ABSTRACT. The correspondence theory of truth has often been attacked on the grounds that the notion of correspondence is too vague to do any serious philosophical work. More recently it has been attacked on the grounds that the sort of correspondence required by the theory does not exist. I argue, on the contrary, that there are no compelling reasons for believing that the requisite sort of correspondence does not exist and that the notion of correspondence can be made clear enough to yield an adequate theory of truth. After critically examining Tarski’s theory of truth, I show how a correspondence theory which applies to the statements of any language can be constructed. Then Davidson’s claim that all true statements correspond to the same thing and Putnam’s claim that there is no fact of the matter concerning what the terms of a language correspond to are shown to be untenable.

J.L. Austin has given us one of the most succinct expressions of the intuition underlying the correspondence theory of truth. He writes, "When a statement is true, there is, of course, a state of affairs which makes it true". And, of course, there is. For a statement cannot make itself true and our believing that a statement is true cannot make it true. Thus it would seem that the truth or falsity of a statement is determined by the existence or non-existence of certain states of affairs. Although such a claim appears perfectly obvious, it has proven to be extremely difficult to provide a philosophically acceptable explication of just what it is for a statement to be made true by or "correspond" to a state of affairs. So much so, in fact, that many philosophers believe that such an explication is impossible. Tarski, for example, claims that the notions of state of affairs and correspondence cannot be made "sufficiently precise and clear" to be useful in formulating an adequate theory of truth. Davidson and Putnam also argue that truth cannot consist in a correspondence between statements and states of affairs, for these entities do not correspond to one another in the appropriate manner. I intend to show, on the contrary, that the notions of state of affairs and correspondence can be made sufficiently precise and clear and that they can be used to construct an adequate theory of truth.
It might be thought that Tarski's theory is an adequate correspondence theory of truth, for, as Davidson says of Tarski's theory, "the property of being true has been explained, and nontrivially, in terms of a relation between language and something else." Popper concurs, claiming that Tarski's theory has "rehabilitated the correspondence theory of absolute or objective truth" and "vindicated the free use of the intuitive idea of truth as correspondence to the facts." But Tarski's theory, I believe, is neither a genuine correspondence theory of truth nor an adequate theory of truth.

In a genuine correspondence theory of truth, the things that are true (the truth-bearers) are made true by the things to which they correspond (the truth-makers). That is, the existence of the truth-makers provides a sufficient condition for the truth of the truth-bearers. In Tarski's theory, however, the things (sequence of objects) to which the truth-bearers (sentences) "correspond" do not determine the truth value of the truth-bearers, for all possible sequences of objects exist, but not all sentences are true.

The relation that takes the place of the correspondence relation, in Tarski's theory, is the satisfaction relation. It is beyond the scope of this paper to provide a technical explication of this relation, but perhaps its intuitive content can be conveyed by means of an example. The ordered pair <Boston, Providence> can be considered to satisfy the sentence, "Boston is north of Providence," provided that Boston is north of Providence. But since the ordered pair <Boston, Providence> would exist whether or not Boston was north of Providence, its existence does not provide a sufficient condition for the truth of the sentence "Boston is north of Providence." In other words, sequences of objects do not make sentences true. Since the truth bearers (sentences) of Tarski's theory are not made true by that to which they "correspond" (sequences of objects) Tarski's theory cannot be considered to be a genuine correspondence theory of truth.

Moreover, an adequate theory of truth should identify the nature or essence of truth. As such, it should identify those features that are had necessarily by all and only those things that are true. But Tarski's theory does not do this, for it does not apply to everything that is true. Specifically, it does not apply to sentences in natural languages. Tarski claims that an adequate theory of truth cannot be formulated for natural languages because it is not possible to provide truth conditions for every assertable sentence in a natural language. (Sentences such as "This sentence is false" have no truth conditions.) But since there are true sentences in natural languages, any theory that cannot account for their truth cannot be considered to be an adequate theory of the nature of truth.

