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HOLISM ABOUT MEANING AND ABOUT EVIDENCE:  
IN DEFENCE OF W. V. QUINE

**ABSTRACT.** Holistic claims about evidence are a commonplace in the philosophy of science; holistic claims about meaning are a commonplace in the philosophy of language. W. V. Quine has advocated both types of holism, and argued for an intimate link between the two. Semantic holism may be inferred from the conjunction of confirmation holism and verificationism, he maintains. But in their recent book *Holism: a Shopper's Guide*, Jerry Fodor and Ernest Lepore (1992) claim that this inference is fallacious. In what follows, I defend Quine's argument for semantic holism from Fodor and Lepore's multi-pronged attack.

1. INTRODUCTION

My concern in this paper is with the relation between holism about *meaning* (semantic holism), and holism about *evidence* (confirmation holism). Confirmation holism is a familiar doctrine in the philosophy of science – it is the idea, stemming from Duhem, that the constituent hypotheses of a theory are not individually responsible to empirical evidence, but only when taken together as a whole. Evidential responsiveness cannot be parcelled out among the constituent hypotheses, on this view, so the confirmation of any individual hypothesis derives from its role in the overall theory. Semantic holism is a familiar doctrine in the philosophy of language – it is the idea, often associated with 'conceptual role semantics', that linguistic content cannot be parcelled out among the individual sentences of a language. The meaning of any individual sentence, on this view, derives from its role in the language. Related holistic theses about the contents of propositional attitudes can often be found in the company of semantic holism.

Is there any relation between semantic holism and confirmation holism? That depends, clearly, on whether there is any relation between meaning and evidence. One plausible-looking suggestion is this: given a verificationist starting point, confirmation holism entails semantic holism. For the verificationist identifies semantic relations with relations of evidential support, or confirmation: the meaning of a statement, he holds, is determined



by the experiences that would tend to confirm it. So if confirmation is holistic and verificationism is true, meaning would appear to be holistic too. In a number of publications, W. V. Quine has argued for a version of semantic holism in precisely this way.<sup>1</sup> However, in their recent book *Holism: A Shopper's Guide*, Jerry Fodor and Ernest Lepore (1992) launch a forceful attack on Quine's attempt to infer semantic holism from the conjunction of confirmation holism and verificationism. In the course of this attack, they claim to have shown that Quine's *Two Dogmas of Empiricism* is 'deeply flawed' (p. 56). My aim in this paper is to defend Quine's argument for semantic holism from Fodor and Lepore's criticisms.

In saying I want to defend Quine's argument for semantic holism, I mean that I want to defend the *validity* of the argument, not its soundness. That is to say, I will argue that confirmation holism and verificationism, suitably understood, do indeed entail semantic holism. But I will not try to defend either confirmation holism or verificationism. This may look like a modest brief, for to some it may simply seem obvious that Quine's argument is valid, and thus that the only interesting question concerns the truth of its premises. Indeed this was how things seemed to Fodor himself, in his paper 'Banish disContent' (1986). In that paper, Fodor wrote "you can infer a holistic account of meaning from a holistic account of confirmation if like Quine ... you happen to be a verificationist. For a verificationist, the meaning of an expression is identified with the means of its confirmation, so if the latter is holistic it follows that the former must be too" (p. 437n). However, in the six years between 'Banish disContent' and the book co-authored with Lepore, Fodor appears to have undergone a dramatic change of mind. For in their book, Fodor and Lepore argue, at great length, that Quine's inference from confirmation holism and verificationism to semantic holism is actually *invalid*. Fodor and Lepore have no quarrel with confirmation holism, and they concede verificationism for the sake of argument. Even so, they argue, semantic holism does not follow. "Appearances to the contrary notwithstanding", they write, "even the conjunction of confirmation holism and verificationism is compatible with the denial of semantic holism" (p. 43). It is this contention that I shall contest below. But first, some preliminary clarifications are needed.

## 2. SEMANTIC HOLISM: ITS FORMULATION AND MODAL STATUS

One of the merits of Fodor and Lepore's discussion is that they define what they mean by semantic holism very clearly, avoiding the usual metaphorical explanations in terms of 'webs', 'networks' etc. Properties, according to Fodor and Lepore, can be classified as *atomic*, *anatomic*, or *holistic*.

Atomic properties are ones which can in principle be borne by just one thing. Anatomic properties, by contrast, cannot be singly instantiated. An example of an anatomic property is ‘being a sibling’: if anyone bears this property, then at least one other person does too. Holistic properties are ones that are very anatomic: if anything has them, lots of other things must have them too. Semantic holism, for Fodor and Lepore, is the doctrine that *generic semantic properties*, e.g. ‘expressing a proposition’, ‘having a meaning’, ‘having intentional content’ etc. are holistic properties: they must in principle be multiply instantiated, if they have bearers at all. If semantic holism in this sense is true, it follows that there cannot be a language with just one meaningful expression, nor a mind with just one belief.

