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SEMANTICS WITHOUT FOUNDATIONS

Quine has frequently asserted that the notion of meaning which he is opposing by arguing for the "indeterminacy of translation" is the "myth of a museum" ([26]: 27; [11]: 495). The myth (which is akin to the view of language disparaged from the outset by Wittgenstein in the *Philosophical Investigations*) ([31]: 77) has a protean quality, appearing here as logically proper names and there as Platonic ideas. In its various forms, this myth asserts the existence of a "fact" of some type which, in turn, fixes or determines the meanings of words. At issue in the *attack* on the myth and related confusions about semantics is not only the rejection of a cluster of distinctions thought (in the not too distant past, anyway) to be important—analytic-synthetic, language-fact, conceptual-empirical (the list is Rorty's)—but also, as Richard Rorty has urged, the displacement of epistemology from a central place in the philosophic enterprise (or, at least, a rejection of the purpose of epistemology as one of providing or uncovering the foundation—the determinate basis of—knowledge) ([33]: 169). Yet even those philosophers, such as Rorty, who feel that Quine has done as much as needs to be (possibly: as much as can be) to dispel the myth are, paradoxically, apt to assert that Quine's arguments for "indeterminacy", i.e., his justification for his doubts about meaning, are either intentionally circular ([36]) or unsound because inconsistent with other theses he asserts ([33]: 181ff.). Quine's doubts about meaning are matched by a skepticism on the part of his critics concerning his justification of his doubts. My initial concern in this paper is to establish a sound Quinean argument for his indeterminacy thesis. A further concern is to correct what I take to be a pervasive misunderstanding of the force and nature of Quine's attack on the museum myth.

These considerations serve, in turn, to support a still more general claim.

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There is a conventional wisdom about how to read Quine, viz., as an updating and refurbishing of certain positivist doctrines.¹ This wisdom perceives Quine's empiricism as enriched by a sophisticated holism but, in addition, impoverished by a recalcitrant commitment to a verificationist view of meaning ([13]; [33]: 195–209; [3]: 757). The problem is most visible in Quine's commitment to the "indeterminacy of translation of theoretical sentences". My claim is that this conventional wisdom is wrong on both counts. On the one hand, Quine is not offering yet another variant of a traditional answer to certain traditional epistemological questions. On the other hand, the supposed tarnish perceived in Quine's "new empiricism" becomes, when viewed aright, an inextricable part of the Quinean position. By way of providing a corrective to the conventional wisdom, I offer, first, a reconstruction of Quine's epistemology which details the interconnections of his characteristic themes. Second, I argue that my reconstruction allows for a superior assessment of the significance of the "holist turn" in epistemology which, I suggest, is both Quine's most significant philosophical contribution and the one which has yet to be properly appreciated.

I will be concerned with five Quinean theses:

(DT) *The Duhem thesis*: The claim that sentences (within either natural language or formal languages) have their evidence only as a related set (I refer to this as Quine's holism).

(UT) *Under-determination of theories*: The claim that it is possible to formulate empirically equivalent but logically incompatible scientific theories.

(IT) *The indeterminacy of translation of theoretical sentences*: The claim that theories wherein we formulate hypotheses about what words or sentences mean lack a fact of the matter, i.e., fail to be objective in the way in which theories in natural science are. Despite acknowledging fundamental methodological parallels between theories of "translation" and theories in the natural sciences, Quine insists that the former are *not* objective in the way the latter are. There are no "facts of meaning" parallel to the "facts of nature." This failing distinguishes translation *in kind* from proper scientific inquiry.

(IR) *Inscrutability of reference*: Whereas (IT) asserts that there is no fact of the matter concerning the intension of terms, (IR) asserts that there is likewise no one right answer concerning the extension of a term. "The only difference between rabbits, undetached rabbit parts, and rabbit stages is in their individuation The only difference is in how you slice it. And how you slice it is what ostension, or simple conditioning, however persistently repeated, cannot teach" ([27]: 32). "Reference, extension, has been the firm thing; meaning, intension, the infirm. The indeterminacy of translation . . . cuts across extension and intension alike" ([27]: 35). Reference, too, is related to a museum myth, i.e., the view that there is one fixed or correct connection between words and "ideas" or words and the world.

(OR) *Ontological relativity*: "The relativistic thesis to which we have come is this, to repeat: it makes no sense to say what the objects of a theory are, beyond saying how to interpret or reinterpret that theory in another" ([27]: 50).

Quine holds or has held that the following relationships obtain among these theses.

- (a) $DT + \text{"Peirce premise"} \rightarrow IT$ ([27]: 80–81)
- (b) $UT \text{ or } IR \rightarrow IT$ ([26]: 182–183)
- (c) $UT \rightarrow IT$ ([18]: 66–67)
- (d) $UT \neq IT$ ([26]: 180; [29]: 303–304)
- (e) $DT \rightarrow UT$ ([20]: 42–43)
- (f) $DT \rightarrow UT$ ([25]: 220; [24]: 314)
- (g) $IR \rightarrow OR$ ([26]: 182–183)

Clearly the claims on the list, as they stand, are inconsistent; what is needed, at a minimum, then is to determine which of the claims in (a)–(g) are sufficient for Quine's attack on the museum myth. To make matters worse, critics have insisted:

- (h) IT is untenable ([33]: 192–212)
- (i) IT is just an empirical hypothesis ([17])
- (j) IR is false ([9]; [10]); or, Quine's argument (g): $IR \rightarrow OR$ constitutes a *reductio* for his own views on reference ([5]; [38])
- (k) IR and OR are inconsistent and OR is false ([7]; [8])

The above critics, by and large, adhere to the conventional wisdom in that they take b: $(UT \text{ or } IR) \rightarrow IT$ to be Quine's central argument. My strategy is to maintain that (a): $DT + \text{Peirce} \rightarrow IT$ is the critical argument in Quine's attack on the myth of the museum; more generally, my concern is to establish that (a), (d): $UT \neq IT$, (f): $DT \rightarrow UT$ and (g): $IR \rightarrow OR$ are correct and sufficient for Quine's purpose (of discrediting the museum myth). The misinterpretations of Quine's position, in turn, I see as developing from two basic sources. One source is that those critics with whom I am concerned accept (e): $DT \rightarrow UT$; the problem here is that if one accepts (e), then (b): $(UT \text{ or } IR) \rightarrow IT$ and not (a): $DT + \text{Peirce} \rightarrow IT$ appears as the primary argument for (IT). But (b) is, as critics insist, untenable. The other source of confusion is that Quine often fails to distinguish the two distinct epistemological views present in his writings; the result is a failure to keep separate the particular consequences of each view. ([34]) I argue that (IT) develops from Quine's *critical remarks* on the museum myth; (IR) and (OR), however, are consequences of adopting Quine's account of the form of proper scientific theories.

In Part I, I develop and defend argument (a). (See also [35].) Part II presents an argument for (g): $IR \rightarrow OR$ which is immune to the criticisms raised

by Davidson, Field, et al. One consequence of the reading proposed in Parts I and II is a repudiation of Quine's own, much discussed, suggestion that (IT) can be argued for by "pressing from above" (from UT) or by "pressing from below" (from IR), i.e., I disavow (b): (UT or IR) \rightarrow IT entirely. Part III reverts to a concern, noted at the outset of this paper, with regard to the philosophic import of Quine's skepticism about semantic theory.

I

Before attempting to defend argument (a)—a derivation of the indeterminacy of translation of theoretical sentences which proceeds from Quine's holism—I will briefly consider three popular construals of the argument for (IT). Putnam offers two of these (although rejecting one and accepting the other); Rorty offers the third. Both of Putnam's arguments are noteworthy because they explicitly take (UT) to be the key premise; Rorty offers an interpretation which does not make explicit appeal to (UT). My central concern in this section is to show that (IT) can be derived without appeal to (UT), and also without invoking the sort of crypto-positivist considerations which Rorty perceives as an illicit premiss in Quine's argument.