Tarski might reply to this sort of criticism by protesting that to ask him to identify the nature of truth is to ask him to do the impossible, for there is nothing that all true sentences have in common. As he puts it, "we are confronted, not with one concept, but with several different concepts which are denoted by one word." As evidence for this
claim, he cites the pragmatic and coherence theories of truth. But from the fact that these are different theories of truth, it no more follows that there is nothing that all true sentences have in common than from the fact that there are different theories of quasars, it follows that there is nothing that all quasars have in common. We may disagree about what makes a sentence true, but the mere fact of our disagreement does not prove that there are no features unique to true sentences.

Moreover, the pragmatic and coherence theories of truth were proposed, not as linguistic analyses of how the word "true" is actually used, but rather as conceptual analyses of how the notion of truth should be understood. Both theories claim to identify those features that a statement must have in order to be true. And both theories are inadequate as theories of the nature of truth because they do not do so; i.e., they do not identify those qualities that are had by all and only true sentences. Tarski's theory also is inadequate as a theory of the nature of truth because it, too, fails to delimit the class of true sentences.

The intuitions underlying the correspondence theory of truth are (i) that statements are made true by states of affairs and (ii) that a statement "corresponds," in some sense, to the states of affairs that make it true. In order to capture these intuitions, an adequate correspondence theory must explain (i) what a state of affairs is, (ii) what a statement is, and (iii) what the relation of correspondence is. This task has not proven to be an easy one. But the difficulties encountered, I believe, are due, in large part, to the fact that correspondence theories have often been wedded to a particular ontology. This need not be the case, however. Once this is realized, many of the problems associated with the theory can be avoided. In what follows, I will indicate how such an ontologically neutral version of the correspondence theory can be constructed.

II

A state of affairs is a situation or condition that occurs or obtains. Ontologically, a state of affairs can be viewed as the exemplification of a property (or relation) by an object (or objects). For example, the state of affairs of Mary's being a brunette can be considered to consist in the exemplification of the property of being a brunette by Mary. The object (or objects) and property (or relation) involved are the constituents of that state of affairs. For example, the state of affairs of the earth's being a planet is composed of, i.e., has as constituents, the earth and the property of being a planet. Thus to say that a state of affairs obtains is to say that its constituent property (or relation) is exemplified by its constituent object (or objects).

The notions of object and property are here being understood in the broad sense—they are not limited to any particular class of entities. An object can be defined as that which exists, i.e., exemplifies properties, and a property can be defined as that which can be exemplified.
Many philosophers, most notably, Russell, Wittgenstein, and Austin, have taken states of affairs to be facts. There is, no doubt, some linguistic support for this position. As Austin points out, "When we say 'The mangy condition of the cat is a fact' we mean that it is an actual state of affairs; when we say 'What are the facts?' we mean 'What is the actual state of affairs?.'" But although the term "fact" may, in some contexts, be used to designate states of affairs, in other contexts it is doubtless used to designate true statements. When we say, for example, "It is a fact that E = mc²," we mean that the statement that E = mc² is true. Thus the term "fact" is ambiguous; in some contexts it means state of affairs, in others, it means true statement.

It is important to realize that facts, in the sense of true statements, are not states of affairs. For states of affairs can occur or obtain and hence can have a spatial and temporal location while true statements cannot. For example, suppose that Mary is making pies in her kitchen on Saturday afternoon. The state of affairs of Mary's making pies, then, obtains. Moreover, it obtains in Mary's kitchen on Saturday afternoon. The fact (true statement) that Mary is making pies, however, does not obtain. Nor is it located in Mary's kitchen on Saturday afternoon. In fact, it makes no sense to ask, "Where is the fact (true statement) that Mary is making pies located?" Since facts in the sense of true statements do not possess the same properties as states of affairs, they cannot be considered to be identical.

A statement is that which attributes a property to something or a relation between things. (This "functional" definition of a statement should be acceptable to both those who construe statements as sentences in use and those who construe them as abstract propositions.) A statement is "basic" just in case it does not contain any other statements as constituents. What a basic statement is about is the "topic" or logical subject of that statement, and what it attributes to that which it is about is the "comment" or logical predicate of that statement. The logical subject and predicate of a statement, of course, may differ from its grammatical subject and predicate.) A relational statement has more than one topic—each relata to a relational statement is a topic of that statement—and it has as its comment a relation. A statement is "compound" just in case it contains two or more basic statements as constituents.

