have the ability to detect objective conditions consisting of a cat on a mat. Speakers are, realists will conclude, in a position to make a practice of asserting the sentence only when the conditions obtain. That speakers have been successful in establishing semantic relations can be confirmed by observation of their linguistic behaviour under conditions detectable by themselves and by observers. The observed conjunction between the utterance of a sentence and the existence of objective conditions would be good evidence that a semantic relation exists between them. If speakers are observed to assert 'The cat is on the mat' only when objective conditions are such that the cat is on the mat, there is good reason to suppose that the sentence corresponds to the conditions, that is, is true if and only if the conditions obtain.

A little reflection suffices to show that speakers cannot always quite so easily establish semantic relations between sentences and objective conditions. Consider a sentence about the past, such as, 'Caesar crossed the Rubicon.'

Unlike cats and mats, Caesar is no longer observable and no one can utter this sentence only when the relevant objective conditions are observed to obtain. Such sentences and sentences about, for example, the theoretical entities of science, pose greater difficulties for the realist than 'The cat is on the mat' and similar observation sentences. These difficulties do not, however, appear to be insurmountable. Even when speakers do not directly observe objective truth conditions, perhaps they can have indirect evidence that the conditions obtain. Speakers can sometimes directly detect conditions which provide evidence of the existence of other conditions. So, for example, historical documents can provide an indication that certain objective conditions obtained in the past. Streaks in a cloud chamber count as evidence for the existence of certain objective sub-atomic conditions. Speakers can then assert sentences about the recorded past and other unobservable conditions only when they have some indirect evidence that objective conditions obtain or obtained. In this way, realists may argue, they can establish correspondence relations between sentences and unobservable conditions.

Realists are faced with more seriously worrisome problems when they try to explain how speakers can establish semantic relations between sentences and objective conditions which the speakers cannot, even indirectly, detect. Realists will also face considerable difficulties giving reasons to believe that such relations actually hold. Consider sentences which involve quantification over infinite sets of objective conditions. Given their finite cognitive capacities, speakers cannot establish a correspondence between a sentence and an infinite set of objective conditions by using the sentence only when the infinite set of conditions is seen to obtain. Or consider, again, the sentence, 'Jane Austen wrote ten sentences on November 17th, 1807.' There is no evidence, direct or indirect, about the (presently) undetectable objective conditions consisting of Austen and her activities on the date in question. Realists want to hold that the sentence may, nevertheless, be true and, if so, that it corresponds to given objective conditions. Certainly, realists must hold that some sentence about how many sentences Austen wrote on that date corresponds to objective conditions. In general, they are committed to the existence of sentences which correspond to objective conditions even though speakers cannot know that they do. The principles of bivalence and demand as much. If a correspondence relation exists between a sentence and undetectable objective conditions, speakers have established it by some means other than they employed in the cases of sentences with directly or indirectly detectable truth conditions. A realist's reason for believing that the sentence corresponds to the conditions cannot be that speakers are observed to utter the sentence only when the requisite conditions obtain. Some other reason must be found or the correspondence theory does not account for the truth of some sentences and realists can hope for, at most, some form of partial realism.

Realists need to find some way to pick out a range of objective conditions,

even when these cannot be detected. Once the conditions have been picked out, sentences could, conceivably, be associated with them. The most plausible line for realists to adopt would hold that, although the objective truth conditions of some sentences cannot be detected, they can, nevertheless, be described. If this is the case, the correspondence between a sentence and its truth conditions, can be established by means of some description. So realists may hold, for example, that speakers can establish a correspondence between ‘Jane Austen wrote ten sentences on November 17th, 1807’ and undetectable conditions simply by specifying that the sentence is true if and only if objective conditions are such that Jane Austen wrote ten sentences on November 17th, 1807. The sentence used on the right hand side of the biconditional is taken to be a description of the conditions which must obtain, if the mentioned sentence is true.

Realists are not just saying here that undecidable sentences must correspond to objective conditions since other sentences do. If realists were asking us to believe that some undecidable sentence corresponds to objective truth conditions simply because some decidable ones do, they would have a weak case: there is no *a priori* reason why all sentences must have the same sort of truth conditions. Their point is, however, a different one. They are saying that speakers have the capacity, in many cases, to detect objective conditions and, thus, to assert sentences only when such conditions obtain. Some sentences, they admit, have objective truth conditions which speakers cannot recognise as obtaining. Nevertheless, they would be able to do so, if they were better placed. When describing the truth conditions of undecidable sentences, realists maintain, speakers give a description of the objective conditions which, if they were detected, would be the conditions under which speakers would assert the quoted sentence. It is merely an accident of history that no one recorded how many sentences Austen wrote on November 17th, 1807. Had someone done so, the realist maintains, speakers would have the capacity to recognise that certain objective conditions obtain.

This may be a plausible account of how speakers can establish a correspondence between undecidable sentences and undetectable conditions. Realists still need to be able to point to something in speakers’ linguistic practice which can be construed as evidence of the fact that sentences are true if and only if objective conditions obtain. The evidence to which realists can reasonably appeal in the cases of (directly and indirectly) decidable sentences will not be available. In this context, realists can, instead, use reflection on reference to help their case. They can begin by noting that speakers use ‘Jane Austen,’ ‘1807’ and other referring terms in decidable sentences. The referents of these terms can be inferred from their uses in these sentences. Realists will maintain that the objects to which these terms refer are, in fact, objective. They can conclude that when the terms are combined in new sentences they continue to pick out objective objects and the sentences in which they occur are true just

in case objective conditions consisting of these objects obtain.

When asked to provide evidence for the claim that undecidable sentences correspond to objective conditions, realists can point to how speakers use decidable sentences containing the terms which occur in the undecidable sentences. The realist's claim will be that this practice is evidence for the claim that certain undecidable sentences correspond as well as evidence for the claim that the decidable sentences correspond. Speakers' use of decidable sentences is evidence, the realist may claim, for a Tarski-style truth theory for their entire language. The realist might suggest that Tarski was on the right track. From a realist's perspective, the basic trouble with Tarski's attempt to give a theory of truth is that he did not give any empirical reason to believe that words denote (or are satisfied by) elements of objective conditions. His definitions of reference and satisfaction are arrived at by stipulation. If speakers use decidable sentences in such a way that words denote elements of objective conditions, realists can claim to have some evidence for the claim that other sentences which employ these terms can correspond to objective truth conditions. This argument is reasonable enough so long as speakers can use a large number of sentences only when detectable objective conditions obtain. Speakers need not be able, it seems, to use all sentences of their language under detectable objective conditions for all true sentences to correspond to objective truth conditions.

This realist account of how sentences can correspond to undetectable objective conditions may break down if there is, somewhere in the universe, a set of conditions which cannot be described by means of sentences which are composed of words whose referents have been fixed in the context of decidable sentences. This might seem to be a problem since realists seem committed to the possibility that the world contains undetectable conditions quite unlike any which can be detected. Global realists can defend themselves against this difficulty, however, on the grounds that a language will not contain sentences concerned with such conditions. Consequently, there are no sentences which fail to be true or false. If realists adopt such a defence, they are constrained to admit that all truths can be formulated in some language. In other words, realists are only committed to saying that there are determinate truths only with respect to conditions of which speakers can conceive. This may appear to be a softening of the global realist position but it concedes nothing essential. Global realists need only maintain that all of the sentences of any language are either true or false. An even harder line realist might claim that there are objective conditions which are indescribable in any language, but about which there are still truths. This is, however, a position of only dubious cogency. If the bearers of truth values are sentences, the concept of an unstatable truth makes little sense. On the other hand, this hard-line realist might take it that there are platonic propositions, some of which cannot be stated in any language. This is a position which can be defended, but it is an

extravagance which even global realists may eschew.

Anti-realists may be prepared to admit that realists have a plausible account of how sentences can correspond to undetectable conditions. Their position depends for its plausibility, however, on realists being right about other classes of sentences. Realists will get into difficulties if it is not the case that speakers assert other sentences only when objective conditions obtain. If it should turn out that speakers assert decidable sentences only when some non-objective conditions obtain, then their account of undecidable sentences will be imperilled. Speakers are only in a position to establish correspondence relations between sentences and objective conditions if these can, at least in many cases, be detected. The section after the next challenges the assumption that any sentences stand in semantic relations to objective conditions. Before we consider the possibility that the correspondence theory is threatened by speakers' inability to establish correspondence relations between sentences and objective conditions, a number of objections which fail to undermine the theory should be considered. The correspondence theory has been subjected to a number of criticisms which do not question its realist presuppositions. Whatever may be in store for realism, these objections to the correspondence theory should not cost its advocates much sleep.

§2. WHAT IS NOT WRONG WITH THE CORRESPONDENCE THEORY

While the correspondence theory of truth is mistaken, the version of the theory articulated in the previous section is immune to many of the standard objections which have been thought to hobble the theory. Merely by maintaining that semantic relations hold between whole sentences and their truth conditions, advocates of the theory are able to undermine one recently-made objection to correspondence theories. The correspondence theory of truth is one of the intended victims of Hilary Putnam's model-theoretic argument against realism.¹⁵ Basically, this argument is designed to establish the conclusion that there is no unique mapping of words on to objects. If the correspondence of a sentence to its truth conditions is the result of the reference of its component terms to objects, the argument seems to undermine the correspondence theory. The problem is that there is no way to tell which objects the terms employed in some language denote and, therefore, no way to determine a unique set of truth conditions for sentences. The model-theoretic argument fails to refute the correspondence theory for two reasons. In the first place, as we have seen, the theory does not need to analyse correspondence in terms of reference. In the second place, Putnam fails to show that the terms of any language lack a unique denotation.

Putnam is particularly concerned with terms employed by ideal theories, ones which are consistent with all available and potentially available empirical evidence. His stated aim is to undermine the realist view that an ideal theory

could be mistaken. The model-theoretic argument is supposed to show that we can always find a model for an ideal theory, that is, a mapping of its terms on to objects in the world, on which the ideal theory is true. If the argument is successful, it has much farther-reaching consequences and undermines any attempt to fix uniquely the referents of words. The argument is really quite simple, for all that it is draped in model-theory. Putnam employs the Löwenheim-Skolem Theorem to make his point but, as David Lewis notes, the argument can be divested of this formal dress.¹⁶ All that is needed is the relatively trivial point that any sufficiently large world or domain can satisfy any consistent theory and do so in a variety of ways. That is, if a world contains enough objects, there is, for every consistent theory, a number of mappings of terms employed by the theory on to the objects which will make the theory come out true. For our purposes, the important conclusion is Putnam's suggestion that there is no way to choose one mapping over another.

We have, of course, a natural tendency to say that one mapping is the intended one: 'cat' refers to cats, for example, since we intend it to do so. According to Putnam, however, the referents of terms cannot be fixed by an intention. Certainly, intentions are not rays which enable the mind to reach out and grasp part of the world. Perhaps, then the referent of a term is to be specified by means of other terms: the referent of 'cat' could, for example, be fixed by means of a description of cats. If, however, there is any doubt about what some term employed by a theory denotes, there will be as much doubt about the referents of the other terms. Parts of a theory cannot be used to fix the reference of terms in another part. Any effort to specify what the terms used by some theory refer to will simply use more terms in need of interpretation. So, for example, we might say that 'cat' refers to feline mammals and 'mat' refers to small, woven floor-coverings. We might hope, thereby, to rule out a mapping of 'cat' on to dogs and 'mat' on to porches. The problem, however, is that this attempt to specify the referents of 'cat' and 'mat' presupposes just one of many interpretations of 'feline mammal' and 'small, woven floor covering,' but these are not the only possible interpretations. 'Feline mammal' no more has a unique referent than does 'cat.' It too could be assigned dogs as its referent.

This conclusion, if right, would have disastrous results for any correspondence theory which held that sentences are true if and only if their terms refer. The critic of such a correspondence theory would simply say that, of course, terms refer to objects. Reference is, they will say, simply the result of assigning a term to an object or mapping terms on to objects. They will then add that we can find a mapping of terms on to objects which makes the sentences of any consistent theory come out true. The trouble is that we can find any number of such mappings. If correspondence is parasitic upon reference relations, then, each sentence ends up corresponding to many, perhaps infinitely many, conditions. The correspondence theory provides a

satisfactory account of truth only if there is one set of semantic relations between sentences and objective conditions in virtue of which the sentences are true.

If correspondence theorists simply take my unsolicited, but completely disinterested, advice, and hold that sentences as a whole stand in semantic relations, they have a convincing reply to this sort of objection. They need only maintain that, when speakers establish a semantic relation between sentences and their truth conditions, they simultaneously fix the referents of words. Fixing the truth conditions of sentences, realists can maintain, is unproblematic. As we have seen, they hold that a correspondence can be established simply by asserting sentences only when given objective conditions obtain. It is certainly true that speakers may assert 'The cat is on the mat' when objective conditions are such that the cat is on the mat and the dog is on the porch. Indeed, when speakers utter any sentence, infinitely many sets of conditions obtain. If, however, they consistently utter the sentence only when the cat and the mat are in plain view and no dogs or porches can be seen, the best bet is that the truth conditions of the sentence are provided by the conditions consisting of the cat on the mat. The bet becomes a virtual cinch if the dog is chased off the porch, the cat remains on the mat and speakers continue willing to assert the sentence. The assignment of truth conditions to any sentence is never a matter for absolute certainty. There can be, however, strong inductive evidence for such an assignment. We can have equally strong evidence for accepting that a given term refers to some object and no other.

Given this account of how the truth conditions of sentences are fixed, it will be possible to give a non-arbitrary assignment of referents to the words in the sentences. The referents of terms are not fixed by intentions or by descriptions composed of words whose referents are, themselves, in doubt. Rather, the referents of words are fixed by the way speakers use words in the context of sentences. Suppose that speakers utter 'The cat is on the mat' only when objective conditions are such that the cat is on the mat. Suppose as well that they utter 'The cat is on the porch' only when objective conditions are such that the cat is on the porch. Under such circumstances we can reasonably hypothesise that cats are the referents of 'cat.' After all, the cat is the most salient object common to the two sets of conditions. As such it is, if not the only possible referent of 'cat,' the most probable one. This being the case, it makes perfect sense to say that a word refers uniquely to some object. Even if the truth of sentences depends on the denotations of terms, therefore, problems with determining the referents of terms cannot undermine a correspondence theory of truth.

Someone might object to this line of argument in the fashion Quine has made famous. Such a person would admit that speakers utter 'The rabbit is on the mat' only when objective conditions are such that the rabbit is on the mat. At the same time, the Quinean will insist, speakers utter the sentence only

when objective conditions are such that a set of undetached rabbit parts is on a temporal mat stage. Consequently, Quineans conclude, we can have no grounds for saying that 'rabbit' has a unique referent. It can, with as much justification, be said to refer to rabbits, undetached rabbit parts, temporal rabbit stages or any of a number of other items. Quineans suggest that this point is perfectly general and they will urge us to accept the inscrutability of reference. That is, the use speakers make of any term does not determine for it a unique referent. Like Putnam, the Quinean will assert that the lack of unique referents for the terms of a language will undermine the search for a correspondence theory of truth.

There is no easy answer to this problem: correspondence theorists cannot respond to Quine, any more than they can respond to Putnam, by holding that the referent of some word can be specified by means of other words. The referent of some word cannot be uniquely specified by means of some other words if the referents of these other words are themselves in doubt. At the same time, however, the response which succeeded against Putnam seems unlikely to work again. Nothing in the linguistic behaviour of speakers, nothing in the way they use sentences, seems to enable us to determine unique referents for speakers' words. Their observable linguistic behaviour will be the same regardless of whether 'rabbit' refers to rabbits or to undetached rabbit parts. This apparent inability to determine unique referents for words may seem to make impossible the task of establishing a unique correspondence between sentences and their truth conditions.

Grounds can be provided for thinking that Quine is wrong and that the referents of terms can be uniquely specified. The provision of such a specification would need to take into account evidence besides information about the conditions under which speakers use sentences. This additional information might include, for example, linguistic data about the general structure of languages. But even if Quine is right and 'rabbit' and other words have no unique referents, the correspondence theory is not threatened if sentences as a whole correspond. Even if some doubt exists about whether 'rabbit' refers to rabbits or to temporal rabbit stages, we can still determine the truth conditions of 'The rabbit is on the mat.' Its truth conditions will be determined in the ordinary way. They are fixed by the use speakers make of the sentence. It does not matter whether 'rabbit' denotes rabbits, rabbit parts or any of a number other objects. The sentence as a whole is still true if and only if it is objectively the case that matter, configured in a certain way, fills a given region of space. Of course, if Quine is right, we have to accept that, when describing the truth conditions of sentences, we give descriptions which can be interpreted in various ways. But this does not matter either, correspondence theorists can reasonably hold. The descriptions, however interpreted, serve to pick out the same objective conditions. The truth conditions can be described as the set of objective conditions such that the rabbit is on the mat.

Alternatively, the conditions can be described as the objective conditions consisting of undetached rabbit parts on a temporal mat stage. Correspondence theorists can still hold that speakers utter 'The rabbit is on the mat' only when a set of objective conditions obtains and these are the conditions under which the sentence is true, regardless of how they are described. The Quinean position, unlike that of Putnam, does not raise the spectre of an inability to identify the truth conditions of sentences even if it does lead to doubts about the scrutability of reference.

The objections to the correspondence theory which have been considered so far turn on the claim that sentences can, due to the nature of reference, correspond to too many conditions. Just the opposite objection has also been made. Donald Davidson has charged that the theory fails since there is no way to individuate the conditions to which sentences correspond and, consequently, sentences all correspond to the same thing, namely the universe as a whole. If Davidson's argument is successful, the correspondence theory is effectively trivialised. The claim that a sentence corresponds to the universe would add little, if anything, to the statement that the sentence is true. The correspondence theory furthers our understanding of truth only if it is possible to show that all true sentences stand in semantic relations to unique truth conditions. (The only exception to this rule is provided by synonymous sentences, if any exist, which share the same truth conditions.) Davidson's argument begins from Frege's claim that all true sentences have the same denotation, namely the truth value true, which Frege calls "the True." Frege also holds that all false sentences refer to the truth value false, or "the False." In developing his argument, Davidson draws upon the defence of Frege's doctrine offered by Alonzo Church.¹⁷

The argument formulated by Church begins with the claim that sentences as well as words have denotations. The denotation of a sentence, the argument continues, cannot be changed by the substitution of a co-referring term. Consider, for example, the descriptions, 'the author of six novels' and 'the sister of Cassandra Austen.' These descriptions refer to the same person. Church concludes from these premisses that the sentences 'Jane Austen is the sister of Cassandra Austen' and 'Jane Austen is the author of six novels' have the same denotation. Church wants to go even further: he would hold that the latter of these sentences is equivalent to (he actually says 'synonymous with,' which is even more implausible) 'The number, such that Jane Austen wrote that many novels, is six' and, as such, has the same denotation. Another name for the number six is 'the number of states in Australia.' So, Church would conclude, 'The number of states in Australia is six' is equivalent to, and has the same denotation as, 'Jane Austen is the sister of Cassandra Austen.' A similar line of reasoning applies to false sentences: 'Jane Austen is not the author of *Emma*' has, on this view, the same denotation as 'Jane Austen is not Jane Austen.' So it seems that, if we go on substituting co-referring terms long

enough, all sentences with the same truth value can be shown to have the same denotation. Since the property that all of the equivalent sentences have in common is their truth value, Church concludes that Frege's view is borne out: all true sentences refer to the True and all false sentences denote the False. Davidson takes this to prove that if true sentences correspond to anything, they correspond to the same thing, namely the universe as a whole.

Advocates of the correspondence theory can respond to Davidson's argument in a variety of ways. The first line of attack would challenge the argument from Frege and Church on which it is founded. The second tack would question whether Davidson's conclusion can be validly inferred from the conclusion of this argument. Consider the first line of attack. Certainly, the argument can be challenged on a number of grounds. For a start, the argument requires that we accept the preposterous claim that every sentence can be transformed into any other sentence with the same truth value by substituting co-referring terms. Frankly, I do not see how one can get from, 'Jane Austen is the author of six novels,' to 'The number, such that Jane Austen wrote that many novels, is six' simply by substituting co-referring terms. The claim that further substitution will produce 'The number of states in Australia is six' stretches the bounds of credulity. Even if this transition is unobjectionable, the general position is certainly untenable. Even if there are no other reasons, problems which arise from semantically opaque and modal statements are enough to undermine Church's proposal. Substitution of co-referring terms in such sentences does not always even result in sentences with the same truth values. Consider, for example, the following cases. Another name for the number six is 'the square root of thirty-six.' Now, if Church is right, we ought to be able to say that we can substitute 'the number of novels written by Jane Austen' for this name as it is used in 'Necessarily the square root of thirty-six is six' and get the equivalent sentence 'Necessarily the number of novels by Jane Austen is six.' Since these sentences have different truth values they cannot be equivalent. Substitution in semantically opaque context presents similar difficulties. Suppose that Jane has a rather rudimentary knowledge of astronomy. If so, substitution of 'Venus' for 'the morning star' in 'Jane believes that the morning star is on the horizon' will not result in a sentence with the same truth value, let alone an equivalent sentence. If the conclusion that all true sentences denote the True depends on the view that the substitution of co-referring terms will always result in equivalent sentences, this conclusion is deeply suspicious. Some sentences which result from such substitution are certainly not equivalent to or synonymous with the original sentences.

Another obvious reply to Church's argument questions the very idea that sentences have a denotation. It is very plausible to hold that only parts of sentences, names and descriptions, for example, are properly said to refer. Sentences, on the other hand, are either true or fail to be true. Perhaps the truth value of a sentence depends on whether or not its constituent parts refer but

this does not entail that the sentence as a whole has a denotation. Certainly, a sentence such as 'Jane Austen is the author of *Emma*' refers neither to Austen nor to her penultimate novel. The suggestion that its denotation must, then, be the True is the result of a desperate search to find some denotation, any denotation, for the sentence. This suggestion is best regarded as a *reductio ad absurdum* of the view that sentences refer. More importantly, the very idea that sentences can refer to a truth value involves a category mistake. The category mistake lies in thinking that a truth value is an object when it is simply a property of a true sentence. It would be strange if all sentences referred to properties of themselves.

Even if, however, nothing is wrong with the argument advanced by Church, we can still provide many grounds for rejecting Davidson's argument against the correspondence theory. Of these, the most pressing is Davidson's move from the claim that all true sentences refer to the True to the conclusion that all true sentences correspond to the universe as a whole, if they correspond to anything. This move scarcely qualifies as an inference. 'Bold *non sequitur*' is, perhaps, the most accurate description. Certainly the two claims are quite different and Davidson gives no reasons for thinking that they are equivalent (I suppose he thinks they both denote the True) or that the first entails the second. There are, on the contrary, good reasons for being suspicious of Davidson's move. Davidson moves from talk about the True to talk about the universe as a whole and from talk about reference to talk about correspondence. Neither transition is unobjectionable.

Begin by considering the second of Davidson's moves, his shift from talk of reference to talk of correspondence. As we have seen, there is a difference between reference and correspondence. Consequently, even if it is the case that all true sentences refer to the True, it does not follow that they all correspond to the True. Davidson's first move, from talk of the True to talk of the universe, is equally dubious. Davidson is committed to the peculiar view that a truth value is an object, not a property of sentences. Even if this view is accepted, something is odd about Davidson's position. Two accounts can be given of the True, on both of which Davidson is committed to a peculiar position. The True could be conceived of as some sort of abstract object, or as the whole universe. Consider first the suggestion that the True just is the whole universe. If so, Davidson's slide from one to other is unobjectionable. This suggestion gives rise to a number of difficulties. For a start, if the True is identified with the whole universe, little is left with which the False can be identified. More importantly, the suggestion that sentences correspond to the whole universe is, in itself, seriously implausible. Consider again 'The cat is on the mat.' The correspondence theorist can plausibly hold that quite dramatic changes can take place in the universe and this sentence will still correspond to the same conditions. Empires can rise and fall or cataclysms wrack the face of the earth, but if the cat is sufficiently sedentary, the sentence should still have the same

truth value. The correspondence theorist will reasonably conclude that the sentence corresponds, not to the universe as a whole, but some restricted part of it. If, on the other hand, the True could be an abstract object, we have good reason for thinking that there is a distinction between a truth value and the universe (which is in large part concrete) and good reason for rejecting the first transition on which Davidson's argument depends. If the True and the universe are distinct objects, something that bears a relation to the True need not bear any relation, let alone the same one, to the universe.

Even if worries about the nature of reference do not undermine the correspondence theory, a number of preliminary objections remain to be overcome. These other preliminary objections take a variety of forms, but each variation tries to show that the sort of thing to which sentences can correspond do not exist. One variation tries to show that the sorts of entities to which sentences are supposed to correspond are not countenanced by a reasonable ontology. Alternatively, it is possible to object that the items to which sentences supposedly correspond do not exist in the cases of all classes of sentences. On either of these objections, the theory is supposed to fail because one of the relata which it posits does not exist. Another line of argument tries to show that the correspondence theory is mistaken because it is not possible to parse the universe in such a way that sentences can correspond to their own individual chunks of reality: the theory is only workable if it is possible to identify the item to which some sentence corresponds and to distinguish it from the items to which other sentences correspond. None of these objections is able to cripple the correspondence theory.

According to one common objection to the correspondence theory, such a theory needs to posit some special class of objects to which sentences can correspond. If the correspondence theory depends on such a class of objects, and if such objects do not exist, the theory would be undermined. Certainly, some adherents of the theory have posited the existence of such items as facts and "objectives" to which sentences are supposed to correspond. J.L. Austin, for example, held that 'The cat is on the mat' corresponds to the fact that the cat is on the mat.¹⁸ Austin has been interpreted as holding that, in addition to the cat on the mat, there exists the fact that the cat is on the mat. While this may be unfair to Austin, certainly one of Russell's early theories of truth posited facts above and beyond cats and mats, as did the Wittgenstein of the *Tractatus*. Other versions of the correspondence theory have involved even greater ontological prodigality. Some writers, including Meinong, have seemed willing to countenance abstract objects to which sentences correspond. Meinong spoke of true sentences corresponding to true "objectives" and false sentences correspond to false "objectives." Clearly, the correspondence theory is in trouble if it depends on the existence of facts or objectives and there are no such things.

Good grounds can be given for being sceptical about the existence of items,

besides conditions like those consisting of cats on mats, to which sentences correspond. Any abstract entities will be regarded with suspicion by naturalists who believe that the world contains only physical objects. Facts do exist, of course, but we have no good reason to believe that a fact is an object. There is, at any rate, no reason to believe that it is an object like a cat or a mat. When the cat is on the mat there is no third thing, the fact that cat is on the mat. The fact that the cat is on the mat is simply the (true) statement, 'The cat is on the mat.' A fact is a statement of affairs and not a state of affairs. That is, facts are, linguistic items. If facts play any role in a correspondence theory, it is as truth bearers, not truth conditions. In the absence of objective facts, or some sort of abstract entity, many critics have rejected the correspondence theory on the grounds that nothing exists to which sentences can correspond.

Correspondence theorists have no trouble replying to this sort of objection. They have no need to posit a special sort of entity to which sentences correspond, even if some of their number have (incautiously) done so. The reply to this objection is found in the very definition of a correspondence theory. Recall that something counts as a correspondence theory if and only if it entails that truth is the result of a conventional relationship between sentences and objective truth conditions. Sentences, very simply, correspond to their truth conditions. On this version of the correspondence theory, truth conditions are not ontologically distinct from the objective world of cats and mats. They are just parts of the world. Curiously, a number of writers who deny there is anything to which sentences can correspond accept that sentences have objective truth conditions and that sentences are true if and only if these conditions obtain. False sentences do not pose any particular difficulty for the correspondence theory. They do not require a special set of entities which make them false. They are made false by the same objective conditions which make true sentences true. Assume that the cat is on the mat. 'The cat is on the mat' corresponds, on this view, to the objective conditions consisting of the cat on mat. 'The cat is on the porch' is false because it does not correspond to this same set of conditions or to any other.

Some critics of the correspondence theory have been willing to grant that it provides a satisfactory account of the truth of some, but not all, sentences. 'The cat is on the mat' is plausibly said to correspond to a particular set of objective conditions but a number of writers have charged that the theory is less well equipped to deal with sentences such as 'The cat is not on the mat.' The suggestion is that there is no set of objective conditions to which this sentence corresponds. Such sentences as, 'All cats like eating mice,' 'Some cats like eating mice' and 'The cat is on the mat or on the porch', have been thought to pose even greater difficulties for the correspondence theory. More generally, it is not clear that sentences involving negation, disjunction and quantification can correspond to a set of objective conditions in the same way that sentences composed only of singular terms can. In fact, however, negation, disjunction

and quantification pose no particular difficulties.¹⁹ Counterfactual conditionals are another sort of sentence which might be thought to pose difficulties for the correspondence theory but they too can be managed by the ingenious realist.

Consider first the case of sentences involving negation. The correspondence theory needs to treat such sentences somewhat differently than it treats sentences employing only singular terms. The correspondence theorist needs to hold that, while the latter sort of sentence corresponds only to one set of conditions, negative sentences can correspond to a wide variety of objective conditions. If 'The cat is on the mat' is true, it corresponds only to the conditions consisting of the cat on the mat. In fact, this is to simplify somewhat: it can correspond to various conditions, including the conditions consisting of the cat sitting on the mat, lying on the mat and the cat standing on the mat. A more specific true sentence which employs only singular terms would, however, correspond only to one set of conditions. If 'The cat is not on the mat' is true, however, it corresponds to any one set of conditions in the infinite class of conditions in which the cat is not on the mat. For example, the sentence may correspond to the conditions consisting of the cat on the porch or to the conditions consisting of the cat up the tree. This is a plausible enough position for correspondence theorists to adopt, since they hold that the sentence is true if and only if any set of objective conditions obtains in which the cat is not on the mat.

This account of the correspondence of sentences involving negation may seem to make sentences correspond to more than one set of objective conditions. If this is the case, someone could object that any sentence (or, at any rate, any non-ambiguous sentence) cannot correspond to more than one set of conditions. This may be so, but correspondence theorists are not committed to such a view by the present account of sentences involving negation. At any given time, a true negative sentence corresponds only to one set of conditions. As conditions change, the sentence corresponds to different conditions. 'The cat is not on the mat' may begin by corresponding to that part of the world which consists of the cat in a tree and the mat in the parlour. Later the sentence corresponds to the objective conditions consisting of the cat on the bed and the mat on the clothesline. In this latter case, the world is parsed in such a way that the cat on the bed and the mat on the clothesline is treated as one set of conditions. There is no reason why this is illegitimate. Correspondence theorists can reasonably claim that a semantic relation can be established between a sentence and any parts of the universe, continuous or discontinuous.

Correspondence theorists need to display some ingenuity when dealing with disjunctions but such sentences present no more threat to the theory than do negations. Disjunctions have been thought to pose a problem since there are no disjunctive states of affairs to which such sentences could correspond. Suppose that 'Jane Austen visited Lyme Regis or she visited Disneyland' is true. This sentence might seem to present difficulties for the correspondence

theory since nothing in the world consists in Austen visiting Lyme Regis or Austen visiting Disneyland. Correspondence theorists could posit the disjunctive fact that she visited one place or the other but multiplying entities has already been seen to be an inadvisable course. Another, more promising, course is open. Recall that the sentence at issue is, from the perspective of the correspondence theory, true if and only if objective conditions are such that Jane Austen visited Lyme Regis or such that Jane Austen visited Disneyland. Once this is borne in mind, the answer to the present objection becomes apparent. The sentence corresponds either to the conditions consisting in Austen's visit to Lyme Regis or to conditions consisting in her visit to Disneyland or to conditions consisting of visits to the two places. There is no need to posit anything further to which the sentence might correspond. As it happens, Austen did visit Lyme Regis, but never went to Disneyland. Consequently, advocates of the correspondence theory will hold that the sentence in question corresponds to the objective conditions consisting in Austen's visit to Lyme Regis. Had she visited both vacation spots, the sentence would correspond to both visits.

By now it should be obvious how correspondence theorists can deal with sentences involving quantification. Should it be objected that the theory cannot deal with universal or existential claims, its defenders need only reply that such sentences correspond to their truth conditions, whatever they may be. Consider a sentence about the predilections of all cats, say, 'All cats like eating mice.' The truth conditions of such a sentence can be variously conceived. A behaviourist will take its truth conditions to consist in objective feline behaviour. A physicalist will take them to consist in the objective neural structure of cats. Suppose that physicalism provides the correct account of cats. A universal claim can be interpreted as a long, possibly infinitely long, conjunction of other sentences. Accordingly, advocates of the correspondence theory will hold that a universal claim corresponds to the truth conditions of all of its conjuncts. In other words, a sentence about the predilections of cats will be taken to correspond to the objective conditions consisting in all the relevant parts of the neural structure of each of the cats in the world. On this view, a universal sentence corresponds to a large, possibly infinite, number of discontinuous parts of the universe. But, again, the universe can be parsed in infinitely many ways, and advocates of the correspondence theory can reasonably claim that semantic relations can be established between a sentence and any parcel of reality. An existential claim, realists can hold, is simply a long disjunction of other sentences. To say that, 'Some cats like eating mice' is just to say that 'Tiger likes eating mice,' or 'Muffin likes eating mice' and so on. And, as already noted, disjunctions pose no particular difficulties for the correspondence theory.

Conditional statements might be thought to pose difficulties for the correspondence theorists. The trouble is not so much with ordinary indicative

conditionals such as, 'If Jane Austen did not write *Emma*, someone else did.' Such a conditional can be analysed as a disjunction. The sentence in question is truth-functionally equivalent to 'Jane Austen wrote *Emma* or someone else did.' If the correspondence theory has no troubles dealing with disjunctions, it should have no trouble with indicative conditionals either. Subjunctive, especially counterfactual, conditionals arguably are another matter and present a challenge to the correspondence theory. Consider, for example, 'If Jane Austen had read Lewis' argument, she would have been incredulous.' We may be tempted to say that such a sentence is true if and only if the antecedent is false or the consequent is true. This temptation is likely to disappear when we recall that any truth functional conditional with a false antecedent is true and we reflect that the antecedents of all counterfactual conditionals are false. The sentence at issue here has a false antecedent and must, therefore, be true. This is fair enough, but then there is a problem about what to say concerning the sentence, 'If Jane Austen had read Lewis' argument, she would have believed every word.' This sentence has the same false antecedent as the other, so the sentence as a whole is true. It seems odd to say that both of these counterfactual conditionals are true and correspond to Austen's failure to read Lewis' argument.