Putnam offers a twin Quine hypothesis: Quine₁ is a figment of the professional philosopher's imagination, while Quine₂ happens to be the person who authored, among other works, *Word and Object*. Each Quine has his own argument for the indeterminacy of translation of theoretical sentences. Paraphrasing Putnam ([17]: 160), the argument of Quine₁ runs as follows:

- (A) A manual of translation, formed as described in Ch. 2 of [31], provides a general recursive function whose domain is the set of all terms and sentences of an alien language and whose range is some subset of all terms and sentences of the home language. The function yields, for each argument (an alien term or sentence), a value which is observationally and/or truth functionally equivalent to the argument.
- (B) It is possible to have more than one such function, and the functions need not be compatible, i.e., they may be empirically equivalent to one another and yet yield different (and incompatible) values for the same argument.
- (C) Relative to a particular function, a translation is correct; however, there is no empirical basis for deciding between conflicting functions.
- (D) Since correctness is defined relative to choice of function, there is no fact of the matter to the question "Which translation (of the different ones provided by different functions) is correct?"

"Quine₁ might well have summed this up by saying that *the choice of [a function] . . . is a matter of convention.*" ([17]: 161)

This interpretation has its supporters; (e.g., [14]: 94; [16]: 131; [12]) however, Putnam's criticism of Quine₁ seems decisive. For the argument depends on the stipulation that the functions be constituted according to certain conventions (specifically, the conventions discussed in Chapter 2 of *Word and Object*). The problem is that premiss A, so interpreted, embodies what Putnam calls the "conventionalist fallacy". The fallacy lies in a decision to *limit* the number of canons which may be used in translation. "The negative essentialist, the conventionalist, intuits not that a great many strong properties are part of a concept, but that only a few *could be* part of a concept" ([17]: 164). Quine₁ guarantees the existence of competing translations by circumscribing the constraints on translation. But why accept *only* those constraints Quine₁ suggests? There is, in other words, no good reason to assume that Ch. 2 of [31], unsupported by arguments, delimits either the possible or the proper constraints on translation. The inference from the fact that certain constraints fail to restrict the number of functions to the claim that, in effect, there are no additional constraints which will, commits what Putnam calls the conventionalist fallacy.

Quine₂, on Putnam's view, avoids the conventionalist fallacy although he (Quine₂) otherwise subscribes to the argument A-D (amending A by deleting "formed as described in Ch. 2 of [31]"). On the revised reading, "Quine's view of the indeterminacy of translation is a hypothesis, not something of which Quine claims to have a logical or mathematical proof" ([17]: 178). The hypothesis is that, even after all the methodological constraints are in place, conflicting translations will still occur. Whether this is true, of course, remains to be seen.

What I wish to note here is that Putnam's formulation, in both cases, assumes (B), which is just UT applied to translation manuals. More generally, Putnam's discussion of Quine proceeds from the assumption that (b): (UT or IR) \rightarrow IT is correct. This reading, with its emphasis on under-determination (premiss B above), is abetted by Quine's remarks in some places. For while Quine will insist ([26]: 180) that indeterminacy is "additional" to under-determination, Quine then, in the passage just noted, phrases the problem of (IT) as follows: "Where physical theories A and B are both compatible with all the possible data, we might adopt A for ourselves and still remain free to translate the foreigner as believing A or as believing B." But, then, this is no different in some philosophically interesting way from any other instance of having to choose between under-determined theories. Quine's reader is left wondering whether indeterminacy is genuinely additional to (UT).

One reason for being reluctant to accept the derivation of (IT) from (UT) is that (IT), so interpreted, is perfectly compatible with tolerating propositions as

posits. (IT) would just be the claim, on this account, that the correct translation is unknowable. ([2]) But, Quine insists, (IT) is to rule out the belief that such posits are scientifically acceptable ([31]: 205–208). Even worse, (IT), understood as Putnam, et al., suggest, does nothing to undercut a museum myth, i.e., to refute the claim that there really is *one* right “translation”, one correct interpretation of another’s utterances (or our own). On this interpretation, Quine would have inferred (IT) from methodological considerations, which cannot be done. It is precisely Quine’s opposition to museum myths, his animus toward determinacy of meaning, which motivates him, in the first place, to formulate his argument for (IT). This is why (b) ought not to be considered Quine’s primary argument.

(IT) does *not* depend on some supposed difference in the methodology of translation as opposed to that of natural science. Quine is explicit in stating that physical theory and semantic theory are alike—parallel—with regard to *methodological* resources and rigor ([31]: 75–76). The cause of the asymmetric relation between truth in science and meaning in semantic theory—the “failure of the parallel” in Quine’s phrase—must be sought in reasons *other* than those of the specific canons involved.

With regard to IT, Quine asserts that “the problem is not one of hidden facts” ([26]: 180). Thus, the issue is not an empirical one, for the indeterminacy thesis is to put in disrepute the *very question* of whether “the foreigner really believes A or believes rather B” ([26]: 181). (IT) obtains “in principle”, i.e., it is not contingent on what further empirical inquiry might reveal. This “in principle” formulation is needed if (IT) is to undercut the museum myth, for, if successful, the argument for (IT) should show that questions concerning what someone, or ourselves, really means—either by appeal to absolute meaning (e.g., a Platonic Form) *or* even by appeal to meaning relativized to a manual of translation (and so viewing an explanation which cites the meaning of terms as no worse off than an explanation which cites current physical theory)—are misguided. The effort is one of philosophic therapy, of trying to break the hold certain questions, bad questions, have on us ([29]: 304).

If the foregoing is correct, then a derivation of (IT) from (UT), understood in the sense of the arguments Putnam attributes to Quine₁ and Quine₂, will not do for the purposes for which (IT) is wanted. And while there is text enough to support Putnam’s view, I have suggested that an alternate formulation of the argument is offered by Quine, viz., (a): DT and Peirce \rightarrow IT, and that only an argument which sustains the “in principle” sense of (IT) will have the desired therapeutic effect.

While Rorty endorses Putnam’s criticism of Quine₁, he also suggests an interpretation of the argument for (IT) which does not appeal to (UT). Rorty’s reading suggests that it is primarily a stubborn streak of residual positivism which engenders Quine’s animosity to semantic theory.² Briefly stated, what

Rorty does is to suggest Quine’s statement that there is “no fact of the matter” to translation is untenable in view of the following argument.

- (A) Either there are “facts” of nature or there are not.
- (B) If there are, then (DT) is wrong (for (DT) entails that there are no *special* “statements of fact”).
- (C) If there are not, then semantic theory is no more lacking in objectivity or internal coherence than, e.g., chemistry ([33]: 194). That is, (IT) is false.
- (D) But the Duhem thesis is not wrong (or, alternatively, Quine presents much better arguments in support of (DT) than he does in support of “observation sentences”—the putative “facts of nature”).
- (E) There are no privileged “facts of nature” (from D, B).
- (F) (IT) is false (from C, E).

Rorty’s strategy, in short, is to insist that (DT) and (IT) are inconsistent.

The above argument explicates Rorty’s claim that there is “a genuine contradiction in Quine’s view” ([33]: 207). The problem arises because, we are told, Quine stubbornly insists on taking “contemporary physics as paradigmatically matter-of-factual” ([33]: 203). However, Rorty argues, “This tactic makes his preference for physics over psychology, and thus his concern about ‘irresponsible reification,’ purely aesthetic” ([33]: 203).