Traditional accounts of the correspondence relation offer little philosophical illumination. The relation between a true statement and the state of affairs that makes it true has been claimed to analogous to the relation of a copy to the original, of a map to the area mapped, or a list of things listed, of a picture of things pictured, etc. The problem with such metaphors is that they are ambiguous—they do not indicate exactly which statements correspond to which states of affairs. A statement should correspond to all and only those states of affairs that make it true. Thus an adequate correspondence theory should specify the conditions under which a statement corresponds to a state of affairs.

The term "correspond" has a number of different senses. When the elements of one thing can be put in a one-to-one relation with the elements of another according to some rule, we say that they correspond
to one another. For example, the set of natural numbers can be said to correspond to the set of even numbers, for the members of either set can be mapped onto the members of the other. This sense of correspondence has been dubbed, "correspondence-as-correlation."\(^{14}\)

When two things fit or are in agreement with one another, we say that they correspond with one another. For example, if a piece of paper is torn in half, the torn edges can be said to correspond with one another. This sense of correspondence has been dubbed, "correspondence-as-congruence."\(^{15}\)

Most correspondence theorists seem to have understood the notion of correspondence in the congruence sense. Wittgenstein, for example, in the *Tractatus*, claims that the relation between a proposition and the state of affairs that makes it true is one of picturing.\(^{16}\) A true proposition, according to him, is literally a picture of reality. Although this notion is a suggestive one, it is not amenable to further analysis. As Wittgenstein himself notes, what a proposition and a state of affairs have in common in virtue of which the former is a picture of the latter can only be shown, not said.\(^{17}\) The inability to provide a precise characterization of the correspondence relation has been one of the major stumbling blocks of the correspondence theory. Given our definitions of statement and state of affairs, however, I believe that the relation of correspondence can be given an unambiguous characterization.

A basic statement \(p\) corresponds to a state of affairs \(s\) just in case (i) the object-constituent(s) of \(s\) are (in order) the topic(s) of \(p\) and (ii) the property-constituent of \(s\) is the comment of \(p\). For example, the basic statement, "The moon is desolate," can be considered to correspond to the state of affairs that contains the moon as object-constituent and the property of being desolate as property-constituent. A basic statement is true just in case it corresponds to a state of affairs.

The truth conditions for compound statements can be given in terms of the basic statements they contain. A disjunctive statement is true just in case at least one of its disjuncts corresponds to a state of affairs. A conjunctive statement is true just in case all of its conjuncts correspond to states of affairs.

Notice that, on this view, true disjunctive and conjunctive statements do not themselves correspond to states of affairs. Rather, their constituent statements correspond to states of affairs. It is important to realize that the correspondence theory does not require that every true statement correspond to a state of affairs. It requires only that the truth of every statement be explainable in terms of the correspondence relation.

Although the correspondence theory works well with respect to basic and compound sentences, many have felt that it breaks down when it is applied to negative and general sentences. Russell, for example, argues that in addition to the sorts of states of affairs we have discussed, there must be negative and general states of affairs to ground the truth of negative and general statements.\(^{18}\) Russell is not alone on this view. Herbert Hochberg has recently defended a similar position.\(^{19}\)
But such a view is puzzling, for it is unclear just what a negative or general state of affairs is. A correspondence theorist need not countenance the existence of such entities, however, for, as we shall see, the argument for their existence is not compelling.

Russell ostensibly uses the term "fact" to designate what we have been calling a state of affairs. He writes, "When I speak of a fact . . . I mean the kind of a thing that makes a statement true or false," and "The simplest imaginable fact are those which consist in the possession of a quality by some particular thing." Russell would like to account for the truth of every statement solely in terms of atomic facts (states of affairs). But although he finds the notion of non-atomic facts repugnant, he feels compelled to admit them into his ontology.