Some authors might be tempted to solve the problem posed by counterfactual conditionals by appeal to possible world semantics. They could argue that the first of the counterfactual conditionals in the previous sentence is true if and only if the possible world which most resembles the actual world but in which Jane Austen reads Lewis' argument is also a world in which she is incredulous. Alternatively, if Austen is credulous in this world, the sentence is false. A possible world may provide something in virtue of which the sentence is true or false. I am very far from recommending that correspondence theorists avail themselves of possible worlds. Like so many others, I respond with an incredulous stare to arguments which rely on possible worlds. My ontology only encompasses material objects in the actual world. In any case, it is not clear that appeal to possible worlds does any good for the correspondence theory. Someone who makes a statement about Austen's likely reaction to Lewis is making a claim about this world. The intention is to remark on the character of the Jane Austen who exists (or, at any rate, existed) in the actual world.

A very simple solution to the problem is, I believe, available to advocates of the correspondence theory. They can simply ask us to ignore the grammatical form of the sentence in question. Regardless of its grammatical form, the sentence, 'If Jane Austen had read Lewis' argument, she would have been incredulous' should simply be read as a comment on Austen's character. The sentence should be taken as an elliptical way of saying that, 'Jane Austen's character made her sceptical about unnecessarily sophisticated arguments to establish simple points.' Similarly, 'If kangaroos had no tails, they would

topple over' simply means 'Kangaroos depend on their tails for balance.' When counterfactual conditionals are understood as disguised categorical statements, they no longer pose any difficulties for the correspondence theory. The sentence about Austen corresponds to conditions consisting in some of her mental predispositions. The sentence about kangaroos simply corresponds to the objective conditions consisting in the centres of gravity of kangaroos. The categorical statements are not truth functions of the counterfactual conditionals which they replace. They can replace them, however, because they are asserted by the same people under the same conditions. There is only an apparent problem with counterfactual conditionals because philosophers have been too caught up in the project of formalising language. Natural languages, unfortunately, do not have the same neat formal structure as artificial languages. Philosophers are constantly led astray by the belief that they do.

§3. HOW TO REFUTE THE CORRESPONDENCE THEORY

The previous section leads to the conclusion that nothing is inherently absurd about the suggestion that truth is the result of a correspondence between sentences and objective conditions. In spite of the best efforts of a number of philosophers, the correspondence theory is still in the running. Some of the objections considered so far fail because they actually take on a tougher opponent than the correspondence theory: many of them attempt to show that truth does not result from a semantic relation between sentences and truth conditions. This is a point which is quite easily proven and was proven in Chapter One. Showing that sentences stand in semantic relations to *objective* truth conditions is much more difficult but this is what correspondence theorists must do. All of the objections considered in the previous section fail because they do not address the realist underpinnings of the correspondence theory. The theory can only be refuted by undermining the realist's suggestion that truth conditions are objective.

The correspondence theory can be knocked out once and for all by only one means. Opponents of the theory need to prove that speakers cannot establish correspondence relations between sentences and objective conditions. Speakers cannot establish such relations, the anti-realist must argue, since they do not have the capacity to assert a sentence only when certain objective conditions obtain. According to the anti-realist, speakers only have the capacity to assert sentences only when detectable conditions obtain. Their linguistic practice establishes a semantic relationship between their sentences and these detectable conditions. The anti-realist will go on, in refuting the correspondence theory, to maintain that we can have no evidence for the existence of a correspondence between sentences and objective conditions. We can have no reason to believe the correspondence theory is correct unless we can obtain evidence that speakers assert sentences only when given objective

conditions obtain. This evidence is not available.

Section 6 indicated that, if the correspondence theory is to be refuted, it will have to be shown to be mistaken for all classes of sentences. In other words, anti-realists need to show that no sentences are asserted only when objective conditions are recognised. Even if speakers assert some sentences only when objective conditions obtain, realists will be able to argue that they have evidence for the existence of a correspondence between all sentences and objective conditions. They will be able to argue that the assertion of some sentences only when objective conditions obtain is evidence for an entire Tarski-style theory of truth for the speakers' language, which specifies objective truth conditions of all sentences in the language. Partial anti-realists do not deny that some sentences correspond to objective conditions. They deny that a sentence can bear semantic relations to undetectable objective conditions but concede that some sentences are asserted under, and can correspond to, objective conditions. This will be possible so long as these conditions can be detected by users of the sentences. This concession opens the floodgates to realism. For this reason, the correspondence theory has to be rejected for all classes of sentences and global anti-realism is the only viable alternative to realism.

A coherence theory of knowledge is the key to showing that speakers cannot assert sentences only when objective conditions obtain. If such a theory is correct, speakers rightly assert sentences from all classes only when the sentences cohere with a system of beliefs. This leads, in turn, to the view that speakers' theories are their only guides to what is in the world. Speakers decide what sorts of conditions obtain by appeal to their theories. The correspondence theory relies upon the assumption that speakers assert sentences and, more generally, adopt theories after determining what is objectively the case. The coherence theory of knowledge suggests that correspondence theorists have the process backwards. Speakers do not decide what theories to adopt after having determined what is objectively the case in the world. Rather, speakers decide what is objectively the case on the basis of the theories which they have adopted. Speakers assert sentences, not because they recognise that the world is objectively some way or other. Rather, they assert sentences because their theories warrant the assertion of the sentences.

Given the previous paragraph's account of the conditions under which speakers assert sentences, speakers can only establish semantic relations between sentences and the conditions under which sentences cohere with a system of beliefs. Such semantic relations are established, as the correspondence theorist holds, between sentences and the conditions under which, in the course of their linguistic practice, speakers assert sentences. These conditions are not, however, objective conditions. The truth conditions of any sentence, the conditions to which it stands in semantic relations, are the conditions under which it coheres with speakers' beliefs. Call these conditions

coherence truth conditions. Global anti-realism can be characterised as the view that sentences have coherence truth conditions and not objective truth conditions. Given this account of truth conditions, the coherence theory of truth will not face the difficulty which cripples the correspondence theory. Realists run into difficulties trying to explain how sentences correspond to undetectable truth conditions. Anti-realists have no such difficulties since speakers can always recognise whether or not some sentence coheres with their system of beliefs. If they cannot recognise that a sentence coheres with their system, then it does not. Consequently, the truth conditions posited by coherentism are always detectable and speakers can easily assert sentences only when they obtain.

If global anti-realism is to supplant realism and the correspondence theory, several points must be established. For a start, of course, anti-realists need to show that we have good reason to adopt a coherence theory of knowledge. Next they must establish that the coherence theory of knowledge entails that speakers do not have the capacity to assert sentences only when objective conditions obtain. While convincing arguments can be found for the coherence theory of knowledge, it is not, by itself, obviously inconsistent with realism. On the contrary, it is possible to argue that such a theory actually buttresses realism. Realists could maintain that the coherence of a sentence with a system of beliefs is (usually, at least) a good indication that the sentence's objective truth conditions obtain.²⁰ Such a claim, if true, is crucial to the hopes of correspondence theorists since it enables them to hold that speakers assert sentences because they have indirect grounds for believing that certain objective conditions obtain. Consequently, global anti-realists need to establish that the coherence of a sentence with a system of beliefs is not grounds for believing that certain objective conditions obtain. Even if this second point could be proven, however, global anti-realism and coherentism would remain elusive. A number of early advocates of the coherence theory of truth, among them Brand Blanshard, tried to infer that coherentism follows directly from a coherence theory of knowledge. Attempting such an inference is akin to making bricks without straw. Only when a coherence theory of knowledge is combined with reflection on the origin of semantic relations can the coherence theory of truth be shown to be correct. The remainder of this chapter is devoted to showing that a coherence theory of knowledge is correct, that it cannot be used to support realism and that it helps undermine realism. Several standard objections to the cogency of coherentism are also rejected.

§4. COHERENCE, TRUTH AND KNOWLEDGE

The case for the coherence theory of knowledge scarcely counts any longer as philosophical news. It dates back at least as far as the 1930s, when the theory was defended by several members of the Vienna Circle. More recent

discussions of the coherence theory of knowledge have added important details but, in its essentials, the arguments of Otto Neurath, Rudolf Carnap and other early coherence theorists have never been improved upon.²¹ Perhaps the best way to motivate the coherence theory of knowledge is, then, to indicate the reasons which were, in the first instance, adduced in its favour. In its early years, all members of the Vienna Circle were (as the very names, 'logical positivism' and 'logical empiricism,' suggest) very far from accepting a coherence theory of knowledge. The arguments which could persuade (at least some of) these committed empiricists should provide strong grounds for adopting a coherence theory of knowledge.

All members of the Vienna Circle were, initially, committed to an empiricism which distinguished between two classes of empirical sentences. Empiricists are committed to the view that the evidence for all (non-analytic) sentences is sensory evidence but it is plain that not all sentences are directly supported by sensations. Consequently, the Vienna Circle introduced a distinction between observation (or "protocol") sentences and non-observation sentences. Observation sentences were said to be the foundational sentences directly supported by sensations while non-observation sentences are supported by reduction to the foundational class. The sentence, 'The cat is on the mat,' on this view, will fall into the class of observation sentences and it is justified if and only if certain sensations are available. Not all empirical claims are directly justified, however, by the occurrence of some sensation. Such claims include sentences about the remote past, unobservable entities, other minds, scientific generalisations and so forth. Empiricists hold that such sentences are justified if and only if they can be reduced to sentences which are supported by sensations. So, for example, sentences about electrons are reduced to sentences about streaks in cloud chambers and other sentences which are supported by experience. A scientific law is reduced to sentences which report some range of experience.

The empiricist account of the justification of both classes of sentences soon broke down. The reductionistic treatment of non-observation sentences is plagued by a number of problems. For a start, it runs afoul of inductive uncertainty: no general statement is entailed by any finite number of sentences which are supported by sensations. Consequently, the view that generalisations are reducible to (and mean the same as) reports of experience is extremely problematic. Moreover, reductionists are committed to a variety of implausible views. They are forced to hold, for example, that sentences about other minds mean the same as sentences about behaviour and that 'Jane Austen visited Lyme Regis' currently has the same meaning as reports about the existence of historical records. The realisation that reductionism has problems leaves us very far from a coherence theory of knowledge. But it was the first step in the realisation that empiricism had difficulties and left the position vulnerable to the alternative provided by the coherence theory.

Even if empiricism does not provide the correct account of how non-observation sentences are warranted, it may still give an adequate account of observation sentences. But just as reductionism fell upon hard times, the Vienna Circle's account of the justification of observation sentences was also thrown into doubt. The foundational sentences, directly supported by the occurrence of sensations, were thought to be infallible and immune to revision. The early positivists believed that knowers cannot be mistaken so long as they limit themselves to judgements about how things appear. Neurath and other members of Circle soon came to believe that observation sentences can be rejected as false. Suppose that I believe the observation sentence, 'The cat is on the mat' is true but a well-established and firmly-held theory entails that cats never sit on mats. Under such circumstances it would be rational to doubt the claim that the cat is on the mat, even if I seem to see a cat sitting on the mat. The realisation that the truth values assigned to direct reports of experience can be revised is the first indication that something like a coherence theory of knowledge is required. When such revision of the assignment of truth values occurs, sentences are accepted as true, or rejected as false, on the basis of other sentences which are held to be true, not on the basis of experience.

When the members of the Vienna Circle recognised that an observation sentence can be rejected because it conflicts with other sentences, they faced a choice. They could have searched for other sentences, more basic than observation sentences, which depend only on experience for their justification. Or they could have rejected the view that sentences are justified by experience. Moritz Schlick adopted the first option and believed that he had found in "*Konstatierungen*" (or "affirmations") a class of sentences which is indubitable and supported by experience.²² Schlick granted that the truth values assigned to observation sentences do depend, in part, on the assignment of truth values to other sentences. This was, he believed, only because such sentences are temporally removed from the sensations which justify them. Once an observation sentence is formulated, written down, uttered or merely conceived, Schlick held, the sensations which could confirm it are gone. Only for this reason can observation sentences be assigned truth values on the basis of other sentences which are held to be true. An affirmation, on the other hand, is supposed to be formed as soon as a sensation occurs. It has no duration so it is never temporally distant from its confirming experience. Affirmations were supposed to provide evidence for observation sentences, which were thus displaced from their role as the foundational class.

The search for affirmations was the last, unsuccessful gasp in the attempt to find a class of sentences whose truth was guaranteed by the occurrence of sensations. It was unsuccessful since no one was able to explain how such sentences, without duration and, according to Schlick, without any consequences, can serve to support observation sentences. Moreover, the very idea of a non-temporal sentence is extremely dubious: it takes time to

formulate a sentence. For this reason, the attempt to eliminate the gap between a sentence and its confirming sensation is futile. If an affirmation is about a particular sensation at a particular instant, the sensation is gone before a speaker has finished formulating the sentence. Since the sensation is gone, it cannot override the rejection of some sentence on the basis of what else is taken to be true. The problem with Schlick's position is, however, even more serious than these points indicate. The most fundamental problem for empiricism stems from the realisation that there is no reason why speakers should not take into account the truth values assigned to other sentences when deciding whether or not to accept any sentence.

Even if the logical positivists' early empiricist account of knowledge is rejected, a feeling remains that sensations play a role in the justification of many sentences. Surely, one might still want to say, the sensation one has when one looks at the cat on the mat has something to do with the justification of 'The cat is on the mat.' Suppose one is in doubt about the truth of the sentence. Surely the best way to remove this doubt is to compare the sentence and the sensation one has when observing the cat and mat. There are other ways to decide whether the sentence is justified: another person can be asked, for example, or instruments consulted. At some point, however, sensations seem to be necessary to much knowledge of the world. Those who reject empiricism can agree that sensations are necessary. They deny only that they play the role assigned to them by empiricists. There is good reason to suppose that sensations play a role in the causal process which gives rise to beliefs: a knower's sensations are, for example, an important part of the causal chain which leads to the belief that the cat is on the mat. We should not, however, confuse the cause of a belief with the justification of a sentence.

A number of good reasons can be presented for believing that even if sensations are the causes of belief, they cannot be the justification of a belief. The first is that sensations sometimes cause false beliefs. Consider, for example, the beliefs caused in the context of non-veridical experiences. Once we recognise that sensations can give rise to false beliefs, it is clear that knowers must look elsewhere for the justification of a sentence. Knowers must look to the results of sensations, namely beliefs, not to the sensations themselves, for the justification of sentences. The second reason for rejecting the identification of sensations and justifications is that it is possible to have the sort of sensation which is supposed to justify a given sentence and yet not be justified in believing the sentence. Some knowers could, for example, have an experience of a cat on a mat without being justified in believing that 'The cat is on the mat' is true. This will be the case if, for example, a knower does not know what a cat is or if the knower believes, falsely, that the cat is illusory. On the other hand, the sentence will be justified if knowers have the beliefs that they are having a sensation of a certain sort, that the cat experienced is the same as is referred to by 'the cat,' that a cat is the sort of animal which is

currently being experienced, that conditions of observation are satisfactory, that other observers also report a cat on a mat and so on. The sentence is justified since these beliefs, taken together, provide good reason to believe that the cat is on the mat. Under such circumstances, the sentence can be said to cohere with some knowers' beliefs. So it seems clear that even an observation sentence depends for its justification on knowers' beliefs, or the sentences which they hold to be true. That non-observation sentences are justified by other sentences is even more obvious.

A coherence theory of knowledge does not, by itself, entail a coherence theory of truth and global anti-realism. It does so, though, in conjunction with the premiss that speakers can only establish semantic relations between their sentences and the conditions under which they assert all sentences. When speakers assert some sentence, they do so because their system of beliefs warrants assertion of the sentence and not because they recognise that certain objective conditions obtain. Consequently, speakers' sentences stand in semantic relations to the elements of a system of beliefs which warrant their assertion. That is, speakers establish a conventional semantic relation between a sentence and certain coherence truth conditions. This semantic relation is such that the sentence is true if and only if a system of beliefs contains these coherence truth conditions. Realists hold, of course, that a sentence could be false even though a system contains certain beliefs. The coherentist replies that it makes no sense to say this, given that speakers have established the semantic relation they have.

In §6 we saw that the realist can reasonably claim that speakers can establish semantic relations between sentences and conditions they cannot detect, so long as there is a significant class of sentences they assert only when they have detected certain objective conditions. At the same time, however, we noted that this avenue would be closed if speakers assert sentences only when they recognise that certain detectable conditions obtain. This eventuality has now come to pass. Speakers assert all sentences only when a system of beliefs is such that the sentences are warranted. Consequently, realists cannot argue that speakers' use of some sentences can be used as grounds for saying that all sentences stand in semantic relations to objective conditions. While realists might be able to use this sort of consideration as a premiss in an argument against partial anti-realists, it has no force against global anti-realism.

The version of the coherence theory of truth offered here differs importantly from earlier versions of coherentism and it is immune to the objections which have plagued them. The key difference lies in the answer given to the question of what it is for a sentence to cohere with a system of beliefs. According to some early advocates and critics of coherentism, to say that a sentence coheres with a system of beliefs is simply to say that the sentence is consistent with the system. That is, on this early account of coherence, a sentence is true if and only if it does not contradict any element of

a system of beliefs. On the present view, however, a sentence coheres with a system just in case it can be inferred from a system of beliefs. When there is a semantic relation between a sentence and certain elements of a system of beliefs, there will, that is, be inferential relations between them as well. Speakers will establish a semantic relation between some sentence and certain conditions because they recognise that the sentence is inferable from, or coheres with, the conditions.

Coherence is characterised in terms of inference from a system of beliefs but it must not be thought that coherence is to be understood solely in terms of logical entailment. Speakers will frequently establish semantic relations between a sentence and conditions consisting of elements of a system of beliefs when the sentence is not logically entailed by those elements. Since many sentences are true which are not logically entailed by a system of beliefs, coherentists must hold that coherence cannot be understood solely in terms of logical entailment. Scientific generalisations, for example, are not logically entailed by any number of reports of experimental results. Since they can, nevertheless, be true, coherentists must recognise that logical entailment is not the only sort of relation involved in coherence. A sentence can also be said to cohere with a system of beliefs if the sentence can be inductively inferred from the system. There are still other sorts of rules of inference besides deductive and inductive rules. Theories within a system of beliefs contain their own rules of inference. These rules differ from one sort of theory to another. Physics and theories of literary criticism specify different sorts of rules of inference by means of which the truth of sentences can be established. When a sentence can be inferred from a system of beliefs in accord with any of these rules, it is said to cohere with the system.

§5. PURPORTED PROBLEMS WITH COHERENTISM

The version of the coherence theory of truth just presented faces a number of potential objections. These objections fall into two main classes. The first sort of objection is directed against the particular, anti-realist version of coherentism advocated here. This type of objection takes issue with the view that speakers cannot assert sentences only when objective truth conditions obtain. A key premiss in the argument for this view is the coherence theory of knowledge. Those who wish to challenge coherentism could, therefore, reject the coherence theory of knowledge. Alternatively, they could take exception to the suggestion that this theory of knowledge entails that speakers cannot assert sentence only when objective conditions obtain. Since we have already seen that good reasons can be given for accepting the coherence theory of knowledge, the second alternative is the more promising of the two. If realists could establish that the coherence of a sentence with a system of beliefs is a good indication that objective conditions obtain, they could argue that speakers

can assert sentences only when objective conditions obtain and, thus, establish semantic relations between sentences and these conditions. Once this sort of objection is overcome, other objections remain. Objections of this second sort are less specific to the version of the coherentism offered here. A number of traditional objections to coherentism have tried to show that it is in some manner incoherent, either because it cannot account for the truth of apparent truths or because it cannot rule out the truth of manifest falsehoods. These objections potentially apply to the global anti-realist's version of coherentism and must be refuted. The global anti-realist's version of coherentism can be defended against all of these objections.

Begin by considering the first sort of objection to coherentism. Realists who present this objection may freely admit that speakers assert some sentence only when it coheres with their system of beliefs. Realists can still hold that speakers can, nevertheless, assert sentences only when objective conditions obtain and the speakers, thereby, establish correspondence relations between the sentence and the objective conditions. Although speakers assert sentences only when they cohere with a system of beliefs, they do so because they take such coherence to be a good indication that certain objective conditions obtain. Think back to the correspondence theorist's account of how semantic relations are established between sentences and conditions which cannot be directly detected. On this account, speakers assert that 'Caesar crossed the Rubicon' when the sentence coheres with their system of beliefs. Their system of beliefs contains the beliefs that certain historical records accurately report Caesar's movements, that certain documents are not forgeries and so on. Or consider a sentence about subatomic particles such as 'An electron passed through the cloud chamber.' This sentence too is asserted because it coheres with some speakers' system of beliefs. Nevertheless, realists could argue, sentences can still correspond to objective conditions. In the cases of both of these sentences, the realist will hold, coherence with a system of beliefs is an indication that unobservable, objective conditions obtain. If speakers can have reason to believe that objective conditions obtain, even if they are unobserved, they can establish semantic relations between sentences and these conditions: they would do so by asserting sentences only when they have indirect reason to believe that their objective truth conditions obtain.

Realists could try to motivate their position by arguing that anyone who adopts the present version of coherentism ignores the fact that theories do not come from nowhere. Realists could attempt to fill this void by offering a naturalistic account of the relationship between sentences and objective conditions. They could, that is, appeal to the view that beliefs are caused, via stimulation of sensory surfaces perhaps, by objective conditions. This claim could serve as a premiss in an argument for the conclusion that the coherence of a sentence with speakers' beliefs is an indication that objective conditions obtain. Certainly, the realist may allow, objective conditions sometimes cause

false beliefs in us. For this reason, as we have seen, causes, whether these are sensations or anything else, are not the justification of a sentence. Nevertheless, realists can still argue, the fact that speakers have certain beliefs is a good indication that certain objective conditions, those which cause the beliefs, obtain. If most of the sentences we believe did not indicate that objective conditions obtain, realists might reason, we would not be such successful creatures. Indeed, given enough beliefs which do not accurately indicate which objective conditions obtain, we might die out. For example, if the beliefs of our ancestors were not good indicators of the presence of objective sabre-toothed tigers, they might not have lived to reproduce themselves. Realists may conclude that the fact that some sentence coheres with a system of beliefs indicates that certain objective conditions obtain and that speakers can, therefore, detect these conditions and establish semantic relations between them and sentences of their language.

Anti-realists can respond to this argument in a number of ways. Their first option would be to deny that the fact that speakers have some belief is a good indicator that certain objective conditions obtain. Certainly, speakers have some beliefs which are not reliable guides to objective conditions. These beliefs can even be very useful and aids to survival. Consider the standard sorts of examples: for centuries speakers held a variety of beliefs which reflected the ontology of Ptolemaic astronomy. These beliefs had, no doubt, been caused in speakers by objective conditions. They also enabled people successfully to make a variety of predictions. Similarly, objective conditions have caused some people to believe that the world is flat. As a result of holding this belief, they were able to survey the world and navigate about in it. In spite of the fact that these astronomical and geographical beliefs were (presumably) caused by objective conditions, and guides to successful activity, they did not reliably indicate which objective conditions obtain. Ptolemaic astronomy, for example, is a poor guide to what is objectively the case: in spite of what the theory would have us believe, no crystalline spheres exist. Still, this sort of rejoinder to the realist's objection might seem specious since we have good reason to believe that some beliefs do provide a good guide to objective conditions. The belief that a computer is in front of me is, the realist might insist, a good (though fallible) indication that a computer is in front of me, even if my justification for the belief is provided by other beliefs. Anti-realists should leave open the option of adopting a naturalistic account of the world and our relation to it.

A more promising sort of reply to the realist's argument accepts the suggestion that our beliefs are guides to objective conditions. Coherentists should not deny that there are objective conditions nor that beliefs are caused in speakers by such conditions. Certainly, the anti-realist may readily accept that there are objective conditions and that our beliefs and theories (that is, systematically related collections of beliefs) can carry with them ontological

commitment to objective conditions. For example, in virtue of accepting the theories that we do, we are committed to the existence of objective, that is, mind-independent objects such as tables and chairs and wombats. The view that beliefs arise in the course of our causal interaction with mind-independent objects is part of the naturalistic picture of the world which is essential to the current system of beliefs. Coherentists are at liberty to accept this picture. Neither commitment to mind-independent conditions nor a naturalistic view of the origin of beliefs carries with it, however, commitment to a realist semantics.

Anyone who believes that naturalism or commitment to the existence of objective conditions is inconsistent with global anti-realism has not taken to heart the implications of the coherence theory of knowledge. Nothing in the present objection leads to the rejection of the view, inherent in the coherence theory of knowledge, that the only grounds speakers can have for asserting a sentence is its coherence with a system of beliefs. The coherence theory of knowledge leads to the coherence theory of truth since it entails that, for semantic purposes, speakers cannot get outside of their system of beliefs. That is, speakers cannot say how things are without relying upon their theories. The realists' objection is based on a mistaken view of the relationship between theories and objective conditions. Speakers do not adopt theories because they recognise how things are objectively. Rather, they are ontologically committed to the existence of certain objective conditions because they recognise that their theories are a certain way. Since speakers are ontologically committed to the existence of some objective conditions if and only if some theory is part of their system of beliefs, it is misguided to say that speakers can assert sentences only when objective conditions obtain.

Realists may object that the rejoinder just provided does not do justice to their claim that beliefs are caused in speakers by objective conditions. The fact is, they will insist, speakers are caused to hold their theories by objective conditions and their theories would not remain unchanged if the objective conditions which cause them were to change. Naturalistic approaches to belief might be thought of as a way to get speakers outside of their theories and able to recognise how things are objectively. Realists suggest, that is, that, since these causal relations exist, speakers assert sentences, albeit indirectly, only when certain objective conditions obtain. In arguing that beliefs have objective truth conditions because they are caused by objective conditions, realists are trying to use one part of a system of beliefs (the naturalistic picture of the world) to get outside the system of beliefs.

One part of a system of beliefs cannot, however, get us outside the whole system. We only take the coherence of a sentence to be an indication that certain objective conditions obtain since we accept a certain naturalistic picture of the relations between our beliefs and the world. Our system of beliefs includes the naturalistic view that beliefs are caused by objective (material)

conditions. This naturalistic theory commits us to the existence of certain objective conditions. Anytime we attempt to say how things are objectively, by telling a naturalistic story about the origin of beliefs, for example, we cannot avoid making decisions about what to believe on the basis of what else we (already) believe. Any attempt to dispense with our theory of the world cannot help but be just more theory. Even if sentences stand in causal relations to objective conditions, speakers assert sentences only when they have certain theories. In this case, speakers assert sentences only when they have theories about causal relations. So, again, there is no chance for speakers to establish semantic relations between sentences and anything but the conditions under which they cohere with a system of beliefs. The fact that there are causal relations between speakers' beliefs and objective conditions has nothing to do with truth. These causal relations between speakers and the world are not semantic relations.

The first sort of objection to the coherence theory of truth, which asks us to reassess the view that speakers cannot assert sentences only when objective conditions obtain, is unable to refute the position but a number of more traditional objections to coherentism remain to be considered. A number of writers, beginning with Russell, have believed that a little reflection will show that coherentism is, at best, absurd and, at worst, incoherent.²³ Two basic lines of argument have been taken to establish that the coherence theory is seriously misguided. Any adequate account of truth will classify as true all and only true sentences. The realist can argue that coherentism captures neither all nor only true sentences. The first line of argument is designed to show both that the coherence theory does not classify as true all sentences which are true and that it may classify as true sentences which are false. This conclusion is supposed to follow as a consequence of (what may be called) the *transcendence problem*. Those who present this objection allege that many true sentences do not cohere with any system of beliefs and some false sentences may cohere with a system. Consequently, truth transcends what coheres with any system. The second fundamental objection to coherentism holds that it does not classify as true only true sentences. The second argument presents the *specification problem*. This second argument is designed to provide another reason for doubting that coherentism classifies as true only true sentences. This argument reminds us that many coherent systems of beliefs are possible and no one wants to say that a sentence which coheres with just any system is true. Those who pose this problem challenge coherentists to specify the system with which true sentences cohere without undermining their position by presupposing the rival conception of truth. Neither problem is as troublesome as the opponents of coherentism have thought.

Those who pose the transcendence problem are willing to concede that coherence with a system of beliefs is a good test of truth but hold that the coherence of a sentence with any system of beliefs is not a guarantee of its

truth. They conclude that truth cannot consist in coherence with a system. According to the opponents of the coherence theory, coherentists are not sufficiently impressed by the fact that speakers may, in certain respects, be mistaken about the universe and unable to tell that they are mistaken. In short, realists believe that scepticism cannot be dismissed out of hand. If it is possible that every system of beliefs contains falsehoods, truth cannot consist in coherence with such a system. This is not, however, the coherentist's only worry. Not only can any system of beliefs contain falsehoods, their opponents charge, but no system will contain all truths. Some true sentence, realists believe, states how many sentences Jane Austen wrote on November 17th, 1807 and this unknown sentence is an example of just such a sentence. So, it seems, a sentence may cohere with a system of beliefs and be false, or not cohere and still be true. In either case, it seems that the identification of truth with what coheres with a system of beliefs is mistaken. Moreover, there will be many sentences which neither cohere nor conflict with any system of beliefs. The coherence theory of truth is, then, inconsistent with the principle of bivalence.

Early defenders of the coherence theory of truth were powerless when presented with the transcendence problem. Early coherentists insisted that sentences cannot be true unless they can be warranted, but they were always plagued by examples of falsehoods which were warranted by coherence with knowers' beliefs and examples of putative truths which fail to cohere with any system. Their opponents seem to be on very firm ground when they hold that, given the limited cognitive capacities of knowers, they may all go to their graves ignorant of many matters and, worse, with false beliefs. The coherentists' response to these examples was usually to seek some ideal system of beliefs which includes all and only true sentences. This ideal system could be variously conceived. On the one hand, the ideal system could be identified with the set of beliefs finite knowers would have when they had gathered all the evidence they possibly can. On the other hand, it could be the set of beliefs of a being with cognitive capacities far greater than those of knowers such as us. Neither alternative provides a satisfactory response to the transcendence problem.

The first account of the ideal system is unsatisfactory since it seems reasonable to believe that speakers are capable of error and omission even when they have gathered all the evidence they can. Some realists will point to the possibility of an evil demon who is systematically deceiving knowers. Others will say that it is possible that knowers are brains in a vat: the knowers are dupes who believe and, given the input they receive via a super computer, can only believe that they are embodied creatures. Such extravagant hypotheses are not, however, necessary to make the present point. Even if there are no grounds for global scepticism, the universe is conceivably constituted in such a way that knowers are doomed to be mistaken about certain matters. In

any case, even if finite knowers can avoid error, the universe is far too vast for them to be able to assign a truth value to every sentence. Truth can, apparently, transcend even the system of beliefs of finite knowers who have reached the limit of inquiry. On the other hand, even if coherentists conceive of the specified system in terms of the system of an omniscient being, they are still not able to provide a satisfactory response to the transcendence problem. For a start, one of the advantages the coherence theory is thought to possess is that it makes truth something which is, in its nature, attainable by finite speakers. Defining the specified system in terms of the system of an omniscient being gives up this advantage. More importantly, this definition of the specified system is not one coherentists can adopt without compromising their position. For reasons which will emerge in §19, where the issue of ideal systems of beliefs is discussed at greater length, any attempt to account for truth in terms of coherence with the system of an omniscient being involves presupposing a correspondence theory of truth.

Not until anti-realism is embraced are coherentists able to give a satisfactory solution to the transcendence problem. Once they can appeal to an anti-realist account of meaning, coherentists can defend themselves by showing that advocates of the transcendence problem are begging the question. Realists cannot simply state, without argument, that truth can transcend what can be warranted. This is precisely what anti-realists deny. Once they have availed themselves of anti-realism, coherentists have a reason for denying that truth can transcend a system. Anti-realists' reflections on the origin of semantic relations enable them to argue that a sentence is true if and only if it can be warranted. A sentence is warranted if and only if it coheres with a system of beliefs. Therefore, a sentence is true if and only if it coheres with a system of beliefs. In other words, if a sentence coheres with a system it is true. If it does not, it is not true. This is just to say that truth cannot transcend what coheres with a system. The charge that coherentism leads to the rejection of the principle of bivalence also presupposes that realism is correct. The coherence theory does require that the principle of bivalence be rejected for some classes of sentences. Again, however, the realist's assumption that this principle applies to all sentences is undermined by the anti-realist's reflections of semantic relations. The principle of bivalence requires that sentences be able to stand in semantic relations to objective conditions and this they cannot do.

Some people may admit that, if anti-realism is correct, there will be no truths which cannot be warranted by coherence with speakers' beliefs. They may still worry that some falsehoods will sneak into even the best system of beliefs. That is, a sentence is quite possibly false, even though it coheres with speakers' beliefs. Certainly, coherentists can hardly deny that sentences have been warranted by coherence with a system of beliefs, only to be subsequently rejected as false. Coherentists can respond to this challenge in two ways. They can embrace relativism and hold that a sentence which was once true has

become false. Alternatively, they can appeal to an ideal system of beliefs. Here such a system can be of assistance to coherentists but, again, appeal to anti-realism is an essential part of the coherentists' reply. A consequence of anti-realism is that sentences stand in semantic relations to the conditions under which they are warranted. The first step in the reply to the lingering worries is the anti-realist premiss that, if the conditions which warrant the sentence obtain, then the sentence is true. Coherentists hold that the conditions under which a sentence is warranted are the conditions under which it coheres with a system (or ideal system) of beliefs. These premisses entail that a sentence cannot be false which coheres with a system of beliefs. Only if semantic relations hold between sentences and objective conditions would it be possible to make sense of the suggestion that a sentence is false even though the conditions which warrant it obtain. Of course, if anti-realists adopt this route they are constrained to admit that what is true changes as systems of beliefs change. The relativistic consequences of this admission are traced in §22.