Rorty’s argument to the falsehood of (IT), taken in conjunction with Putnam’s interpretation, indicates the course which any defense of (IT) must steer. A defense must, on the one hand, be stronger than Putnam’s, i.e. strong enough to undo the hold of the museum myth. But, on the other hand, the interpretation must avoid a reading of Quine’s notion of “a fact of the matter” which distinguishes science from semantics at the cost of running afoul of (DT) in the way in which Rorty details. We must, in short, show that (IT) is not a variant of (UT) and that (IT) is not inconsistent with (DT).

The argument which I defend—(a): DT + Peirce \rightarrow IT—together with a concise statement of the view to be debunked by means of this argument, receives clear expression at ([27]: 80–81). However, before I explicitly defend this formulation of the argument, the Quinean claim needs to be more precisely stated. That is, just what is at issue when Quine insists that manuals of translations lack the sort of objectivity possessed by theories in the natural sciences?

Quine maintains that the notions of meaning and of truth can be understood only as relativized to a particular theory: a manual of translation in the case of meaning and a theory in natural science in the case of truth. Yet the “analytical hypotheses”—hypotheses concerning, e.g., equivalences of meaning—which are products of our manuals are *not* on a par with the “genuine hypotheses” of scientific theory: “The point is not that we cannot be sure whether the ana-

lytical hypothesis is right, but that there is not even, as there was in the case of 'Gavagai', an objective matter to be right or wrong about" ([31]: 73, 68–72). If we stick with just this way of formulating the differences between truth and meaning (which, I readily admit, Quine himself does not), we see the alleged distinction between truth and meaning can be made *without appeal* to the existence of any multiplicity of theories, i.e., without invoking the under-determination of theories by evidence. *The problematic notion, on this formulation, is that of there being a "fact of the matter" in one case but not the other.* And it is unpacking this last mentioned notion which, I contend, reveals the defensible distinction between the two types of theories, i.e., an argument for (IT) which makes no use of under-determination, and which circumvents the criticisms noted above. *Quine's claim that there are facts of nature and not facts of meaning is derived from social/behavioral considerations.* It is precisely the need to have a *socially* grounded concept of evidence which Quine stresses ([31]: 75); given that there is a need for a "social checkpoint" in order to make sense of how it is possible to teach language, and given that the natural sciences are our means for probing, for better or worse, the nature of this social check, what is warranted is the assumption that there are facts of nature, i.e., a world to which we respond and which science investigates.³

If we consider the case of translation, however, we find that there is no warrant for assuming facts of meaning akin to the warrant for facts of nature. Semantic theory is indeterminate, I argue, because what is necessary to provide, even in principle, a translation with the requisite fact of the matter would be a warrant for positing the existence of a meaning for a term or sentence *prior* to translation. The indeterminacy of translation obtains because Quine's argument establishes that there is no basis on which to assume a prior standard of meaning. That is, if one could contrast the imposed translation/semantic theory with some prior—theory-independent—fact of the matter (some "meaning" the utterance has *per se*), then there would be something about which translation can be right or wrong. This contrasts with Quine's argument which establishes that we do have a basis for believing in a fact of the matter in natural science. *The inability to warrant the assumption that there exists a meaning-in-itself is the key to Quine's arguments with regard both to the inscrutability thesis and the indeterminacy of translation of theoretical sentences.* (For details, see [35].)

The argument for (IT), then, is as follows:

- (A) Given Quine's holism, there is no making sense of the notion of truth or of the notion of meaning as applied to individual theoretical terms or sentences *apart* from one or another theory.
- (B) From within our "web of belief", we need to posit an intersubjectively available stimulus to which speakers or potential speakers

of a language are jointly capable of responding as a necessary condition of language learning. That is, in order to explain the social and public character of language, and the fact that it is teachable, we assume that there is a fact of the matter to which we respond and around which our use of language is initially coordinated. (The argument for this claim involves what I call the "paradox of language learning". See [35]: 355–363.)

- (C) Given that we must assume there is an intersubjectively available fact of the matter as a necessary condition of language learning, there is a warrant for a belief in objective evidence which arises from considerations *within* our language/theory.
- (D) Natural science is the best means for exploring the intersubjective/public domain. Hence, theories in natural science are about (have) a fact of the matter.
- (E) A belief in a fact of the matter for semantic theories is *not* warranted by appeal to any absolute standards (given (A)); moreover, such a belief is *not* warranted *within* the Quinean web as a necessary condition for there being a public and teachable language. (See [35]: 363–367.) We "misjudge the parallel" ([31]: 75) between the relativized notions of truth and of meaning if we think that the *internal* considerations which mandate attributing a fact of the matter to scientific theories also extend to semantic theories.
- (F) Since there is no warrant, either internal to theories or external to them, for attributing a fact of the matter to semantic theories, such theories are indeterminate, i.e., not ultimately about "facts" in the way we are entitled to assume that scientific theories are.

This argument proceeds without appeal to (UT), thus avoiding the pitfalls encountered in Putnam's (and Quine's other) formulation. In addition, it avoids Rorty's criticism because the argument is consistent with (DT). My analysis indicates how the requisite Quinean conception of evidence develops naturally from *within* a holistic view of language and knowledge. Rorty treats (DT) as if it were simply descriptive, as if it were the case that language and culture form a hermetic web. He does not consider the problems posed to those, e.g., infants, who have to break into this web of belief via something like "radical translation." (One problem with the Quinean image of the field linguist faced with an unknown language is that the problem is not radical enough, for both the intrepid linguist and his quarry have, *ex hypothesi*, fully developed languages. If we think instead of an infant faced with the task of making sense of utterances which themselves make sense only in the context of large, related blocks of a language, some of the philosophic consequences of (DT) become more plausible.)

Indeterminacy obtains due to an *inability* to warrant an assumption which is warrantable for the natural sciences. This (the warranting in the one case and not the other) is the explanation for the asymmetric relation between truth relative to natural science and meaning relative to semantic theory. We "misjudge the parallel" when we think that methodological similarities are all important, when we believe, like Rorty, that from within the web of belief, i.e., given (DT), all posits look alike, be they mental or physical, extensional or intensional.⁴

A confusion between Quine's Duhemian holism and (UT) is abetted by Quine's tendency to stress the methodological parallels between underdetermination in natural science and the indeterminacy of manuals of translation.⁵ The parallels *can* be illuminating if one attends to the reason why they *fail* at the critical point, viz., the point where we have a warrant for assuming that science appeals to (is about) facts despite its being underdetermined, but mistaken in extending this assumption to the case of translation. The explanation of this failure requires that we recognize that the very possibility of language as a social institution presupposes a public, non-verbal fact of the matter. *The objectivity of the natural sciences arises from the a priori need of there being some such non-verbal matter which gives language its all-important social dimension.* However, *there is no parallel guarantee for the case of semantic theory—because arguments for a semantic theory as a necessary condition of there being a language cannot be adduced, consistent with the Duhem premises.*

The parallel between science and semantics fails, then, for reasons related to (DT); we have reason to posit the existence of a subject matter of physical theory but not so for semantic theory. This is *not* to claim that science interprets, in Rorty's words, "nature's very own vocabulary". Nor is it assumed that Nature but not Man has its own determinate mode of being. All that is claimed, i.e., the basis for believing that there are facts of nature and not facts of meaning, is that such an assumption is necessary in order to explain the social (teachable) dimension of language. It is not illicit invoking of positivist dogma, but, rather, a sober thinking through of what is involved in a Duhemian view of language which leads Quine to conclude that there is no fact of the matter to semantic theory.

II

In turning to consider (IR) and (OR)—inscrutability of reference and ontological relativity—I shall argue that (IR) is to be derived from (DT) plus certain assumptions borrowed from Quine's account of scientific theories. Once I have outlined the main lines of argument for (IR), I defend the inference (g): IR → OR.