His argument for negative facts is this: "A thing cannot be false except because of a fact, so that you find it extremely difficult to say what exactly happens when you make a positive assertion that is false, unless you are going to admit negative facts." Russell, as is obvious from this passage, holds what might be called a correspondence theory of falsehood. According to him, statements are made false by facts to which they correspond. But there are no negative territories corresponding to incorrect maps, so why must there be negative facts corresponding to false statements? Russell gives this answer:

> There might be an attempt to substitute for a negative fact the mere absence of a fact. . . . But the absence of a fact is itself a negative fact; it is the fact that there is not such a fact as . . . [e.g.,] A loving B. Thus, we cannot escape from negative facts in this way.

This statement turns on a confusion between "fact" in the sense of true statement and "fact" in the sense of state of affairs. Once this confusion is cleared up, the need to postulate negative facts evaporate.

Let's label "fact" in the sense of state of affairs "fact₁" and "fact" in the sense of true statement "fact₂". What Russell is saying, then, is this: "There might be an attempt to substitute for a negative fact₁ the mere absence of a fact₁. . . . But absence of fact₁ is itself a negative fact₂." This, however, is nonsense. The absence of a state of affairs, or anything for that matter, is nothing and it certainly is not another thing. Moreover, as we have seen, facts₁ (states of affairs) are not facts₂ (true statements). If a certain state of affairs did not exist, then there would be a true statement to the effect that it did not exist; but this true statement would not itself be a state of affairs. Since this argument equivocates on the term "fact₁," it is not valid.

Russell's argument for general facts is this:

It is perfectly clear, I think, that when you have enumerated all the atomic facts in the world, it is a further fact about the world that those are all the atomic facts there are about the world, and that is just as much an objective fact about the world as any of them are. It is clear, I think,
that you must admit general facts as distinct from and over
and above particular facts.\textsuperscript{24}

This argument, too, confuses the two senses of "fact" identified above. Russell is correct in claiming that once one has enumerated all the atomic states of affairs in the world, it is a further true statement that these are all the atomic states of affairs there are. But since true statements are not states of affairs, the true statement that these are all the atomic states of affairs that there are is not itself a state of affairs. Thus neither of the foregoing arguments provides adequate grounds for believing that there are such things as negative or general states of affairs.

There are a number of ways to account for the truth of negative and general statements without postulating the existence of negative and general states of affairs. It could be claimed, for example, that a negative statement is true just in case its constituent statement, i.e., the statement negated, does not correspond to a state of affairs. (Remember, the correspondence theory is not committed to the view that every true statement corresponds to a state of affairs; it is committed only to the view that the truth of every statement can be explained in terms of the correspondence relation.)

Alternatively, it could be claimed that a negative statement is true just in case its obverse corresponds to a state of affairs. For example, the statement that Reagan is not a communist could be considered to be true just as long as the statement that Reagan is a non-communist is true.

Universal statements could be treated as long (perhaps infinitely long) conjunctions of basic statements and particular statements could be treated as equally long disjunctions of basic statements. For example, the statement "All cats are animals" could be considered to say of everything that if it is a cat, then it is an animal. On this reading, it would be equivalent to a very long conjunction of basic statements that attribute, respectively, to each thing the complex property of being such that if it is a cat, then it is an animal. On this reading, it would be equivalent to a very long conjunction of basic statements that attribute, respectively, to each thing the complex property of being such that if it is a cat, then it is an animal. Similarly, the statement "Some cats are Siamese" could be considered to be equivalent to a long disjunction of basic statements that attribute, respectively, to each thing the property of being a Siamese cat.

Alternatively, following Frege\textsuperscript{25}, general statements could be taken to say of certain concepts that they are instantiated. For example, the statement "Some cows are brown" could be taken to say of the concept of a brown cow that it is instantiated and the statement "All whales are mammals" could be taken to say of the concept of a whale that whenever it is instantiated, the concept of a mammal is instantiated. Or, more traditionally, general statements could be taken to say of certain classes that they have or lack certain members. The statement "Some cows are brown," for example, could be taken to say of the class of brown things that it contains at least one cow and the statement "All whales are mammals" could be taken to say of the class of mammals that it contains the class of whales. In any event, it should be clear that one can account
for the truth of negative and general statements without postulating the existence of negative and general states of affairs.