Even if the transcendence problem can be overcome, the specification problem still remains. Coherentists need to be able to specify the system with which true sentences cohere. The coherentists' trouble is that there is any number of coherent systems of beliefs and, their opponents charge, they cannot specify one as the system with which truth sentences cohere and give reasons why sentences which cohere with some other system are false. At any rate, the charge is that coherentists cannot do so without presupposing a non-coherentist account of truth. The specification problem is, as Nelson Goodman notes, somewhat less chilling if we are prepared to accept that there is more than one system with which true beliefs cohere.²⁴ There are, however, plenty of systems with which a sentence could cohere without being true. Unless coherentists can explain why truth cannot consist in coherence with a fairy story, their position is reduced to absurdity.

The coherentist's worries become apparent when we consider, for example, a perfectly consistent fairy story. No one, especially not a coherentist, wants to say that every sentence is true which coheres with, that is, which can be inferred from, a fairy story. A comprehensive fairy story is not the only threat to the coherentist position. A more modest fiction presents just as much of a problem. Someone might invent a system which consisted of all the sentences which state the accepted views of scientists and historians plus a set of sentences which are consistent with the accepted views but complete fabrications. Plainly, some sentences will cohere with the enlarged system which do not cohere with the original one. And yet, again, no one wants to hold that the sentences which cohere only with the enlarged system are true. There is an obvious way to rule out systems consisting of coherent fictions: we could say that they consist of sentences which do not correspond to reality. Unfortunately, this simple expedient is not open to coherentists.

Coherentists have a very simple reply to the specification problem.

Proponents of this problem have confused a consistent set of sentences, such as a well-contrived fairy story, with a system of beliefs. A fairy story is, at best, a possible set of beliefs. Certainly any number of systems of beliefs are possible, but speakers adopt many fewer actual systems of beliefs. No community actually believes the sentences in which a fairy story is stated. Simply because no community believes fairy stories, coherentists are not committed to saying that a sentence which coheres with a fairy story is true. They are committed to saying that sentences which cohere with, say, quantum mechanics are true, but people actually believe this theory. Their position is that true sentences cohere with a system of beliefs, that is, with a system of sentences which speakers actually hold to be true. They are not committed to saying that sentences are true which cohere with an arbitrarily selected but consistent set of sentences.

If speakers should happen to adopt a system with which a fairy story coheres, coherentists would have to admit that any sentences which cohere with this system are true. There is little danger, however, that anyone will come to believe a fairy story. The belief that there is a distinction between truth and fiction is essential to any system of beliefs. Without it, there could be no belief at all: the very concept of belief depends on there being some sentences which are rightly held to be true and others which are false. Accordingly, any system will contain the belief that some entirely fictional system of sentences cannot be correct. The only grounds speakers can have for holding that the fictional sentences are true is that they cohere with the original system. Consequently, the beliefs in the fictional system will not cohere with the speakers' current system and, thus, speakers can only regard them as false. Consequently, coherentists are not committed to holding that sentences which cohere with a fiction are ever true.

Realists might object that this sort of response to the specification problem is inconsistent with coherentism. In holding that true sentences cohere with the system of beliefs actually held (or held at ideal limit of inquiry), coherentists claim to have a true belief about which system is the one with which true sentences cohere. That is, coherentists believe of some system that it is the one with which true sentences cohere since it consists of sentences which speakers hold to be true. Now, it could be objected, if the coherentists' belief is true, it is so because the knowers actually believe the sentences in the system.²⁵ So it seems that the coherentists' belief is true because certain objective conditions (consisting in the fact that knowers actually have certain beliefs) obtain. Coherentism states, however, that no sentences have objective truth conditions. So it seems that coherentists compromise their position in the course of defending it.

Like so many arguments against the coherence theory of truth, this argument begs the question. The argument assumes that only under objective conditions can a sentence about some system can be true. This is precisely what coherentists deny. They will hold that the claim that some system is the

one with which true sentences cohere is true if and only if it coheres with knowers' beliefs. On the other hand, the claim that any other coherent system (a coherent fairy story, for example) is the one with which true sentences cohere simply does not cohere with knowers' beliefs. This is not to deny that there is some objective fact about what knowers believe. Coherentists need never deny that any objective conditions obtain. The point, however, is that sentences about what knowers believe are not, any more than any other sentences, true if and only if these objective conditions obtain.

This chapter has led to the conclusion that the correspondence theory of truth needs to be supplanted by a version of the coherence theory of truth. Speakers utter any sentence only when it coheres with the speakers' system of beliefs. As a result of this linguistic practice, a semantic relation is established between the sentence and the elements of a system from which it is inferred. These elements are the coherence truth conditions of the sentence. This account of truth conditions leads to the demise of the principles of bivalence and transcendence and vindicates global anti-realism. Reflection on meaning, to which we turn now, will lead to the same conclusions as reflection on semantic relations.

C H A P T E R T H R E E

The Meaning of Global Anti-realism

§1. MEANING AND TRUTH

Reflection on the nature of meaning should confirm the conclusions about truth reached in the previous chapter. I have been discussing the semantic relations between sentences and their truth conditions. We have seen that sentences stand to their truth conditions in the conventional relation of being true if and only if the conditions obtain. I want now to switch to talk about meaning. As was noted in §1, realists and anti-realists can agree that the meaning of a sentence consists in its truth conditions, even if they have different conceptions of these conditions. The claim that the meaning of a sentence consists in its truth conditions is just the claim that the sentence is true if and only if the conditions in question obtain. When meaning is characterised in these terms, it becomes apparent that there is a close relationship between claims about the semantic relations in which sentences stand and claims about the meanings of sentences: a sentence stands in a semantic relation to the conditions in which its meaning consists. Realists, of course, claim that the meanings of sentences consist in objective conditions. Anti-realists, on the other hand, hold that meanings consist in detectable conditions. Global anti-realists, maintain, more specifically, that the meaning of a sentence consists in its detectable coherence truth conditions. This chapter confirms that global anti-realists are right about truth by showing that they are right about meaning.

The present section is devoted to exploring the relationship between accounts of meaning and the nature of truth. Sections 12 and 13 provide the cases for the rival conceptions of meaning: the realist's case is presented in §12 and the global anti-realist's views emerge in the following section. The cases for both accounts of meaning take the form of reflection on radical

interpretation. They both suggest that we will understand meaning when we understand interpretation. The radically new account of meaning which emerges from the global anti-realist's account of interpretation is presented in §14. Anti-realist accounts of meaning have, of course, been the subject of many objections. Section 15 is devoted to showing that many of these objections have no force against the account of meaning provided by the global anti-realist. When the objections do bear against global anti-realism, they are confuted. The holistic consequences of the global anti-realist account of meaning are traced in §16, and §17 shows that certain common objections to holism are unsuccessful.

Philosophers typically answer the question, 'What is meaning?' by providing a meaning theory for a language. Realists such as Davidson hold as much, as does Dummett, who is, at least, sympathetic to anti-realism. (A *meaning theory* is a systematic specification of the meanings of all sentences in a language.) For reasons which emerge later in this chapter, I am more sceptical than most people about the prospects of ever actually providing a complete meaning theory for a natural language. Even if, however, a complete meaning theory is, in practice, unattainable, light is cast on the general question about meaning by asking what the meanings of individual sentences are, according to a meaning theory for some language. We should, then, replace the question 'What is meaning?' by the question, 'In what, according to a meaning theory for some language, do the meanings of sentences consist?' This question is to be decided by inquiry into the use speakers make of their language. Just as the conditions under which sentences are uttered provide the key to determining the conditions to which sentences stand in semantic relations, so does the use speakers make of sentences indicate the conditions in which their meanings consist. When speakers use some sentence only when certain conditions obtain, this is evidence that the sentence is true if and only if the conditions obtain and that the meaning of the sentence consists in these conditions. The realist account of meaning will run into difficulties just in case speakers are unable to determine which objective conditions obtain. If speakers lack this ability, they will be unable consistently to use a sentence only when objective conditions obtain.

The realist account of semantic relations was faced with two questions: the first challenged realists to explain how speakers can establish semantic relations between their sentences and objective conditions, particularly when these are undetectable by speakers. The second question asked realists to indicate something, in the linguistic practice of speakers, which provides us with reason to believe that speakers have successfully established semantic relations between their sentences and (undetectable) objective conditions. In defending their account of meaning, realists must answer two parallel questions. Dummett has stressed, and Davidson has come to believe, that a meaning theory is a theory of understanding. That is, a meaning theory is a

theory which indicates what speakers know when they understand a language. This being the case, the first question realists face asks them to explain how speakers could acquire an understanding which consists in knowledge of objective conditions. Speakers must be able to acquire whatever understanding we attribute to them. The second question asks realists to indicate something in the linguistic practice of speakers which indicates that speakers possess an understanding which consists in a knowledge of objective conditions. Since the ability to use a language is a practical ability, speakers should be able to manifest their understanding in practice. Anti-realists have two arguments for the view that realists cannot provide satisfactory answers to these two questions. The acquisition argument is designed to show that realists do not have a satisfactory response to the first question and the manifestation argument leads to the conclusion that realists have no good reply to the second.²⁶

The acquisition argument begins from the premiss that teaching the meaning of a sentence is a matter of indicating, to language learners, the conditions under which it is true. Now it is uncontroversial that, when language learners are being taught the meanings of some sentences, they can only be exposed to conditions they are capable of detecting. Anti-realists conclude from this that speakers can only learn that sentences are true if and only if certain detectable conditions obtain. Understanding cannot, it seems, consist in a knowledge of objective conditions, when these cannot be detected by speakers, since speakers cannot acquire such an understanding. Partial anti-realists typically believe that speakers cannot detect any objective conditions which cannot be observed. They conclude that speakers cannot acquire an understanding of sentences which consists in a knowledge of these unobservable conditions. Instead, the understanding of certain sentences will have to consist in a knowledge of sentences about observable conditions to which they can be reduced. Global anti-realists, on the contrary, believe that the only conditions speakers can recognise, when they are acquiring a knowledge of meaning, are the conditions under which sentences cohere with a system of beliefs. They will conclude that the only understanding speakers can acquire consists in a knowledge of these coherence truth conditions.

The key premiss in the manifestation argument is the claim that those who understand a sentence know how to use it under the appropriate conditions. As the later Wittgenstein continually reminds us, understanding is to be thought of as a practical ability, an ability to act in a certain way, rather than as a purely mental state. When we recognise that speakers who understand a sentence possess a practical ability, the speakers will be expected to be able to display their understanding by making appropriate use of the sentence. When understanding is seen as a practical ability, the realist's difficulties immediately become apparent. The obvious way for speakers to display their understanding of a sentence is to pay attention to prevailing conditions and utter the sentence

only when the conditions obtain under which the sentence is true. The realist's trouble is that speakers cannot display, in this fashion, an understanding which consists in a knowledge of conditions they cannot detect, and objective truth conditions are not (always) detectable. Speakers simply cannot know when to utter the sentence and when to refrain from doing so. The partial anti-realist, on the other hand, has no difficulty explaining how speakers manifest their understanding of sentences whose meanings consist in observable conditions or which are reducible to sentences with such meanings. Speakers simply observe certain conditions and utter the appropriate sentences. Global anti-realists believe, similarly, that speakers are able to recognise the conditions under which a sentence coheres with their system of beliefs, so there is no trouble in explaining how speakers can manifest an understanding which consists in a knowledge of coherence truth conditions. Speakers can only be seen to assert sentences when certain coherence truth conditions obtain.

Reflection on interpretation is the best way to illustrate the force of the acquisition and manifestation arguments. Beginning with Quine, a number of philosophers have believed that debates about meaning can be resolved by appeal to a thought experiment.²⁷ Quine's thought experiment involves consideration of the process of radical interpretation. The study of radical interpretation is valuable since it makes easier the task of keeping tabs on what evidence is available to anyone who acquires an understanding of a language. This task is crucial, since the debate between realists and anti-realists turns on what speakers are able to know. An understanding of radical interpretation should enable us to assess the acquisition argument since radical interpretation is the process of acquiring an understanding of a wholly unknown language. Consideration of radical interpretation should reveal what interpreters come to know when they succeed in understanding a new language. Since interpreters learn the meanings of sentences, once we comprehend what they learn when they acquire an understanding of a language, we should be able to answer the general question about the nature of meaning. The radical interpretation thought experiment should also reveal the strengths of the manifestation argument. Interpreters can only succeed in interpreting the speakers of an unknown language if these speakers successfully manifest the understanding they possess. In the context of radical interpretation it will be easier to determine how speakers manifest their understanding.

The global anti-realist account of radical interpretation leads to the conclusion that meaning theories are very different in form from those which have been proposed by realists. Realists typically hold that a Tarski-style truth theory can do double duty as a meaning theory. Such a theory, they claim, when the result of empirical investigation, specifies the objective truth conditions of all sentences in a language and, thereby, indicates their meanings. The global anti-realist account of meaning theories differs from the realist's in two important respects. First, a meaning theory specifies the detectable

conditions under which a sentence coheres with a system of beliefs. Second, the global anti-realist maintains that a meaning theory is not a theory speakers know above and beyond their other theories. Rather, a meaning theory is parasitic upon the system of beliefs of some community of speakers. Anyone who holds a certain system of beliefs knows, ipso facto a meaning theory. When acquiring a language, speakers do not acquire two sorts of knowledge: familiarity with a set of beliefs and knowledge of a meaning theory. Rather, learning the meaning of any sentence is simply a matter of mastering some part of a system of beliefs. So, for example, learning the meaning of some statement of physics consists in mastering some part of physical theory.

§2. THE INTERPRETATION OF REALISM

Radical interpreters cannot appeal to the sort of evidence available to ordinary interpreters. That is, they cannot appeal to a standard mapping of sentences of the interpreted language on to sentences of the interpreter's language. The only evidence upon which they can draw is information about the linguistic and non-linguistic behaviour of speakers of the unknown tongue, information about the conditions which obtain when speakers engage in this behaviour and general information about speakers and languages. On this much, realists and anti-realists can agree. They part company on the matter of the conditions which obtain when speakers utter a sentence, and which are relevant to the interpretation of the sentence. Realists claim that the key to radical interpretation is found in the objective way the world is when speakers of an unknown tongue assert the sentences of their language. Anti-realists, on the other hand, think that the relevant conditions are those which speakers can detect and which warrant the assertion of sentences. Their view is that conditions which speakers (and interpreters) cannot detect can scarcely be relevant to the interpretation of speakers' utterances.

Realists believe, however, that interpreters can proceed on the assumption that both they themselves and the speakers of the unknown language can detect objective conditions. On the realist's account, interpreters will note, for example, that the speakers assert that '*Le chat est sur le tapis*' when it is objectively the case that the cat is on the mat. This is taken to be evidence that '*Le chat est sur le tapis*' is true if and only if (it is objectively the case that) the cat is on the mat. Of course, the realist will grant, a good many more observations about the conditions under which the sentence in question is asserted would be necessary before this hypothesis about its truth conditions could be satisfactorily confirmed. The observation that, on some occasion, speakers assert the sentence when the cat is on the mat cannot, by itself, confirm the hypothesis. Interpreters need to demonstrate that speakers assert it *only* when these objective conditions obtain. Interpreters may need to conduct some experiments: they could, for example, remove the cat from the

mat and see if this affects speakers' willingness to assert that '*Le chat est sur le tapis.*' Nevertheless, the suggestion is that interpreters' careful attention to the objective conditions under which speakers of an unknown tongue utter some sentence will reveal its meaning.

This approach to interpretation requires, as Davidson recognises, that radical interpreters adopt a principle of charity.²⁸ According to this principle, speakers of an unknown language are, at least most of the time, right when they assert a sentence. On the realists' view, the interpreters notice that a speaker utters given sentences when certain objective conditions, recognisable by the interpreters, obtain. The interpreted speaker has to be (charitably) credited with a capacity, similar to that of the interpreters, to recognise reliably that the given objective conditions obtain. In the example used in the previous paragraph, interpreters assume that certain speakers are able, like themselves, to detect the objective conditions consisting of the cat's being on the mat. Given that they have this capacity, the speakers have the ability to utter '*Le chat est sur le tapis*' only when objective conditions are such that the cat is on the mat. These abilities underwrite the claim that the interpreted speakers utter mainly true sentences. Without these assumptions, interpreters can have no grounds for saying that the sentence in question is true if and only if objective conditions are such that the cat is on the mat.

Radical interpretation is a more complex undertaking than simply associating some sentences with the conditions under which they are asserted. The procedure just outlined may make possible the interpretation of observation sentences. From a realist's perspective, observation sentences may be characterised as those sentences whose objective truth conditions may be directly experienced and which are asserted only when these conditions are so experienced. In the case of observation sentences, realists can plausibly claim that an important clue to interpretation is found in the immediately observable conditions under which sentences are uttered. Other sentences are less amenable to such treatment. A wide variety of conditions obtain in the immediate neighbourhood of speakers when they utter non-observation sentences such as 'Jane Austen visited Lyme Regis in 1804' and 'Neutrinos have no rest mass.' In the cases of such non-observation sentences, the conditions which obtain, in the locale of the speakers when the sentences are uttered, provide little clue to their meanings. Certainly, speakers are likely to assert the first of these sentences only when a range of historical evidence has been inspected. And, typically, they will assert the second only when some experimental data have been perused. Nevertheless, it is unlikely that attention to the local conditions under which these sentences are uttered will, by itself, enable interpreters to understand the sentences. In the cases of still other sentences, attention to the local conditions under which sentences are asserted will provide even less clue to the meanings of sentences. Consider, in particular, undecidable sentences. There will be no correlation between the

utterance of such sentences (which will be rare, limited primarily to philosophy seminars) and local conditions under which they are uttered. Still, such sentences are meaningful and interpreters will not have completed their task until they have indicated how the sentences are to be understood. Interpreters must have some other means to interpret sentences besides paying attention to the immediate conditions under which they are asserted.

We can profitably note, parenthetically, that Quine's doctrine of the indeterminacy of translation is a consequence of his view that interpreters have no other way. Except in the cases of observation sentences, Quine believes, interpreters cannot associate, in a unique manner, sentences and objective conditions. Quine accepts the realist's assumption that meanings must be sought in objective conditions. Quine seeks them in the objective conditions which prompt assent to sentences. When these conditions cannot be uniquely identified, interpreters can find no unique meaning for interpreters to identify. Consequently, Quine concludes, interpreters can map non-observation sentences of an alien language on to sentences of their own language in a variety of equally acceptable manners. The problem of indeterminacy of translation can be overcome if interpreters can find evidence about the meanings of sentences besides the evidence concerning the immediate objective conditions which prompt assent to, or dissent from, sentences.

Most realists disagree with Quine. In an effort to explain how interpreters can understand non-observation and undecidable sentences, realists are able to adopt the view that information about some speaker's utterance of a sentence under certain conditions is not merely evidence about the meaning of that sentence. Such information is also evidence, realists may hold, for an entire meaning theory for the speaker's language. Davidson, for example, is a realist who believes that the aim of radical interpretation is to develop a Tarski-style truth theory for an alien language. Such a truth theory is supposed to do double duty as a meaning theory for the language. Davidson believes that information about the conditions under which speakers assert some sentence is evidence for entire truth theories. So, for example, the observation that speakers assert '*Le chat est sur le tapis*' when (objective conditions are such that) the cat is on the mat is supposed to be evidence for a truth theory which contains the axioms "'*Chat*' refers to cats' and "'*Tapis*' refers to mats.'

Realists may suggest that these axioms, in conjunction with other axioms and rules of inference, may be used to generate theorems which specify the objective truth conditions of non-observation sentences and even the truth conditions of undecidable sentences. Their argument will be that, as they are used in observation sentences, words such as '*chat*' and '*tapis*' pick out elements of objective conditions. When these words are used, in combination with others, to form non-observation sentences, the words continue to denote elements of objective conditions. Realists can conclude that the theorems of a truth theory which indicate the truth conditions of the new non-observation

sentences indicate that the sentences have objective truth conditions. So, for example, a theorem of the truth theory for the alien language will be, “*Un chat est sur un tapis dans une autre galaxie*” is true if and only if (objective conditions are such that) a cat is on a mat in another galaxy.’ Realists conclude that interpreters can develop a truth theory which specifies objective truth conditions for all sentences of an alien language.

If the account of interpretation sketched in the preceding paragraphs is accepted, realists have a plausible response to the acquisition and manifestation arguments advanced by anti-realists. If radical interpretation is a matter of developing a truth theory such as that described in the previous paragraph, realists may claim that radical interpreters can, given the evidence available to them, acquire an understanding of all sentences of an alien language, which consists of a knowledge of objective truth conditions. Partial anti-realists have frequently advanced a version of the acquisition argument to show that the understanding of some sentences does not consist in a knowledge of objective truth conditions. They insist that an interpreter can acquire an understanding which consists in knowledge of certain truth conditions, only if these conditions are detectable by the interpreter. Moreover, the partial anti-realist position seems to be that an interpreter has to acquire an understanding of sentences one at a time, as the interpreter becomes acquainted with the conditions under which each sentence is true. This can now be seen to be an unreasonable requirement. In mastering some sentences, by paying attention to the conditions under which they are asserted, interpreters can learn enough to master other sentences. If the understanding of the sentences initially mastered consists in a knowledge of objective truth conditions, there seems little reason to deny that the understanding of the other sentences does not consist in a knowledge of similar conditions.

Realists can claim, with as much justification, to have an adequate response to the manifestation argument. According to the manifestation argument, recall, speakers must be able to manifest, in their linguistic activity, the understanding they possess of any sentence. Partial anti-realists have suggested that a speaker could not manifest an understanding which consisted in a knowledge of undetectable objective conditions. After all, they can reason, speakers cannot be expected to assert a sentence only when conditions obtain which they cannot detect. Plainly, however, if radical interpreters can construct a complete truth theory for an unknown tongue, of the sort realists want, speakers can manifest an understanding of the sort realists posit. After all, the only evidence the interpreters had to go on was information about the linguistic and non-linguistic behaviour of the speakers. The speakers supposedly manifest this understanding by using some of their sentences only when objective conditions obtain. This is enough, realists can hold, to indicate that other sentences are to be used only when objective conditions obtain and that understanding consists in knowledge of these conditions.

All this is not meant to suggest that realists are right about meaning. Clearly, however, the realist's account of interpretation, and meaning, can be refuted only if a concession made by partial anti-realists is withdrawn. Partial anti-realists allow that the meanings of sentences can consist in objective conditions, when these are recognisable by users of the sentences. Such anti-realists do not deny that speakers can acquire and manifest an understanding which consists in a knowledge of such conditions. Once this is granted, it now appears, realists can argue that speakers can acquire and manifest a realist understanding of all sentences in a language. Only by denying that the meanings of all sentences consist in objective truth conditions can anti-realists succeed in showing that realists are wrong about the meanings of any sentences. Global anti-realism can, again, be seen to be the only viable alternative to realism.

§3. THE INTERPRETATION OF ANTI-REALISM

The time has come to examine the realist's claim that speakers assert, and can be observed to assert, at least some (observation) sentences only when objective conditions obtain. Good reasons can be provided for doubting the assumption, essential to the realist's account of interpretation, that both speakers of the alien tongue and interpreters have the capacity to assert sentences only when certain objective conditions obtain. Realists frequently do not argue for this assumption. It is, rather, built into the principle of charity. Realists are not merely charitable: they are down-right prodigal when they endow speakers with the capacity to detect objective conditions and assert given sentences only when certain conditions have been detected. Realists will have difficulty in justifying their generosity if global anti-realists are right in accepting a coherence theory of knowledge and right about the consequences for semantics of such a theory.

Any anti-realist believes that conditions which are not detectable by speakers cannot be relevant to interpretation of the speakers' utterances. And, of course, anti-realists believe that objective conditions cannot always be detected by speakers. The global anti-realist believes, more specifically, that the only ground speakers can have for asserting a sentence is its coherence with a system of beliefs. That is, the only conditions speakers can detect, when they assert sentences, are the conditions under which the sentences cohere with a system of beliefs. Interpretation becomes a matter of discovering the conditions under which sentences cohere with a system of beliefs. This conception of interpretation is a consequence of the coherence theory of knowledge, outlined in §8, according to which speakers can only recognise what is warranted, according to some system of beliefs. They cannot recognise how things are objectively and independently of any beliefs at all. Since interpretation is the process of discovering the conditions under which a

sentence is true, it seems that the conditions under which sentences are true are the conditions under which sentences cohere with a system of beliefs.

In certain respects, the realist and anti-realist conceptions of interpretation resemble each other. In particular, anti-realists are still committed to the view that interpretation begins with observation sentences. Advocates of a coherence theory of knowledge do not, of course, distinguish between observation and non-observation sentences in the same way an empiricist would. Holders of a coherence theory of knowledge cannot distinguish between sentences warranted by experiences and sentences warranted by beliefs. Nonetheless, the distinction between observation and non-observation sentences can and, for the purposes of interpretation, needs to be preserved. Observation sentences are sentences (such as 'The cat is on the mat') which are warranted primarily by beliefs about what can be observed in a speaker's immediate environment. Non-observation sentences, on the other hand, depend for their warrant on beliefs besides those about some speaker's immediate environment.

Interpretation begins with observation sentences since interpreters can have a good idea about the beliefs which warrant such sentences. At the beginning of the process of interpretation, interpreters have to make a guess about the beliefs of the speakers of the unknown language. While interpreters are not, in general, justified in attributing to the speakers their own beliefs, the speakers probably share some beliefs with their interpreters. Part of the interpreters' system of beliefs will be the view that all people have much the same capacities to discern, and form beliefs about, features of their immediate environment. Given that the speakers have similar cognitive capacities, and given that they are subject to similar environmental stimuli, they probably have similar beliefs about the immediate environment. (This is not to say, of course, that beliefs are justified by their causes.) So, for example, that speakers of an unknown tongue probably have beliefs about local fauna and other nearby middle-sized physical objects which are similar to the beliefs of the interpreters. Once interpreters are equipped with this conjecture about the beliefs of speakers, they are in a position to understand observation sentences of the unknown language since they have a good idea about the beliefs the speakers take to warrant such sentences. Identifying the utterances which are utterances of observation sentences will be quite easy. Interpreters need only pay attention to the relation between (their own) beliefs about the changes occurring in the environment of the speakers and the speakers' changing dispositions to assert sentences. Observation sentences can be identified by the strong correlation between changes in the environment and changes in speakers' dispositions.

Notice that anti-realists, like realists, believe that interpreters need to rely upon a principle of charity. Realists are quite right when they state that interpretation cannot proceed without the assumption that many of the beliefs

of the speakers are (by the lights of the interpreters) true. The principle of charity, as anti-realists conceive of it, does not lead interpreters to attribute to speakers beliefs which are true in the sense of corresponding to objective conditions. Nor does the principle presuppose that speakers have the capacity to utter sentences only when objective conditions obtain. The anti-realist's principle of charity simply states that the speakers have a system of beliefs which resembles that of the interpreters. The global anti-realist also believes that speakers have the capacity to recognise what is warranted by their beliefs. Independent arguments can be provided for these conclusions. They should not be presupposed without argument in a principle of charity.

Given that the recognition that a sentence coheres with a system of beliefs is the only ground speakers can have for asserting a sentence, a picture of interpretation emerges which differs greatly from the one presented by the realist. The evidence that would justify interpreters in adopting a meaning theory such as the realist posits is simply not available. They have to construct a meaning theory using only information about the beliefs speakers have when they assert sentences (and, of course, the background information available to all interpreters, including information about the cognitive capacities of humans). An example will illustrate how interpretation proceeds, according to the global anti-realist. Consider again the interpretation of an observation sentence such as, '*Le chat est sur le tapis.*' Suppose that the interpreters know the conditions under which 'The cat is on the mat' coheres with a system of beliefs. Suppose, moreover, that these conditions are currently satisfied: the interpreters are warranted in believing that the cat is on the mat. Furthermore, the interpreters are warranted in believing that the speakers of an unknown language are saying '*Le chat est sur le tapis.*' The speakers are believed to have very much the same cognitive capacities as the interpreters and their beliefs are (probably) causally linked to the items (cats, and so forth) in the environment which cause the interpreters to believe that the cat is on the mat. It is also likely that the speakers have beliefs similar to the interpreters' beliefs about the conditions of observation (that they are standard), the identity conditions for animal bodies and so on. Given all this, the interpreters have some reason to adopt the hypothesis that the sentence uttered by the speakers is true if and only if the speakers have beliefs similar to those with which 'The cat is on the mat' coheres. Of course, the interpreters do not yet have sufficient evidence to say that they understand the sentence in question. They will have sufficient evidence only when they note that speakers repeatedly assert the sentence under similar conditions.

Notice that, on the global anti-realist's account of interpretation, no mention is made of objective conditions. Interpreters recognise that they themselves assert any sentence only when it coheres with their system of beliefs. They recognise, moreover, that they have no grounds for asserting that speakers assert sentences only when objective conditions obtain. Given the

available evidence, the interpretation of a sentence, even an observation sentence, is a matter of determining which beliefs provide the conditions under which speakers assert the sentence. The meaning of the sentence consists in these conditions and interpreters understand the sentence when they grasp the conditions. Speakers can acquire no other sort of understanding.

Someone might grant that interpreters understand some sentence when they know the conditions under which the sentence coheres with speakers' beliefs, but still find odd the claim that interpreters adopt the hypothesis that some sentence is true if and only if those who assert it have certain beliefs. That is, there is room to doubt that the conditions in which meanings consist are truth conditions. Perhaps interpreters should seek to confirm hypotheses which state that some sentence is warranted if and only if certain conditions obtain. We can easily see why someone might entertain such a possibility: anti-realists do blur the distinction between truth and warranted assertability. Anti-realists will say, however, a strict distinction between these makes sense only if there is a reason to suppose that truth conditions can be undetectable. The whole thrust of the anti-realist's approach to meaning is to show that sentences cannot mean that undetectable conditions obtain and, consequently, sentences cannot have undetectable truth conditions. Sentences are rightly asserted if and only if certain recognisable conditions obtain and these conditions might as well be called truth conditions. If these conditions are not truth conditions, then nothing is a truth condition.

Suppose, then, that the interpretation of observation sentences is a matter of identifying the beliefs about the immediate environment with which some alien observation sentence coheres, and suppose that these beliefs provide the truth conditions of the sentence. A good deal remains to be said about interpretation. Like realists, global anti-realists need to indicate how interpreters would proceed, once they have succeeded in understanding a number of observation sentences of an unknown language. All the other non-observation sentences of the language remain to be interpreted and beliefs about the immediate environment provide little clue to the meanings of many of these sentences. For reasons which will become clearer in the next section, anti-realists have little temptation to adopt the realist's strategy for interpreting non-observation sentences. That is, interpreters should not next proceed to develop a Tarski-style truth theory for the alien language.

If a truth theory is unable to serve as a meaning theory, we will have to look elsewhere. We would do well to remind ourselves of what interpreters actually learned when they successfully interpreted observation sentences. They did not learn a theorem of a Tarski-style truth theory. That is, they did not learn some sentence of the form "*Le chat est sur le tapis*" is true if and only if the cat is on the mat.' Rather, they acquired a knowledge of the beliefs which must be part of a system of beliefs if the quoted sentence is true. That is, the interpreters became familiar with the elementary theory of cats and mats which provides

the conditions under which the sentence is true. It seems reasonable to expect that the interpretation of any sentence will, similarly, be a matter of learning the conditions under which sentences cohere with a system of beliefs. Interpreting an unknown language is a matter of learning the theories which speakers of the language must hold if their sentences are true. A complete meaning theory will indicate, for every sentence of a language, the conditions under which it coheres with a system of beliefs and is true. That is, a meaning theory specifies the coherence truth conditions of every sentence in a language.

Global anti-realists need to indicate how interpreters are to acquire a knowledge of the theories which make up some speakers' system of beliefs. They also need to show how this knowledge provides an understanding of the non-observation sentences of an unknown language. There is nothing mysterious about what interpreters must do. They need to use their mastery of a small portion of a language as a tool to acquire an understanding of more of the language. Interpreters will use the part of the language they have mastered by attention to the use of observation sentences to ask questions about the grounds speakers have for asserting other sentences. In order to use language to inquire into these grounds, interpreters will need to decide three matters. First, they have to divide into words the observation sentences which they understand, assign a meaning to the words and determine (where appropriate) their referents. In the second place, the interpreters need to figure out a little of the grammar of the interpreted language. In particular, they need to learn the rules for forming new sentences from the words they have seen used in observation sentences. They will have to acquire some knowledge of different grammatical moods. They especially need a knowledge of the interrogative mood, so they can ask questions of the native speakers. The interpreters' third, more specific, task is to decide on the words for 'yes' and 'no' in the interpreted language. Without this knowledge, they will be hard pressed to decide what answers they have received to their questions. Once they have answered these three questions, interpreters will be able to formulate questions about the meanings of sentences in an interpreted language.

The meanings of words are simply abstracted from the systematic contributions they make to the meanings of sentences. Similarly, we have already noted in earlier sections that it is not difficult to determine what the words used in observation sentences denote once the truth conditions of enough such sentences have been discovered. Evidence that '*chat*' denotes cats is, for example, provided by the observation that speakers consistently use the word in a variety of observation sentences only when interpreters believe that a cat is present. Interpreters can similarly discover which objects satisfy which predicates. Suppose, for example, that speakers use the word '*blanc*' in their utterances only when the interpreters believe something white to be in the speakers' environment. This use of the word is good evidence that the predicate is satisfied by the class of white things. Once interpreters have

divided sentences into words and determined their referents, they have taken an important step towards being able to formulate new sentences in the interpreted language.

Interpreters can abstract some knowledge of the grammar of the unknown language from the way that speakers use their sentences in the same way that they extract a knowledge of the referents of words. They will note, for example, that speakers consistently use '*le*' or '*la*' before referring terms which, the interpreters have decided, refer to unique objects. Under these circumstances, the words can reasonably be taken to be definite articles in the interpreted tongue. Interpreters can gain some knowledge of tenses by paying attention to the changes which occur in speakers' linguistic dispositions as their beliefs about the world change. Suppose, for example, speakers become unwilling to assert '*Le chat est sur le tapis*' and, simultaneously, become willing to assert that '*Le chat était sur le tapis.*' Under such circumstances, interpreters have some evidence that '*était*' is a past tense form of '*est*'. When speakers are observed to place '*et*' between two sentences which they are independently prepared to assert, this is good evidence that this is a conjunction in the speakers' language. Other linguistic practices will similarly provide clues to the grammar of the speakers' language. Armed with some rudimentary knowledge of the grammar of a language, interpreters are in a position to formulate a few elementary sentences and ask simple questions of the speakers of the unknown language.