This is a clear definition of semantic holism; but there is reason to doubt whether it actually corresponds to any doctrine of Quine’s. Fodor and Lepore’s semantic holism is an explicitly *modal* doctrine – as they say, it is a claim about the “metaphysically necessary conditions for something to have meaning or content” (p. 1). But Quine’s meaning holism, as I understand it, is a claim about actual natural languages, roughly the claim that the sentences of natural languages do not have separable meanings, and is certainly not a claim about all possible languages, nor therefore about the metaphysically necessary conditions for having content. Indeed, Quine’s moderation of his holism in *Word and Object*, by the introduction of a class of observation sentences explicitly exempt from his holistic strictures, suggests an account of what a non-holistic language would have to look like – it would have to contain only observation sentences. The expressive power of such a language would no doubt be very limited, but there is no reason to think, and Quine makes no suggestion, that it represents a conceptual impossibility. The point is just that natural languages aren’t like that.

That Quine’s semantic holism concerns actual natural languages is evident from his reply to a paper of Robert Nozick (Nozick (1986), Quine (1986b)). Nozick had raised the question of whether a ‘non-Duhemian language’, one whose individual sentences faced the tribunal of experience individually, not collectively, would be possible for us. This is the question of the modal status of *confirmation* holism. In reply, Quine insisted that a ‘non-Duhemian language’ was possible – his observation sentences already constituted a rudimentary ‘non-Duhemian language’, he said, and one which “admits of ‘non-Duhemian’ enlargement . . . without clear limits” (p. 364). So Quine thinks that confirmation holism is merely a contingent truth about the actual languages we use to describe the world. Since he thinks that semantic holism is true because, and to the extent that, confirmation holism is true, it follows that his semantic holism is a

contingent claim as well. Quine would say that semantic holism is *not* true of the ‘non-Duhemian languages’ whose possibility he admits. So Quine’s semantic holism is clearly *not* a claim about the ‘metaphysically necessary conditions for having meaning or content’, and cannot therefore be equated with semantic holism as defined by Fodor and Lepore.

Does it follow that Fodor and Lepore’s argument against Quine misses its target completely? Fortunately, it does not. For there *is* a relation between semantic holism as espoused by Quine and as defined by Fodor and Lepore. Quine usually formulates his semantic holism by saying that the ‘unit of significance’ is not the individual sentence, but the theory, or some suitably large cluster of sentences. The meaning of any individual non-observational sentence, on Quine’s picture, derives from the contribution it makes to the whole theory, and so depends on its interconnections with many other sentences.<sup>2</sup> Now suppose *S* is a non-observational sentence, that is a constituent member of a theory *T*. Quine holds that the meaning of *S* depends on its interconnections with the other members of *T*. Alter those interconnections, and you alter the meaning of *S*. So if a theory (or language) contained *only* the sentence *S*, *S* would not have the meaning it does in *T*. So no theory (or language) could contain just one expression which means what *S* means in *T*. Note that this conclusion is an instance of Fodor and Lepore’s semantic holism, applied to *S*. Therefore, though Fodor and Lepore’s definition of semantic holism yields a thesis that is certainly not Quine’s, as we have seen, it looks as though *any individual sentences which are instances of Quine’s holism will also constitute instances of Fodor and Lepore’s semantic holism*. So the basic concept of semantic holism is common to Quine and to Fodor and Lepore; the difference is just that, according to Quine, some sentences of actual natural languages instantiate the concept, while according to Fodor and Lepore’s definition, all possible sentences instantiate the concept.

Despite this discrepancy in modal status, the fact that the basic concept of semantic holism is common to both parties is sufficient to ensure that Fodor and Lepore are not guilty of attacking a strawman. For as it happens, none of Fodor and Lepore’s objections to Quine’s argument depends essentially on their misconstruing the modal force of Quine’s holism. Their objections to the inference from confirmation holism plus verificationism to semantic holism, if correct, would apply equally, whether both holisms are construed as claims about actual natural languages, or about all metaphysically possible languages.