The theory of truth sketched above is a correspondence theory because the truth of a statement is determined by its relation to the world (and not by its relation to other statements) and because the truth bearers (statements) of this theory are made true by that to which they correspond (states of affairs). Moreover, it has the advantage of neither being relativized to a particular language nor to a particular ontology. Because the semantical categories of topic and comment are universal (every declarative sentence predicates something of something), it is applicable to the statements of every language and because it characterizes an object simply as that which exists, it is not committed to any specific view of what is real.

The theory of truth presented here is a theory of the nature or essence of truth, i.e., it explains what it is for a statement to be true. It is not, however, a theory of the criterion of truth, i.e., it does not explain how one can tell whether or not a statement is true. It is important to keep the questions, "What is the nature of truth?" and "What is the criterion of truth?" separate, for, as Russell warns, "any confusion between them is sure to produce an answer that is not really applicable to either."27

The correspondence theory not only provides the most intuitively plausible account of the nature of truth, but it also has the advantage of elucidating the nature of a number of other puzzling world-world relations. We often speak of statements as describing, representing, specifying, designating, or denoting states of affairs, especially in explanatory and causal contexts. These relations, I believe, can best be understood in terms of the correspondence relation. In other words, a statement can be considered to stand in one of the aforementioned relations to a state of affairs just in case it corresponds to that state of affairs. Thus in addition to being sanctioned by common sense, the correspondence theory also has considerable explanatory power.

III

According to the correspondence theory, statements are made true by only a limited number of states of affairs. Consequently, they correspond to only a limited number of states of affairs. Davidson finds this aspect of the correspondence theory unacceptable, however, for, according to him, each true statement corresponds to every state of affairs. He writes:

... if a statement corresponds to one fact, it corresponds to all. ... Indeed, employing principles implicit in our examples, it is easy to confirm that suspicion. The principles are that if a statement corresponds to the fact described by an expression of the form 'the fact that p,' then it corresponds to the fact described by 'the fact that q' provided 'p' and 'q' are logically equivalent sentences, or one differs from the other in that a singular term has been replaced by
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a coextensive singular term. The confirming argument is this. Let 's' abbreviate some true sentence. Then surely the statement that s corresponds to the fact that s. But we may substitute for the second 's' the logically equivalent '(the x such that x is identical with Diogenes and s) is identical with (the x such that x is identical with Diogenes)'. Applying the principle that we may substitute coextensive singular terms, we can substitute 't' for 's' in the last quoted sentence, provided 't' is true. Finally, reversing the first step we conclude that the statement that s corresponds to the fact that t, where 's' and 't' are any true sentences.28

What this shows, according to Davidson, is that all true statements correspond to the same thing, namely, "The Great Fact."29

The conclusion is extremely counter-intuitive, however. Since each true sentence is not made true by the same facts, i.e., states of affairs, each true sentence should not be considered to correspond to the same states of affairs. Surely the state of affairs of my desk's being wooden does not make the sentence "All men are mortal" true. Consequently, the latter should not be considered to correspond to the former.

The word "fact," as we have seen, can be used to signify either a state of affairs or a true statement. In the foregoing argument, Davidson uses the word "fact" in both of these senses. In order to make clear just what Davidson is saying, let's restate the argument and make the different uses of the word "fact" explicit. I take it that what Davidson means by "the fact described by 'the fact that s'" is the state of affairs described by the true statement that s.

1. Let 's' abbreviate some true sentence.

2. Therefore the statement that s corresponds to the state of affairs described by s.

3. The statement that s is logically equivalent to the statement that '(the x such that x is identical with Diogenes and s) is identical with (that x such that x is identical with Diogenes).'

4. Therefore the statement that s corresponds to the state of affairs described by (the x such that x is identical with Diogenes and s) is identical with (the x such that x is identical with Diogenes).

5. The true statement that t is coextensive with the statement that s.

6. Therefore the statement that s corresponds to the state of affairs described by t.

Although this argument makes use of the notion of a description of a state of affairs, it need not do so. To say that the statement that s corresponds to the state of affairs described by s is to say no more than that the statement that s corresponds to a state of affairs.
Davidson recognizes that this argument can be blocked by rejecting one or more of the principles upon which it is based. One of these principles is that logically equivalent statements correspond to the same thing. Unfortunately, Davidson offers no reason for accepting this principle. In the absence of such supporting evidence, however, there is little motivation to accept it, for from the point of view of the correspondence theory, it is absurd.