So far we have dealt with the interpretation of assertions and there may be some doubt about whether interpreters' understanding of assertions will enable them to ask questions of the native speakers. The interpreters may be able to formulate a few new assertions but this, it might be thought, does not carry with it an ability to ask questions. In fact, of course, assertions can be used to express queries. Assertions, tentatively advanced, perhaps followed by the native words for 'yes' or 'no,' can serve as questions. Moreover, the speakers of the unknown language are aware that the interpreters are trying to understand them. An obvious, but frequently overlooked, feature of radical interpretation is that it is (almost) always mutual.²⁹ As one community of speakers endeavours to understand the utterances of another community, the second community is trying to figure out what the first is saying. This is significant since members of each community frequently will endeavour to assist the members of the other. The members of one community will recognise that the members of the other are struggling to ask questions. The native speakers will make allowances for the fact that the questions are not grammatically correct. They will frequently be able to guess what they are being asked and offer tentative answers. Moreover, they are likely to offer correct constructions to their faltering interlocutors. These constructions will help the interpreters ask further questions.

On the matter of how interpreters decide which are the native words for

‘yes’ and ‘no,’ I have nothing to add to Quine’s suggestions.³⁰ Once interpreters are in a position to ask questions of the speakers of our unknown language, they will find that they regularly receive ‘*oui*’ and ‘*non*’ as answers. It is reasonable to suppose that the speakers intend by these responses to express agreement or disagreement, but the interpreters must still decide which word to translate as ‘yes’ and which to translate as ‘no.’ The interpreters can make this decision on the basis of the response speakers make to the repetition of their assertions. If speakers respond with ‘*oui*’ to repetitions of their assertions, more often than they respond with ‘*non*,’ then ‘yes’ is the likely interpretation of the former and the latter is to be translated as ‘no.’

For our purposes, the precise details of how radical interpreters come to be able to ask questions of native speakers are not terribly important. The fact of the matter is that it can be done, as the fact that radical interpretation has taken place attests. Certainly mistakes will occur in the course of radical interpretation: apparently the word ‘kangaroo’ is derived from a native Australian expression meaning ‘I don’t know.’ The English colonists asked the natives what the marsupial was called. The aborigines replied by saying, ‘Kangaroo,’ meaning that they did not know what they were being asked. Nevertheless, the fact remains that radical interpretation can be successfully undertaken. In the long run, the English colonists and the Australian aborigines were able to understand each other. Spanish conquistadors and Aztecs, Dutch East Indian merchants and Indonesian spice farmers, European missionaries and native Africans and many others have also succeeded in understanding completely unknown languages. By whatever means, radical interpreters succeed in being able to ask questions and understand answers.

The important question concerns what interpreters learn by asking and receiving answers to questions. Suppose that the native speakers periodically assert the sentence, ‘*Les pélicans sont nos demi-frères*’ Suppose, moreover, that interpreters are unable to discover any correlation between the assertion of this sentence and beliefs about the observable world. Under these circumstances the interpreters need only ask, in the language of the natives, as children do of their elders, ‘Why do you say that?’ (In the case of false sentences, speakers need only ask, ‘What would make you say that?’) The native speakers will respond with simple explanations of why they believe what they do. Interpreters will have no more difficulty than children in coming, in time, to a knowledge of the theories which provide the conditions for the right assertion of sentence in an unknown language. They will simultaneously learn more about the language and more about the theories of the speakers being interpreted.

The picture of interpretation offered here captures an important, but frequently neglected, platitude: in order to understand other people we need to enter into their way of looking at things. This need is especially apparent when we seek to acquire an understanding of scientific statements such as,

'Neutrinos have no rest mass.' Those who are in any doubt about what this sentence means will not be helped if they are told that it is true if and only if neutrinos have no rest mass. Telling them that 'neutrino' denotes neutrinos and 'mass' denotes mass is not much more helpful. An interpreter, or anyone else, who wants to understand the sentence will have to acquire some knowledge of subatomic physics. No one understands a statement of theoretical physics who is not familiar with the theory which provides the grounds for its assertion. The interpretation of observation sentences is a matter of discovering the conditions under which sentences cohere with a system of beliefs, and the interpretation of non-observation sentences is no different.

According to the global anti-realist's account of interpretation, interpreters have available to them a wider range of evidence than most realists have recognised. Realists generally believe that the objective conditions under which sentences are uttered provide the only grounds for developing a meaning theory for an alien language. The account of interpretation given here takes into account much more general, background information about the beliefs speakers are likely to have, given the nature of humans, their societies and so forth. (There is no reason why realists could not give an account of interpretation which takes this information into account. They have simply tended to ignore it.) So, for example, interpreters can take into account, when trying to understand the speakers of an unknown language, anthropological theories about what people in a certain sort of society are likely to believe. An anthropological theory which states that tribal societies typically believe in a variety of deities or spirits, and seldom have theories about sub-atomic particles, will be of material use in interpreting some languages. Information from psychology about the development of the concepts of causality, number and similar concepts will also be of assistance.

As was noted above, interpreters need to adopt a principle of charity if they are to get started on the interpretation of an unknown language: they need to assume that the speakers of the language have views about the observable environment very much like their own. Frequently, however, the understanding of non-observation sentences of an unknown language will require that users of the sentences be taken to hold theories which differ dramatically from those of the interpreters. For example, suppose interpreters were to come across a community of speakers who still adhered to some obsolete chemical theory. The speakers still believe, say, that the world contains indivisible atoms, phlogiston, caloric fluid and ether. These speakers assert that caloric fluid is emitted from bodies when heated, that light waves are propagated through ether and so on. If interpreters want to understand these (false) statements, they will have to acquire a familiarity with theories similar to those held by nineteenth century chemists. Similarly, the interpretation of a sentence such as *'Les pélicans sont nos demi-frères'* may demand that interpreters attribute to users of the sentence beliefs about animals quite different from their own. In

interpreting this sentence, anthropological evidence could be quite useful. Anthropological theories may state, for example, that members of certain societies are likely to believe that they have animal totems.

The account of interpretation given here presents, in effect, an extended version of the acquisition argument. The present reflections on interpretation indicate that the only understanding which interpreters can acquire consists in a knowledge of the detectable conditions under which sentences cohere with a system of beliefs. Interpretation cannot be a process of determining the objective truth conditions of sentences simply because speakers do not have the capacity to assert given sentences only when certain objective conditions obtain. Interpretation has to be a matter of determining detectable conditions under which sentences are asserted, and the conditions speakers can detect are the conditions under which sentences cohere with beliefs. Interpreters can only get started by paying attention to the beliefs they have and, in particular, beliefs they have about the beliefs of the speakers, when the speakers assert sentences. Here, interpretation proceeds on the (justifiable) assumption that the speakers of an unknown language similarly only have the capacity to assert sentences only when they cohere with their beliefs. At later stages of interpretation, the speakers can directly specify the conditions under which given sentences cohere with a system of beliefs. At either stage of the process of interpretation, the only understanding interpreters can acquire of sentences of the alien language consists in a knowledge of conditions under which sentences cohere with a system of beliefs.

Reflection on interpretation has also borne out the manifestation argument. That is, an understanding of interpretation indicates that speakers of any language can only manifest, to interpreters, an understanding which consists in a grasp of the detectable conditions under which sentences are warranted by coherence with a system of beliefs. Only the coherence of a sentence with a system of beliefs provides speakers with grounds to assert the sentence. Speakers do not have the capacity to assert sentences only when objective conditions obtain. Consequently, the speakers of an unknown language display to interpreters their understanding of sentences by asserting sentences only when they cohere with their beliefs. Such speakers cannot display an understanding which consists in a knowledge of objective conditions. Even when speakers manifest their understanding by explaining what sentences mean, they can only display an understanding which consists in a knowledge of detectable conditions. When explaining to interpreters what their sentences mean, the speakers of any language can only indicate the beliefs which must be part of a system of beliefs, if the sentence is rightly asserted.

§4. A NEW LOOK FOR MEANING THEORIES

The account of radical interpretation offered in the previous section leads to a

view of meaning theories which is very different from what Davidson, for example, would have us believe. A meaning theory is nothing like a Tarski-style truth theory. A meaning theory will not have axioms which define reference and satisfaction nor will it have a neat recursive structure. Rather, it will be a ramshackle affair which draws upon the theories which provide the grounds for asserting sentences. A meaning theory is not something speakers know in addition to their other theories. It is something they know because they are familiar with their other theories. A meaning theory would simply make explicit the relations between sentences and the beliefs which warrant them. A complete meaning theory for a language would, that is, systematically indicate, for every sentence of a language, the beliefs which must be included in a system, if the sentence is true. Obviously, the construction of such a meaning theory is a task of mind-boggling complexity. Even the indication of the meaning of a single sentence is difficult. A vast range of beliefs can contribute to the conditions under which a single sentence is rightly asserted. For this reason, there is little hope that a complete meaning theory for a natural language could ever be explicitly stated.

The crucial step away from the view that meaning theories are Tarski-style truth theories came, in the previous section, when we considered how to move from the interpretation of observation sentences to the interpretation of all other sentences. We saw that global anti-realists have available to them two accounts of the interpretation of non-observation sentences. The first course is to attempt to construct some sort of recursive meaning theory, similar to the Tarski-style theories which realists often favour. If global anti-realists opt for this course, their method would resemble that of realists such as Davidson. They would attempt to use information about the conditions under which speakers utter observation sentences as evidence for the axioms of a truth theory. The second course involves abandoning the search for a recursive theory and accepting that a meaning theory is parasitic upon the theories which make up a system of beliefs. The first option available to global anti-realists has a superficial appeal but it is subject to objections to which the second course is not prey.

Consider the first of the methods interpreters could, according to global anti-realists, use to interpret non-observation sentences. Interpreters could try to use the evidence about the conditions under which speakers utter observation sentences as evidence for a recursive truth theory for the interpreted language. The view that interpreters develop a recursive truth theory for the interpreted language has a number of well-known advantages. If correct, it is able to explain, for example, how interpreters, once their task is complete, are able to understand any of an infinitely large number of sentences. Interpreters need only master a truth theory with a finite number of axioms. If interpretation is a matter of developing a truth theory for the unknown language, global anti-realists should maintain that interpreters try to confirm a

series of axioms, similar to the axioms of a Tarski-style truth theory, which provide definitions of reference and satisfaction. According to global anti-realists who adopt the first option, there is a crucial difference between the truth theory interpreters can develop, and that desired by the realist. The difference is that the interpreters' truth theory, which serves as a meaning theory, unlike that of realists, has theorems which state that sentences are true if and only if certain detectable conditions obtain rather than true if and only if certain objective truth conditions obtain.

If global anti-realists adopt the view that interpretation involves the development of a recursive truth theory, their position is subject to a number of objections. They run into difficulties as soon as they attempt to show how a truth theory could entail that sentences are true under detectable conditions. Presumably, these anti-realists will hold, as do realists, that interpreters use the information about the conditions, under which speakers utter observation sentences, as evidence for certain definitions of reference and satisfaction. So, for example, the interpreters will decide that '*chat*' refers to cats and '*tapis*' refers to mats and these become axioms of a truth theory. These axioms, together with others like them, can be used to infer the theorem that "*Un chat est sur un tapis dans une autre galaxie*" is true if and only if a cat is on a mat in another galaxy.' This said, the trouble with this version of the global anti-realist account of interpretation becomes apparent. The theorem just mentioned looks suspiciously like the theorem at which interpreters arrive according to the realist account of interpretation.

Anti-realists will hold that the sentence used on the right hand side of the biconditional describes detectable conditions while the realist will hold that it describes objective conditions. We can only decide which of these accounts is correct by determining the conditions under which the sentence on the right hand side is true. Suppose that the key to interpretation is the provision of a truth theory for the interpreted language. In this case, we will only be able to determine the meaning of the sentence on the right hand side when we know the truth theory for the language to which it belongs. If this truth theory is stated in the same language as the sentence on the right hand side, then we will be no better off than we were. We will only know that "The cat is on the mat" is true if and only if the cat is on the mat' and this does not answer the question about the sort of conditions the sentence describes. On the other hand, if the truth theory is stated in some other language, we will still be no further ahead. We would need a truth theory for this language. Plainly, a regress is in the offing. It seems that a recursive truth is unable to give a satisfactory answer to the question about the sort of conditions under which sentences are true.

This should lead us to reassess the suggestion that interpreters develop a Tarski-style truth theory for unknown languages and, with it, the view that a recursive truth theory can be a meaning theory. A recursive truth theory of the sort Tarski developed is not designed to answer questions which must be

answered by a meaning theory. A meaning theory is supposed to convey semantic information about a language, information about the conditions under which sentences in the language are true. A truth theory, however, simply conveys truths of logic and can tell us nothing more than can logic. A truth theory enables us to infer from definitions of reference and satisfaction to a definition of truth. There is a difference between, on the one hand, the truth theories offered by realists and global anti-realists, who hold that interpretation is a matter of developing a truth theory, and those of Tarski, on the other hand. Realists and anti-realists arrive at definitions of reference and satisfaction on the basis of the use speakers actually make of a language while Tarski's definitions are provided by stipulation. Even so, a recursive truth theory cannot be a meaning theory.

What is needed is a substantive meaning theory which specifies for each sentence of a language the conditions under which it coheres with a system of beliefs. Actually constructing such a substantive meaning theory would be very difficult. Even specifying the full meaning of a single sentence would be exceedingly cumbersome. A meaning theory would have to indicate, for this sentence, the whole range of considerations which count in favour of its truth. Consider, again, what a meaning theory would have to say about 'The cat is on the mat.' Speakers who understand this sentence have a great deal of knowledge, including a knowledge of what cats and mats are and a grasp of the concepts of space and spatial relations. They have a range of beliefs about the conditions under which cats are properly said to be on mat. A meaning theory would have to indicate all of the beliefs the speakers possess which enable them to understand the sentence. Plainly, a simple theorem will not be sufficient to capture this information.

Whatever structure a meaning theory has must be borrowed from the structure of a system of beliefs. A theory such as the ordinary picture of the world as a set of material objects existing in space and time implicitly contains rules for the use of language. Suppose, for example, that some interpreters know the conditions under which '*Le chat est sur le tapis*' is true. The interpreters are, then, familiar with the theory about mid-sized physical objects which is held by speakers of the language to which this sentence belongs. This theory about mid-sized physical objects simply is the meaning theory for the language. Anyone who is familiar with this theory knows that the animals denoted by '*chat*' are spatio-temporal objects capable of standing in a variety of relations besides that of being on a mat. Now suppose that the interpreter has been able to determine what '*porche*' denotes and has been able to work out some of the grammar of the unknown language by observing the use speakers make of sentences. Such an interpreter will be able to understand '*Le chat est sur le porche*,' even if no native speaker has been observed to assert this sentence when its truth conditions obtain.

This point about meaning theories is even clearer when we consider

sentences from physics such as the familiar, 'Neutrinos have no rest mass.' Clearly, someone could understand a language in so far as it treats of tables and chairs and yet not understand this sentence. Equally clearly, the theory speakers learn, when they acquire an understanding of such a sentence from quantum mechanics, is quantum mechanics. Certainly, speakers who can understand sentences from physics will know that 'neutrino' denotes neutrinos and 'mass' denotes mass. More importantly, they know what it is for something to be a neutrino and know what it is for something to be massive or to lack rest mass. Moreover, such speakers know that neutrinos can lack rest mass. In short, the theory with which they are acquainted is quantum mechanics.

Notice the important fact that there is no distinction between determining what the words of a language denote and learning the conditions under which belief in the existence of some object or state of affairs is warranted. Although description theories of reference have come under attack in recent years, the present account of meaning leads to the conclusion that, at least, the denotations of terms are fixed by a description. The answer to the question, 'What does "neutrino" denote?' is, very simply, 'It denotes neutrinos.' If one requires any further information about neutrinos, one should turn to physicists, not to philosophers of language. Physicists will be able, one hopes, to provide the necessary and sufficient conditions for something's being a neutrino. The word 'neutrino' simply denotes whatever satisfies these conditions. Similarly, nothing more need be said about which objects satisfy the predicate 'massive' than what theories about mass have to say. Something is right about the realist's suggestion that understanding a language is a matter of knowing a truth theory whose axioms define reference (and satisfaction). Speakers who understand a language do have a knowledge of reference. Their knowledge does not, however, consist in a familiarity with axioms which define reference. Rather, speakers who possess a knowledge of reference are acquainted with the substantive theories which indicate how the world is to be categorised.

The view that a meaning theory is a neat Tarski-style truth theory may seem to have one important advantage lacked by the view that meaning theories are ramshackle and parasitic on other theories. Those who hold that meaning theories are Tarski-style truth theories claim to be able to explain how interpreters can come to understand sentences which they have never heard anyone assert. Indeed, if they know such a truth theory for a language, interpreters are supposed to be able to understand any of an infinite number of sentences. Now, however, we can see that the present view of meaning theories is able to explain how speakers can understand sentences to which they have never previously been exposed. In virtue of mastering the ordinary picture of the world, speakers are able to understand new sentences about physical objects. As they master more theories, they can understand more sentences.

Even if some speakers' ability to formulate and understand new sentences

can be explained on the present account of meaning, it might be thought that their ability to understand any of an infinite number of sentences cannot be explained. It is important to distinguish between two ways of interpreting this point. The charge could be that global anti-realists cannot explain how speakers understand an infinite number of sentences or it could be that speakers cannot, on the anti-realist account, understand all of the, infinitely numerous, sentences in a language. If the claim is simply that anti-realists cannot explain how speakers understand an infinite number of sentences, the objection is quite easily met. How anti-realists are to explain how speakers can understand any sentence in a language is less obvious. Clearly, before very long, anyone learning a language will be able to understand an infinite number of sentences. This is not terribly difficult: in order to understand infinitely many sentences, a speaker need only understand a given sentence of a language and know that new sentences can be formed by endlessly conjoining tokens of the given sentence. The more interesting claim which might be made is that speakers can understand any sentence of a language. This claim is rather extravagant and there is no reason why anti-realists need worry if their theory of meaning has the consequence that the claim cannot be preserved. The fact of the matter is that no one even understands all of the hitherto formulated English sentences. I do not understand many of the sentences physicists and literary critics utter and they do not understand many of the assertions of philosophers of language. Those who adopt the present view of meaning theories can explain how speakers can understand many previously unencountered sentences and this is all they need to do.

This last observation shows that there is a division of semantic labour, similar to that posited by Putnam. The meanings of sentences in any given natural language are fixed by the uses speakers make of these sentences, but meanings of many sentences, particularly those of recondite fields such as physics and philosophy of language, will be established by the uses which relatively small portions of the community make of the sentences. In all probability, no members of a linguistic community possess a knowledge of an entire meaning theory for any natural language. Consequently, no member of a linguistic community understands all sentences of a language.

Global anti-realists are now in a position to answer the question, 'What is meaning?' They can conclude from the present reflections on interpretation and meaning theories that theirs is the correct account of meaning. The past few sections have provided grounds for believing that the meanings of sentences in all classes consist in detectable conditions. In particular, the meaning of any sentence consists in the conditions under which it coheres with a system of beliefs, or coherence truth conditions. The global anti-realist's account of meaning leads to a global anti-realist account of truth. When the meanings of sentences consist in detectable truth conditions, sentences are true if and only if these detectable conditions obtain. Chapter One has already

indicated that the principles of bivalence and transcendence lose their appeal when sentences have only detectable truth conditions. These and other consequences of global anti-realism are traced in the next chapter.

A worry some readers may have about the global anti-realist's account of meaning should here be laid to rest. The verification theory of meaning advanced by the logical positivists is widely-regarded as self-refuting. According to verificationism, a sentence is meaningful if and only if it is empirically verifiable or analytic. The opponents of logical positivism charged that this claim about meaning is meaningful but is neither empirically verifiable nor analytic. The positivists themselves would have denied that their account of meaning is analytic, since this would make it tautologous. Neither does the theory seem to be empirically verifiable. Verificationism seems, then, self-refuting: it gives a criterion of meaningfulness but itself provides a counter-example. Now, someone might think, the theory of meaning advanced by the global anti-realist is subject to a similar sort of objection. Global anti-realists do not advance a verification theory of meaning. On the contrary, they hold that the meanings of sentences consist in their truth conditions. Nevertheless, rather like the verificationist, the global anti-realist insists that if a sentence is meaningful, there are possible conditions under which it can be known to be true or warranted. Some readers may worry that global anti-realists have advanced a position which cannot be known to be true. After all, it is neither empirically verifiable nor analytic.

This worry is, of course, groundless since the global anti-realist does not accept the positivist's account of how the truth of sentences can be known. The global anti-realist does not believe that sentences can be divided into two classes, those which are empirically verifiable and those which are analytic. Consequently, they do not have to hold that their account of meaning is either empirically verifiable or analytic. Global anti-realists hold that all sentences are warranted by coherence with a system of beliefs. Given this account of how sentences are warranted, nothing is problematic about the claim that statements of the anti-realist account of meaning are meaningful. They too are warranted by coherence with a system of beliefs. This section has been devoted to showing that the global anti-realist account of meaning coheres with our beliefs about language, the capacities of speakers and so on.

§5. REPLIES TO REALIST OBJECTIONS

Anti-realist theories of meaning have been subjected to a wide range of objections. The most troublesome objections all attempt to show that speakers can conceive of objective conditions even when these conditions cannot be detected. Realists can hold that, in order to show that they are right about understanding and meaning, they need only show that speakers can have a conception of objective conditions. They reason that the debate between

realists and anti-realists is a debate about the sorts of conceptions speakers can have: to say that the understanding of a sentence consists in a knowledge of its truth conditions is just to say that when speakers understand a sentence they have a conception of certain conditions. Partial anti-realists typically admit that realism provides an unobjectionable account of the meanings of all those sentences concerned with detectable objective conditions. Many objections to anti-realism attempt to parlay this concession into grounds for saying that speakers can conceive of undetectable conditions and for accepting the realist's account of other classes of sentences. Realists have also argued that an anti-realism which depends on empiricism is mistaken since it has the (absurd) consequence that every sentence means something different in the mouths of different speakers. Even when these objections tell against the theories of meaning advanced by partial anti-realists, global anti-realism is proof against the realist's wiles.

Realists must somehow explain how speakers can have an understanding of sentences which consists in a knowledge of conditions the speakers are unable to detect. Realists can attempt to meet this challenge by arguing that, even when speakers cannot recognise certain objective conditions, they can nevertheless come to have a knowledge of what certain conditions are like, that is, form a conception of the conditions. Realists have advanced a variety of arguments in an effort to establish the conclusion that speakers can conceive of undetectable objective conditions. Here, three arguments will be considered. The first argument posits the existence of a "truth value link" between sentences about detectable and undetectable conditions. According to the second argument, the fact that speakers are able in some cases to detect objective conditions enables them to form a conception of other such conditions. These two arguments are, if they work at all, effective only against partial anti-realism, and are easily dismissed. The third argument is more troublesome and requires closer attention. This argument starts from the indubitable premiss that speakers are able to form conceptions of conditions which they have never observed. Realists then suggest that anti-realists have no good account of such conceptions. While the partial anti-realist's account of such conceptions is unconvincing, the global anti-realist has a successful account.

Begin by considering the realist argument which depends on the existence of so-called "truth value links." The realist can use this sort of argument in an attempt to refute, for example, an anti-realist account of sentences about the past. Some partial anti-realists have suggested that the meanings of present tense sentences can consist in objective conditions but past tense sentences mean that recognisable traces of the past exist in the present. In replying to this suggestion, the realist asks us to note that there is a link between the truth values of certain sentences. Consider, for example, the following pair of sentences: imagine that, last Thursday, I asserted the true sentence, "The cat is

on the mat.’ Now, a week later, I assert that ‘The cat was on the mat last Thursday.’ The realist finds uncontroversial the claim that the meaning of the first sentence consists in objective truth conditions: last Thursday the objective conditions consisting of the cat on the mat were available for inspection and, consequently, I would have had no difficulty in acquiring an understanding which consists in a knowledge of these objective conditions. Partial anti-realists have alleged that the understanding of past tense sentences cannot consist in a knowledge of these same conditions, since these are no longer available for inspection. Realists note, however, that there is a link between the truth values of the two sentences about the cat on the mat: since the sentence uttered last Thursday is true, so is the sentence uttered now. Realists can reasonably go on to claim that our recognition that this link exists enables speakers to form the conception of the objective conditions under which the past tense sentence is true. When speakers understand some sentence about the past, they conceive of precisely the same sort of conditions as they do when they understand a sentence about detectable conditions in the present. Similar sorts of argument might be used to refute anti-realist accounts of the meanings of sentences about inaccessible regions of space and other classes of sentences.

Whether the truth value link argument works against the partial anti-realist has been debated at some length.³¹ In any case, however, the argument is powerless against global anti-realism. The argument depends upon the premiss, accepted by the partial anti-realist but rejected by the global anti-realist, that speakers have the ability to detect some objective conditions and, thus, can acquire an understanding of some sentences which consists in a knowledge of these conditions. Global anti-realists will maintain that even the meanings of present tense sentences do not consist in objective truth conditions. If they are right, it does not follow that, if there is a truth value link between past and present tense sentences, the meanings of past tense sentences consist in objective conditions. If realists are to refute global anti-realism, they will have to go back and refute the global anti-realist’s arguments to the effect that speakers can never acquire an understanding which consists in knowledge of objective truth conditions. Until this is done, the argument from truth value links is powerless against global anti-realism.

Another commonly heard argument against anti-realism fails as an argument against global anti-realism and fails for precisely the same reason as the truth value link objection fails. Some realists argue against various forms of partial anti-realism by claiming that the meanings of some sentences in any disputed class consist in objective truth conditions.³² They go on to conclude that this is enough to enable speakers to form a conception of objective truth conditions in the case of any sentences in the disputed class. Consider again sentences about the past. The partial anti-realist holds that the meanings of many such sentences cannot consist in objective conditions since these are not detectable by speakers and, hence, speakers cannot acquire an understanding

which consists in knowledge of such conditions. The realist replies that speakers can, in some cases, have knowledge of objective conditions which exist in the past. Speakers can, after all, remember events which happened in the past. In the cases of sentences about objective conditions in the past which speakers remember, the realist holds, there is no trouble in explaining how speakers acquire an understanding of the sort realism attributes to them. In other words, speakers' ability to remember how some objective conditions were in the past, enables them to conceive of any objective conditions existing in the past. The realist says that this ability to have an understanding of some past tense sentences, which consists in knowledge of objective conditions, enables speakers to acquire a similar understanding of other such sentences. All that speakers need to do, the realist can hold, is conceive of conditions similar to those of which they already have a conception.

Once again, however effective this argument may be against partial anti-realism, it begs the question against global anti-realism. The argument relies on the claim that speakers have an understanding of some sentences which consists in knowledge of objective conditions. Global anti-realists deny this claim, and an independent reason for believing that it is true is required if global anti-realism is to be refuted.

Perhaps the realist's strongest argument against anti-realism is a challenge to them to provide an alternative account of the conceptions speakers possess when they understand sentences about unobservable conditions. Speakers understand a wide variety of sentences. Some of these sentences are concerned with observable conditions with which speakers are acquainted, but many of them are not. Speakers also understand sentences about conditions they have never observed and sentences about conditions they could never observe, either because the conditions are inaccessible or because they are non-existent. Anti-realists must somehow give an account of speakers' understanding according to which the understanding of all of these sentences consists in knowledge of detectable conditions. Partial anti-realists believe that observation is our only means of detecting conditions. Consequently, they are forced to hold that our understanding of all sentences consists, either directly or indirectly, in knowledge of observable conditions. To say that the understanding of some sentences indirectly consists in knowledge of objective conditions is to say that these sentences are reducible to sentences about observable conditions. Realists, if they are to refute anti-realism, apparently need only refute reductionism.

Whatever reply anti-realists give to the realist's challenge, they will have to rely on some version of the acquisition argument. The partial anti-realist will use the argument in an attempt to show that the only conceptions speakers can have are conceptions of conditions which are observable or conceptions which are reducible to conceptions of observable conditions. The suggestion is not unlike the claim Hume makes in the *Treatise* when he states that all ideas are

derived from impressions. In more contemporary terminology we might say that speakers can only conceive of the sorts of things they have experienced. Certainly speakers can have conceptions which seem not to be conceptions of observable conditions. The partial anti-realist holds, however, that all conceptions of conditions which are not immediately about the directly observable have to be reduced to conceptions about the directly observable. Consider, for example, the partial anti-realist's account of conceptions about the past. The only conditions which are available for inspection by speakers, when they are learning the meanings of sentences about the past, or acquiring a conception of the past, are traces of the past which have survived into the present. Whatever content conceptions of the past have, partial anti-realists maintain, must be derived from these traces of the past. Their justification for this claim is that speakers are (frequently, at least) unable to detect objective conditions in the past and, therefore, could not acquire a conception about the remote past which consisted in knowledge of these objective conditions. They conclude that any conception about the past consists in a conception of presently existing traces. Similarly, conceptions of other minds consist in conceptions of behaviour and conceptions of unobservable entities, such as electrons, are to be understood in terms of conceptions of observable phenomena.

Apparently, in order to refute this position, realists need only show that some speakers' conception of past events or unobservable entities is not exhausted by their conception of some presently observable conditions.³³ It seems perfectly obvious that speakers can have a conception of unobservable conditions which cannot be reduced to conceptions of observable conditions. Speakers develop conceptions, not merely on the basis of what they experience, but also according to what they need to explain the world in which they find themselves. Indeed, the very possibility of science depends on the possibility of (irreducible) conceptions of unobservable conditions. Speakers need to develop conceptions of what lies behind and explains the phenomena they observe. Here a coherence theory of knowledge can come to the aid of the realist in arguing against the partial anti-realist. Whatever conceptions speakers have must, perhaps, be derived from conditions of which they can be aware. If a coherence theory of knowledge is correct, however, speakers have more raw material from which to construct their conceptions. Speakers can have evidence for the existence of conditions which is not sensory evidence and, consequently, can have conceptions of conditions which are not reducible to conceptions of observable conditions. It seems, then, that the partial anti-realist's suggestion, that conceptions of the past or unobservable entities need to be reduced to sentences about the present, is highly dubious.

Realists frequently believe that any non-reductionist conception of the conditions under which sentences are true is a conception of objective truth conditions. Since reductionism is mistaken, they conclude that realism is

correct. If reductionism were the only alternative to realism, realists would only need to refute reductionism. Global anti-realism provides, however, another alternative. The global anti-realist agrees with the realist that some speakers' conceptions about the past cannot be reduced to statements about observations of present traces of the past. Like the partial anti-realist, however, global anti-realists will use a version of the acquisition argument against the realist. Both sorts of anti-realist agree that speakers can only acquire concepts of conditions for which they can have evidence. The difference is that global anti-realists hold that this evidence need not be sensory evidence and, consequently, conceptions are not limited to conceptions of observable conditions.

Recall that, according to global anti-realism, those who understand any sentence, even 'The cat is on the mat,' know the conditions under which it coheres with a system of beliefs. Global anti-realists will say that the content of the conception of, say, a cat on a mat, is provided by the conditions under which this sentence coheres with a system of beliefs. Someone with a conception of a cat on a mat knows what would count as evidence for a cat being on a mat. The justification for this account of the conception of a cat on a mat is found in the anti-realist's account of how such a concept originates. If I wanted to share with other speakers the concepts of cats and mats, I would indicate to them the conditions under which something is properly said to be a cat or a mat. The global anti-realist says these conditions are the conditions under which certain sentences cohere with a system of beliefs. As we saw in earlier sections, speakers depend on their theories when they form conceptions of any conditions. Partial anti-realists are on the right track when they suggest that our conceptions are limited to conceptions of conditions which we can detect. They should have said, however, that our conceptions are limited to conceptions of conditions of whose existence a system of beliefs can provide evidence.

Global anti-realists will adopt very much the same sort of account of the conceptions speakers have of undetectable conditions as was just given of the conception of the cat on the mat. When speakers have a conception of undetectable conditions, they have the ability to recognise evidence for the existence of such conditions. The only difference between conceptions of detectable conditions (the conceptions of cats on mats, for example) and undetectable conditions (the conception of the dinosaur who was on the site of the University of Victoria grounds exactly 200 million years ago) is that evidence for the existence of one set of conditions is actually available. Consider, for example, the conception speakers can have of the number of dinosaurs which existed at some particular time in the Palaeozoic period. A sentence which states precisely how many dinosaurs existed at a particular moment in the Palaeozoic period does not mean, as the empiricist might suggest, that certain (observable) fossils can be found. Rather, anyone who

asserts such a sentence is asserting a sentence which is true if and only if certain archaeological theories, including reports of fossil evidence, are correct. The only way to train speakers in the use of such a sentence would be to indicate the sorts of evidence which would warrant assertion of the sentence. Although the undetectable objective conditions are not available for inspection, speakers can be made acquainted with the theories which would warrant undecidable sentences about dinosaurs. The global anti-realist concludes that a speaker's conception of the number of dinosaurs at a particular period consists, not in knowledge of objective conditions, but in a knowledge of the theories which must be true if some belief about the number of dinosaurs is to be true. More generally, according to the global anti-realist, the content of a conception about the past consists in knowledge of the conditions under which some sentence would cohere with a system of beliefs.