Quine classifies both (IT) and (OR) as types of "indeterminacy"; the former applies to theoretical sentences, the latter applies to the "apparatus of identity and individuation". ([27]: 45) Jointly, (IT) and (OR) complete Quine's attack on the museum myth. (IT) constitutes a rejection of the museum myth for intentional and intensional accounts of meaning because the argument shows that there is no warrant for positing meanings, unlike the considerations which warrant positing a fact of the matter to natural science. (IR), on the other hand, is meant to dispel any confidence in the belief that a determinate word-world relation can be established by appeal to a better scientific understanding of the world.

Even though (IR) is termed by Quine a form of indeterminacy, he also notes that (IR) and (IT) are *not* equivalent. For one, terms in observation sentences, should there be any, are held to be subject to complete inscrutability but to be only tangentially affected by sentence indeterminacy ([26]: 182). Second, the inscrutability of reference does, while sentence indeterminacy does not, function in the argument for (OR). These differences, I shall argue, are explained by the differing *scope* of (IT) and (IR). Inscrutability of reference has in its purview specific scientific theories, while sentence indeterminacy concerns our "theory of theorizing," concerns, that is, the nature and limits of all theoretical knowledge (given the Duhem premise, of course) ([34]). This is *not* to claim that the theses are restricted, (IT) to natural languages and (IR) to scientific discourse. For failure to find determinacy of reference in science implies a corresponding lack of determinacy for natural language. Parallel considerations hold for (IT) as applied to theoretical sentences in scientific theories. The non-equivalence is a function of the fact that (IR) concerns indeterminacy of the *extension* of terms while (IT) asserts the indeterminacy of their *intension*.

The argument for (IR) shares with the argument for (IT) the Duhem thesis.

- Premiss 1: Given (DT), there are no indubitable standards by which to settle questions about what a theory says there is.
 - Premiss 2: Relative to the best standards available at the present time—the sentences of scientific theory expressed in first-order logic—there is still no determinacy of reference, i.e., no restricting the models of a theory so expressed to some one domain.
 - Premiss 3: The determinacy of reference, i.e., a specification of the denotata of the terms of a language, is not made possible by extra-theoretic considerations (given 1) or by intratheoretic ones (given 2).
- ∴ Reference is indeterminate

In important respects, the problems with regard to the notion of reference parallel the problems which affect the notions of truth and of meaning. Each is said by Quine to make sense only relative to some given theory. Quine argues

that it is an error to think that a non-relativistic understanding is possible. Specifically, he argues that given the Duhem premise, one must forego the very intelligibility of the belief that there is some one "ideal" explication of these notions. Reasons given from *within* any theory beg the question (the question being just the adequacy of current theoretical discourse to talk of some correspondence between the theoretical picture and things-in-themselves). And if the Duhemian is right, *there are no other sorts of reasons to be offered*, i.e., there are no other standards to avail ourselves.

Any claim to knowledge of some necessary word-world correspondence is contravened by our failure, given (DT), to have non-contingent standards by which to arbitrate such claims ([24]: 327). Theories can remain "tied for first place" because ultimately there is no way to break the tie, no standard from which to judge knowledge claims *sub specie aeternitatis*. Even if the problem is narrowed to the case where there is only one theory, and it is confirmed by all possible evidence, the standards are those which the theory offers, and so the best available canons remain those contingently affirmed by that theory ([23]: 80–81). Thus, the philosophical puzzle concerning reference, given the Quinean view, is *not* to be understood in terms of our inability to construct an ideal scheme, for of no theory can we ascertain that it corresponds uniquely to the way The World (as Putnam has put it) is.

Quine's claim is that reference lacks determinacy—a fact of the matter—even when spoken of from *within* the framework of an accepted theory ([27]: 54). The claim that reference is inscrutable is *not* based on the possibility that there is some currently unknown or unknowable multiplicity of objects: "the inscrutability of reference is not the inscrutability of a fact; there is no fact of the matter" ([27]: 47). The inscrutability thesis has the "in principle" character of (IT), not the empirical-hypothetical character of the underdetermination thesis.

I claimed that (IR) proceeds from two premisses: (DT) plus certain aspects of Quine's concept of what constitutes a theory in natural science. Characteristically, for Quine, we find in the argument for (IR) an interplay of two senses of the term "theory" ([34]). The sense of "theory" relevant to (DT) is "theory" in Quine's most general sense of that term, where a person's "theory" includes "everything he accepts as true". It is the nature of theories, whether the "theory" in question be a natural language or a specialized scientific theory, to conform to (DT). However, Quine also speaks of theories in a narrower sense, one which includes only those theories which are properly part of Quine's conception of the natural sciences. For Quine, scientific theory will be expressed in first-order predicate logic—Quine calls this the "canonical idiom" for science ([31]: 158). Theories expressed in the canonical idiom are not free of the characteristics cited with regard to (DT). Rather, "the doctrine is only that such a canonical idiom can be abstracted and then adhered to in the state-

ment of one's scientific theory. The doctrine is that all traits of reality worthy of the name can be set down in an idiom of this austere form if in any idiom" ([31]: 228, and see generally Quine's remarks in [31]: 226–232).

The point, then, is that while (DT)—the first premiss of the argument we are considering—applies to theories in the extended sense, the second premiss—which includes as a constraint on theories that they be in canonical form—applies only to theories in a narrower sense, viz., those theories which Quine counts as a proper part of natural science. The argument, then, between the first premiss and the second, shifts the scope of the term "theory". That is *not* to suggest that the argument is fallacious; quite the contrary, I shall maintain the argument is sound. However, in order to understand why Quine claims there is no "fact of the matter" to reference, it must be understood that he is looking at theories in two senses, one general and the other more specific. At issue is the question of what standards a theory, *in either sense*, has to offer for the purpose of determining meaning, truth-value, or reference.

Having already argued, with regard to (DT), that there is no making sense of a theory-independent fact of the matter, premiss two must address the question: from within a narrowly scientific conception of reality, is reference determinate? Quine is not primarily concerned with the analysis of "ordinary language" because questions about reference are more precisely posed for scientific theories. However, in Quine's conception of a proper scientific theory, the ontological commitments will be expressed via the bound variables, i.e., within the theory in canonical form. *The question "Is reference determinate?" is then equivalent, for Quine, to the question "Will only one domain of objects satisfy our scientific account of reality?"*

Quine's approach to this question is illustrated by his discussion of the "thoughtful protosyntactian" ([27]: 41ff.). Let us ask, in particular, what are the well-formed formulas (wffs)? Given a specification of atomic formulae, a recursive definition of a wff can be specified in one of the usual ways. But it certainly does *not* make sense, *prior* to some specification of the atomic wffs and the recursive clauses, to ask which strings of symbols are wffs and which are not. More generally, Quine's point is that the intended interpretation of the laws is not the only interpretation of them. Quine applies this point to a discussion of number theory. "The subtle point is that any progression will serve as a version of number so long and only so long as we stick to one and the same progression . . . Arithmetic is, in this sense, all there is to number: there is no saying absolutely what the numbers are; there is only arithmetic" ([27]: 45).

How is the ontology of a theory in science ascertained? For Quine, a scientific theory, when turning seriously ontological, will be expressed in first order predicate logic. "To paraphrase a sentence into the canonical notation of quantification is, first and foremost, to make its ontic content explicit, quanti-

fiction being a device for talking in general of objects" ([31]: 242). A theory so regimented, i.e., translated into the notation of formal logic, is in canonical form. But there is an important, if ironic, philosophical consequence of so turning. We look to scientific theories thus expressed in order to clarify our ontological commitments. Lacking the regimented discourse, we cannot specify what our sayings commit us to. It is the sense in which the laws of our currently accepted scientific theory are constitutive of objects which provides the important link between the case of the protosyntactician or number theorist and more mundane discourse about the world. The irony is that the theory, once in canonical form, is *not* restricted to just those objects, which, when left unexplicated, ordinary discourse includes. There are, in short, other models, other interpretations, which the theory allows ([27]: 53).