According to the correspondence theory, a statement is made true by that to which it corresponds. Thus if it were true that all logically equivalent statements correspond to the same thing, it would follow that all logically equivalent statements are made true by the same state of affairs; i.e., there would be one state of affairs that grounds the truth of all logically equivalent statements. But surely the logically equivalent statements that everything that has a shape has a size and that nothing can be red and green all over at the same time are not made true by the same state of affairs. Consequently, the principle appears to be mistaken.

Moreover, in both the correlation and congruence senses of "correspond," there must be some sort of isomorphism between the terms of the correspondence relation. One would expect, then, that when two statements correspond to the same state of affairs, there must be some sort of isomorphism between them. It is difficult to see, however, what sort of isomorphism there could possibly be between the statement that Sally is blonde and the statement that the x such that x is identical with Diogenes and Sally is blonde is identical to the x such that x is identical to Diogenes.

To deny that logically equivalent statements correspond to the same thing is to deny that correspondence contexts are extensional; that is, it is to deny that necessarily co-extensive (logically equivalent) statements can be substituted salva veritate in correspondence contexts. Correspondence contexts, then, are similar to explanatory contexts, for what serves as an explanation for one statement will not necessarily serve as an explanation for a logically equivalent statement. But if explanatory contexts are intensional, one would also expect correspondence contexts to be intensional, for to explain something is to indicate what makes it true and what makes a statement true is the state of affairs to which it corresponds.

The point that Davidson is trying to make here is that it is not informative to say that true statements correspond to the facts, if facts cannot be specified independently of the statements to which they supposedly correspond. As he puts it, "unless we find another way to pick out facts, we cannot hope to explain truth by appeal to them." But the theory outlined above does make it possible to identify facts (states of affairs) without using the statements to which they correspond. States of affairs, as we have construed them, have constituents and a structure and thus can be identified in terms of their constituents and structure. Our theory, then, avoids the problem that Davidson finds implicit in correspondence theories of truth.
Putnam also objects to the correspondence theory on the grounds that the correspondence required between statements and limited states of affairs does not exist. The problem as he sees it, however, is not that there is no correspondence between statements and limited states of affairs, but rather that there are too many; our language can be mapped onto the world in many different ways and there is no way to determine which mapping is the correct one. The reason that we cannot identify the correct mapping is that we have no "referential access to the mind-independent things;" i.e., we cannot get outside of our conceptual scheme and compare it to that which it is supposed to represent. "To single out a correspondence between two domains," Putnam says, "one needs some independent access to both domains." Since we do not have such access, the correspondence theory cannot be correct.

This argument is a familiar one and it has come to be known as the "ego-centric predicament." According to this argument, there is no reason to believe that our ideas correspond to anything in particular, for we can never get outside the circle of our ideas and establish the existence of such a correspondence. The flaw in this argument, however, is well-known. From the fact that one cannot tell whether or not something is the case, it neither follows that it is not the case nor that it is unreasonable to believe that it is the case. Thus even if we cannot tell what state of affairs a particular statement corresponds to, it does not follow that that statement does not correspond to a particular state of affairs.

The correspondence theorist is committed neither to the view that we can tell (for certain) which statements are true nor to the view that there are true (first order) statements. His claim is only that if a statement is true, then it corresponds to a state of affairs. Thus in order to discredit the correspondence theory, Putnam must show more than that we cannot tell what state of affairs a statement corresponds to. He must show that it is impossible for a statement to correspond to a state of affairs, i.e., that there is no fact of the matter as to what state of affairs a statement corresponds to.

There are essentially two strategies that one might employ to establish that there is no fact of the matter regarding a particular phenomena. (i) One might attempt to show that the assertion that there is a fact of the matter is self-contradictory and thus that it is logically impossible for there to be a fact of the matter, or (ii) one might attempt to show that the assertion that there is a fact of the matter is meaningless and thus that it makes no sense to claim that there is a fact of the matter. Putnam, however, employs neither of these strategies. He merely claims that there are no operational or theoretical constraints which would single out one correspondence as the correct one.