The account just given of the knowledge speakers possess when they understand sentences enables us to see how another objection to anti-realism is misguided. J.J.C. Smart, for example, has claimed that anti-realists must believe that sentences about the precise number of dinosaurs at a given time are meaningless.³⁴ More generally, the suggestion is that anti-realists are committed to saying that all undecidable sentences are meaningless. Since undecidable sentences are plainly meaningful, realists might conclude that anti-realism is incorrect. The realist's grounds for this conclusion seems to be that the anti-realist says that meanings consist in recognisable conditions and there are no conditions to be recognised in the case of undecidable sentences. (Following a similar line of reasoning, realists are bound to conclude that anti-realism entails that all false sentences are meaningless.) Such sentences are meaningful, from an anti-realist's perspective, since speakers can know the conditions under which they would be warranted. Anti-realists will give a similar account of the meanings of sentences about non-existent conditions. Speakers can understand sentence about, say, phlogiston or Pegasus since they can acquire knowledge of the theories which would warrant belief in the existence of such things. Global anti-realists hold, in short, that conceptions of any sort of conditions are to be understood in terms of knowledge of theories.

Realists might object to this line of argument that, in a perfectly straight forward sense, speakers can conceive of objective conditions: it is uncontroversial to say that some things can exist independently of our knowledge of them. This is certainly true, but global anti-realists can help themselves to this conception of objective conditions without committing themselves to a realist account of meaning. Speakers frequently assert sentences which state that the world contains conditions which they are unable to detect. For example, speakers might say that stars exist which will never be observed by humans and which, nevertheless, exist independently of our knowledge. According to the global anti-realist, this is just to say that our cosmological theories entail that stars are the sorts of things which do not

depend on human observation for their existence and that, since human cognitive capacities are limited, not every star will be observed. When speakers have a conception of unobserved stars, they simply have knowledge of the theories which tell us that some stars will never be observed. Speakers can have this sort of conception of objective conditions without having the sort of understanding attributed to them by realists.

From the account just given of speakers' conceptions we can conclude that anyone who possesses a conception of certain conditions has the ability to detect evidence for the existence of these conditions. This consequence of anti-realism can be used as the basis for another argument against the position. Realists can try to refute the anti-realist's position by putting forward examples of conceptions speakers can have without having the concomitant ability to tell whether or not the conditions obtain. Smart has put forward an example which can be used to suggest that such conceptions are possible.³⁵ He has asked us to consider the possibility that, as our current theories suggest, physical objects are located within a four-dimensional space-time continuum, but that, contrary to what current theories lead us to believe, our four-dimensional world is a "cross-section" of a five-dimensional universe which has other four-dimensional cross-sections. Smart asks us to imagine, furthermore, that each cross-section of the five-dimensional continuum is completely inaccessible from every other. Due to the laws of nature, that is, all physical objects are confined to a single four-dimensional world and there are no causal or other relations between objects in different four-dimensional worlds which would enable speakers in one world to learn anything about other worlds, not even that they exist. In this scenario, speakers could have no evidence for the hypothesis that the universe is five-dimensional. Indeed, we cannot even imagine having evidence for the hypothesis without contradicting the hypothesis. Consequently, it seems that, contrary to what global anti-realists believe, a speaker's conception of this five-dimensional universe cannot be understood as knowledge of the conditions under which the hypothesis coheres with a system of beliefs. Nevertheless, Smart invites us to believe, we can conceive of such a five-dimensional universe. If we accept Smart's invitation, global anti-realism must be rejected.

This objection is met simply by denying that speakers, not even Smart, can have a conception of a five-dimensional universe such as Smart imagines himself to have. More generally, global anti-realists need to deny that speakers are capable of conceiving of conditions for whose existence they do not have the ability to recognise evidence. Certainly speakers can talk about causally-independent four-dimensional cross-sections of the universe but such talk means nothing more than does talk of square circles. Speakers cannot have a conception of the sort of five-dimensional universe Smart thinks he envisages simply because the very idea of such a universe is incoherent. The hypothesis that the universe is physically five-dimensional is not consistent with the

hypothesis that all objects are confined to four-dimensional cross-sections. If the latter hypothesis is correct, apparently the supposed fifth dimension contains no objects or causal relations so there is nothing in which it can physically consist.³⁶ In being asked to accept that Smart has conceived of a five-dimensional universe, we are being asked to believe that the universe might physically contain a fifth dimension but also accept that there is nothing in which this dimension could physically consist. No one can, however, conceive of a world which can only be characterised in contradictory terms.

Notice that Smart's example differs importantly from standard science fiction examples. Science fiction writers frequently fantasise about, for example, spaceships which can move faster than light. Surely we can understand their stories. We can, that is, form a conception of the spaceships of which they speak and can do so even though we can (according to present theories) have no evidence for the existence of such craft. The difference is that the claim that spaceships could exist which exceed the speed of light is simply false and not inconceivable. In order to understand the sentence we need only be able to imagine the theories which would warrant the belief that it is true. I am inclined to believe that our conception of spacecraft which travel at speeds greater than light is not a very clear conception. Nevertheless, we can have at least a dim conception of such things. We are able to detect something at one point at a given time and then recognise evidence that it is at another point in the space-time continuum, which it could only have reached by travelling faster than the speed of light. This constitutes some idea of the theories which would provide the content for the conceptions of the science fiction writer's fancies.

Showing that Smart's scenario fails to produce an example of a conception which does not consist in an ability to recognise certain conditions does not decisively refute the realist's present line of argument. Realists can certainly put forward other conceptions of conditions which we can, supposedly, have without having the capacity to recognise that the conditions exist. If anti-realists cannot show that the supposed conception is a pseudo-conception, or that speakers do have the capacity to recognise that the conceived conditions exist, then realists will have established their point. The onus is, however, plainly on realists to put forward such a conception.

Nothing said here should be taken to imply that the universe cannot be completely different from what our theories suggest. On the contrary, for all that global anti-realists know, the universe is radically different than our theories lead us to believe. Perhaps the universe does contain more than four dimensions. Anti-realists are only committed to saying that speakers cannot conceive of the universe as, for example, five-dimensional unless they could recognise evidence that it is five-dimensional.

Before we leave off replying to realist objections to anti-realism, one further argument deserves consideration. This objection tries to refute an anti-

realist theory of meaning by showing that it has the consequence that no sentence could ever have the same meaning in the mouths of different speakers.³⁷ Anti-realism is alleged to have such a consequence since it ties meaning to what speakers are able to recognise as obtaining. All speakers have somewhat different recognitional capacities. The sensory powers of speakers vary, of course: some speakers lack sensory modalities possessed by others. Moreover, since all speakers have different locations in space and time, they have varying abilities to determine whether certain conditions obtain. Now, if the understanding speakers can acquire of sentences is linked to what they are capable of recognising, two speakers apparently must have different understandings of the same sentence. Consider, for example, the sentence 'Jane Austen has brown hair.' People who were personally acquainted with Jane Austen could actually see that she had brown hair. Anti-realists seem committed to saying that those who actually saw Austen mean, when they assert the sentence, 'Jane Austen has brown hair,' that certain observations are available. In other words, when Cassandra Austen understood this sentence, she knew that it is true if and only if certain observations are available. Today, however, historical reports provide the only grounds for saying that Austen had brown hair. So anti-realists seem committed to saying that, today, the same sentence means that certain historical reports are available. Historians who understand the sentence know that it is true if and only if certain historical reports are available and accurate. Similarly, anti-realists seem committed to saying that 'Jane Austen has a sweet singing voice' means something different to a person with perfect hearing and someone who is profoundly deaf.

Clearly, however, Cassandra Austen and the modern historian can mean the same the thing when they assert sentences about Jane Austen's hair colour. Realists charge that anti-realists cannot explain how this could be. Moreover, if the meaning of a sentence depends on the cognitive capacities of the speaker who uses it, communication requires the development of a different meaning theory for every different speaker. This would be more than an inconvenience. The realist could reasonably charge that anti-realists would be hard-pressed to explain the possibility of language acquisition, which involves learning what other speakers mean, and the possibility of communication, which depends on the availability of public, shared meanings. Since sentences do have the same meanings for different speakers, and since communication is possible, realists conclude that anti-realism is mistaken.

Objections of the present sort may count against some partial anti-realisms but they have no force against global anti-realism. Cassandra Austen and the modern historian, and the deaf person and the fully able person, certainly have different capacities to discern features of their environments. Only, however, if some sort of reductionist account of meaning, such as partial anti-realists frequently hold, is adopted will these differing capacities have an impact on meaning. If a reductionist account is given of sentences about the past, the

historian's sentence is true if and only if certain historical records are available and Cassandra Austen's assertion is true if and only if certain observations are available. The global anti-realist holds, however, that 'Jane Austen has brown hair' is true if and only if it coheres with a system of beliefs. Both Cassandra Austen and the historian can know what these beliefs are. True, if they hold the beliefs, they come by them by very different means: one gets them by observation and the other by poring over documents. The genesis of the beliefs which warrant the sentence is, however, completely irrelevant to the meaning the sentence.

Similar considerations apply in the case of speakers who are deaf and those who are able to hear. Deaf people are still able to recognise evidence for sentences about how things sound. True, deaf people recognise such evidence indirectly. They are forced to rely, for example, on the reports of people without impaired hearing. Since deaf people can have this evidence, they can have conceptions of how things sound and they can know that 'Jane Austen has a sweet singing voice' is true if and only if a certain part of a system of beliefs is correct. Consequently, deaf speakers can mean the same thing by a sentence about sounds as anyone else. We can conclude, therefore, that global anti-realism is able to explain how speakers can mean the same thing by some sentence, their differing cognitive capacities notwithstanding. Since global anti-realists can explain how speakers can mean the same thing by some sentence, their anti-realism leads to no special problems in explaining how communication and language acquisition are possible. Even if the global anti-realist is able to contend with the arguments which have been troublesome for partial anti-realism, a new sort of objection remains to be confronted. Unlike the typical partial anti-realist, global anti-realists are committed to a thorough-going holism (in a sense to be elucidated in the next section) about meaning. Once global anti-realists embrace holism, realists can object that holism presents a threat to our ability to account for language acquisition and communication. Global anti-realists need to show that realists have no good reason to think this.

§6. MEANING AND HOLISM

The account of meaning which has been proposed so far is holist in a very strong sense. This strong version of holism, which the global anti-realist must be prepared to embrace, has been frequently attacked, regularly attributed to other people but seldom, if ever, willingly endorsed. Such anti-realists as Dummett, Neil Tennant and Crispin Wright are unanimous in denouncing the sort of holism to which global anti-realists are committed. It is not quite clear, however, whom they have been criticising, since Quine, the writer most commonly suspected of adherence to the doctrine, anxiously denies any such allegiance. A consequence of the account of meaning offered in this chapter is

that no sentence can be understood in isolation. The holist believes that Frege did not go far enough when he held that only in the context of a sentence does a word have meaning. The holist maintains that only in the context of a system of beliefs does a sentence have meaning. Even Dummett, perhaps the staunchest opponent of this view, embraces a modicum of holism. He accepts that an understanding of some sentences involves knowledge of their inferential and evidential relations to others. The holist holds, however, that the understanding of all sentences demands such knowledge. Any sentence is understood only in relation to others and these others are understood in relation to still others. Ultimately, no sentence is completely understood unless all are. This section and the next are devoted to defending such a holism against standard objections. These objections must be met if global anti-realism is to be sustained: a position which entails an untenable position is itself indefensible. At worst, this section and the next will have finally provided the critics of holism with a target. At best, they show that any account of meaning must be holistic.

Partial anti-realists, in particular those whose anti-realism depends on empiricism, will not accept holism. Such anti-realists believe that the meanings of some sentences, in particular the meanings of observation sentences, consist in the observable conditions under which they are true. On this view, each observation sentence has its own, unique observable truth conditions. If so, each sentence of a language can be understood in isolation from others, given only a grasp of its own truth conditions. Partial anti-realists can allow that some sentences are warranted, not if certain experiences occur, but if they are inferable from other sentences which are held to be true. This is certainly the case for many sentences of mathematics and logic but it is also true of many empirical statements. Even those who hold that the meanings of observation sentences consist in observable conditions will admit that sentences about the entities posited by science and other unobservable objects can only be warranted by inference from others. The understanding of these sentences, partial anti-realists are likely to concede, involves a grasp of the sentences by which they are supported. Dummett does, in fact, allow as much. Nevertheless, partial anti-realists are, at most, only partial holists.

Unrestricted holism requires that we reject the distinction between sentences warranted by experiences and those warranted by inference from other sentences. That is, such holism depends on the acceptance of a coherence theory of knowledge. Holism requires, however, retention of the view that meanings consist in detectable conditions which warrant sentences. Suppose that the meanings of all sentences consist in their truth conditions. And suppose that the truth conditions of all sentences are the conditions under which they cohere with a system of beliefs. It follows that the meaning of any sentence consists in the conditions under which it coheres with a system of beliefs. The same would be true of the meanings of all other sentences. The

meaning of a sentence cannot be given in terms of its relations to other sentences unless the meanings of these sentences are known: we would not be much wiser about the meaning of some sentence if we were told that it follows from sentences whose meanings we do not know. Consequently, a complete understanding of any sentence involves knowledge of the meanings of all of the sentences to which speakers assign a truth value. At any given time, speakers will assent to some sentences and dissent from others. The set of sentences to which they assent (including the negations of those from which they dissent) constitutes a community's (constantly evolving) system of beliefs. (In practice, of course, this set is inconsistent, so some idealisation is being presupposed. The nature of systems of beliefs is addressed in §18.) According to the holism to which global anti-realists are committed, speakers cannot understand any sentence without a familiarity with this total system of beliefs. Call this position *theory holism* to distinguish it from all other species of holism.³⁸

Theory holism is plainly a consequence of the global anti-realist's account of meaning. We have seen that the global anti-realist holds that the meaning of any sentence consists in the conditions under which it coheres with a system of beliefs. By itself, perhaps, this view does not lead to theory holism. Reflect, however, that all of our theories are interconnected. We cannot, for example, learn the theories of physics and literary criticism without having mastered theories about middle-sized physical objects. In justifying any sentence, other claims are adduced in its favour. These other claims are themselves in need of justification by others. The process of justifying claims by appeal to others can continue until the inferential relations of all sentences in a system of beliefs are considered. In practice, the process of justification stops when sceptics are satisfied by the proffered explanation. Nevertheless, the complete justification of a sentence would involve reference to every sentence in a system of beliefs. If meaning is tied to the conditions under which sentences are supported by others, a complete account of the meaning of a sentence cannot be given independently of a system of beliefs. Meaning is holistic since justification is holistic.

It is important to distinguish theory holism from a variety of other positions to which the name 'holism' is also applied. The distinction between theory holism and other forms of holism is best made in terms of the sort of knowledge of other sentences which is required for an understanding of a given sentence. According to theory holism, an understanding of a given sentence demands a knowledge of the other sentences (and their meanings) from which the given sentence can be inferred, as well as the knowledge that the given sentence can be inferred from the others. According to another sort of holism (call it *semantic holism*), an understanding of a given sentence involves a knowledge of how words contribute to the meanings of other sentences. It is reasonable to suppose that the meaning of a word is abstracted from the

contribution it makes to the meanings of different sentences. Advocates of semantic holism will hold that, in order to understand a sentence (which has not previously been encountered) speakers need a knowledge of other sentences in which words used in the new sentence occur. The sort of knowledge thought necessary by the theory holist presupposes, of course, knowledge of the second sort. But someone might think that, while knowledge of the second sort is required for an understanding of a sentence, the first is not. Davidson, whose holism is discussed below, is a holist only in the sense of thinking that the second sort of knowledge is required for understanding.

It is worth noting that theory holists have, at least until now, been hard to find. Although both Quine and Davidson are frequently described, and sometimes self-described, as holists, neither of them is an advocate of theory holism. Quine cannot be a theory holist since he does not believe that all sentences are warranted by other sentences. He holds that there is a class of sentences whose meanings can be specified independently of their relations to other sentences. Sentences in this class are observation sentences or, as Quine frequently calls them, peripheral sentences. Quine conceives of a language as a system of sentences standing to one another in various inferential relations. Some sentences, those on the interior, can only be warranted by inferential relations to other sentences. The meanings of these sentences will also depend on their relations to others. Quine's position can, however, best be described as restricted theory holism, since his holism does not extend to all classes of sentences. The sentences on the periphery of a system, Quine believes, are directly prompted by occurrent stimuli. The meanings of these sentences consist in the stimuli which prompt assent to, or dissent from, the sentences. The stimulus conditions under which observation sentences are asserted exhaust the meanings, or empirical contents, as Quine prefers to say, of observation sentences. The meanings of these sentences are quite independent of relations to any other sentences.³⁹

Davidson is even farther from being a theory holist than is Quine. Dummett criticises them both as holists without noting that their positions are quite distinct. Quine believes, as does the theory holist, that the meanings of (some) sentences depend on inferential relations to other sentences in a system of beliefs. Davidson believes nothing of the kind. Davidson does adopt a coherence theory of knowledge, but he rejects the suggestion that the meanings of sentences consist in the recognisable conditions under which they are warranted. Davidson's position is, as we have seen, that the meaning of each sentence in a language is given by a Tarski-style truth theory. Davidson is led, however, to semantic holism by the realisation that the theorems of such a truth theory cannot, by themselves, indicate the meanings of the sentences of some language. Consider the theorem, "*La neige est blanche*" is true (in French) if and only if snow is white.' This theorem at most fixes the truth value of the sentence relative to certain conditions. A sentence such as "*La neige est*

blanche” is true if and only if philosophers use unimagative examples’ also fixes the truth value of the sentence relative to certain conditions. No one thinks, however, that this sentence provides a clue to the meaning of the quoted sentence. Davidson is constrained to hold that, in order to know the meaning of any sentence, speakers need to know more than an individual theorem of a truth theory. They also need to know that the theorem is a consequence of an empirically justified truth theory for the language to which the sentence belongs. Davidson is not saying that the meaning of a sentence depends on inferential relations to other sentences which warrant it. He is simply saying that evidence for the interpretation of a given sentence is evidence for a truth theory for a language. Interpreters begin by gathering evidence about the conditions under which individual sentences are asserted. When they have enough such evidence, they develop a truth theory for the interpreted language. The theorems of such a theory, on Davidson’s view, since they are consequences of an empirically justified truth theory, can be taken as a key to the meanings of sentences. Davidson’s holism consists merely in the claim that the evidence interpreters collect is evidence for an entire truth theory, not evidence for individual theorems. On his view, speakers need to learn the axioms of a truth theory governing the use of words, if they are to understand new sentences, but they do not need knowledge of the theories which warrant the new sentences.

Davidson occasionally makes comments which sound a little like theory holism and Dummett apparently construes these remarks as expressions of such a view. At one point, Davidson observes that meaning is contaminated by theory. Dummett quotes this passage and goes on to elaborate and criticise a view recognisable as theory holism.⁴⁰ In the passage just referred to, Davidson is not making the point, essential to theory holism, that the meaning of a sentence depends on its relations to other sentences in a system of beliefs. Indeed, he is not making a point which has much at all to do with holism. Attention to Davidson’s essay makes clear that he is simply repeating an old Quinean point: it is not possible to separate the contributions to the truth conditions (and meaning) of a sentence made by matters of fact and matters of language. This is, of course, a point accepted by the theory holist, but one quite independent of theory holism. It would have been rather surprising, perhaps, had a realist such as Davidson accepted a position which is so closely associated with global anti-realism.

As indicated above, the restricted theory holism of Quine (and Dummett, for that matter) will give way to unrestricted theory holism just in case the distinction between observation and non-observation sentences cannot be sustained. Dummett charges that Quine, inadvertently perhaps, breaks down this distinction when he adopts the Duhem thesis. Since Dummett’s criticisms of theory holism turn on his rejection of this thesis, it is important to have a clear idea about what it states. The Duhem thesis states that a body of theory

confronts experience as a corporate whole. Consequently, if an experience is in accord with what a theory predicts, the whole theory and not an individual sentence is confirmed. Conversely, when an experience conflicts with what some theory predicts, no one sentence can be singled out as false. Rather, in taking account of a recalcitrant experience, the truth values of any of a number of sentences can be revised. The following example illustrates the consequences and appeal of the thesis. Imagine a theory which contains, among others, the statements that wombats live only in Australia, that certain individuals are reliable observers and that these observers are in Canada. Suppose now that the observers report seeing a wombat. This report can be accommodated by rejecting any one of the three claims in the theory. Alternatively, the observation report can be dismissed as false. Of course, rejecting a given claim will require other changes in the theory. Suppose, for example, that the statement that wombats live only in Australia is rejected. It may then be necessary to revise those aspects of the theory which deal with the ability of wombats to swim long distances.

The distinction between observation and non-observation sentences, as it is drawn by empiricists, is inconsistent with the Duhem thesis. It is dependent on there being some sentences which are directly confirmed by the occurrence of particular experiences. This bifurcation of sentences also requires that observation sentences be falsified by the occurrence of experiences which confirm contrary sentences. If the Duhem thesis is correct, neither of these conditions can be met and the empiricist's distinction between observation and non-observation sentences collapses. (The distinction can be drawn in different terms, as noted in § 13, but it is no longer a difference of kind.) It is important to bear in mind, however, that the Duhem thesis is merely a symptom of a more general threat to the division of sentences into these categories. The Duhem thesis is a step in the direction of a coherence theory of knowledge. It entails that the justification for accepting some sentence as true is found, not in experience, but in the other sentences which are held to be true. When we decide, for example, to reject the claim that wombats can swim the Pacific ocean, this is because this claim fits poorly with our other beliefs.

§7. OBJECTIONS TO HOLISM CONFUTED

Turn now to the objections with which theory holism must contend. The most notable of these objections have been presented by Dummett. Dummett has never systematically developed his arguments against holism: they are scattered throughout his writings.⁴¹ These arguments can, however, be grouped into two basic sorts. One set of arguments is designed to reduce holism to absurdity by showing that, if holism were correct, speakers would have no way to acquire an understanding of a language. The second set consists of arguments which purport to show that holism leads to the consequence that

communication is impossible. Since speakers plainly acquire languages and communicate with other speakers, Dummett concludes that unrestricted theory holism is false. In fact, holism represents no threat to either communication or to language acquisition.

Dummett has two lines of argument designed to show that theory holism cannot account for language acquisition. The first sort of argument attacks holism for entailing that one sentence in a language cannot be understood unless all are. Dummett suggests that, if holism were correct, potential language learners would face a dilemma. Aspiring language users could not understand a given sentence unless they first understood all of the others. They would, however, face the same difficulty when they tried to learn the meaning of any of the other sentences. People could only understand one sentence, on this view, if they could learn all at once the inferential relations between all sentences. The trouble, as Dummett sees things, is that humans lack the ability to grasp in one fell swoop all the inferential relations between all sentences in a language. Dummett's second line of argument turns on the consequences of the Duhem thesis. On the Duhem thesis, sentences are not assigned the value true under only one set of circumstances. Rather, a sentence comes out true under a variety of assignments of truth values to other sentences. For example, the sentence 'Wombats live in the forests of British Columbia' can be assigned the value true if we accept that they regularly swim ashore on Vancouver Island. Alternatively, however, the sentence comes out true if we accept that they are flown in from Australia and released into the wild. Since the meaning of a sentence consists in its truth conditions, understanding the sentence seems to involve a knowledge of its truth value under every possible assignment of truth values to all other sentences in a language. Humans lack, however, the capacity to survey all the possible ways in which a sentence could be true, and Dummett concludes that holism is mistaken. Apparently, speakers must be able to learn the meanings of sentences in isolation from others or in the context of a relatively small fragment of a language.⁴²

Begin by considering the second of Dummett's arguments for thinking that holism makes language acquisition impossible. Dummett is quite right in maintaining that the Duhem thesis entails that a sentence could be assigned the value true under a large (possibly infinite) number of conditions. That is, the truth value assigned to a given sentence depends on the truth values assigned to other sentences and the given sentence can be true under any number of valuations of the other sentences. If the understanding of a sentence required a knowledge of all of these valuations, language acquisition would be impossible. Dummett's objection, however, misses the point. In order to understand a given sentence, speakers need not know all the possible different assignments of truth values to the sentences of a language, and the truth value assigned to the given sentence under every different assignment. In order to have a working understanding of a sentence, they need only know which

closely related theories must be correct if the sentence is to come out true. The following example should illustrate this point. ‘The distribution of electrons is fifty percent spin-up and fifty percent spin-down’ can only be assigned the value true if many other sentences of physics also are assigned the value true. That is, the sentence is true if and only if quantum mechanics is correct. This is all someone with a working understanding of the sentence needs to know. Certainly, the sentence can be true when some sentence of literary criticism is either true or false. A working understanding of the sentence from physics can be had without any knowledge whatsoever of the truth values assigned to sentences of literary criticism. This point is developed in a few paragraphs in my analogy of the gravitational forces.

Dummett’s other argument concerning language acquisition is less easily met. Here again, he charges that holism burdens potential language learners with an insuperable task: they must simultaneously grasp the meanings of all sentences in a language. Dummett presents, what he calls, a “molecularist” alternative to holism. On this alternative, language acquisition is a manageable chore. Dummett grants that sentences cannot, in general, be understood in isolation. But he holds that the meaning of any sentence does not depend on its relations to all others in a total theory. According to molecularism, language learners can learn the meaning of a sentence given only the grasp of a fragment of a language. Language learners will not find beyond their capacities the task of simultaneously mastering a few interconnected sentences. Something is right about Dummett’s point. Holists can substantially agree with his account of language acquisition. He is right in insisting that speakers learn sentences a few at a time. He is wrong, however, in maintaining that a knowledge the meanings of a few of the sentences in a language suffices for a complete understanding of any of the sentences. A complete understanding comes only with a grasp of the inferential relations between all sentences in a system of beliefs.

The trouble with Dummett’s objection is that it depends on the unstated but dubious premiss that understanding is an all or nothing state. He assumes that speakers either completely understand a sentence or fail utterly to grasp its meaning. In fact, however, speakers may possess a partial understanding of a sentence. Consider, for example, a sentence about sub-atomic particles. The average six-year old child, while able to speak a language, is wholly ignorant of sub-atomic physics. I know very little of such matters and the physicist possesses a wide knowledge. I am not as completely ignorant of the meanings of statements as is the six-year old. On the other hand, I lack the extensive understanding possessed by the physicist. These reflections lead to the conclusion that understanding comes in degrees. Given that a partial understanding of a sentence is possible, the holist can concur with Dummett and hold that language acquisition proceeds a few sentences at a time. There are, however, two differences between the molecularist and the theory holist.

The holist, who does not recognise the empiricist's distinction between peripheral and interior sentences, denies that there can be any understanding of a portion of a language so small as a single sentence. And holists deny that a knowledge of some of the sentences in a language, and the inferential relations between them, conveys a complete understanding of any of the sentences.

We might be tempted to say that speakers who master a fragment of a language possess, not an incomplete understanding of some sentences, but a complete grasp of their own idiolect. If we succumb to this temptation, we will regard a sentence as having its meaning only in the context of an individual's system of beliefs. The very possibility of meaning and communication depends, however, on speakers agreeing on rules for the use of language. For this reason, it is important to stress that meaning is a public phenomenon and that meanings of sentences are fixed by shared public practice.

The opponents of holism sometimes argue that reflection on rules of inference shows that an understanding of a fragment of a language is attainable. Wright, for example, argues that speakers' ability to master part of a language follows from the fact that rules of inference are supposed to "keep faith" with the use of other sentences.⁴³ That is, speakers come to an understanding of rules of inference after they grasp the use of other sentences and they adopt a use of rules of inference which is consistent with the use made of other sentences. This is to admit that other sentences are understood without an understanding of rules of inference. This admission is, Wright charges, contrary to the holist's injunction that a fraction of a language cannot be understood in isolation. By now the holist's reply to this objection should be obvious. Speakers can have a partial grasp of some sentences without an understanding of (some, at least) rules of inference. As they begin to understand rules of inference, their grasp of the uses and meanings of the other sentences is enriched. Rules of inference keep faith with the use of other sentences, but the other sentences also keep faith with the rules of inference. In other words, the uses and meanings of all sentences must be consistent with those of all the others.

An apparently counter-intuitive consequence of theory holism is that no one ever completely grasps the meaning of any sentence. No one, after all, is completely familiar with the entire system of beliefs of a linguistic community. This counter-intuitive consequence is not, however, grounds for rejecting theory holism. Most speakers can have an understanding of most sentences which is sufficiently complete to enable them to use their language in effective communication. A total system of beliefs is fairly compartmentalised. Speakers can have a good understanding of literary criticism while remaining wholly ignorant of quantum mechanics. Literary criticism and physics are, in a manner of speaking, very theoretically remote from each other. The two sorts of discourse are connected, but only via the mediation of many other theories. Physics and literary criticism are like two bodies very distant from each other

in space. No matter how distant from each other two bodies are, they still exert a gravitational force on each other. For most purposes, this force can be ignored when the bodies are widely removed. Similarly, widely separated theories influence each other's meanings but the impact of each upon the other may effectively be discounted when considering the meanings of sentences in each theory. Another image may clarify the holist's position. The answers to a crossword puzzle obviously depend on the immediately adjacent answers. An answer in one corner has, however, an indirect impact on answers in an opposite corner. While parts of the puzzle can be solved in isolation from others, every answer has consequences for every other. There is an analogy between answers in a crossword puzzle and meanings of sentences. While speakers can gain a working grasp of an isolated group of sentences, every sentence has an impact on the meaning of every other sentence.

Turn now to Dummett's reasons for thinking that holism is unable to account for communication. Again, Dummett's arguments for this conclusion reduce to two basic types. His first argument begins with the premiss that every speaker has a different system of beliefs: no two people have all of their beliefs in common. This leads to troubles for the holist, Dummett believes, since we cannot grasp the meanings of other speakers' sentences (on the holist view) without a knowledge of all of their beliefs. But, Dummett continues, we cannot know everything other speakers believe unless we can know what their utterances mean. We cannot know what others believe, it seems, unless we can know what they mean, but we cannot know what they mean unless we know what they believe. The second sort of argument starts from the premiss that, if holism is correct, the meanings of sentences are constantly changing as a system of beliefs evolves. The very possibility of communication depends, however, on there being fixed and shared standards of linguistic practice. Other writers, developing this sort of argument, have warned that holism raises the spectre of radical incommensurability whenever theories change.⁴⁴

Dummett's first line of argument is easily confuted. For a start, it is not so very difficult to come to a knowledge of what other speakers believe. Dummett apparently believes that there is a danger that different speakers have radically different beliefs. As we have seen, however, it is entirely reasonable to adopt a principle of charity which attributes to other speakers many beliefs much like our own. Of course, even if other speakers share many of our beliefs, many of their beliefs may still be different. This concession does not lead to the breakdown of communication. Even though holism states that the meaning of a sentence depends on all others in a system of beliefs, differences of beliefs between speakers do not always present an insurmountable barrier to communication. We can know enough about other speakers' beliefs to make possible an understanding, sufficient for most purposes, of many of their utterances. Knowledge of the sentences in an individual's system of beliefs which are remote from a given sentence is not necessary for a working

understanding of a given sentence. So long as some of another speaker's sentences can be understood, an understanding of other sentences is not hard to acquire. As reflection on radical interpretation indicated, once we understand some of some speakers' language we can find out more simply by asking, 'What makes you say that?' Dummett only thinks holism presents a threat to communication because he thinks complete understanding is the only sort. Again, he underestimates the rough and ready nature of meaning and understanding.

Consider now Dummett's second argument for thinking that holism threatens the possibility of communication. As is often the case, Dummett's argument begins with an unexceptionable premiss: communication is impossible if the meanings of utterances are constantly shifting. Indeed, the very possibility of meaning depends upon the existence of fixed rules for the use of sentences. According to Dummett, however, holists threaten these unobjectionable principles by allowing that the meanings of sentences depend on the theories which warrant them. Holists tie meaning to a system of beliefs, he reasons, and so they are committed to saying that any change to the system will change the meaning of every sentence. A system of beliefs is constantly evolving so, it seems, the meanings of sentences are forever in flux. Holism seems to lead to the conclusion, then, that communication is impossible. In fact, even if holism is correct, some changes to a system of beliefs do not change the meanings of sentences. Holists must admit, however, that some changes to a system will change meanings. These changes will change meanings to such a small degree, however, that there is no danger that communication will break down and no fear that the concept of meaning is at risk.

One sort of change a system of beliefs may undergo is a reassignment of truth values. That is, some sentence which has hitherto been thought to be true may be classified as false. Such a change need not, by itself, have an impact on the meaning of the sentence whose truth value is revised. Recall that the meaning of the sentence consists in its truth conditions and, according to theory holism, these conditions are the conditions under which a sentence coheres with a system of beliefs. To judge that a sentence should be reassigned the value false is to judge that certain theories within this system of beliefs, once thought to be correct, are incorrect. The sentence would, however, still be true if and only if the theories are correct and its meaning is unchanged. The sentence, 'Wood contains phlogiston' has (pretty much) the same meaning today as it had in the eighteenth century. The conditions under which it is true have not changed but these conditions are no longer thought to obtain.

Theory holists must, nevertheless, admit that their position entails that the meanings of sentences change as theories change. When new statements are admitted into a system of beliefs, these statements stand in inferential relations to the other sentences in the system. They become, thus, part of the conditions

under which other sentences are warranted and true. As these conditions change, the holist must admit, so do the meanings of sentences. Change of meaning is, however, neither so rapid nor so extensive as to threaten communication or the possibility of meaning. Even if speakers change one of their theories, the use of the vast majority of their sentences will, for all practical purposes, be unaffected. True, the meanings of sentences closely connected to the modified theory will undergo substantial revision but sentences remote from the alteration will remain virtually unchanged. Speakers, able to depend on sufficiently stable standards of meaning, will be able to communicate with each other. Without question, the meanings of some sentences about atoms have changed over the past century. This change has not had catastrophic results for communication. The theory change, which has led to evolution of meaning, has left intact enough background beliefs to preclude any danger of communication breaking down between holders of rival physical theories. Similarly, Copernicus revolutionised theorising about the sun, and with it, the meanings of some sentences. But he could still converse with the partisans of Ptolemy. We should not fear that holism will lead to talk of different speakers inhabiting different worlds, or other such nonsense. Theory change would only lead to incommensurable systems of belief, and the collapse of communication, in the event of the sort of radical theory change which is unlikely, given our current theory about the causal relations between speakers and their environment. Communication does not require absolute stability of meanings any more than it requires absolute unanimity among speakers.