Because the theory permits alternative models, there is no saying, *from the perspective of the canonical form of the theory*, that there exist only the objects of the "intended" interpretation. Yet from the perspective of noncanonical (ordinary) discourse, we cannot state what objects there *need* be, for arbitrating disputes about reality is a task for the scientist. The notion of ontological commitment is well defined for theories in canonical form; but given the corresponding theory form, this theory is indistinguishable from a theory with the same form but a different model. As we make precise the canonical form, we cut our tie to the "loosely referential" idiom of the ordinary language model ([19]: 195). *Reference is inscrutable—objectively indeterminate—because determinate judgements are possible only at the level of theory form and at this level many domains will do* (will provide a model for the theory form). Science begins with our everyday talk of objects; science refines this talk to the point, however, where the assumption that there are *just those* objects about which we initially talk itself becomes untenable ([27]: 54).

Note that the objective indeterminacy of choice of model is *not* due to (UT), for we are talking about some *one* theory, canonically expressed. *Although we look to natural science to clarify our notion of what an object is, what we learn is that we have no scientific sanctions for talking of just as we presently do.* This is not to say, of course, that current talk is "wrong," but, rather, the point is that such talk enjoys no privileged status. For not only is ontology open to future revision, but, here and now, there are various choices of universes by which to satisfy the bound variables of a regimented theory. We cannot, given arguments for (IT), assume that there is one correct translation (the intension is not fixed); *now we find that we cannot assume that there need be a reference relation as ordinarily understood in order to have a language.*

Growing up in a community of believers in stones and rabbits, we first learn 'there is' in connection with stony and rabbit sorts of stimulation. Eventually, after mastering the logic of quantifiers and identity or their vernacular equivalents, we invest

'there is' with a theoretical quality and are prepared, in an extremity, to warp it away from its paradigm cases. *This is why I have urged the inscrutability of reference; existence in its final estate is theoretical.* ([29]: 293)

The "final estate" of our explication of what there is is within science, canonically expressed. And it is here, where ontic commitments are explicit, that the notion of there being just one particular set of objects which makes our theory true ceases to have any support. To the extent that reference can be made sense of at all for ordinary language, the argument for the indeterminacy of reference within scientific theory then applies, *a fortiori*, to natural languages as well. Yet this relativising of ontologies to choice of models does not threaten us with incoherence in communication; one's choice will be governed by the usual pragmatic reflections and constraints.⁶ (Note Quine's distinction cited above between how we *first learn* to use "there is" and our later analysis of existence claims.)

In summary, then, we see that by accepting (DT), we forego appeal to any extra-theoretic standard. What then is the best intra-theoretic sense that can be made of reference? Here we turn to what Quine says about determinacy of reference from *within* scientific theories, canonically expressed. Quine argues that there is no fact of the matter because given a theory in canonical form, different models—and so different universes of discourses—are possible. A theory may be understood as quantifying over rabbits, undetached rabbit parts, and natural numbers with equal facility ([27]: 96). The conclusion, then, from these two premises is (IR)—there is no fact of the matter to reference. There is no reason to assume that there is some fixed and determinate relation either between natural language terms and the world (given DT) or between scientific terms and the world (given model theory). The mythic character of a belief in determinacy is made clear; the therapy, if successful, frees us from the compulsion to seek determinate links between words and the world. (For a related account of Quine's views here, see also [1].)

The argument for (IR), as outlined above, makes no appeal to (UT). Yet Davidson, for one, in his discussions of (IR) and (OR), assumes that (UT) is central to Quine's argument: "the argument for the inscrutability of reference has two steps. In the first step we recognize the empirical equivalence of alternative reference schemes" ([7]: 14). Field, for his part, better understands the import of the indeterminacy thesis ([9]: 202). I examine below Field's claim that Quine's account of reference cannot be "relativized" to a background language without committing Quine to the very "museum view" of meaning that Quine is otherwise concerned to reject ([9]: 207).

By way of approaching what Field has to say, let us consider an implication of the model-theoretic account of reference with which Quine leaves us. This model-theoretic account accepts as an ontology of a theory any universe which

provides a model for the theory. But this theoretical tolerance contrasts with my interpretation of my neighbor's remarks about what he sees scamper across his lawn, or for that matter, my interpretation of my own remarks. Quine's theory of reference does not seem to explain the practice of using language to make (seemingly) determinate remarks that are (often, it appears) well understood as determinate. In other words, how is reference, as a matter of fact, ever settled in the social (inter-subjective) realm ([27]: 47)? That is, one implication of Quine's position is that we should converse interchangeably about rabbits and, e.g., Gödel numbers. But we do not.

Quine's proposal for alleviating this strain within his account is found in his comparison of reference to relativity theory. What we need, and, fortunately, what we have, is a coordinate system by which to refer. There is no absolute scheme of reference, no absolute fact of the matter. But there does exist an *accepted* format for talking about the world ([27]: 48). How is the quandary, the tension between theory and practice, resolved by the principle of relativity, i.e., the assertion that our usual stock of terms and predicates constitutes a coordinate system by which to talk about the world? Quine's apparent answer is that we explain reference by "regress into" a background language—a metalanguage. And how do we come to determine the reference of terms in this metalanguage? An infinite regress seems to threaten. Quine responds to the threat by stating that "in practice of course we end the regress of coordinate systems by something like pointing. And in practice we end the regress of background languages, in discussions of reference, by acquiescing in our mother tongue and taking its words at face value" ([27]: 49–51). There is no saying, independently of one or another coordinate system, what it is we are referring to. We explain terms such as "refers to" by use of a background language; if the theories we are dealing with are formalized, this background language is the meta-language. Having "explained" the object language terms in this background language, the background language, can, in turn, itself be interpreted by appeal to another background language.

Ontology will, on Quine's account, be a function of our *chosen* universe of discourse, but there is more than one choice that can be made. "Which of these models is meant in a given actual theory cannot, of course, be guessed from the theory form . . . *Paraphrase in some antecedently familiar vocabulary, then, is our only recourse; and such is ontological relativity*" ([27]: 53–54, emphasis mine). The substance of ontological relativity is a formal point concerning scientific theories which are canonically expressed. We accepted the move to theories, so formulated, given the two premises of Quine's argument for (IR). In response to the question regarding how we ever, in the first place, learn to refer to rabbits and not Gödel numbers, i.e., in answer to the question why the problems which arise at the level of the theory form do *not*

ordinarily arise in our use of language, Quine states, as noted above, that we acquiesce in our mother tongue and take the words at "face value." (See also [29]: 293.) *We can take words at face value precisely because we learned to talk that way.* Reference becomes a word-word relation, a matter of how we were taught to use language. The reluctance of science to remain confined to the domain of objects of the natural language/theory first learned—to isolate one model as the intended one—is no obstacle to discourse normally understood, but only to the *naturalized* explication of language and the world. If all there is to reference is a translation which makes the best empirical sense possible of a person's utterances, then, indeed, "reference is nonsense except relative to a coordinate system" ([27]: 48). An infinite regress of coordinate systems is avoided by the fact that one of these "coordinate systems"—modes of translating referential terms etc.—is just the first language which we learn—our mother tongue. At the level of scientific theory, canonically expressed, no one model is privileged; *but we can always stop doing model theory when we want to.* If we distinguish the scientific study of reference from our initial use of language, then Quine's suggestion that we "acquiesce" in other mother tongues reflects what we, in fact, do. "Such talk of subordinate theories and their ontologies is meaningful, but only relative to the background theory with its own *primitively adopted* and ultimately inscrutable ontology" (27: 50–51, emphasis mine). We can fit new schemes to our present "background theory", but if we ask for a corresponding specification of our background theory, we can do no more, ultimately, than revert to our native tongue. Our native tongue does *not* possess some special determinacy other languages lack. What it does have is an accepted public use, and this "loosely referential" idiom is sufficient for ordinary communication.