From a logical point of view, Putnam contends, a theory can be viewed as formal language. Logic alone, however, cannot tell us how the terms of a formal language are to be interpreted. That is, it cannot tell us how to map the terms of the language onto the items in the world. Traditionally it has been held that the range of possible interpretations is constrained by certain operational and theoretical considerations. Operational constraints serve to delimit the class of admissible interpretat-
tions by specifying what experimental conditions must be met in order for a statement to be considered true. Theoretical constraints serve to delimit the class of admissible interpretations by specifying what criteria a statement must meet in order to be considered true. Putnam's claim is that even if a statement ideally met these constraints, that is, even if the truth conditions for a statement were determined in all possible worlds, there would still be no fact of the matter as to what its terms refer to.

Putnam attempts to establish this claim by appealing to certain model-theoretic considerations. He shows that for any formal language which has at least one predicate whose extension is not empty, there are a number of different ways to interpret its non-logical constants so that its statements come out true. This feature of formal languages, of course, is well known. What is startling about Putnam's position is the assertion that none of these interpretations can be considered to be the correct or intended one. The reason that no interpretation can enjoy such a privileged status is that the operational and theoretical constraints on interpretation are insufficient to single out one interpretation as the correct or intended one. Consequently, no terms can be considered to have a determinate reference.

But even if the best empirical evidence possible is not sufficient to decide between two interpretations of a statement, it does not necessarily follow that there is no fact of the matter as to which interpretation is the correct one. Perhaps an analogy would be helpful here. It is conceivable that even at the ideal limit of rational inquiry—at the "end of science," as it were—the best evidence available will not be sufficient to determine whether or not someone's visual spectrum is inverted relative to someone else's. But even so, it would not follow that there is no fact of the matter as to whether or not their spectrums are inverted. Putnam is trying to prove that the notion of truth is essentially epistemic. But if he is to avoid begging the question against those who consider truth to be a non-epistemic notion, he cannot assume from the outset that the only things that can be considered to be true are those which can be known to be true. Yet this appears to be precisely what he is assuming here.

That Putnam is begging the question against the correspondence theorist can perhaps best be brought out by the following considerations. If no statement has a determinate reference, then the statement "No statement has a determinate reference" has no determinate reference. That is to say, it is not about anything in particular. But if it is not about anything in particular, then, according to the correspondence theory, it does not have a determinate truth value. (That is why, for example, vague and ambiguous statements do not have a determinate truth value.) Thus from a correspondence theorist's point of view, the indeterminacy thesis is self-defeating, for if it were true, it would have no determinate truth value. In other words, the indeterminacy thesis only makes sense on the assumption that the correspondence theory is false. But as a result, it cannot be used, without circularity, to undermine the correspondence theory, for instead of proving the correspondence theory to be inadequate, it presupposes the inadequacy of that theory.
From the fact (if, indeed, it is a fact) that we cannot empirically determine what a term refers to, it does not follow that it does not have a determinate reference. But if reference is not determined by the operational or theoretical constraints on interpretation, then just how is it determined? The traditional answer to this question has been that the reference or extension of a term is determined by its meaning or intension. On this view, the meaning or intension of a term is a concept associated with that term and its reference or extension is that of which its associated concept is true. More recently it has been claimed that the reference of a term is that which bears the appropriate causal relation to the use of that term. Putnam rejects both of these accounts. But note: even if Putnam is correct and, at present, there is no good theory of reference, it does not follow that reference is indeterminate or even that it is reasonable to believe that reference is indeterminate.