While Dummett's writings are the single most important source of objections to theory holism, the position faces a number of other challenges. In particular, Putnam has presented two lines of argument against holism which are important enough to be acknowledged here. The first of his objections is easily dismissed but the second demands closer attention. According to Putnam's first (and easily dismissed) objection, the meanings of sentences cannot depend on theories, since speakers understand, for example, sentences about electrons when they are ignorant of the theories to which the sentences belong.⁴⁵ Putnam provides no argument for this claim. It seems much more likely that, speakers who have never even heard of subatomic physics would not have a clue about the meaning of 'Electrons have negative charge.' It is true that many non-physicists can understand some pronouncements about electrons. But these laymen possess some rudimentary knowledge of physical theory. Putnam, rather like Dummett, apparently does not clearly distinguish between full and partial understanding.

A more trenchant objection to theory holism is inherent in Putnam's claim that meanings are not in the heads of speakers. That is, he holds that meanings are not dependent on the beliefs, or other mental contents, of speakers. Putnam supports this claim, which is inimical to holism, by a number of arguments

which are designed to show that the meaning of a term depends on the referent to which is causally linked. According to one such argument, the meaning of the word 'gold' has remained constant for thousands of years despite the dramatic changes in chemical theories about gold over the past two and a half millennia.⁴⁶ Of course, the word 'gold' did not exist in classical times but, when the ancient Greeks used their word for gold, they referred to precisely the same substance as we do when we use ours. English speakers who shared the chemical theories of the Greeks would still refer to the same substance when they used 'gold' and the meaning would not have changed. Meaning, it seems, has gone unchanged because reference has gone unchanged. Since holists are committed to the view that all meanings change as theories change, they are committed to saying that 'gold' has changed its meaning since antiquity. Their view seems, then, incapable of preserving the intuitions that meaning depends (at least in good part) on reference and that we do mean much the same thing by 'gold' as did the ancients.

In fact, theory holism can accommodate both of these intuitions. It can do so because the parts of a system of beliefs, on which the meaning of 'gold' is most dependent, are not found in chemical theory. Rather, the meaning of this word depends most intimately on beliefs about the particular things to which 'gold' refers and other beliefs about gold, accepted by both ancient and modern speakers. The meaning of 'gold' is most dependent on beliefs such as that gold is the substance of which such-and-such pieces of jewellery are made, which is mined in such-and-such a location and so on. In short, the beliefs which contribute most to the meaning of 'gold' are beliefs about the things to which we refer when we use the word. Other factors relevant to the meaning of 'gold' include the beliefs that gold is malleable, yellow, heavy and so on. These beliefs have remained unchanged through the centuries. Certainly, chemical theory has changed and, with it, the meanings of 'gold' and all other terms. So many beliefs have remained constant, however, that the meaning of 'gold' has not altered dramatically and the unwary observer is tempted to say that it has not changed at all.

Putnam's criticisms of theory holism, like those of Dummett, fail because he does not realise that the understanding speakers possess of a language is not simple, neat and clean-cut. It comes in degrees. All speakers have somewhat different beliefs about such matters as electrons, gold and Jane Austen and, consequently, they have somewhat different understandings of sentences about such matters. Most every speaker has, however, enough beliefs in common with everyone else for communication to be possible on most questions. The critics of holism do not recognise that, when it comes to understanding sentences, good enough is good enough.

C H A P T E R F O U R

Consequences of Global Anti-realism

§1. SPECIFYING THE SPECIFIED SYSTEM OF BELIEFS

The previous two chapters both have led to the conclusion that the truth conditions of sentences are, in all cases, detectable by users of the sentences. We saw in Chapter One that such a conception of truth conditions leads to a picture of truth which differs dramatically from the usual, realist conception. In particular, we have good reason for thinking both that truth is a property which cannot exist undetectably, and for doubting that all sentences are either true or false. In short, the principles of bivalence and transcendence are rejected by the global anti-realist. The rejection of these principles is, however, only one of many far-reaching consequences of global anti-realism. The global anti-realist's account of truth has implications for logic, epistemology and metaphilosophy. This chapter is devoted to tracing some of these implications.

The answer to the question 'What is truth?' is finally provided in §20 and some of the characteristics of the property of truth are also indicated. Section 21 is devoted to the re-evaluation of another fundamental feature of the realist conception of truth which is cast into question if truth conditions are always detectable. Realists will typically say that truth is an eternal property of sentences. They mean by this that truth is not a property which can be gained or lost: if a sentence (suitably indexed to time and place, if necessary) is true (or false), it is so now and forever. This may be called the *principle of eternity*. The view that truth is eternal is a consequence of the realist's conception of truth as determined by objective conditions and as completely independent of what speakers believe. The global anti-realist's account of truth conditions, we have seen, links truth to systems of beliefs. As a result, it leads to the reassessment of the principle that truth is eternal and immutable. By

abandoning the principle of eternity, global anti-realists commit themselves to a species of relativism. In §22 the relativism of the global anti-realist is circumscribed and defended against standard objections. Observant readers will have noted that global anti-realism also demands the reconsideration of certain principles of classical logic. Some of the position's implications for logic are traced in §23. Global anti-realism also leads to a novel perspective on scepticism. Since anti-realism leads to the rejection of the principle of transcendence, no truths are unknowable. The ability of global anti-realism to undermine at least one species of scepticism is the subject of §24. Finally, in §25, some of the metaphilosophical implications of global anti-realism are developed.

One important question remains to be addressed before we are in a position to determine the consequences of global anti-realism and, in particular, to trace the fate of the principles of eternity, bivalence and transcendence. This question is concerned with the nature of a system of beliefs. Global anti-realists hold not merely that truth conditions are, in all cases, detectable. They also hold that these detectable conditions are coherence truth conditions. That is, truth conditions are the conditions under which sentences cohere with a system of beliefs. Up to this point, global anti-realists have been allowed to speak, in a somewhat imprecise manner, of truth as the property possessed by sentences which cohere with a system of beliefs. They have not been pressed to specify which system or systems of beliefs are the ones with which true sentences cohere. The time has come to offer a definitive answer to the specification problem, which was introduced in §10. The answer which global anti-realists give to this question will have implications for their verdicts on the principles of bivalence, transcendence and eternity. The remainder of this section and §19 are devoted to answering this question.

Several different accounts can be given of the system of beliefs with which true sentences cohere, which was earlier called the *specified system*. According to the first account, those sentences are true which cohere with an ideal system of beliefs. An ideal system of beliefs is a set of sentences which are held to be true at the limit of inquiry. That is, an ideal system is the set of beliefs which would be possessed by some knowers who have collected all the evidence available to them. Different conceptions of the knowers who are collecting the evidence will lead to rather different conceptions of the ideal system. The knowers could be conceived of as possessing cognitive capacities greater than our own or even capacities which are infinitely great. The system of beliefs possessed by a knower with infinitely great cognitive capacities who, that is, is omniscient, may be called the *strong ideal system*. A somewhat more modest position results if we conceive of the knowers as possessing cognitive capacities similar to our own. On this account of the ideal system, it is the set of beliefs of which would be adopted by finite creatures such as ourselves, if they were to collect all the evidence they are capable of uncovering. Call this

the *modest ideal system*. Both of these accounts of the specified system are ideal in the sense that they will never actually be held by any real speakers.

Coherentists may be tempted appeal to an ideal system of beliefs in an effort to solve the second of the two problems introduced in §10, namely the transcendence problem. A coherentist who thinks that truth may transcend what any finite speaker can know is forced to turn to an ideal system. In fact, a coherentist who opts for the view that the specified system is the strong ideal system, will be able to preserve all three of the principles essential to realism. The principle of bivalence is thrown into doubt only if the truth (or falsity) of a sentence depends on the existence of a proof of its truth and its truth cannot be proved, that is, the sentence does not cohere with the specified system. Since omniscient beings can, by definition, prove everything that can be proved, if a sentence coheres with their system of beliefs, it is true. If it does not cohere with the strong ideal system, it is false. In other words, every sentence or its negation coheres with the strong ideal system. Consequently, if the specified system is the strong ideal system, the principle of bivalence holds for all classes of sentences. The principle of transcendence is also upheld in its intended sense. Truth cannot, of course, transcend the strong ideal system. Nevertheless, the principle of transcendence is upheld since it is intended only to say that truth may transcend what finite knowers are able to detect. Since the strong ideal system is unchanging, the principle of eternity is also preserved. Omniscient beings have nothing to learn and do not change their minds. As a result, a sentence cannot fail to cohere with the system of such a being at one time but cohere at some subsequent time.

If the specified system is the modest ideal system, only two of the three principles survive. The principle of eternity survives since there is only one specified system and it is, like the strong ideal system, fixed and unchanging. It is defined in terms of a unique ideal limit. Moreover, if truth consists in coherence with any ideal system at all, even a modest one, truth may transcend what any actual speaker is able to know. The principle of bivalence is, however, not retained if the specified system is a modest ideal system. Even if finite knowers such as ourselves were to collect all the evidence we are capable of accumulating, there would be some cases where a given sentence does not cohere with the system but neither does any contrary sentence. Very likely, even if all the evidence available to finite speakers were in, ‘Jane Austen wrote ten sentences on November 17th, 1807’ still would not cohere with the speakers’ beliefs. Neither, on the other hand, would any other sentence about the number of sentences she wrote on the day in question cohere with the system. The sentence in question can be false only if some contrary sentence is true. If truth is identified with coherence with the modest ideal system, therefore, some sentences are neither true nor false. The modest ideal system is the least interesting candidate for the dignity of the specified system. It preserves too much of realism to be acceptable to global anti-realists and not

enough to appeal to hard-core realists.

If the specified system can (only) be the one actually adopted by some community of speakers, a more radical position ensues than follows if the specified system is an ideal system. All three of the realist's principles are rejected. If truth consists in coherence with an actual system of beliefs, and if speakers can know that some sentence coheres with their beliefs if it does, then a sentence cannot be true unless it can be known to be true. Consequently, truth cannot transcend even the systems of finite knowers and the principle of transcendence is dismissed. Obviously, a sentence often fails to cohere with an actual system when no contrary sentence coheres. So the principle of bivalence does not hold. That the principle of eternity is also to be rejected becomes apparent when we reflect that, if truth consists in coherence with a non-ideal system of beliefs, there is no unique specified system. The actual system of beliefs of any community is constantly in flux. At one time a sentence may fail to cohere with a community's system but do so at some latter time. Alternatively, a sentence can cohere with a community's system but cease to do so as the system evolves. As a result, if truth consists in coherence with an actual system, truths come into and pass out of existence. In other words, the principle of eternity goes the way of the other two pillars of realism.

We cannot assess the suggestion that the specified system can be some non-ideal system which speakers can actually hold, rather than an ideal system, until we have a clearer conception of the non-ideal system in question. Clearly, not just any non-ideal set of beliefs can be the specified system. That this is the case is apparent from the fact that some sets of beliefs are inconsistent. Contradictions, which are necessarily false, will cohere with an inconsistent system of beliefs. Moreover, since (according to classical logic, at any rate) anything at all follows from a contradiction, all sentences, no matter how little inclined anyone is to say that they are true, cohere with an inconsistent system. Another concern about the view that a non-ideal system is a specified system is that many possible non-ideal systems are perfectly consistent but implausible candidates for the dignity of a specified system. Imagine that, somewhere in the contemporary world, a group of people have a consistent set of beliefs which includes astrology and phrenology. Even the most hardened global anti-realist will hesitate before saying that sentences are true which cohere with the beliefs of these people. Those who think that a specified system can be a system actually adopted by a community must, then, deal with two serious worries. They must, first, explain how inconsistent systems are ruled out. In the second place they need to explain how they can capture the intuition that the beliefs of consistent astrologers and phrenologists do not constitute a specified system. The worry that systems of beliefs may be inconsistent is particularly pressing since it is extremely likely that every speaker has an inconsistent set of beliefs.

Both of the difficulties outlined in the previous paragraph can be overcome

by becoming more clear about what constitutes a system of beliefs. In giving an account of a system of beliefs, global anti-realists need to focus on what coheres with the beliefs of communities of speakers, rather than on what individual speakers happen to believe. Of course, the set of all the beliefs held by the members of some community of speakers will be, if possible, even more inconsistent than the set of beliefs of a single individual. A system of beliefs is not, however, to be understood as the total set of beliefs held by members of the community. Rather, the system of beliefs of some community is the set of sentences which are warranted. Sentences are warranted, on the coherence theory of knowledge, by coherence with other beliefs. A sentence does not cohere with a system if it is inconsistent with some other sentence in the system. Consequently, a system of beliefs is a consistent set of sentences which are warranted, given the beliefs held by some community of speakers. A number of consistent and coherent sets of beliefs can be constructed from the set of all beliefs held by the members of a community. Only one of these will be the maximal set, the one which preserves as many as possible of the beliefs of the members of the community. This system, the maximal consistent and coherent set of beliefs of community, is the best candidate for the specified system of those who think that this cannot be an ideal system. Call such a system a *practicable system*.

Defining the specified system in these terms may seem problematic since there seems to be no way to rule out the possibility that more than one maximal system of beliefs can be derived from the set of beliefs of any given community. That is, perhaps two possible systems of beliefs preserve equally large subsets of a community's beliefs but preserve different beliefs. In such a case, both systems would have an equal claim to being the practicable system. Two replies can be made to this objection. The first denies that two maximal systems can be derived from a set of beliefs. This conclusion seems likely given that any large system of beliefs will preserve logic, mathematics, canons of scientific method and other elements of a community's theories which play an important role in the inference of other beliefs. Unless these theories are part of a system, very few beliefs will cohere with the system and it will be very far from maximal. Once these theories are included in a system, it is not clear how two conflicting but equally maximal systems are possible. Someone might think that two systems could be extracted from a community's set of beliefs which differ only in that one contains 'Jane Austen wrote ten sentences on November 17th, 1807' while the another system lacks this sentence but contains 'Jane Austen liked port wine,' which is missing from the first system. The reason for thinking that this is not possible is that beliefs are always interconnected with others. If a given sentence is part of a system, it is supported by others. If it is rejected, these others must be rejected, or the rules inference by which they support the given sentence must be rejected. If the supporting sentences and rules of inference are not rejected, then the given

sentence ought to be included in both of the systems. The two systems would then be identical.

In the event that this argument is found unconvincing, the global anti-realist has a second argument. Suppose that two sets of beliefs might both contain all of a community's beliefs about logic and so on and yet preserve equally many, but different, other beliefs. The global anti-realist will argue that any two systems which preserve logic, mathematics and scientific method will vary only in comparatively minor respects. For all practical purposes, the differences between these systems can be ignored. For example, so long as scientific method is preserved, evolutionary biology, a heliocentric view of the solar system, basic historical theories (such as the existence of the Holocaust) and other scientific theories will be a part of any system of beliefs for our community which has any reasonable claim to being maximal. Compared to such widespread agreement, any disagreement will be insignificant.

Other misgivings about the present account of the specified system will be forestalled once we note the important fact that, as the concept is understood here, a practicable system of beliefs is essentially communal. Such a system is not to be identified with what any individual happens to believe. A sentence is part of a practicable system of beliefs and true, not because any one individual believes it, but because it is part of a maximal coherent set of beliefs. In the limiting case, a sentence is part of a system of beliefs, even though no one believes it. By stressing that systems are communal, global anti-realists can preserve the distinction between a belief being true (or warranted) and a belief being taken to be true (or warranted) by some particular speaker or speakers. Once this distinction is made, we can explain why practicable systems of beliefs cannot be inconsistent and to explain why astrology is not part of a practicable system of beliefs, even if many speakers happen to believe it.

A few examples will illustrate the distinction between what speakers believe and what coheres with a community's system of beliefs. Imagine that many speakers in a community (perhaps all of them) believe that Jane Austen was born in Stevenson and also believe that, if she was born in Stevenson, she was born in Hampshire. These speakers might, nevertheless, not believe that Jane Austen was born in Hampshire. In such a case, 'Jane Austen was born in Hampshire' coheres with, and is part of, the community's system of beliefs. It is part of the system even though many people do not have this belief. This is the case since they have the other two beliefs, and given that they accept modus ponens as a valid argument form, the third is entailed. The sentence is part of the system, even though not believed. (This point explains, incidentally, how global anti-realism provides the correct account of truth, even though many people, even most philosophers, do not believe that it is true. Global anti-realism coheres with our community's beliefs about the capacities of speakers, the nature of language and so on, even though many people do not realise that it is part of our system.) Just as a belief can be part of a system, even if not

believed by many speakers, so can a belief fail to be part of a system, even though widely adopted. Possibly, for example, some members of a community believe in astrology. If, however, the community is committed to the belief that modern physics gives a complete account of the forces at work in the universe, and that physics overrides any other theories which present conflicting accounts of such forces, then astrology does not cohere with their system of beliefs, even though many members of the community may believe it. The failure of a sentence to be part of a system of beliefs when many people believe it, or its belonging when few do, reflects a division of labour similar to the division of semantic labour.

Once a system of beliefs is conceived of as the maximal coherent set of the beliefs of a community, there is no worry that the specified system will be inconsistent. Systems of beliefs are, as it were, self-regulating. They contain rules for deciding which beliefs are to be admitted. A basic rule of any system of beliefs will be that two contradictory beliefs cannot both be admitted: in the event of inconsistency, at least one belief has to go. Anyone who accepts a coherence theory of knowledge maintains that a system of beliefs provides the only grounds on which to accept or reject beliefs. If a system of beliefs could provide grounds for adopting inconsistent beliefs, the very possibility of seeking knowledge would be undermined together with the possibility of communication. These consequences would follow since, if inconsistent beliefs could both be justifiably accepted, speakers could believe whatever they wished without any constraints. Moreover, if there were no constraints on what speakers could justifiably believe, there would be no way to determine what they mean. Speakers can only be interpreted on the assumption that prevailing conditions put constraints on what speakers can rightly believe and, hence, rightly assert. The reply to the first of the present worries is then apparent: maximal coherent systems of beliefs will not be inconsistent since, by their very natures, they are consistent.

Someone might worry that, faced with the total set of a community's beliefs, it will always be possible to come up with a variety of consistent sets which could be said to be the community's system of beliefs. We could, for example, reject all the beliefs of reputable historians and retain the views of Holocaust-deniers. Alternatively, the views of racists, who maintain that certain groups are inferior to others, could be accepted in preference to modern genetics. More generally, it will always be possible to come up with a coherent set of beliefs by excluding views that many sensible people want to hold true and including the views of loonies from the outback of ideas. This should, obviously, be a worry to anyone who holds that a specified system is a practicable system. The reply to this worry is that any set of beliefs which includes the views of Holocaust-deniers and racists cannot be the maximal coherent set of beliefs. The views of Holocaust-deniers, for example, cannot be retained without rejecting the canons of scientific method and inductive logic,

to say nothing of a number of highly confirmed historical theories. If scientific method and inductive logic are rejected, a huge body of beliefs will also have to be excluded from a system of beliefs. In short, the hypothesis that no Holocaust occurred is directly or indirectly inconsistent with virtually every belief held by a community. The attempt to preserve it would result in a system which is more likely to be minimal than maximal.

Realists may be tempted to object that there could be a group of speakers from whose beliefs there is no way to develop a consistent system of beliefs without rejecting virtually everything the speakers believe. That is, realists could object that some community of speakers might easily have beliefs which are irreconcilably inconsistent. Perhaps a consistent set of beliefs cannot be extracted from some speakers' beliefs without rejecting the vast majority of what every individual speaker believes. This might be taken to conflict with the suggestion that systems of beliefs are essentially consistent. I am sceptical about this proposal. I think it extremely likely that all speakers share a vast range of beliefs. They have in common beliefs about mid-sized physical objects, rules of inference and standards of evidence. Many of the matters on which speakers disagree will not be consistent with this shared body of beliefs. Even if this is an unduly sanguine perspective, the existence of speakers with irreconcilable views should not be taken as showing that systems of beliefs can be inconsistent. Rather, if speakers exist from whose beliefs a consistent system cannot be distilled, this should be taken as evidence that the speakers belong to two or more communities with different systems of beliefs. It is not evidence that a single system of beliefs is inconsistent.

The recollection that there may be more than one specified system reminds us that there still remains to be considered the second of the worries which arise when the specified system is understood in terms of systems which speakers can actually adopt. Some people might think that merely conceiving of a system of beliefs in the present terms provides the key to resolving this worry. After all, although many people believe in astrology, it is not part of the system of beliefs of our community. Even if, however, astrology is not part of the system of beliefs current in our community, there seems to be no principled reason why it could not be part of the system of some other community. There could be a community whose system of beliefs contains the belief that astrology overrides physics with the result that astrology is part of the system and physics (which happens to be believed by some speakers) is excluded. Indeed, such a community may very well have existed in the sixteenth century. The system of such a community could be perfectly consistent. If this is the case, those who think that a specified system is one speakers can actually adopt are committed to saying that astrology can be part of a specified system.

Before becoming unduly worried by this result, we should remember that no actual practicable specified system of beliefs contains astrology. Certainly, global anti-realists who hold that a specified system is a practicable system are

forced to admit that astrology is possibly true. This is not a particularly damning concession: everyone has to admit that astrology is possibly true. The difference is that the realist will say that the truth of astrology remains a merely logical possibility unless objective conditions change dramatically. On the other hand, a global anti-realist, who believes that any practicable system can be a specified system, is committed to saying that only a system of beliefs must change if astrology is to be true. This difference should not be surprising: it simply reflects the differing views of truth conditions held by realists and global anti-realists. If anti-realists should still seem soft on astrology, reflect that they can tell a story about why the system of beliefs with which astrology coheres will never be adopted. They can explain, for example, that (according to their theories) the world is constituted in such a way that a system of beliefs with which astrology coheres will never be caused. Of course, if their theories are subsequently thought to be mistaken, astrology may cohere with and be part of a specified system.

Realists may object that some people will go to their graves believing in astrology. No one can do anything to persuade such people that astrology is mistaken. Sad as this is, it can scarcely be denied. This situation does not, however, bear on the present issue. Advocates of the view that a practicable system is a specified system can respond to such stubborn astrologers in the manner of Dr. Johnson: they are obliged to find the astrologers an argument, but they are not obliged to find them an understanding. That is, if a sentence does not cohere with a system of beliefs, it must be possible to provide an argument to this effect. A speaker's inability to recognise that a sentence does not cohere with a system of beliefs does not mean that the sentence does not cohere with the system. The anti-realist, to be sure, holds that truth is recognisable, but truth does not have to be recognisable by everyone.

Anyone who believes that truth consists in coherence with a system of beliefs has, then, three alternatives. The system with which true sentences cohere could be an ideal system, either modest or strong. Alternatively, the specified system could be a practicable system. While *prima facie* reasons can be given for thinking that the specified system cannot be one speakers can actually adopt, these have been overcome and the specified system could also be the maximal coherent set of actual beliefs of a community. There remains the task of choosing between these three systems. The considerations advanced in earlier chapters, about meaning and the nature of semantic relations, demonstrate that a specified system is a practicable system.

As we have seen, speakers learn to assert sentences only when they cohere with a practicable system of beliefs. They do not learn to assert sentences only when they cohere with some ideal system. Indeed, they cannot learn to assert sentences under such conditions. Speakers have no idea about what an ideal system of beliefs looks like. (If they did, they would adopt it.) Consequently, speakers can have no idea about whether some sentence coheres with a modest

ideal system, let alone an idea about whether it coheres with the system of beliefs of beings with cognitive capacities much greater than their own. Chapter Two demonstrated that speakers establish semantic relations between a sentence and certain conditions by asserting the sentence only when the conditions obtain. Having no knowledge of ideal systems, speakers cannot establish semantic relations between sentences and the conditions provided by such systems. Chapter Two also established that sentences stand in semantic relations only to conditions which speakers can detect. The conditions speakers are capable of detecting are the conditions under which a sentence coheres with a practicable system of beliefs. Global anti-realists conclude that the conditions to which a sentence stands in semantic relations are the conditions under which it coheres with a practicable system of beliefs.

This conclusion can also be reached by reflecting on the nature of meaning. We saw in Chapter Three that meanings are what speakers know when they understand sentences and that speakers can only acquire an understanding of sentences which consists of a knowledge of the conditions under which it coheres with a system of beliefs. The attempt to decide which is the specified system is, then, a question about the sort of conditions speakers know when they understand sentences. We need to ask whether speakers acquire a knowledge of the conditions under which sentences cohere with some sort of ideal system, or the conditions under which sentences cohere with a practicable system. Chapter Three demonstrated that whatever conditions the meanings of sentences consist in, they are conditions speakers are able to detect. All actual speakers learn the meanings of sentences without the benefit of a knowledge of what an ideal system, whether strong or modest, looks like. Consequently, they cannot possibly acquire an understanding of sentences which requires a knowledge of such an ideal system. The conditions speakers can detect, in learning the meanings of sentences, are the conditions under which sentences cohere with practicable systems.

Another conclusion of Chapter Three was that the meaning of a sentence is manifest in the use which is made of it. Nothing in the linguistic behaviour of a speaker would indicate that its meaning consists in the conditions under which it coheres with an ideal system. Speakers cannot utter some sentence only when it coheres with an ideal system of whose nature they are ignorant. On the contrary, they utter some sentence only when it coheres with some practicable system with which they are acquainted. In general, then, the meanings of sentences consist in the conditions under which they cohere with a practicable system. If the meanings of sentences consist in these conditions, they are the truth conditions of the sentences. Consequently, only a practicable system provides the truth conditions of sentences and is a specified system.

§2. THE MYTH OF AN IDEAL SYSTEM

To this point, I have taken ideal systems of beliefs to be merely possible and not actual systems of beliefs. Since they are not practicable, ideal systems cannot be specified systems. A system of beliefs has to be actual before speakers can establish semantic relations between a sentence and conditions provided by the system or grasp the meaning of a sentence by learning the conditions under which it coheres with the system. Some people (theists, for example) believe, however, that a strong ideal system of beliefs is an actual system. The view that truth has something to do with an ideal system may still appeal to these people. Anyone who thinks that an omniscient being, call it 'God,' exists with its own ideal system of beliefs, may still be attracted by the suggestion that the strong ideal system is the (only) specified system. After all, such a person will reason, if God exists, then the strong ideal system is a practicable system and the beliefs of God are true if and only if they cohere with this practicable system. Such a person might go on to argue that a sentence is not true, even if it coheres with the practicable system held by finite knowers, if it fails to cohere with an actual strong ideal system. That is, it might seem that no sentence which coheres with any practicable system can be true unless it also coheres with God's system of beliefs. This section is devoted to establishing two points. The first is that, even if the strong ideal system can be a practicable system, even if, that is, an omniscient being might exist, global anti-realism still provides the correct account of the property of truth possessed by the sentences used by speakers who lack an ideal system. The second is that the very idea of the idea of the strong ideal system of beliefs is dubious.

Consider first the question of whether the concept of the strong ideal system is dubious. A strong ideal system only makes sense, I suggest, given a realist conception of truth. Since the realist account of truth is mistaken, we should be sceptical about the cogency of the concept of the strong ideal system. In order to see that the strong ideal system is dependent upon a mistaken conception of truth, we need a better understanding of the strong ideal system. The distinguishing feature of the strong ideal system is supposed to be that all true sentences cohere with it. This feature does not, by itself, global anti-realists will say, distinguish the strong ideal system from any other system of beliefs. After all, they hold that a sentence is true if and only if it coheres with a system. Any sentence which does not cohere with a system is not a truth and, consequently, no extra-systemic truths exist. Given the global anti-realist's account of truth, every system has an equal claim to being the strong ideal system if this is the system composed of all truths. Plainly, the strong ideal system has to be distinguished from others by some other means.

Perhaps the strong ideal system is to be distinguished from others, not on the grounds that all true sentences cohere with it, but on the grounds that all possible truths cohere only with the strong ideal system. Global anti-realists

will admit that potential truths exist which do not cohere with a non-ideal system. That is, they will admit that some sentences which are not true now may be true in the future. The claim that all possible truths cohere with the strong ideal system is the claim that all sentences which can ever be true cohere with this system. In other words, the claim is that for every sentence of a language, either it or its negation coheres with the strong ideal system. In other words, in the context of the strong ideal system, any sentence is true or its negation is, in which case the sentence is false. This commitment to the principle of bivalence is a dead give-away that realism is lurking nearby.

The strong ideal system of beliefs is characterised, then, as the coherent system composed of all true sentences, including the negations of all false ones. The concept of a system which assigns a determinate truth value to all sentences of a language is perfectly intelligible. Unless an omniscient being exists, such a system will never exist. Even if such a system does not exist, however, perhaps we can still imagine such a system. If we can conceive of such a system, perhaps it can serve a regulative ideal, against which all other systems are to be measured. While nothing is incoherent about a system which assigns a truth value to every sentence of a language, the concept of the strong ideal system is problematic. It is problematic because the concept of the strong ideal system is the concept of a unique correct assignment of truth values to all the sentences of a language. There are, however, good grounds for thinking that we cannot make sense of a unique strong ideal system if truth consists in coherence with a system of beliefs. A variety of assignments of truth values to all of the (perhaps infinitely many) sentences of a language will result in a system both consistent and coherent. If truth consists in coherence with a system of beliefs, there can be no reason for picking out one of these as the one and only strong ideal system.⁴⁷

There can be a unique set of true sentences only if the truth values of sentences are determined by some conditions other than the conditions under which sentences cohere with a system of beliefs. After all, if the truth conditions of sentences are always internal to systems of beliefs, no grounds exist for saying that one system is more ideal than another. The conditions which are external to a system of beliefs, against which systems of beliefs can be measured, are objective truth conditions. If a knower can adopt a unique system which will remain forever unchanging, this must be because the sentences have objective truth conditions. Consequently, anyone who believes that the strong ideal system is the specified system is a realist with respect to the beliefs of anyone who holds such an ideal system of beliefs.

The trouble with the strong ideal system is now apparent. We can have no grounds for picking out one of the many systems of beliefs which assign a truth value to every sentence and calling it the strong ideal system. Saying that one of the many such systems is the only strong ideal system makes sense only if speakers have the capacity to establish semantic relations between sentences

and objective conditions. That is, only if the sentences in one system correspond to objective conditions are there grounds for saying that one system is the one and only strong ideal system. All the arguments presented in Chapters Two and Three count against the suggestion that sentences can correspond to objective conditions. Consequently, the concept of a unique strong ideal system is extremely questionable.

It is time now to turn to the second of the two questions to be addressed in this section. Suppose that the concept of the strong ideal system is not dubious and that possibly some being adopts such a system. (If such a system could be a practicable system, some being is able to assert sentences if and only if objective conditions obtain. If God exists, He is a realist.) This second question asks whether, given the present supposition, global anti-realism provides the correct account of the property of truth which can be possessed by the sentences used by ordinary non-omniscient beings. The global anti-realist has two arguments to show that the possibility of such a system has no impact on considerations about the property of truth as it applies to the sentences of finite speakers.

The first, and less satisfactory, argument depends on a controversial metaphysical premiss. The fact that the strong ideal system of beliefs is a possible system does not entail that it is an actual system. As we have seen, only actual systems of beliefs can be specified systems. In order to maintain that truth, as it applies to finite speakers' sentences, has nothing to do with the strong ideal system, global anti-realists need only deny the existence of a being which could hold the strong ideal system. If an omniscient God does not exist, the strong ideal system is not an actual system, and global anti-realists need not worry. Global anti-realists might do better to provide an argument which does not depend on the premiss that God does not exist. The existence of God, while doubtful, cannot be ruled out and global anti-realists would not want to have their position undermined by theological discoveries.

Fortunately, global anti-realists can show that the property of truth, as it applies to finite speakers' sentences, has nothing to do with the strong ideal system, and they can do so without relying on metaphysical claims, however probable. Even if God exists, the global anti-realist's account of truth still applies to the languages of non-omniscient creatures. If God exists, the strong ideal system is a practicable system and a specified system. A sentence used by an omniscient being will be true if and only if it coheres with His system of beliefs. From this we cannot conclude that the sentences used by finite speakers are true on the same conditions. The sentences used by finite speakers will still be true if and only if they cohere with the speakers' own practicable system. Strictly speaking, God and finite speakers do not have the same language. The truth conditions of God's sentences are different from the truth conditions of the sentences used by finite speakers. Accordingly, the fact that God's sentences have objective truth conditions does not entail that a finite

speaker's sentences have the same sort of truth conditions.

The use God makes of its sentences has no impact on the use finite speakers make of theirs. Even if God possesses an understanding of sentences which consists in a knowledge of objective truth conditions, this does not confer upon other, finite speakers a similar knowledge. God cannot understand their sentences for them. The understanding finite speakers possess of any sentence does not consist in a knowledge of the conditions under which it coheres with God's system. Their understanding still consists in a knowledge of the conditions under which it coheres with a practicable (for finite creatures) system. Of course, if God were to let finite speakers in on some of the beliefs in His system, their sentences could be true if and only if they cohere with these beliefs. Their sentence would be true under these conditions, not because God held certain beliefs, but because the beliefs had become part of the finite speakers' system.

§3. WHAT TRUTH IS

A specified system of beliefs, the system with which true sentences cohere, is a practicable system of beliefs. That is, a specified system is the maximal coherent set of beliefs which can be extracted from the total set of beliefs of a community of speakers. Now that we are clear about the nature of a specified system, we are finally in a position to give a definitive answer to the question, 'What is truth?' Truth is the relational property a sentence possesses if and only if speakers adopt the practice of asserting the sentence only when it coheres with the speakers' practicable system of beliefs and the sentence does cohere with their system. A sentence coheres with a system if and only if certain coherence truth conditions obtain. These are conditions from which the sentence can be inferred. Accordingly, a true sentence stands to a practicable system of beliefs in the relation of being inferable from it. This characterisation of truth answers all three of the questions posed in §1: it tells us that truth bearers are sentences, that truth is the relational property sentences bear to coherence truth conditions and that semantic relations are the (conventional) relations in virtue of which sentences are inferable from a system of beliefs. This is precisely the account of truth offered by the global anti-realist. Now that we have given a definitive answer to the specification problem, we are also in a position to begin tracing the consequences of global anti-realism.