## 3. FODOR AND LEPORE'S RECONSTRUCTION OF QUINE'S ARGUMENT

Fodor and Lepore focus on Quine's case for semantic holism as represented in *Two Dogmas of Empiricism*.<sup>3</sup> Their strategy is to concede to Quine virtually all of his major claims in *Two Dogmas*, but to argue that semantic holism does not follow from them. Some of these claims they concede for the sake of argument; others because they really believe them. Verificationism, or 'Peirce's thesis' as they call it, they accept strictly for the sake of argument. Holism about confirmation, or the 'Quine-Duhem thesis', they accept because they believe it. Furthermore, they accept and really believe that Quine showed the analytic-synthetic distinction to be untenable. But strangely, they represent Quine as arguing that rejection of the analytic/synthetic distinction *entails* confirmation holism: "the moral of the first part of 'Two Dogmas' is clear; the consequence of assuming that there is no analytic/synthetic distinction is confirmation holism" (p. 38). They then grant this point to Quine too. But this was *not* Quine's point. Quine did not argue that rejecting the analytic/synthetic distinction leads to confirmation holism; rather, he argued that the direction of implication went the other way. Before turning to the details of Fodor and Lepore's critique, this must be cleared up.

The issue of confirmation holism arose in *Two Dogmas* as follows. Quine had established that the concept of analyticity was interdefinable with the concept of linguistic synonymy, so a satisfactory account of synonymy would yield a satisfactory account of analyticity. He then looked at a number of explanations of synonymy and found them wanting. Finally, he suggested trying to base an account of synonymy on the verification theory of meaning. Statements would qualify as synonymous, on this theory, if the experiences that confirmed them were the same. But Quine then argued that individual statements do not usually *have* their own fund of confirming experiences, because confirmation is holistic. Thus the verification theory cannot yield an adequate account of sentential synonymy, nor therefore of analyticity. So Quine did not argue, as Fodor and Lepore think, from 'no analytic/synthetic', to 'confirmation is holistic'. Rather, he argued that *because* confirmation is holistic, the verification theory of meaning cannot be invoked to salvage the concept of synonymy, nor therefore the analytic-synthetic distinction.

Fodor and Lepore construct an argument 'in the spirit of Two Dogmas', which yields the holistic conclusion that no theory (or language, or belief system) could contain only the statement that it is raining. They then argue that the argument fails. The argument, which I call argument TD<sub>FL</sub> (for Two Dogmas à la Fodor & Lepore) goes like this:

PREMISE 1. The statement that it's raining ( $R$ ) is partially confirmed by the statement that the streets are wet ( $S$ ) (Meteorological platitude).

PREMISE 2. Confirmation relations [among statements] are *ipso facto* semantic (Peirce's thesis).

PREMISE 3. Statements are individuated by their semantic properties; or ... they have their semantic properties essentially (Truism).

LEMMA.  $R$  is individuated... by its relation to  $S$ .

CONCLUSION. Any theory that contains  $R$  must contain  $S$ . (Therefore) no theory could contain just  $R$  (p. 44).

Argument  $TD_{FL}$  is clearly at some remove from the letter of *Two Dogmas*, so it is worth commenting on a few points:

(i) Premise 1 is a specific instance of the Quine–Duhem thesis on one of its construals, namely that every statement partially determines the level of confirmation of every other. This is not a construal of the Quine–Duhem thesis that Quine himself favours, but nothing essential hangs on that. (Fodor and Lepore think that the Quine–Duhem thesis is actually a “galaxy of non-equivalent but closely interrelated doctrines” (p. 9), of which the construal in question is one. This claim is surely correct.)

(ii) Note that confirmation, in argument  $TD_{FL}$ , appears as a relation between pairs of statements. Quine in *Two Dogmas*, on the other hand, talks about confirmation as a relation between statements and experiences. However this discrepancy is resolved by Quine's tendency, in later writings, to speak of *observation sentences* in place of experiences, as the entities entering into confirmation relations with non-observation sentences.

(iii) Fodor and Lepore say that argument  $TD_{FL}$  is independent of the choice of example, since the Quine–Duhem thesis says that the confirmation of a large number of sentences is holistic. Their choice of example is in fact very unfortunate, since both ‘it is raining’ and ‘the streets are wet’ are observation sentences for Quine, and hence exempt from his confirmation holism. But presumably the argument, if successful, could be run using two theoretical sentences, e.g. ‘electrons are negatively charged’ and ‘electrons have negligible mass’.

(iv) Premise 3, the supposed truism that statements are individuated by their semantic properties and thus bear their semantic properties essentially, corresponds to *nothing* that Quine says, in *Two Dogmas* or elsewhere. It is entirely an artefact of Fodor and Lepore's reconstruction of

Quine's argument. As we shall see, given Quine's use of 'statement', Premise 3 is not even true, let alone truistic.