Yet Quine's reliance on a background language is precisely what provokes Field's criticism. Field argues that Quine cannot resolve the tension between reference relative to a theory and reference in ordinary use by simply suggesting that we ignore the problem ([9]: 207). (IR) precludes making sense of the word-world relationship; relativizing the notion of reference will not, Field argues, solve the problem either. "It is clear, then, that Quine's indeterminacy thesis forces us to give up not only the absolute notions of denotation and signification, but even the relativized notions which Quine has proposed as surrogates for them" ([9]: 208–209). Thus there is no sense to be made of Quine's relativized account because, Field insists, we never arrive, on Quinean relativized account, at a connection between words and the world. The general complaint with regard to (IR), then, is this: "The suggestion that one's own language be accepted at face value is puzzling . . . Conspiring to ignore the fact of referential inscrutability will not make reference any clearer" ([38]: 55). Field sharpens this objection by suggesting an important disanalogy between

the relational account of position and velocity and Quine's proposed relational account of reference. The disanalogy, at the critical point, is that while we make relational sense of objects in space by appeal to the physical objects, we cannot make relational sense of reference by any analogous appeal, for Quine offers only accounts of translational relations between one or another *language*. ("[N]o one holds that physical objects are constituted, by the relations of words" ([9]: 208). The problem is, in other words, that Quine appears to provide a hierarchy of translation schemes, but no account as to how these schemes connect in some important way with the world ([9]: 208fn). The dilemma facing Quine, then, is as follows. If the unrelativized account of reference obtains in the home language, then Quine is wrong to claim that nowhere is there determinacy of reference; on the other hand, if reference is indeterminate even in the home language, then it seems as if the understanding of reference for any language, in including our mother tongue, is going to engender the threatened infinite regress.

However, if we return to consider the two premises of Quine's argument for (IR), the resolution to this apparent dilemma is forthcoming. Quine's appeal to an unrelativized notion of reference comes when Quine is talking about theories—here including natural language—*prior to* any formal analysis of these theories. In English, or whatever one's native language happens to be, "we can say in so many words that this is a formula and that a number, this a rabbit and that a rabbit part, this and that the same rabbit, and this and that different parts. *In just those words*" ([27]: 48). Of course, when we talk casually, no problems of the type imagined above ordinarily arise. And this is the way which people learn to talk, i.e., the initial sense of "there is". However, when we begin to ask what there really is, more serious methods for taking stock of the world than ordinary discourse offers are developed. The more serious criteria—for Quine, first-order logic and physics—are not bound by or limited to "just those words" which constitute our initial and usual way of conversing about the world. What is confusing about Quine's account, i.e., the point overlooked by his critics, is the fact that the Quinean epistemologist begins *in medias res*; we begin with a language which we do, as a matter of fact, use to communicate. What actually divides Field's view and Quine's is the question of how loosely tied to the world a language can be ([10]: 399ff.). For Quine, the world impinges only at the periphery of a language/theory, via observation sentences. The need to incorporate such sentences is a basic constraint on theory-building. The constitutive process—the theory-building—is constrained by experience. One result is an (initially) unrelativized way of talking about the world. Given (DT), it follows that this way of talking is not determinate. However, it takes further reflection on the implications of the more refined referential idiom (the canonical idiom) to make apparent (IR) and, finally, (OR). Hence, Field is mistaken when he insists that Quine's appeal to the home lan-

guage commits him to some form of semantic determinacy. What it *does* commit Quine to is the claim that we develop our notions of reference and truth based on epistemic relations which are weaker even than Field's notion of "partial signification" ([9]: 204ff).

The foregoing discussion holds the answer, I suggest, to Davidson's difficulty about the inference from (IR) to (OR). Davidson believes that (IR) is true, but, he admits, "it is ontological relativity that I do not understand" ([8]: 11). His problem is that he, like Field, does not see how the relativizing of ontology ever allows us to make sense of reference. "The fixing of reference and ontology for the object language has been done on the basis of an arbitrary choice; but the arbitrary choice succeeds in doing this only if the relativized 'refers' of the metalanguage has somehow been nailed down. And this is what we argued cannot be done for any language" ([8]: 11). However, by keeping in mind Quine's two uses of the term "theory" then Davidson's difficulty disappears. For acknowledging the fact that our usual terms and predicates allow for communication does *not* beg the issues raised when we take the measure of this discourse by other, more scientific and formal, standards.

Quine has elaborated on the respects in which the very notion of a physical object may vanish once we take science seriously (e.g., [27]: 91–113; [30]: 303–310). Our initial theory of the world, our mother tongue—the language we first learn to use—embodies whatever connection with shared experience makes this language learnable and teachable in the first place. Given that we accept the Duhemian account of language and of science, we can never make better sense of this language than its internal resources allow. Ontology becomes relativized because as the construction of models is not, in the end, constrained by any commitment to the objects of ordinary discourse.

The inscrutability of reference, I have argued, arises when we look to *within* the theory to find a basis—a foundation—for semantic determinacy. (DT) functions to preclude our establishing some determinate relation between the way we naturally talk about the world and the way the world is. Science, canonically construed, fails to support the assumption that reference can be understood by appeal to the "concrete denoted object", because there is no license for beliefs in such unique objects. Ironically the multiplicity of interpretations countenanced by science so construed is broken by abandoning science for our mother tongue. Reference here, in turn, obtains by whatever factors allow the language to be taught *in the first place*. What is discovered is that when we try to make scientific sense of what there was "in the first place" (and there is, of course, an intimate relation between the stimulus conditions which make language teachable and the belief that science does have access to a fact of the matter), no unique origin is locatable. For, as a matter of fact, the stimuli to which we are individually exposed differ, in some respect, from those which another receives. We have only the general guarantee that there

must be non-verbal stimulations to which speakers are jointly exposed because otherwise, given the Duhemian view of language, there would seem to be no teaching of language possible at all. In light of this apparent "condition for the possibility" of language, we can, perhaps, understand Quine's remark that "both truth and ontology may in a rather clear and even tolerant sense be said to belong to transcendental metaphysics" ([27]: 68). They belong, that is, to the study of the characteristic forms of human judgement. But what determines the form our judgments take are not the stimulations-in-themselves.

III

While the arguments for (IT) and for (IR) share a common premiss, viz., (DT), each argument requires different subsidiary premises. In the case of the argument for (IT), the subsidiary premises construe the notion of "evidence" pragmatically and behavioristically (what Rorty has called "epistemological behaviorism"). And in light of the paradox of language learning, we assume a fact of the matter to scientific inquiry. There exists no warrant for any such assumption in the case of semantic theory. Hence, there is indeterminacy of translation of theoretical sentences. The argument for (IR) involves Quine's view of the proper form of scientific theory; the conclusion—(IR)—states, in effect, that no matter how we understand the term "theory", i.e., either generally so as to include natural language or formally so as to include only canonically expressed theories, the available standards fail to guarantee any determinate word-world relationship. Appeal to natural languages is circular; appeal to formal languages encounters the possibility of alternate models. There is no saying from within, as Quine insists, that only one of these universes is the "right" one. (OR), then, is just a *formal* consequence of the view of theories taken in arguing for (IR). Together, the arguments for (IT) and (IR) count against believing in the determinacy of a term's intension or extension. The mythic quality of the museum view of meaning is that there are neither facts which support the museum view nor any fact which only the museum view is needed to support.