Little has been directly said in the course of this essay about the first part of an answer to the question, 'What is truth?' That is, questions about the bearers of truth values have not been directly addressed. Nevertheless, we can now see that we are justified in talking of sentences or, more accurately, sentence types, as the bearers of truth values. Sentences are the items which speakers assert only when they are able to detect a certain range of (truth) conditions. Consequently, sentences are the items which are placed in semantic relations to

truth conditions. Moreover, sentences are the items which speakers, by virtue of the use the speakers make of them, endow with meanings. Since only that which has a meaning can be the bearer of a truth value, sentences are the obvious candidates for the bearers of truth values.

In telling us that truth is a property sentences possess in virtue of standing in a semantic relation to coherence truth conditions, the global anti-realist's account of truth tells us everything that philosophers can tell us about truth. Everything they can tell us is more than deflationists would have us believe philosophers can tell us. Contrary to a deflationary account of truth, all true sentences do share a general property, and philosophers can investigate this property. The general property shared by all true sentences is the property of cohering with a practicable system of beliefs. Beyond telling us that sentences are true under coherence truth conditions, however, philosophers cannot, in general, tell us a great deal about the specific conditions under which sentences cohere with a practicable system of beliefs. Neither can they provide a general account of what it is for a sentence to cohere with, or be inferable from, a system of beliefs. These are matters best left to the practitioners in the various fields of inquiry.

A question about the truth conditions of a sentence can be answered only by paying attention to the conditions under which speakers actually use it. The specific conditions under which a given sentence is true can be decided only by reference to the theories of some community of speakers. If we want to know the truth conditions of 'Neutrinos have no rest mass,' physicists are the people to ask. And if we want to know the truth conditions of '*Northanger Abbey* is a more fully-realised work of art than *I Was a Teen-aged Werewolf*' we should ask a literary critic. In neither case should we expect philosophers to have much to say about the specifics of the sentence's truth conditions. Similarly, a question about the sort of relations in which a sentence stands to a system when it coheres with the system can only be decided by investigation of the linguistic practices of speakers. As was noted near the end of §9, rules of inference differ from one sort of theory to another. In the context of certain sorts of logic and mathematics, relations between a sentence and its truth conditions might be restricted to rules of deductive inference. In physics, the relations can be inductive rules of inference. According to literary critics, sentences may be true when they stand in analogical relations or when their meanings resonate (whatever this may mean) with the meanings of other sentences.

We should not expect a recursive truth theory to shed much light on truth and truth conditions. Of course, the truth conditions of conjunctions will be the union of the truth conditions of the two conjuncts and the truth conditions of some other complex sentences will, similarly, be expressible in terms of the truth conditions of simpler sentences. Nevertheless, no neat, recursive truth theory can specify the truth conditions of all sentences in a language. Section

14 demonstrated that meaning theories will be complex and ramshackle affairs which are parasitic on the system of beliefs of a community of speakers. The meaning theories discussed in that section simply are truth theories. Accordingly, any attempt to construct a theory which specifies the truth conditions of all sentences in a language would be equally unsystematic, convoluted and dependent on the total system of beliefs of some community of speakers.

Once we recognise that a practicable system is a specified system, we can see that truth is a property which any sentence can possess only if (at least some) users of the sentence can know that it has the property. Since all sentences are true if and only if they cohere with a practicable system of beliefs, if a sentence is true, it can be known to be true. In other words, all true sentences can be known to be true since a sentence cannot cohere with a system unless it can be known to cohere with a system. In order to see that this is the case, reflect that a given sentence can cohere with a system only if it follows from beliefs held by some speakers by means of rules of inference accepted by those speakers. The sentences from which the given sentence follows in turn have to be inferable from other sentences whose truth the speakers can recognise. As a result, every sentence which coheres with a system can be known to cohere with the system and truth is a property which can always be detected. Saying that truth is a property a sentence can possess only if it can be known to possess the property is just to say that the principle of transcendence is mistaken.

Another characteristic of truth is that it is not (what may be called) a *complementary property*. A property is a complementary property if any item which lacks the property has the opposite property. Oddness and evenness, as these properties apply to positive integers, are complementary properties: any positive integer which lacks the property of evenness possesses the property of oddness. So to say of truth that it is not a complementary property is to say that any sentence which lacks the property of truth does not necessarily have the property of falsity. In order to see that truth is a non-complementary property, reflect on the conditions under which sentences are false. When the coherence truth conditions of a sentence fail to obtain, the sentence does not possess the property of truth. That the sentence possesses the property of falsity does not, however, follow. Just as when a sentence is true, certain conditions obtain, so when a sentence is false other conditions obtain. The conditions under which a sentence is false are the conditions under which a contrary sentence is true. Global anti-realists will say that a sentence is false only if the coherence truth conditions of some contrary sentence obtain. A sentence might easily exist which does not cohere with a system of beliefs but none of whose contraries cohere with the system either. Under such circumstances, the sentence will be neither true nor false. In other words, the principle of bivalence is another victim of global anti-realism.

In the simplest terms, truth can be characterised as the property possessed by sentences which cohere with a practicable system of beliefs. That the principles of bivalence and transcendence are victims of this global anti-realist account of truth is not news: this conclusion was anticipated in Chapter One. The next section considers a fresher consequence of global anti-realism. Once we recognise that a specified system is a practicable system and that there is no unique specified system, the truth values of sentences are subject to revision. That is, truth is a property which sentences can gain or lose. As a result, the principle of eternity goes the way of the principles of bivalence and transcendence.

§4. *SIC TRANSIT VERITAS*

This section shows that the principle of eternity is another victim of the global anti-realist's account of truth. This is a conclusion which realists find particularly difficult to accept. Realists frequently complain that anti-realism makes truth a property which can be lost. They are absolutely right: a global anti-realism which holds that a practicable system is a specified system certainly leads to this conclusion. A number of realists, including Davidson, charge that this conclusion must be wrong: if a sentence is true it can never become false.⁴⁸ Realists will also believe that if a sentence does not possess the property of truth at the moment it is first formulated, it will never acquire the property. Neither Davidson, nor anyone else who has ever expressed horror at the thought that the principle of eternity is to be rejected, has ever given a convincing reason for believing that truth is a property which can never be lost (or gained). Indeed, the only reason advanced at all is the question-begging suggestion that truth just is a property which cannot be lost.

In saying that truth is eternal, realists are not committed to the view that every truth has always existed. As we saw near the end of §6, realists need only hold that a truth comes into existence when a sentence is formulated. This is a reasonable enough stance for them to adopt: truth is a property of sentences and only someone who is a realist in a very different sense of the word believes that a property can exist without something which possesses the property. Even on the realist's account, when our cave-dwelling ancestors began to use language, 'Neutrinos have no rest mass' was not yet true. Language users had to establish a use for this sentence before it could be either true or false. According to the realist, once this use has been established, the sentence acquires a truth value. (The anti-realist, of course, finds very mysterious the process by which the sentence is supposed to acquire its truth value.) Realists will hold that the sentence retains this truth value for all eternity or, any rate, so long as the sentence has the same use. So, in saying that truth is eternal, realists maintain that sentences cannot change their truth values so long as their meanings remain unchanged.

The principle of eternity is a consequence of the doctrine of objective truth conditions. By committing themselves to objective truth conditions, realists commit themselves to truth conditions which are, in a sense, eternal. Certainly, the realist will admit that truth conditions can cease to exist. The truth conditions of 'The cat is on the mat' perish when the cat wanders off to dinner. Nevertheless, the realist maintains that it remains objectively and eternally the case that the cat was on the mat at a given time. Since this is eternally the case, the realist claims that sentence 'The cat is (at a given time) on the mat' is eternally true. While this position has a superficial plausibility, the principle of eternity is a victim of the same reasoning which leads to the rejection of the principles of transcendence and bivalence.

The principle of eternity is threatened when the global anti-realist conceives of truth conditions in terms of the conditions which warrant sentences. These conditions are plainly transient: sometimes the conditions which warrant sentences obtain and at other times they do not. If these conditions are truth conditions, sentences may change their truth values from time to time. In other words, the principle of eternity is undermined once we realise that sentences acquire the property of truth only when warrant for the sentence is available. If, for some reason, the warrant is no longer available, the sentence will lose the property of truth. In order to show that truth is eternal, realists need to demonstrate that the truth of a sentence depends in no way upon epistemic considerations. Realists typically engage in intuition-mongery in their attempts to establish the eternity of truth. The key element of the realist's attempt to motivate the principle of eternity is the invitation to contemplate a number of cases in which a sentence was warranted at one time but not warranted at another. In offering a more specific criticism of the global anti-realist's assault on the principle of eternity, realists will present cases where a sentence coheres with a system of beliefs at one time but does not cohere at another time. Under such circumstances, global anti-realists are committed to the conclusion that the truth values of sentences have changed. Realists then suggest, frequently in a gently insinuating tone of voice, that this conclusion cannot be right and that the truth value of the sentence cannot have changed.

The realist's strategy will be clearer if we consider a few cases which are designed to tease out our realist intuitions. The truth value of a sentence could be revised in a number of ways. It could be revised from indeterminate to a determinate truth value, from a determinate truth value to indeterminate or from one determinate truth value to the other. Begin by considering cases where the truth value of a sentence fluctuates between some determinate value and indeterminate. There can be no doubt that certain sentences were warranted in the past but are no longer warranted. 'Jane Austen wrote ten sentences on November 17th, 1807' is an example of such a sentence. Assume that Jane Austen counted the sentences she wrote on the day in question and

discovered that she wrote ten. The sentence would then have cohered with the system of beliefs current in 1807 and, by the global anti-realist's account, would have been true. Jane Austen went to her grave, unfortunately, without recording how many sentences she wrote on the day in question and there is now no way to discover how many sentences she penned. The sentence at issue does not cohere with the current system of beliefs but neither does any contrary sentence. Consequently, the global anti-realist is committed to saying that the sentence is currently neither true nor false. Realists find this conclusion frankly incredible. Surely, they opine, the sentence cannot have changed its truth value in the intervening years.

Realists may also present what may be considered the deluxe counter-example to the claim that the principle of eternity should be rejected: a case where it seems that global anti-realists must admit that the truth value of some sentence changes from indeterminate to a determinate truth value and then back to indeterminate. Consider the case where two literary critics are attempting to add 'Jane Austen wrote ten sentences on November 17th, 1807' to the class of sentences with a determinate truth value. In the attic of an old house in Winchester, the critics make a stunning discovering: Jane Austen's hitherto unread diary for 1807 which records, among other things, precisely how many sentences she wrote each day. The critics quickly turn to the entry for November 17th and discover that Austen wrote ten sentences that day. At that instant, the truth value of the sentence changes from indeterminate to true: the sentence now coheres with the system of beliefs of the critics' community. Before the critics can break the news to a waiting world, a fire sweeps through the old house destroying the diaries and killing the two critics. The sentence no longer coheres with a system and its truth value reverts to indeterminate. Surely, realists will maintain, the truth values of sentences cannot fluctuate with such reckless abandon.

There is little point in denying that many people share the realist intuition according to which truth is eternal. There is equally little point in putting much stock in these intuitions. Intuitions ought to be justified by philosophical arguments. They ought not to be the basis of philosophical positions. In all of the cases just described, it is difficult to accept that truth values have changed only if a realist position has already been accepted. The intuitive implausibility of truth values changing cannot be a reason for accepting realism. Rather, it is a consequence of a realism. In the present cases, people with realist intuitions are being misled because they are implicitly assuming a perspective from which the truth value of sentences can be seen to remain unchanged. In the case of the newly discovered diary, for example, realists put themselves in the position of someone looking over the shoulder of the two critics. Realists say to themselves that, after the fire, the truth value of the sentence about how many sentences Jane Austen wrote cannot be indeterminate. After all, they know that the sentence is true. The trouble is that they do not know that it is true. The

example cannot be stated without imagining that there is a God-like point of view from which the sentence in question can be seen to be true. The trouble is that no one occupies this point of view and, even if someone did, this would have no impact on the truth value of the sentence used by finite speakers who do not share God's knowledge.

Realists can marshal intuitions about the nature of truth until their hearts' content but no number of intuitions will show that the arguments for global anti-realism are unsound. All the intuitions in the world do not change the fact that a number of arguments presented in this essay have indicated that the meaning of a sentence consists in its coherence truth conditions. Neither do intuitions override the arguments to the effect that speakers cannot establish semantic relations between their sentences and objective truth conditions. These arguments entail the conclusion that a sentence is true if and only if its coherence truth conditions obtain. This conclusion, in turn, entails that truth is not eternal. The coherence truth conditions of 'Jane Austen wrote ten sentences on November 17th, 1807' may very well have obtained on November 17th, 1807. If so, the sentence was true. In any case, it was probably either true or false. Today, the coherence truth conditions of this sentence do not obtain but neither do the coherence truth conditions of many contrary sentences. Consequently, the truth value of the sentence is indeterminate. Coherence truth conditions are transient in a way that the objective truth conditions posited by realists are not. When they pass away or come into existence, truths likewise appear or disappear. As more people come to appreciate the strengths of the global anti-realist's arguments, this conclusion will come to seem more intuitive.

Even if realists could be brought to accept that the truth value of a sentence can be revised from indeterminate to a determinate truth value (or vice versa), they are likely to stick at the suggestion that a sentence can be false at one time but true at another. Such cases appear to be more troublesome for the global anti-realist. Consider the following case. In the nineteenth century, 'Light waves are propagated through ether' cohered with a system of beliefs. The global anti-realist seems committed to saying that the sentence was true in the nineteenth century but false today. Conversely, of course, global anti-realists are committed to saying that the truth value of 'Light waves are not propagated through ether' has changed from false to true. Realists seem to have a stronger case here. After all, they can reason, light waves never were propagated through ether. Indeed, there never was any ether through which waves could be propagated. Realists conclude that it was false that light waves are propagated through ether in the nineteenth century even though no one knew it. Moreover, they will continue, clearly the contrary assertion was true then, is now and will be forever.

Here realists seem to have an argument for the eternity of truth and not just an intuition. If they have an argument, however, it begs the question. Global

anti-realists may freely admit that light waves have never been propagated through a non-existent medium. That is, they may agree with the realist that objective conditions are such that no ether exists, or has ever existed, through which light waves can be propagated. Anti-realists and realists part company when the latter begs the question by assuming that such objective conditions can serve as the objective truth conditions. Of course, anti-realists will grant, (according to our present theories) ether was not found among the objective conditions which obtained in the nineteenth century. Unlike the realist, they will add that they have already established that objective conditions are not truth conditions. Global anti-realists hold that the truth or falsity of 'Light waves are propagated through ether' has nothing to do with whether ether objectively existed, however unintuitive this conclusion may seem. The sentence is true if and only if certain coherence conditions obtain. These conditions no longer obtain but they did in the nineteenth century. Therefore, the sentence was true in the nineteenth century but is false today. There is no point in calling upon intuitions or reiterating the realist account of truth conditions in an effort to shore up the principle of eternity. Rejoinders must be provided to the global anti-realist's arguments.

Up to this point, we have been considering cases of sentences which had a different truth value in the past than they have now. Perhaps realists will have better luck when they come to consider sentences about the future. They could present sentences about the future as a special sort of case which shows that sentences can be true even though they do not cohere with a system of beliefs. Everyone can agree that some sentences about the future are true now: 'The sun will rise tomorrow' is an example of such a sentence. Realists and global anti-realists agree that this sentence is true but disagree about why it is true. The two camps differ about the truth value of a sentence such as '*Global Anti-realism* will go into a second printing.' Global anti-realists hold that this sentence has an indeterminate truth value since neither it nor its denial coheres with our system of beliefs. Realists hold that the sentence presently has a determinate truth value: they may even have strong suspicions about what its truth value is. Realists will reason that either the book will go into a second printing or it will not. If it will, then the sentence in question is true. If the book is never reprinted, the sentence is false. Realists conclude that the truth value of the sentence is determinate and invariant and the principle of eternity is upheld.

Anti-realists can object to this reasoning in either of two ways. They could, for example, hold that, by the realist's own account, a sentence is true if and only if certain objective conditions obtain. No future objective conditions obtain. So, the anti-realist may conclude, sentences about the future cannot be either true or false.⁴⁹ While this line of argument is quite strong, realists have a plausible rejoinder. Realists can hold that the objective conditions which provide the truth conditions of future tense sentences exist in the present.

These presently existing objective conditions are the causal propensities at work in the present which will give rise to future conditions. Consider, for example, 'The sun will rise tomorrow.' This sentence is true, the realist will hold, since the universe is set up in such a way that the sun and earth will continue to move in their accustomed fashions and these motions will lead to tomorrow's sunrise. Similarly, propensities inherent in the world will lead to the conditions which make '*Global Anti-realism* will go into a second printing' either true or false. The realist acknowledges a difference between the case of this sentence, and that of the one about tomorrow's sunrise. The difference, however, is simply that, while we can determine the truth value of one sentence, when we come to consider the fate of this book, there is no telling what conditions will result from current propensities. That is, we cannot tell whether the world is unfolding in such a way that *Global Anti-realism* will be reprinted while we can know that the sun will rise tomorrow. According to the realist, however, the causal forces affecting the fate of this book are nevertheless at work and the principle of eternity is intact.

Another objection to the realist's account of future tense sentences, more fundamental than the first, is also available to anti-realists. They can argue that the same considerations, which undermined attempts to apply the principle of eternity to sentences about the past, undercut the realist's efforts to apply the principle to sentences about the future. That is, anti-realists can argue that the realist has, again, begged the question against them. Anti-realists have argued that the existence of objective conditions is irrelevant to the truth or falsity of sentences. They may well grant that there are propensities in the present which will give rise to certain conditions in the future. Specifically, global anti-realists may grant that the universe is unfolding in such a way that either the sun will rise tomorrow or it will not. Similarly, the universe will unfold in such a way that either *Global Anti-realism* will be reprinted or it will not. Nevertheless, anti-realists will hold, 'The sun will rise tomorrow' and '*Global Anti-realism* will go into a second printing' are true if and only if they cohere with a system of beliefs. Since neither the latter sentence nor its denial coheres with a system of beliefs, the sentence is neither true nor false. A time will come when the sentence will be true or false. Therefore, the truth value of the sentence is revisable and the principle of eternity is rejected. Again, if realists want to retain the principle of eternity, they will need to do better than assume the realist account of truth conditions. They will have to show that there is a flaw in the argument which led to the anti-realist account of truth conditions.

The principle of eternity is not the only victim of the view that a specified system is a practicable system. Realists are committed to the view that truth is not relative to anything except reality. In the next section we will see that the realist's opposition to relativist accounts of truth will also have to be abandoned.

§5. RELATIVELY SPEAKING

Pretty clearly, the global anti-realist account of truth presented in this essay has relativism as one of its consequences. Truth is not, as the realist would have us believe, determinate. Contrary to what realists believe, the truth values of sentences are not fixed once and for all by objective conditions. Rather, any sentence is true only relative to some system of beliefs. That is, a sentence is true if and only if a practicable system includes the conditions under which the sentence is true. According to global anti-realism, a system of beliefs is the measure of all sentences: alike of the truth of sentences that are true and the falsity of sentences that are false. Relativism has been, of course, subjected to a wide range of objections. According to the most pressing of these objections, there is no coherent formulation of the position. Realists have held that relativism is either self refuting, inconsistent or otherwise incoherent. These objections have been frequently refuted but they are still heard from time to time and it behooves the global anti-realist, as the advocate of a relativist position, to respond to the various objections to relativism. Fortunately, this is not difficult to do.

The most ancient objection to relativism dates back to Plato's *Theaetetus*. According to advocates of this venerable objection, recently endorsed by Putnam, relativists refute their own position even as they state it.⁵⁰ This sort of objection is directed only against global relativism, that is, relativism with respect to all classes of sentences. The global anti-realist is committed to just such a position: *all* sentences are true only relative to some system of beliefs. Opponents of relativism would have us believe that relativists implicitly subscribe to a non-relativist account of the truth of the sentences in which their own account of truth is stated. Global anti-realists, for example, defend their account of truth by saying that they give the correct account of the sort of understanding speakers possess of their sentences. More generally, relativists need to maintain that they give the correct account of the way truth and language really are. Otherwise, they seem to have to have no case against the realist. The realist charges, however, that the relativists' claim that their views about truth are correct amounts to saying that the relativists' claims are true if and only if certain objective conditions obtain.

Global anti-realists maintain that all sentences can only be true relative to some system of beliefs. Now it seems that if the sentences in which the global anti-realist's own position is stated are true, they are so if and only if certain objective conditions obtain. Realists are in a position to object that if a non-relativist account can be given of these sentences, there is no principled reason for ruling out a non-relativist treatment of any other sentences. An even more trenchant objection is available to realists. They can object that if the claims of global anti-realists are true if and only if objective conditions (in this case, the objective facts about the understanding speakers possess) obtain, then their

position is self-refuting. The realist can reason that if anti-realism is correct, then it is incorrect, for it denies that any sentences can have objective truth conditions. Hence, the realist may conclude, global anti-realism, and any other position which involves global relativism, must be mistaken.

In spite of its antiquity, such an argument does not succeed in dispatching the relativism of the global anti-realist. If the realist conception of truth were the only one available, the argument would perform admirably. Unfortunately, the realist conception of truth is precisely what is at issue so the argument succeeds only in begging the question. When global anti-realists state, for example, that 'Sentences are true only relative to some practicable system of beliefs,' they are not claiming that this sentence is true if and only if certain objective conditions obtain. Rather, they will say that the sentence is true under precisely the same sort of conditions as any other sentence. The sentences in which global anti-realism is expressed are true only relative to some system of beliefs. Global anti-realists may be mistaken in claiming that sentences are true relative to systems of beliefs. They are not, however, guilty of presupposing realism in stating their position. There is no reason why anti-realists cannot say that the truth conditions of sentences about anti-realism are true if and only if they cohere with a system of beliefs.

The realist's attempt to prove that relativism is self-refuting is no stronger than a parallel argument which the global anti-realist could offer. The realist's argument assumes that whenever any speakers say that any sentence is true, they are saying that its objective truth conditions obtain. Realists then infer that when anti-realists claim that anti-realism is true, they are saying that the objective truth conditions of some statement about anti-realism obtain. This argument makes it seem that anti-realism is self-refuting. Two can, however, play at this game. Global anti-realists can assume that whenever any speakers say that any sentence is true, they are saying that it is true relative to some system of beliefs. Anti-realists can then infer that when realists say that realism is true, they are saying that realism is true relative to some system of beliefs. Realism just is the view that truth is not relative to systems of belief. So, apparently, realism is self-refuting. This argument will, obviously, persuade no realists to abandon their position. Neither should the realist's argument persuade global anti-realists to give up their position.

Even if such hoary objections cannot refute global anti-realism, the philosophical literature does contain a number of fresher arguments against relativism. Putnam has advanced a new argument against relativism which might be thought to be effective against global anti-realism.⁵¹ Like earlier arguments, this argument is designed to show that relativism is somehow incoherent. The basis of this new argument is the claim that anyone who believes that truth is relative to what someone believes cannot draw a distinction between the truth and what someone takes for the truth. Without this distinction, the argument continues, the very possibility of communication

is undermined. Indeed, the very possibility of meaning depends on the existence of a distinction between what is true and what someone believes to be true. This premiss seems to be unobjectionable. After all, as the previous chapter indicated, the very possibility of interpretation depends on the availability of truth conditions detectable by interpreters. If a sentence were true simply because someone believed it, there would be no chance for speakers to determine the truth conditions of a sentence. Speakers could say anything at any time and, so long as they believe the sentences they assert, they would be right to do so. Interpretation is possible only if interpreters can discover how prevailing, and intersubjectively available, conditions place constraints on what is rightly asserted. Now, the present objection to relativism continues, the conditions which place constraints, since they cannot simply be the beliefs of individual speakers, must be objective conditions. Realists might be tempted to conclude that communication and meaning are possible only if sentences have objective truth conditions. Communication and meaning obviously are possible. If relativism has the consequence that they are not possible, the position is deeply misguided, if not incoherent.

The present argument, in a nutshell, states that if meaning and communication are possible, then there are constraints on which sentences are true besides what an individual believes. These constraints are objective truth conditions. Meaning and communication are possible. Therefore, sentences have objective truth conditions. The only trouble with this argument is that it does not explain why the constraints on truth must be objective truth conditions. Global anti-realists can agree that communication would not be possible, indeed, meaningful sentences would not be possible, without the existence of constraints on truth besides the beliefs of individuals. Recall that the global anti-realist holds that a sentence is true if and only if its truth conditions obtain, and these are the conditions under which it coheres with a practicable system of beliefs. Recall, moreover, that § 18 gave an account of such a system in terms of the beliefs of a community. Nothing about global anti-realism commits global anti-realists to saying that a sentence is true if a single individual believes that it is true. The attempt to show that relativists cannot explain how communication is possible may be effective against Protagoras. That is, it may refute a relativism which makes truth relative to an individual's beliefs. It has, however, no force against the sort of relativism advocated by global anti-realists.

Another quick little argument for the incoherence of relativism starts from the indubitable premiss that some people do not believe that relativism is correct.⁵² The opponents of relativism have been known to suggest that relativists are forced to admit that their position is false relative to the beliefs of a person who accepts realism. From this admission follows the conclusions that relativism is no better than any contrary position and that the position is both true and false at the same time for different members of the same

community of speakers.

Again, while this argument may trouble a Protagorean relativist, it is no more effective against global anti-realism than the previous argument. Nothing in global anti-realism commits its advocates to saying that some sentence is true simply because some individual believes it or because it coheres with some speakers' beliefs. Again, global anti-realists believe that any sentence is true if and only if it coheres with a community's system of beliefs. The beliefs of any one individual are irrelevant to the truth of relativism or, for that matter, any other position. Global anti-realists are not committed to saying that relativism is no better than any other view which anyone might hold, nor need they say that relativism is true for some members of a community and false for others. Rather, their position is that relativism is true if and only if global anti-realism coheres with a community's system of beliefs.

The arguments against relativism which have been considered so far fail to undermine global anti-realism simply because they are designed to refute a more primitive sort of relativism. They may well be successful against a subjectivist relativism, which makes truth relative to the beliefs of an individual, but they do not tell against a relativism according to which truth is relative to a community's system of beliefs. Arguments designed to tackle the more sophisticated relativism of the global anti-realist are available. W.H. Newton-Smith has presented an argument against the latter sort of relativism. He explicitly argues against the view that the truth values of sentences are relative to a system of beliefs.⁵³

Essential to relativism is the claim that a sentence can have one truth value relative to one system of beliefs and another truth value relative to a second system. Newton-Smith argues that this claim can be interpreted in two ways. On one interpretation, relativism is a trivial thesis. On the other, the position is incoherent. According to the first interpretation, the claim that a sentence can have different truth values relative to different systems is to be interpreted as saying that a sentence can have different meanings for different communities of speakers. On this interpretation, relativism is no more than the commonest of philosophical commonplaces. On the second interpretation, relativism can be taken to say that two sentences, which have the same meaning, have different truth values relative to different systems. Newton-Smith argues that two sentences have the same meaning just in case they have the same truth conditions. If these truth conditions obtain, the sentences are both true. If they do not, both are false. If this is the case, and the second interpretation of relativism is correct, the position is incoherent. There is no way to make sense of the claim, to which relativists are apparently committed, unless their position is trivial, that two sentences can have the same meanings and same truth conditions but different truth values.

Global anti-realists want to have advanced a relativist position which is not trivial. Certainly, they are committed to theory holism and the view that the

meaning of a sentence depends upon an entire system of beliefs. This being the case, strictly speaking, every sentence will have a different meaning in the context of different systems. Nevertheless, the meaning of any sentence depends most crucially on the theories which immediately warrant it. Consequently, two sentences can have, to all intents and purposes, the same meaning in the context of different systems, so long as the immediate inferential relations in which the sentence stands are the same. The global anti-realist account of truth is intended to establish the view that there could be two systems (perhaps the systems of one community at different times) relative to which some sentence (or two sentences with the same meaning) has different truth values.

An example will help show that nothing is incoherent about this position. Imagine that 'The earth revolves around the sun' coheres with one system of beliefs but not with another. The sentence will cohere with the system which contains Copernican astronomy but not with the one which does not. Nevertheless, the people who adopt the first system and those who adopt the second may agree that the sentence in question is true if and only if Copernican astronomy is part of their systems of beliefs. Consequently, the two groups of speakers agree to all intents and purposes about the meaning of the sentence. They disagree about whether its truth conditions, which are provided by Copernican astronomy, obtain. This disagreement leads, of course, to disagreement about the truth value of the sentence. This does not seem to be in the least incoherent. The incoherence is supposed to issue from the fact that, from the relativist's perspective, the sentence is both true and not true. If the truth conditions of sentences are provided by systems of beliefs, there is no difficulty in explaining how the sentences can have different truth values. The truth conditions of 'The earth revolves around the sun' may obtain in the case of some speakers, namely the case where the speakers' system of beliefs contains Copernican astronomy. The conditions do not obtain in the case of other speakers, if they subscribe to a system which includes the denial of Copernican astronomy. Again, two groups of the speakers can agree on the meaning of the sentence since they agree that it is true if and only if Copernican astronomy is included in their system of beliefs. They can, nevertheless, disagree about the truth value of the sentence.

Given these reflections, some readers may be puzzled about why Newton-Smith believes that the sort of relativism to which global anti-realists are committed is incoherent. This puzzle can be solved when we reflect that, very probably, he was confused because he assumed that truth conditions are objective truth conditions. Suppose that the meaning of 'Neutrinos have no rest mass,' as used by speakers who hold one system of beliefs, consists in objective conditions. The sentence is then true if and only if given objective conditions obtain and false otherwise. Suppose also that the same sentence, as used by speakers who adopt another system, has the same meaning as it does in

the mouths of speakers who adopt the first system. The sentence, as used by adherents of the second system will also be true if and only if the (same) given objective conditions obtain. Apparently, we can make no sense of the claim that the sentence could have different truth values. After all, either the objective conditions in question obtain or they do not. If they do, both sentences are true and if not, they are both false. Once we recognise that sentences have coherence truth conditions, we can see how a sentence can have different truth values relative to different systems of beliefs.

When the relativism of the global anti-realist is misrepresented and when the question is begged against the relativist, realists have little trouble showing that their opponents' position is incoherent. On the other hand, when the global anti-realist's relativism is not distorted, and when the correctness of realism is not, in a question-begging fashion, assumed, global anti-realism seems like a much more resilient position. There is no easy way to refute relativism or global anti-realism. Realists will, I am afraid, have to roll up their sleeves and do some honest semantic toil if they are to undermine the position.

§6. A FEW COMMENTS ON LOGIC

From the perspective of global anti-realism, logic is not a privileged discipline. The theories of logicians, like any other theories, are correct if and only if they cohere with a practicable system of beliefs. Like any other theories, logical theories can be revised and replaced as systems of beliefs change. The truth values of logical laws and rules of inference are just as subject to revision as the truth values of any other sentences. That logic is not a privileged discipline is just as well for the global anti-realist since some of the positions advanced in this essay conflict with certain widely-held beliefs about logic. We have already seen that global anti-realism leads to the rejection of the principle of bivalence. Global anti-realism also entails that certain rules of inference of classical logic are to be rejected. Or, at any rate, some rules of inference can no longer be taken to apply to natural languages. None of this counts as philosophical news. On the issue of the revisability of logic, global anti-realists are simply orthodox Quineans.

The revisability of logic is a consequence of the collapse of the distinction between analytic and synthetic truths. The collapse of this distinction is, in turn, a consequence of the coherence theory of truth. The distinction between analytic and synthetic is tenable only if the truth of some sentences depends on the meanings of the words of which they are composed and the truth of other sentences depends on how the world is. If the truth value of some sentence depends only on the meanings of its constituent terms, then its truth value cannot be revised short of changing its meaning. The coherence theory of truth entails, however, that all sentences are true if and only if they cohere with a system of beliefs. Even the truth value assigned to a law of logic, such as the

law of excluded middle, can be revised if a system of beliefs is revised and the law ceases to cohere with the system. Similarly, no set of rules of inference is privileged. We ought to adopt, for example, modus ponens or disjunctive syllogism only if 'Modus ponens (or disjunctive syllogism) is a valid argument form' coheres with our system of beliefs.

Someone might object that logical rules of inference cannot be true if and only if they cohere with a system of beliefs since they are the standards by which coherence is (at least in many cases) measured. A regress of rules of inference might seem to be in the offing: if a rule of inference coheres with a system, there is another rule of inference in accordance with which it coheres with the system, a further rule in accordance with which this second rule coheres, and so on. This objection fails since rules of inference do not depend on other rules of inference for their coherence with a system of beliefs. A rule of inference coheres with a system if (and only if) it contains the belief that certain inferences are valid. That is, rules are true if they accord with the inferences speakers believe to be acceptable. Put in this fashion, the trouble with the global anti-realist's account of rules of inference may seem to be its circularity. The global anti-realist says both that certain conclusions are true if they are arrived at by means of valid rules and that rules are valid if they conform to inferences speakers believe to be acceptable. As Nelson Goodman notes, however, this circularity is virtuous, not vicious.⁵⁴ Rules of inference and beliefs about which inferences are acceptable are so because they have been combined into a coherent system. This coherent system is the result of a process in which speakers simultaneously weigh the epistemic attractions of rules of inference and various other beliefs.

Although the truth values of logical laws and rules of inference are no more immune to revision than the truth values of any other sentences, we should be careful when dealing with them. Rules of inference and logical laws play an important role in our system of beliefs. Very many sentences cohere with a system of beliefs only because certain rules of inference are part of the system. If modus ponens were excluded from our system of beliefs, vast numbers of sentences would cease to cohere with the system. In this respect, logical laws and rules of inference differ only in degree from other sentences. The revision of the truth value of any sentence has some implications for the question of which sentences cohere with a system. The revision of the truth value of a rule of inference requires the reassessment of the truth values of more sentences than does the revision of the truth value of an observation sentence. For pragmatic reasons, then, we should be reluctant to tamper with logic.