Putnam rejects the causal theory of reference on the grounds that it presupposes and thus cannot explain reference. He writes, "If there is a determinate physicalistic relation R . . . which just is reference . . . , this fact cannot itself be the consequence of our intentions to refer; rather, as we have repeatedly noted, it enters into determining what our very intentions to refer signify." In other words, unless the reference of the terms of the causal theory is already fixed, they cannot be used to pick out the referential relation. But if their reference is fixed, then, Putnam seems to be saying, the theory is circular, for "... how can we have intentions which determine which causal chains are of the appropriate type unless we are already able to refer?" Putnam is right in claiming that the causal theory of reference requires that the terms of the theory have a determinate reference. But he is wrong in concluding that this somehow vitiates the theory; since the causal theory applies to the terms of any theory, it applies to itself. Hence if the causal theory is correct, the reference of its terms is determined in the same way in which the reference of the terms of every other theory is determined, namely, by causal relations. But this merely makes the theory consistent, not circular. There is certainly nothing wrong for a theory to apply to itself. If there were, it would be impossible to construct a theory of meaning or truth that was meaningful or true. Since it is not self-contradictory to assume that the terms of the causal theory of reference are determined by causal relations, the fact that it must apply to itself in order to be true is no reason to reject it.

Putnam rejects the traditional view that extensions are determined by intensions on the grounds that two people can have the same intensions and yet refer to different objects. To support this claim, he offers the infamous twin earth thought experiment. Suppose that, in a distant galaxy, there is a planet which is identical to ours except that the stuff that its inhabitants call "water" has a very different chemical structure from the stuff that we call water. Nevertheless, the stuff on the distant planet looks like, acts like, and tastes like the stuff we call water. Now before 1750, that is, before anything was known about the chemical structure of water, the intension of the word "water" would have been identical for both the inhabitants of earth and the inhabitants of twin earth, for the information that they would have associated with the term "water" would have been the same. And yet, according to Putnam, the
extension of the word "water" would be different for these two groups, for on twin earth it would refer to the sort of stuff in their lakes and rivers while on earth it would refer to the sort of stuff in our lakes and rivers. Thus it cannot be the case the intension determines extension, for, as this case purportedly shows, the same intension can have different extensions.

The traditionalist need not accept Putnam's account of this situation, however. Prior to the discovery of chemical structure, it could be claimed that the extension of the term "water" on the two planets was identical (it referred indifferently to the stuff on both planets) and that after the discovery, it came to mean different things on each planet and hence referred to different stuff.

But even if we accept Putnam's account, it does not necessarily follow that intensions do not determine extensions. For as Searle has shown, intensions can have a non-descriptive indexical component. If so, then even if the qualitative content of the intensions of the speakers on earth and twin earth are identical, they may nevertheless succeed in referring to different things by using the same word.

My purpose here has not been to advocate any particular theory of reference, but rather to demonstrate that the prospect for developing an adequate theory of reference is not as hopeless as Putnam would have us believe. To show that reference is indeterminate, Putnam must show more than that present theories of reference are inadequate; he must show that it is not possible to construct an adequate theory of reference. I submit that not only has he not shown that it is impossible to construct an adequate theory of reference, he has not even shown that present theories of reference are inadequate.

The correspondence theory of truth is our "folk theory" of truth; it is the account of truth that, pre-philosophically, most of us take for granted. That, in and of itself, of course, is not necessarily a virtue. Many of our folk theories have turned out to be seriously flawed. But since it is our folk theory and since it does play such a central role in our theorizing about the world, it should be overthrown only if there are very strong practical or theoretical reasons for doing so. We have examined some of the strongest arguments that have been brought against the correspondence theory and have found them to be wanting. There appears to be nothing to be gained by changing the way we think and speak about truth and much to be lost. The presumption, then, would seem to be in favor of the correspondence theory.

ENDNOTES


5 Donald Davidson, op. cit., 758.


7 Tarski, op. cit., 27.

8 Ibid.


13 Ibid.


15 Ibid.


17 Ibid.

18 Bertrand Russell, "The Philosophy of Logical Atomism", in *Logic and Knowledge*, 175ff.


20 Bertrand Russell, op. cit., 182.

21 Ibid., 198.
Ibid., 214.


Bertrand Russell, "The Philosophy of Logical Atomism", op. cit., 236.


Garver, op. cit.


Donald Davidson, "True to the Facts", op. cit., 752-53.

Ibid., 755.

Ibid.

Ibid.


Ibid. 72-73.

Ibid., 74.

Ibid., 29ff.

Ibid., 30.

Ibid., 31.

Ibid., 32ff.

Ibid., 217-18.

Ibid., 47.

Ibid., 51.

Ibid., 21ff.