What I have urged here is a general reading of Quine's epistemological position which orders his theses in terms of their philosophical importance—in particular, shows the central importance of Quine's Duhemian views to his general notion of indeterminacy—and traces their various interrelations. Second, and more generally, however, I have tried to show that Quine has presented a very powerful set of arguments for an extremely constricted conception of philosophy.

If successful, I take the arguments of this paper to establish that the central thrust of Quine's epistemology is to determine the *inherent* limits of such theo-

izing. Quine has delineated the bounds of possible knowledge; this is, I suggest, the prime and fundamental import of his discussions of indeterminacy in its various forms. Even when Quine cautiously, and rather late in his philosophical writings, turns to the question of the possible details of a naturalized epistemology, he cautions his reader to remember that "I have asked how our ontological notions are *possible*, not why they are *right*. Even in the case of bodies, these prototypical objects of reference, I offered no hope of justification" ([28]: 136 emphasis mine). (DT) imposes severe restraints on what can be said to be prior to, or as necessary for, there being a language. The "transcendental condition" comes to no more, on Quine's analysis, than the claim that if language is to be socially transmitted, then some sentences must function as observation sentences.

Most of what we would like to ask with regard to the semantics of natural language becomes a type of transcendent inquiry. My use of the terms "transcendent" and "transcendental" alludes to a Kantian strain in Quine's writings which others have noted ([6]; [15]; [39]; [40]). However, insofar as there are parallels to be noted between Kant and Quine, the Kantian aspects of Quine's thought are, I suggest, most akin to those which prompted Kant's contemporary Moses Mendelssohn to call Kant "the All-destroyer" ([37]: 58). For Quine has not articulated a metaphysics of experience, but, in essence, a counsel of despair. The more appropriate historical analogue, as Quine himself believes, is Hume. For what Hume argued with regard to knowledge of causal relations, Quine maintains concerning knowledge of semantic notions.

The expositors of the conventional wisdom on Quine err not just in the particulars of their analysis, but also in construing Quine as providing yet another version of the answers offered by a particular tradition ("empiricism") to a traditional set of problems about the origins of knowledge and the verification of statements. Quine's holism engenders a rather different problematic for philosophic inquiry, i.e., a problematic not defined by disputes between realists and idealists, by controversies over correspondence theories of truth and coherence-theoretic accounts. Quine, in his Herculean effort to cleanse empiricism of its dogmas, has transformed it. His *immanent* account of truth, meaning, and reference offers no special insight into any word-world relationship. His empiricism results from considering the necessary conditions for having a language like ours. The analysis of knowledge which Quine offers, on my reading, is therapeutic, for properly understood, it undoes the compulsion to ask about how language "corresponds to" or "pictures" the world.

Quine, as his essay "Epistemology Naturalized" [27] makes plain, strongly identifies himself with the empiricist tradition in philosophy. And, by and large, others have been content to read him in this way. What has been missed, and what I have in this essay attempted to show, is just how radical a reformulation of philosophy is implied by Quine's holism. Quine, in seeking to

preserve the Humean heritage, leaves us unable to make sense of any descendants of "unvarnished" evidence. It is left to us to assess the dimensions and the implications of this transformation. I would suggest that Quine, like Hegel or Aristotle, stands at the culmination of a particular tradition; put more prosaically, I do not see that "empiricism" has anywhere left to go.

The problematic which Quine bequeaths us is to determine how knowledge is to be analyzed given (DT). Having spiked the museum myth, to what sort of explanation of human knowledge are we to turn? An answer, urged on us by Rorty (who has pondered the significance of (DT) more than any other serious student of Quine's thought), is that the "unit of empirical significance" be larger than Quine allows, viz., be taken to the whole of culture (see, e.g., [33]: 201). But Rorty is so impressed by the holist side of Quine's thought that Rorty's therapy calls for the destruction of the science/non-science distinction. "In the view that I am recommending, we might . . . view morality, physics, and psychology as equally 'objective'" ([33]: 335). This is in explicit contrast, of course, to Quine's own adamant repudiation of the *Geisteswissenschaften* (see, for example, [31]: 219–221). Whether truth (and whatever else we deem important) is to be found in edifying conversation, or in the laboratory, or somewhere else again, and the role of philosophy in all of this, remains a matter of debate. Quine's legacy is at least this: that he has forced a fundamental discussion of method upon us.

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NOTES

1. The locus classicus is Harman [12].
2. Rorty's admiration for Quine is based on Quine's espousal of (DT) and Quine's critique of traditional epistemology (or, at least, certain dogmas thereof). Rorty's own position is that the museum myth is just part of the baggage of a certain philosophic tradition, and that once we abandon the foundationalist aspirations of this tradition, the myth will die from neglect. Consequently, Rorty sees no need to assert (IT) since his strategy for spiking the myth relies on a different therapeutic approach than Quine's. However, Rorty cannot be neutral with regard to (IT), for (IT), as Rorty understands it, requires us to distinguish between the *Geisteswissenschaften* and the *Naturwissenschaften*. But, Rorty argues, this distinction is untenable given (DT) [33]. "Edifying" philosophy grants no privileged place to any one voice in the conversation of humanity. While I do not argue the issue here, I would maintain, against Rorty, that (IT) entails only what Rorty terms "epistemological behaviorism" ([33], p. 174). The real issue, I suggest, is whether epistemological behaviorism, which Rorty endorses, is consistent with his casual attitude toward the notion of objectivity.
3. The primacy of the social/public criterion for determining what counts as objective evidence is a central, but, I suggest, much neglected aspect of Quine's epistemology. See [31]: ix; [19]: 177, 179; [23]: 74; [22]: 88–89.
4. Quine's concern to repudiate Berkeleyian-style skepticism and so to assert that the existence of the external world is a warranted assumption is evident throughout his writings. E.g., [31]: 1–2; [21]: 2; [28]: 1–4.
5. Since the question of how to derive (IT) from (UT) has been a focus of discussion for so long, some explanation is owed with regard to how this came to be. Of course, Quine endorses just the inference I claim we ought to reject. But this fact does not explain how Quine came to offer *two different* arguments for (IT), one proceeding from (DT) and the other from (UT). My suggestion as to why there are two different arguments and why one works and the other does not is as follows: Quine early on confused the relation of (DT) and (UT), a confusion expressed in his asserting both (e) $DT \rightarrow UT$ and (f) $DT \not\rightarrow UT$. Ultimately, Quine endorses only (f). However, I suggest, Quine never perceived that he entangled in his writings a thesis—(IT)—which is properly only a consequence of (DT) with what is implied by (UT).
There is no denying that Quine sometimes states that (UT) is a reason for concluding (IT) (e.g., [26]: 181, 183). Yet to accept what Quine says here is to overlook the fact that it is inconsistent with the distinction between (UT) and (IT). For Quine asserts that if we ignore (UT), indeterminacy persists ([29]: 303). If (UT) is critical for the argument for sentence indeterminacy, then settling underdetermination, even if only by fiat, should have some consequence for (IT); but it does not.
How do I account for the alleged confusion? Confusion arises because Quine deploys (DT) as a key premise in support of both (UT) and (IT). My suggestion, in short,

is that since Quine does not clearly distinguish in his early writings between (DT) and (UT), he assumes that whatever (DT) implies, (UT) does also. And while he later concludes that (DT) and (UT) are not equivalent, Quine does not notice that (IT) is properly a consequence only of (DT).