Nevertheless, in some circumstances, the revision of logic is unavoidable. An example will illustrate how global anti-realism requires the revision of classical logic, as traditionally interpreted. According to classical logic, from the truth of a disjunction we can infer the truth of (at least) one of the disjuncts. Global anti-realism leads to the conclusion that such an inference is not, in

general, valid. Consider the following familiar case. A coin is placed in a closed box. The box is then shaken and placed on a table. Before anyone looks into the box, it is taken from the table, shaken again and the coin removed. Given everything we know about coins, 'The coin rested heads up or tails up when the box was on the table' coheres with our system of beliefs and is true. (Suppose that when the box was resting on the table we could hear the coin sliding around on one of its faces, and we know that it was not on edge.) Neither 'The coin rested heads up' nor 'The coin rested tails up' coheres with a system of beliefs. According to the anti-realists, sentences are true if and only if they cohere with a system. Consequently, although the disjunction is true, neither of the disjuncts is true. This is not to say that the classical account of disjunction is to be rejected wholesale. For limited classes of decidable sentences it can be retained.

One logical principle does seem unavoidable in any system of beliefs. This is the principle of non-contradiction, according to which a sentence and its denial cannot both be true. This principle can only be assigned the value true. (Paraconsistent logics allow for the truth of inconsistent sentences and reject the principle of non-contradiction. I am sceptical about the suggestion that any actual system of beliefs could incorporate such a logic, but any system which does will need, in the place of the principle of non-contradiction, another principle which ensures that the system remains coherent.) The indispensability of the principle of non-contradiction (or a principle which plays a similar role) should not lead us to suppose that its truth depends on something other than coherence with a system of beliefs. The principle is indispensable simply because it coheres with any system of beliefs whatsoever. Without the principle of non-contradiction, no practicable system would be possible. Recall the account of a system of beliefs, given in §18, as the maximal consistent set of beliefs of a community. Without something like the principle of non-contradiction, there is no way to sort through a community's set of beliefs and decide which beliefs are members of the community's system of beliefs.

The law of excluded middle, according to which the disjunction of any sentence and its negation is true, is often regarded as another casualty of anti-realism. The law of excluded middle is not always clearly distinguished from the principle of bivalence. Even if the two are carefully distinguished, someone might think that global anti-realism is inconsistent with the former. After all, someone might reason, we may find that neither a given sentence nor its negation coheres with some system of beliefs. Consider again the case provided in an earlier paragraph for an example of such a situation. In this situation, neither 'The coin rested heads up' nor 'It is not the case that the coin rested heads up' coheres with a system of beliefs, and, according to the anti-realist, neither sentence is true. It might be thought that this result commits anti-realists to rejecting the law of excluded middle. This situation simply

shows, however, that from the truth of a disjunction of a sentence and its negation, neither the truth of the sentence nor the truth of its negation can be validly inferred. Anti-realists are still free to maintain that any disjunction is true which consists of a sentence and its negation.

Global anti-realists are not only free to hold that the law of excluded middle is true. They are well advised to hold that it is true. In general, the disjunction of a sentence and its negation will cohere with our system of beliefs. 'Jane Austen wrote ten sentences on November 17th, 1807 or she did not write ten sentences on that day' is true. This disjunction coheres with our theories about sentence writing, and is true, even if neither of the disjuncts coheres with our system of beliefs. That is, our system of beliefs is such that we believe that the world is set up in such a way that Jane Austen wrote ten sentences or she did not. Similarly, disjunctions consisting of a sentence and all of its possible contraries will also cohere with our system of beliefs, even if none of the disjuncts so coheres. For example, 'Either Jane Austen wrote no sentences on November 17th, 1807, or she wrote one sentence, or she wrote two sentences...' coheres with our system of beliefs. According to our theories, she must have written some whole number of sentences. (Sentences cannot come in fractions: if Austen began writing with the intent of producing a sentence but did not finish it, she produced a sentence fragment and not a sentence.)

Just as the sentences in which logical laws and rules of inference are stated are treated just like other sentences, so logical connectives such as 'or' and 'and' are to be treated just like other words. The meanings of such words are not fixed by means of truth tables or otherwise settled by means of definition. Rather, the meanings of logical connectives are fixed by the roles they play in sentences, as these are used by speakers. Think back to the reflections in §13 about the radical translation of '*et.*' This word was interpreted as a conjunction (with a particular truth table) since it was used only to combine sentences both of which the speakers took to be true. Similarly, all speakers who master the use of any connective have learned the role it plays in contributing to the truth values of sentences. There is nothing more to its meaning than this role.

§7. THE REFUTATION OF SCEPTICISM

The relationship between anti-realism and scepticism is the source of considerable confusion. The situation is not unlike that surrounding Berkeley's epistemology. Berkeley believed that he had refuted scepticism, but many of his critics found his position the very embodiment of scepticism. Similarly, anti-realists frequently tout their position as a refutation of scepticism. After all, they reason, anti-realism entails that truth can always be detected and scepticism is the view that the truth might sometimes or even always elude us. Realists are often bemused by the claim that anti-realism refutes scepticism.

Anti-realism seems to them an essentially sceptical position. Some of these realists are simply in the grip of a nostalgia for objective truth: they continue to believe that truth is more than coherence with a system of beliefs and, they complain, anti-realism makes such truth inaccessible. Anti-realists have an easy reply to those gripped by nostalgia: there simply are no objective truths which we can fail to know. Nevertheless, the realist does have a legitimate complaint against those anti-realists who claim to have refuted scepticism. Anti-realism entails that objects may exist concerning which there are no truths. Since knowledge involves a grasp of the truth, anti-realism leads to the view that conditions exist of which we can have no knowledge. Realists can be excused for thinking that this sounds a lot like scepticism. The confusion about the relationship between scepticism and anti-realism can only be overcome when we realise that two quite different conceptions of scepticism are at work. Anti-realism provides the means to refute one sort of scepticism but it affirms the other.

The two formulations of scepticism may be called the *semantic* and *metaphysical* formulations. Semantic scepticism is the thesis that true sentences exist which cannot be known to be true. Semantic scepticism can be either global or partial. The global semantic sceptic holds that no true sentences can be known to be true. The partial semantic sceptic maintains that some, though not all, truths must remain unknown. Metaphysical scepticism, on the other hand, is the view that objects exist of which we can have no knowledge. Again, such scepticism can be global or partial. The global metaphysical sceptic holds that we can have no knowledge of any objects, while the partial metaphysical sceptic maintains that only some objects elude our grasp.

The two sorts of scepticism are not equivalent. They would be equivalent only if each entails the other and this is not the case. Semantic scepticism does entail metaphysical scepticism: anyone who is a semantic sceptic is, thereby, committed to metaphysical scepticism as well. If a truth cannot be known, some things are not possible objects of knowledge. The reverse is, however, not the case: metaphysical scepticism does not entail semantic scepticism. Someone can consistently maintain that objects exist of which we can have no knowledge and yet deny that there are any truths about these objects. Such a person is metaphysical sceptic without being a semantic sceptic.

Anyone who adopts realism is committed to a measure of both semantic and metaphysical scepticism. An essential feature of truth, on the realist account, is that it may transcend what can be known. Realists could deny that truth transcends what can be known, but this would commit them to the implausible claim that we are potentially, at least, omniscient. Since they believe that we are not omniscient, they hold that truth does transcend what can be known. This is just another way of stating the semantic sceptic's point that truths exist which cannot be known to be true. Consequently, semantic

scepticism of, at least, the partial variety is part and parcel of realism. Realism does not lead to global semantic scepticism but it raises the possibility of such scepticism. The view that no true sentences can be known to be true is compatible with realism. Moreover, since semantic scepticism entails metaphysical scepticism, the realist is committed to some degree of metaphysical scepticism. According to realists, undetectable objective conditions obtain and these are the truth conditions of undecidable sentences. Realists are committed, thereby, to the claim that speakers can have no knowledge of these conditions.

Semantic scepticism is obviously incompatible with the global anti-realist's conception of truth. According to anti-realism, a sentence cannot be true unless it can be known to be true. Semantic scepticism states, however, that a truth exists which cannot be known to be true. Partial anti-realists are committed, then, to rejecting global semantic scepticism. They will reject semantic scepticism for those classes of sentences about which they are anti-realists. Partial semantic scepticism remains a possibility for partial anti-realists. Global anti-realism provides a refutation of both global and partial semantic scepticism. Since, however, anti-realism divorces questions of truth from questions of reality, it is unable to refute metaphysical scepticism. Anti-realism does not entail that the absence of a truth about some matter entails that there is no matter. All that follows from the absence of a truth about some matter is that the conditions under which sentences about the matter are true, their coherence truth conditions, do not obtain. Anti-realists will concede that objects may exist of which we can have no knowledge. Indeed, they may not only make this concession but they are likely to do so. After all, anti-realists can hardly deny that objects exist of which we cannot have knowledge. Statements to the effect that certain objects exist but will never be known to exist cohere with our system of beliefs. For example, 'A planet exists in another galaxy but cannot be detected by us' coheres with our system of beliefs. The metaphysical sceptic's claim that there may be objects of which can have no knowledge is, then, compatible with global anti-realism.

The attitudes of realists and anti-realists towards the various sorts of scepticism can be illustrated by considering their perspectives on the brain in a vat hypothesis, as discussed by Putnam. According to this hypothesis all knowers are not the embodied creatures they take themselves to be. Rather, they are simply brains in vats of nutrients. These brains are connected via electrodes to a super computer which is able to stimulate in them a range of sensations phenomenologically indistinguishable from the sensations embodied creatures would have when they causally interact with objects in the natural world. So, for example, when a brain wills to move a limb, the computer stimulates in it the appropriate kinaesthetic sensations. When one brain wills the utterance of a sentence, other brains receive auditory sensations from the computer. Of course, as the brain thinks that it moves through a

material world, the computer provides it with an ever-changing panorama of visual experience. Nevertheless, according to the brain in a vat hypothesis, the brains have no limbs, voices, ears or eyes. The hypothesis states that the brains have no means to discover that they are brains in a vat. The brain in a vat hypothesis is a sceptical hypothesis which can be given a semantic or a metaphysical formulation. The semantic formulation states that 'The brain in a vat hypothesis' is true. According to the metaphysical formulation, the world is such that we are brains in a vat.

The difference between the realist and anti-realist attitudes towards semantic and metaphysical scepticism are apparent in their responses to questions about whether the brain in a vat hypothesis may be true and about whether the world is such that we are brains in a vat. Realists, who believe that truth may transcend what can be known, are constrained to admit that the brain in a vat hypothesis might be true. If the hypothesis is true, all or virtually all of some knowers' beliefs are false. Realists are, then, committed to saying that a virtually global semantic scepticism is a possibility. Realists are also unable to rule out the possibility of a similarly global metaphysical scepticism. The hypothesis can be true, according to realists, only if objective conditions are such that we are brains in a vat. Consequently, since realists cannot reject the possibility that the brain in a vat hypothesis is true, they cannot reject the possibility that all knowers are brains in a vat. If we are brains in a vat, then, by the brain in a vat hypothesis, there are conditions (the existence of brains in vats, super computers and so on) of which knowers can have no knowledge. (This is not to say that realists must adopt the brain in a vat hypothesis. Rather, nothing in realism is able to rule out the truth of the hypothesis or the existence of brains in vats. A realist might have additional arguments, above and beyond those provided by realism, against the brain in a vat hypothesis.)

The attitude global anti-realists adopt towards the brain in a vat hypothesis differs completely from that of realists. They maintain that the hypothesis is true if and only if it coheres with a practicable system of beliefs. Manifestly, the hypothesis does not cohere with any actual practicable system. On the contrary, a naturalistic hypothesis coheres with our system. According to this naturalistic hypothesis, we are embodied creatures who causally interact with a world of material objects. Consequently, global anti-realists hold, the brain in a vat hypothesis is false. In other words, they reject the semantic formulation of the brain in a vat hypothesis. The global semantic scepticism which the hypothesis threatens can be ruled out. Nevertheless, nothing in global anti-realism entails that we are not brains in vats. Global anti-realism cannot, by itself, rule out the metaphysical formulation of the brain in a vat hypothesis. We cannot infer from the falsity of the brain in a vat hypothesis to the conclusion that the world is not such that we are brains in vats. As a result, the possibility remains that there are conditions of which we can have no knowledge. In other words, metaphysical scepticism still remains a possibility

for the global anti-realist.

It is worth noting that Putnam's discussion of the brain in a vat hypothesis does not show that we cannot be brains in a vat. Anyone who thinks that it does has confused the semantic and metaphysical formulations of scepticism. Putnam argues that if we are brains in a vat, the sentence 'We are brains in a vat' is necessarily false. The hypothesis can be true, he holds, only if there is some perspective from which the hypothesis could be known to be true. This perspective cannot be the perspective of brains in a vat. Putnam concludes that the hypothesis is necessarily false. The intricacies of Putnam's argument are the subject of considerable debate but they need not concern us here. Even if the argument is coherent and sound, it cannot demonstrate that we are not brains in a vat. Putnam apparently thinks that it does. He says at one point that a world in which all sentient creatures are brains in vats is not a possible world.⁵⁵ At best, Putnam's argument only shows that the brain in a vat hypothesis cannot be true in any possible world. The argument does not show that there is no possible world in which all sentient beings are brains in vats. These conclusions are equivalent only if the realist is right about the relation between true sentences and the objective world. In other words, Putnam's argument can only refute a semantic scepticism which holds that the brain in a vat hypothesis might be true. It has no effect on the metaphysical sceptic who asks us to imagine that the world might be such that we are all brains in a vat. Perhaps Putnam thinks that the refutation of the semantic thesis entails or is equivalent to the refutation of the metaphysical thesis. The trouble is that we can infer from the falsity of the brain in a vat hypothesis to the non-existence of the (objective) conditions under which it is true only if we accept the realist account of truth which Putnam, apparently, rejects.

The global anti-realist's attitude towards scepticism is the result of an epistemological position which resembles, in important respects, that of Hume and other eighteenth century philosophers. Hume believed that we should limit ourselves to describing our ideas. Any attempt to describe the reality beyond ideas was condemned to failure. Global anti-realists believe that we should limit ourselves to saying which beliefs cohere with our system of beliefs. Just as the eighteenth century epistemologist believed that we cannot get beyond the veil of ideas, the global anti-realist believes that we cannot get beyond the veil of theories. So long as scepticism is understood as the view that we must remain ignorant of how things are apart from our theories, the global anti-realist is open to metaphysical scepticism. Our inability to transcend our system of beliefs does not lead to semantic scepticism. Truth is internal to a system of beliefs and not something that will elude us.

Here a parallel with Kant suggests itself. Kant did not consider himself a sceptic, even though he believed that we can have no knowledge of things in themselves. He held that there are no truths about the noumenal world, not that there are truths which elude us. According to Kant, truth is a concept which has

an application only in the context of the phenomenal world.⁵⁶ Nevertheless, there are objects of which we can have no knowledge, even if there are no truths which cannot be known. Similarly, the global anti realist holds that the concept of truth applies only in the context of a system of beliefs. Consequently, there are no truths about conditions which cannot be detected. Nevertheless, global anti-realists agree with Kant in holding that there may be conditions of which we cannot have knowledge.

§8. THE END OF PHILOSOPHY

In recent years, several critics of realism, notably Richard Rorty, have proclaimed the end of philosophy. These critics maintain that the traditional project of philosophical inquiry comes to an end with the death of realism. Rorty and his cohorts claim that the conception of philosophy as the queen of the sciences cannot survive once the idea that truth is correspondence to reality has gone to its eternal rest. Philosophy is reduced, on Rorty's account, to a kind of literary criticism. He suggests that, after the demise of realism, all that remains of philosophy is the narcissistic interpretation and reinterpretation of its own history.⁵⁷ No such conclusion follows from global anti-realism. Global anti-realists are not subject to the flagellatory tendency which afflicts so many contemporary philosophers and leads them to devalue their own discipline. Global anti-realists recognise that philosophy does not perish when a particular conception of truth is rejected. Once realism is rejected, philosophers should carry on their investigations into aesthetics, ethics and metaphysics in precisely the same way as they have in the past. The only difference is that their answers are correct, not when they have uncovered some objective conditions, but when they put forward a position which coheres with a system of beliefs. This is just to say that philosophers engage in inquiry under the same conditions as everyone else.

Rorty sometimes says that there is nothing interesting to be said about truth. All I can say in reply to this is that this must be a matter for personal preference. The property of being interesting is a relational property, in the sense identified in §1. That is, if something is interesting, this is because someone is interested in it. To say that something is interesting is to say that someone is interested in it and to say that something is uninteresting is to say that someone is uninterested in it. When Rorty says that there is nothing interesting to be said about truth he is simply saying that truth does not interest him. He has simply given us some autobiographical information about his preferences. All I can do, by way of reply to Rorty, is provide some autobiographical information of my own: truth is of interest to me. In fact, I am sufficiently interested in truth to write a book about it. Therefore, it is interesting (for me). I expect that it is also of interest to anyone who has read this far in this essay.

We have good reason to be interested in truth. Were there no such thing as truth, philosophy would perish. Of course, every other form of inquiry would perish as well. There is little danger of inquiry coming to an end, however, since the concept of truth is not one we can easily do without. As we saw in §21, meaningful communication is possible only if prevailing conditions make some sentences rightly assertable, or true, and other sentences wrongly assertable. That is, speakers can make themselves understood to others, or even to themselves, only if their sentences are related in a systematic manner to certain conditions. Unless speakers have, in the course of their linguistic activity, endowed certain sentences with the relational property of truth, and not endowed others with the property, the assertion of any sentence would be just as appropriate as the assertion of any other. Under such circumstances, no distinction would exist between meaningful sentences and randomly generated noises and scribbles. At times, Rorty seems willing to embrace this position. Surely, however, a distinction exists between sense and nonsense. That a reader can understand this sentence proves as much. Everything that has been said so far in this book indicates that speakers are able to establish semantic relations between sentences and truth conditions and to endow these sentences with meaning. This being the case, all inquiry can carry on. Even if truth is not what realists have thought, philosophy is still a search for truth. Inquiry, whether philosophical or otherwise, is simply a sorting of sentences into the classes true, false and indeterminate.

Sometimes Rorty, and people like him, seem to believe that the trouble with philosophy is not that no meanings exist, but rather that too many meanings exist. That is, those who would kill off philosophy are worried that, once realism is dead, no text has a unique meaning. In other words, philosophy's would-be executioners worry that philosophical inquiry cannot be pursued unless utterances have a determinate meaning. After the demise of realism, they claim, all that remains of meaning is a variety of interpretations, none any better than another. If no sentences have a determinate meaning, philosophy is, indeed, in trouble, although so is every other sort of inquiry. Fortunately, this worry has been undermined by the global anti-realist's reflections on meaning in Chapter Three. The meanings of sentences are fixed by the conditions under which speakers use them, even if these conditions are not objective truth conditions. True, meanings can evolve, but for all practical purposes they remain constant long enough for us to communicate with each other and to engage in inquiry, including philosophical inquiry.

The mere fact that truth is not objective does not entail that philosophy must come to an end. Science did not come to an end when Thomas Kuhn and others showed that it was subject to influences which compromised its objectivity. Scientists continued conducting experiments and gathering observations. Similarly, even if the results of philosophical inquiry are true only relative to some system of beliefs, philosophers can carry on in their

accustomed manner. They can continue to provide arguments for their philosophical conclusions as they always have. They can still ask about the form of deductively valid arguments, whether humans have minds distinct from their bodies, whether art always involves the expression of emotion, whether goodness is to be understood in deontological or teleological terms and whether humans have free will. Now that realism is dead, however, philosophical conclusions, like any others, cannot be objectively true.

Once global anti-realism supplants realism, philosophers can no longer aspire to the discovery of eternal verities. Eternal verities are possible only if the truth values of sentences are determined by objective conditions. If truth is not so determined, if it is relative to systems of beliefs, then there is no one eternal set of verities but many sets of truths, none of them eternal, for systems of beliefs are constantly evolving. This should not worry philosophers. On the contrary, they should be pleased. Thomas Love Peacock noted that “the pleasure of metaphysical investigation lies in the means, not in the end; and if the end could be found, the pleasure of the means would cease.”⁵⁸ Global anti-realism ensures that the pleasure will never go out of the means, since another end can always be found.

N O T E S

Chapter One

- 1 For Dummett's view that realism and the correspondence theory are independent of each other see, *Frege: Philosophy of Language* (London: Duckworth, 1981), pp. 442ff. Hilary Putnam, on the other hand, writes that, "Whatever else realists say, they typically say that they believe in a 'correspondence theory of truth'." *Meaning and the Moral Sciences* (Boston: Routledge and Kegan Paul, 1978), p. 18. For a more recent association of realism and the correspondence theory see John Bigelow and Robert Pargetter, 'From Extroverted Realism to Correspondence: A Modest Proposal.' *Philosophy and Phenomenological Research*, 50 (1990). F.P. Ramsey and P.F. Strawson are critics of versions of the correspondence theory who, by my account, count as correspondence theorists. Strawson is certainly, and is by his own account, a realist. Ramsey writes, for example, that truth involves both mental (truth-bearing) factors and objective factors. He writes that 'the fact that I am judging that Caesar was murdered consists in the holding of some relation or relations between these mental and objective factors.' 'Facts and Propositions,' *Proceedings of the Aristotelian Society*, Supplementary Vol. 7 (1927), p. 153. For more on these points, see §6.
- 2 For an example of someone who holds a modest deflationary theory see Paul Horwich, *Truth* (Oxford: Basil Blackwell, 1990), p. 110. He holds that no tension exists between a deflationary theory of truth and the view that 'truths do correspond — in some sense — to the facts.' Dorothy Grover takes the hard-line position. See her 'Truth: Do We Need it?' *Philosophical Studies*, 40 (1981) and 'Truth and Language-World Connections,' *Journal of Philosophy*, 57 (1990).
- 3 Donald Davidson, 'The Structure and Content of Truth,' *Journal of Philosophy*, 87 (1990). See, in particular, §I of this essay. Davidson also provides, in this essay, a good survey of the various interpretations of Tarski.

- 4 F.P. Ramsey, *On Truth*, eds. Nicholas Rescher and Ulrich Majer (Dordrecht: Kluwer, 1991), p. 9.
- 5 This interpretation of Tarski owes a good deal to various reconstructions offered by Hilary Putnam. See, for example, *Meaning and the Moral Sciences* (Boston: Routledge and Kegan Paul, 1978), pp. 10ff.
- 6 Tarski states in a variety of places that he accepts a correspondence theory. See, for example, 'The Establishment of Scientific Semantics,' in *Logic, Semantics, Meta-Mathematics*, Second Edition, ed. John Corcoran, trans. J.H. Woodger (Indianapolis: Hackett, 1983), p. 401 and 'The Concept of Truth in Formalized Languages,' in the same volume, p. 153.
- 7 For this sort of approach, see Brand Blanshard, *The Nature of Thought* Vol. 2 (London: George Allen and Unwin, 1939), chapter 25.
- 8 The guilty parties include Michael Devitt, *Realism and Truth* (Princeton: Princeton University Press) and J.J.C. Smart, 'Realism v. Idealism,' *Philosophy*, 61 (1986). Dummett does, however, ask for this sort of treatment. See, for example, his *The Logical Basis of Metaphysics* (Cambridge Mass.: Harvard University Press, 1991).
- 9 Bas van Fraassen is an example of a scientific anti-realist who accepts a realist account of truth. He writes that, on his view, 'scientific statements...have truth conditions entirely independent of human activity or knowledge.' *The Scientific Image* (Oxford: Clarendon Press, 1980), p. 38
- 10 Dummett quotes Kreisel, for example, in the Preface to *Truth and Other Enigmas* (Cambridge, Mass.: Harvard University Press, 1978), p. xxviii.
- 11 Rudolf Carnap, 'Empiricism, Semantics and Ontology,' *Revue Internationale de Philosophie*, 4 (1950), 19-40.
- 12 W.V. Quine, 'Carnap's Views on Ontology,' in his *The Ways of Paradox* (Cambridge, Mass.: Harvard University Press, 1976), 203-11.
- 13 Michael Hand is one anti-realist who embraces the idea that there are gaps in the world. 'Anti-realism and Holes in the World.' *Philosophy*, 65 (1990).

Chapter Two

- 14 For an attempt to analyse correspondence in terms of reference see, for example, Michael Devitt, *Realism and Truth* (Princeton: Princeton University Press, 1984), pp. 27ff.

- 15 For a statement of the model-theoretic argument, see Hilary Putnam, 'Models and reality,' in his *Realism and Reason* (Cambridge: Cambridge University Press, 1983), 1-25. The argument is repeated in other places, including *Reason, Truth and History* (Cambridge: Cambridge University Press, 1981), where he makes clear that the argument is supposed to refute the correspondence theory of truth (pp. 72ff).
- 16 David Lewis, "Putnam's Paradox," *Australasian Journal of Philosophy*, 62 (1984), p. 229.
- 17 Davidson most recently advanced the argument discussed here in 'The Structure and Content of Truth,' *Journal of Philosophy*, 87 (1990), p. 303. Church's argument, upon which Davidson draws, is found in *Introduction to Mathematical Logic*, Vol. 1 (Princeton: Princeton University Press, 1956), pp. 24ff.
- 18 J.L. Austin, 'Truth,' in his *Philosophical Papers*, eds. J.O. Urmson and G.J. Warnock (Oxford: Oxford University Press, 1961), p. 89. I am not so sure that Austin actually held the view usually attributed to him, but he will serve to stand in for writers who have held that there are facts to which sentences correspond. Austin is the source of the example of the cat on the mat, used *ad nauseum* in the present work and so many others.
- 19 For some of these criticisms of the correspondence theory see P.F. Strawson, "Truth," in his *Logico-Linguistic Papers* (London: Methuen, 1971).
- 20 Davidson adopts this position in "A Coherence Theory of Truth and Knowledge," in *Truth and Interpretation*, ed. Ernest LePore (Oxford: Basil Blackwell, 1986).
- 21 For some of the Vienna Circle's argument for a coherence theory of knowledge see Otto Neurath, "Protocol Sentences," in his *Philosophical Papers 1913-1946*, ed. Robert S. Cohen and Marie Neurath (Dordrecht: D. Reidel, 1983) and Carl G. Hempel, "Some Remarks on Empiricism," *Analysis*, 3 (1936), 33-40. For a full discussion of the Vienna Circle and the coherence theory of knowledge, see my "Truth, Coherence and the Vienna Circle," *Synthese*, 86 (1991), 467-82. For more recent treatments of the coherence theory of knowledge see Laurence Bonjour, *The Structure of Empirical Knowledge* (Cambridge, Mass.: Harvard University Press, 1985) and Keith Lehrer, *Theory of Knowledge* (Boulder: Westview: 1990). For criticisms of Lehrer and Bonjour see the papers in John W. Bender (ed.), *The Current State of the Coherence Theory* (Boston: Kluwer, 1989).
- 22 Moritz Schlick, "The Foundation of Knowledge," in *Logical Positivism*, ed. A.J. Ayer (New York: The Free Press, 1959).

- 23 Russell presents arguments for the absurdity of the coherence theory in a number of places. For an early argument see *The Problems of Philosophy* (Oxford: Oxford University Press, 1967), p. 71.
- 24 Nelson Goodman, *Ways of Worldmaking* (Indianapolis: Hackett, 1978).
- 25 A.J. Ayer presents this sort of objection to coherentism. See "Verification and Experience," in *Logical Positivism*, ed. A.J. Ayer (New York: The Free Press, 1959), p. 234.

Chapter Three

- 26 For a good discussion of these arguments, which were first formulated by Dummett, see Crispin Wright, *Realism, Meaning and Truth* (Oxford: Basil Blackwell, 1987), pp. 13ff.
- 27 W.V. Quine, *Word and Object* (Cambridge, Mass.: MIT Press, 1960), chapter 2.
- 28 For one of Davidson's discussions of the principle of charity see *Inquiries into Truth and Interpretation* (Oxford: Oxford University Press, 1984), pp. 137f.
- 29 The history of Tonga affords an interesting case of radical interpretation which was not mutual. In 1793 Labillardiere, the French explorer, visited Tonga. A.H. Wood reports that "in Labillardiere's eagerness to learn Tongan numbers he continued asking for the meanings of higher denominations, for which there were actually no Tongan equivalents, and in reply received a series of terms of indecency, which he solemnly noted as Tongan numbers." *History and Geography of Tonga* (Auckland: Wilson and Horton, 1938), p. 24. In the end, of course, radical interpreters were successful: we now have Tongan/English dictionaries.
- 30 Quine, *Word and Object*, p. 29f.
- 31 See, for example, John McDowell, "On 'The Reality of the Past'," in *Action and Interpretation*, eds. Christopher Hookway and Philip Pettit (Cambridge: Cambridge University Press, 1978).
- 32 Colin McGinn is among the realists who have advanced this line of argument. See, "Truth and Use," in *Reference, Truth and Reality*, ed. Mark Platts (London: Routledge and Kegan Paul, 1980), p. 28.
- 33 *Ibid.*
- 34 J.J.C. Smart, "Realism v. Idealism," *Philosophy*, 61 (1986), p. 302.
- 35 J.J.C. Smart, "Metaphysical Realism," *Analysis*, 42 (1982), 1-3.
- 36 For this sort of criticism of Smart, see Peter Smith, "Smart's Argument for Realism," *Analysis*, 43 (1983), pp. 75f.

- 37 For this objection, see P.F. Strawson, "Scruton and Wright on Anti-Realism *Etc.*," *Proceedings of the Aristotelian Society*, 77 (1976-77), pp. 19f.
- 38 Compare this account of holism with that given by Crispin Wright, *Realism, Meaning and Truth* (Oxford: Basil Blackwell, 1987), p. 330: "The possible motivation for the holist stance...would presumably have to involve the belief that no account can be given of the correct use of a declarative sentence — the conditions under which it might legitimately be held true, or false, — save by reference to an indefinite number of background assumptions, i.e. sentences held to be true. And to these sentences the same point would apply, so that accounting for the correct use of one sentence would rapidly become a matter of accounting for the correct use of every sentence in the language."
- 39 Quine writes that "I must caution against over-stating my holism. Observation sentences do have their empirical contents individually." "Reply to Putnam," in *The Philosophy of W.V. Quine*, eds. Lewis Edwin Hahn and Paul Arthur Schilpp (La Salle, Ill.: Open Court, 1986), p. 427.
- 40 Dummett, *Truth and Other Enigmas* (Cambridge, MA: Harvard University Press, 1978), pp. 134f. The remark by Davidson which is being discussed is found in his *Inquiries into Truth and Interpretation* (Oxford: Clarendon Press, 1984), p. 187.
- 41 For a list of Dummett's arguments against holism see Neil Tennant, *Anti-realism and Logic* (Oxford: Clarendon Press, 1987), pp. 52f and "Holism, Molecularity and Truth," in *Michael Dummett*, ed. Barry Taylor (Dordrecht: D. Reidel, 1987), pp. 34f. Chapter 10 of *The Logical Basis of Metaphysics* (Cambridge, Mass.: Harvard University Press, 1991) contains Dummett's fullest discussion of holism.
- 42 Dummett presents versions of his first line of reasoning in "What is a Theory of Meaning? (II)," in *Truth and Meaning* eds. Gareth Evans and John McDowell (Oxford: Clarendon Press, 1975), p. 79 and *Truth and Other Enigmas* p. 302. For the second sort of argument see *Elements of Intuitionism* (London: Clarendon Press, 1977), p. 367 and *Truth and Other Enigmas* p. 302.
- 43 Crispin Wright, *Realism, Meaning and Truth* (Oxford: Basil Blackwell, 1987), p. 331.
- 44 Dummett, *Frege: Philosophy of Language* (London: Duckworth, 1973), p. 598. Alan Weir raises the spectre of incommensurability in 'Against Holism,' *Philosophical Quarterly*, 35 (1985), p. 226.
- 45 Hilary Putnam, 'Meaning and Holism,' in *The Philosophy of W.V. Quine*, eds. Lewis Edwin Hahn and Paul Arthur Schilpp (La Salle, Ill.: Open Court, 1986). p. 412.
- 46 Putnam, *Mind, Language and Reality* (Cambridge: Cambridge University Press, 1975), p. 235.

Chapter Four

- 47 For a similar point see, W.V. Quine, *Word and Object* (Cambridge, Mass.: MIT Press, 1960), p. 23.
- 48 Donald Davidson, "The Structure and Content of Truth," *Journal of Philosophy*, 87 (1990), p. 308.
- 49 Dummett, for example, considers such an anti-realism about the future. See his *Truth and Other Enigmas* (Cambridge, Mass.: Harvard University Press, 1978), p. 152.
- 50 Hilary Putnam, *Reason Truth and History* (Cambridge: Cambridge University Press, 1981), pp. 120f.
- 51 *Ibid.* pp. 121f.
- 52 John Preston discusses a variant of this argument in "On Some Objections to Relativism," *Ratio N.S.* 5 (1992), pp. 67f. He attributes the argument to Putnam but he is ambivalent about the argument. In general, Preston's essay provides a good survey of the arguments against relativism.
- 53 W.H. Newton-Smith, *The Rationality of Science* (Boston: Routledge and Kegan Paul, 1981), pp. 34ff.
- 54 Nelson Goodman writes that, "A rule [of inference] is amended if it yields an inference we are unwilling to accept; an inference is rejected if it violates a rule we are unwilling to amend." *Fact, Fiction, and Forecast* (Cambridge, Mass.: Harvard University Press, 1955), p. 67.
- 55 Putnam, *Reason, Truth and History*, chapter 1, especially pp. 12ff. Many commentators have overlooked a later passage of this book (p. 50f) which also deals with the brain in a vat hypothesis. In this passage, Putnam indicates that he believes that the hypothesis can be true only if there is a perspective from which the hypothesis can be formulated and, by hypothesis, no one can occupy this perspective. In this passage he also states that the world described by the brain in a vat hypothesis is "not a possible world at all."
- 56 Kant defines truth as "the agreement of knowledge with its object." *Critique of Pure Reason* (London: Macmillan, 1983), p. A58/B83. See also, p. A191/B236. Since the object of knowledge is always phenomenal (Bx), truth is a concept which applies only to the phenomenal world. It cannot apply to the unknowable noumenal world.
- 57 Richard Rorty makes this point in, for example, *Consequences of Pragmatism* (Minneapolis: University of Minnesota Press, 1982), p. 93.
- 58 Thomas Love Peacock, *Headlong Hall and Nightmare Abbey* (London: J.M. Dent, n.d.), p. 219.

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