How Quine's views change, and the import of this change for the issue at hand, is seen by comparing an argument first formulated in "Two Dogmas of Empiricism" and later repeated, to a different effect, in "Epistemology Naturalized" (Compare [20]: 37–42 and [27]: 81). In each case the argument takes as a premiss a version of the verificationist theory of meaning which Quine imputes to Peirce, i.e., the view that the meaning of a sentence is the difference its truth would make to experience ([27]: 80; [20]: 37). In developing his counter-suggestion to the dogma of verification, Quine conjoins the "Peirce premiss" with a position he attributes to Duhem: "our statements about the external world face the tribunal of sense experience not individually but only as a corporate body" ([20]: 41). Yet a version of (DT) is stated as follows: "But the total field is so *underdetermined* by its boundary conditions, experience, that there is much latitude of choice as to what statements to reevaluate in light of any single contrary experience" ([20]: 42–43, emphasis mine). The Duhemian view of theories is, in this key early passage, *identified with* underdetermination.

When Quine returns to the explicit premises in question almost two decades later, however, it is the relation of (DT) to (IT) which he stresses ([27]: 80–81). The identical reasons—(DT) plus the Peirce premiss—which earlier formed his account of underdetermination are now adduced as the grounds for sentence indeterminacy. This would account for the apparent parallels in Quine's discussion of (UT) and (IT). However, it is important to note, (DT) and (UT) are, subsequent to "Two Dogmas," shown by Quine to be importantly different. Quine now believes that (DT) and (UT) are not equivalent and that (DT) does not entail (UT). Thus, in those cases where Quine cites (UT) in support of (IT), I suggest that he does so only because he has confused the logical consequences of (DT) and (UT).

What, then, is the relation of (DT) and (UT)? Quine, in recent writings, warns against identifying them ([24]: 313). As Quine now sees the matter, underdetermination does *not* concern the intra-theoretic dependence of terms and sentences, as does (DT), but emphasizes the methodological/logical problem of the possible compatibility of a set of observations with theories which are, in turn, not compatible with one another. (DT) emphasizes that it is laws taken in conjunction which imply observable consequences; (UT) asserts that the evidence implies theories in alternation ([25]: 220). (DT) is concerned with the internal relation of theoretical terms and sentences; (UT) is concerned with the relation of distinct theories compatible with the same body of evidence.

What is philosophically significant about (DT) on the foregoing interpretation is that it is true of each and every theory; even if there is only one theory, the sentences of that theory would, on Quine's view, have their meaning and their evidence only as a related group. In order for there to be a "genuine" case of (UT), however, two conditions must obtain: a) there be at least two empirically equivalent theories, and b) these theories be logically incompatible and cannot be made compatible by any reconstrual of their predicates ([24]: 323).

The Duhem thesis is consistent with either the truth or the falsity of (UT). (DT) is a thesis about the truth conditions for individual theoretical statements. (UT) fails if it is the case that theories which are equivalent empirically are not, as a matter of fact, logically incompatible ([24]: 322–23). But the failure of (UT) does not affect the point about the truth conditions for individual theoretical statements. For in the absence of a "first philosophy", the only standard of truth for a single theoretical sentence is that

which its containing theory offers, and that is, of course, just what a Duhemian claims. Since (DT) can be true and (UT) false, the theses are obviously not equivalent and (DT) does not entail (UT).

At best, Quine believes, (DT) makes plausible the claim that (UT) is true ([24], 313). Indeed, Quine now seems quite uncertain about whether or not there are any compelling reasons for believing (UT) to be true ([22]: 80). (UT) is best understood, perhaps, as "a thesis about the world" ([24]: 324), i.e., a statement about the nature of our most current explanation of the world.

6. On the role of pragmatic considerations in Quine's account of reference, see Thompson [39].

REPLY TO PAUL A. ROTH

Early in his essay Roth methodically sets forth seven relations (a)–(g) of implication, non-implication, or inequivalence that I have purportedly affirmed between various theses. He gets some right and some wrong.

(a) Holism and verificationism together imply the indeterminacy of translation. Right.

(b) Under-determination of science and inscrutability of reference each imply indeterminacy of translation. Partly right. Inscrutability of reference implies indeterminacy of translation of terms, obviously, but not of sentences, as remarked in the very place that he cites in support of (b).

(c) Under-determination of science does not imply indeterminacy of translation. This one startles me, for, as he notes, it contradicts (b). Evidently it did not startle him, or he might have looked twice at his purported source, my "Comment on Newton-Smith". I wrote there that the implication in question does not hold by virtue of simple instantiation but does hold by virtue of a more devious argument, which I there cited—an argument that Roth himself cited in support of (b).

(d)–(e) Under-determination of science is not equivalent to indeterminacy of translation but is implied by holism. Right.

(f) Under-determination of science is not implied by holism. Another shock, contradicting (e). He cites two places in my writings to support this startling ascription, and I cannot see why he thinks either reference supports it. So much for the contradictions.

(g) The inscrutability of reference implies ontological relativity. I have no quarrel here, but I do not see what difference there is between the two.

Farther along he seems to ascribe to me a thesis (F) to the effect that "there is no warrant . . . for attributing a fact of the matter to semantic theories." On the contrary, the conformity of a translation manual to speech dispositions

is decidedly a matter of fact. It is only the choice between certain rival manuals that lacks factuality.

A major thesis of Roth's essay is that the indeterminacy of translation is best argued from a somewhat Duhemian holism and a somewhat Peircean verificationism—hence (a) above—rather than from the under-determination of physical theories. I quite agree. I took line (a) in *Ontological Relativity and Other Essays*, page 80, as Roth observes, and I remarked the inferiority of the other approach in my "Comment on Newton-Smith".

The last half of Roth's essay is concerned mostly with the inscrutability of reference. We must remember that the present volume languished for well over a dozen years; the essays are thus not uniformly recent, and Roth's evidently antedated *Theories and Things*. He had to cope with the murkiness of my original "Ontological Relativity". In that essay I indeed allotted six pages to proxy functions, but it was only later that I appreciated how fully they of themselves support the thesis of inscrutability of reference and how much clearer that thesis becomes when propounded independently of the indeterminacy of translation. The brain-cudgeling that Roth records in the last half of his essay could have been largely spared him if history had vouchsafed him a look at the opening essay in *Theories and Things*.

One murky matter that this later rendering clears up is the status of the background language. Another is the status of reference in the home language. Another is the nature of the relativity: What is ontology relative to? Within the home language, reference is best seen (I now hold) as unproblematic but trivial, on a par with Tarski's truth paradigm. Thus 'London' designates London (whatever *that* is) and 'rabbit' denotes the rabbits (whatever *they* are). Inscrutability of reference emerges only in translation. When we say that 'Londres' designates London and that 'lapin' denotes the rabbits, this simply means that we are translating 'Londres' as 'London' and 'lapin' as 'rabbit'. Ontological relativity is the relativity of ontological ascriptions to a translation manual. What I once called the background language is just the language into which we are translating.

Clarity this supervenes, but triviality does not. Proxy functions retain their punch. Ontology can be recast by reinterpretation of predicates without prejudice to truth values or observational support.

Finally some comments on scattered points. Roth's remarks on recursion, after the middle of his essay, suggest that he thinks the inscrutability of reference in number theory and protosyntax issues from an inadequacy on the part of recursive definition. On the contrary, there is no slippage there; any indefiniteness must lurk in the base term of the recursion or in the step relation.

In an ensuing discussion he represents inscrutability of reference as arising from the regimentation of language in predicate logic and the consequent identification of ontology with the values of the variables. On the contrary, ordinary

language with its relative clauses and pronouns presents the same situation; the regimentation serves only to clarify and simplify and to bring reference explicitly to the forefront. Proxy functions have full access to ordinary language. Roth's sense of the referential scrutability and ontological absoluteness of our naive and unregimented language is due, I suspect, to his thinking of terms rather than one-word sentences at the observational level. In my recent "Ontology and Ideology Revisited" I have suggested an accommodation of such intuitions.

"The Quinean epistemologist," he writes at a later point, "begins *in medias res*." Here he is very nearly right. The Quinean epistemologist plunges *in medias res*; he begins *in mediis rebus*.

W. V. Q.

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