#### 4. FODOR AND LEPORE'S OBJECTION TO ARGUMENT TD<sub>FL</sub>

Fodor and Lepore's contention is this: argument TD<sub>FL</sub> is invalid. It retains the appearance of validity, they claim, because Quine is "very careful not to say what a statement is" (p. 44) There are only three options, they say: statements are either formulas, or propositions, or 'formulas together with their conditions of semantic evaluation'. However, none of these options is satisfactory, they argue: taking 'statement' as formula makes nonsense of Quine's own doctrines, while taking it in either of the other two ways generates a contradiction in the premises of the argument. The only way to avoid these unsavoury consequences is to read 'statement' differently in the Quine–Duhem thesis and in Peirce's thesis, they think, in which case argument TD<sub>FL</sub> is rendered fallacious because equivocal. So Fodor and Lepore's objection amounts to this: argument TD<sub>FL</sub> is only valid if we adopt a univocal interpretation of 'statement', but 'statement' cannot be interpreted univocally, on pain of either nonsense or contradiction.

By 'formulas' Fodor and Lepore mean sentences – they are individuated syntactically, and bear whatever semantic properties they may have contingently. Propositions are what sentences express – they are trans-linguistic abstract objects, individuated semantically. By 'formula together with its conditions of semantic evaluation', Fodor and Lepore mean something like an ordered pair consisting of a sentence and its satisfaction conditions, or truth conditions. 'Formulas together with their conditions of semantic evaluation' are thus individuated part-syntactically and part-semantically – they have essential syntactic properties, and essential semantic properties. Fodor and Lepore think that 'formula plus conditions of semantic evaluation' is the 'most interesting' candidate for what a statement might be, in *Two Dogmas* (p. 50).

Now it is true that in *Two Dogmas* Quine nowhere says *explicitly* what a statement is. But his intention is not really as difficult to discern as Fodor and Lepore imply. For at one point, Quine writes: "the statement 'Brutus killed Caesar' would be false if the world had been different in certain ways, but it would also be false if the word 'killed' happened rather to have the sense of 'begat'" (p. 36). This remark alone is sufficient to rule out Fodor and Lepore's second and third options for what a 'statement' could be. 'Statement' cannot mean proposition, for the truth-values of propositions obviously do not depend on what words happen to mean. (In any case, Quine doesn't believe in propositions.) Equally, 'statement'

cannot mean sentence plus conditions of semantic evaluation. For consider the ordered pair consisting of the sentence ‘Brutus killed Caesar’, and its satisfaction-conditions in English, Sat C: (‘Brutus killed Caesar’, Sat C). Now if ‘killed’ had meant *begat*, then the sentence ‘Brutus killed Caesar’ would obviously have had different satisfaction-conditions, call them Sat D. But in that case, the original statement (‘Brutus killed Caesar’, Sat C) would not be false, it would no longer be a statement of English at all. (It would be a true statement of a different language.) For if statements are ordered pairs of sentences and satisfaction-conditions, and if ‘Brutus killed Caesar’ has satisfaction-conditions Sat D in a given language, then the ordered pair (‘Brutus killed Caesar’, Sat C), is not a statement of that language. Had ‘killed’ meant *begat*, then the statement (‘Brutus killed Caesar’, Sat D) would of course be false, but our original statement was (‘Brutus killed Caesar’, Sat C). So when Quine says “the statement ‘Brutus killed Caesar’ would be false if the word killed happened rather to have the sense of ‘begat’ ”, he is clearly *not* using ‘statement’ to refer to sentences plus their conditions of semantic evaluation. It is clear, moreover, that Quine must be using the word ‘statement’ to mean sentence – only then would the truth-values of statements be dually dependent on language and the world.<sup>4</sup>

But Fodor and Lepore think that ‘statement’ *cannot* be taken as sentence, in Quine’s argument for semantic holism. Why not?

#### 5. FODOR AND LEPORE’S OBJECTIONS TO TAKING ‘STATEMENT’ AS SENTENCE

Fodor and Lepore raise four objections to taking ‘statement’, as it occurs in argument TD<sub>FL</sub>, to mean sentence. Of these, two are trivial and easily dealt with, while two are substantive. I tackle the former first.<sup>5</sup>

*Objection (i):* Reading ‘statement’ as sentence is inconsistent with Premise 3 of TD<sub>FL</sub>, the ‘truism’ that statements have their semantic properties essentially. Sentences, obviously, do not have their semantic properties essentially – a given sentence could have meant something else, had linguistic conventions been different.

*Objection (ii):* Reading ‘statement’ as sentence makes the conclusion of TD<sub>FL</sub> come out trivially false. For the conclusion would then say, any theory containing the *sentence* ‘it is raining’, must contain the *sentence* ‘the streets are wet’, hence no theory could contain just the former. But that is an extremely implausible assertion, and one which has nothing to do with semantic holism. For sentences are simply forms of words, which can be used to mean whatever we like; the conclusion of argument TD<sub>FL</sub>,

under the proposed interpretation of ‘statement’, amounts to the absurd claim that no theory could contain just one well-formed form of words, irrespective of what (if anything) it means.

Neither of these two objections should carry any weight; both are simply consequences of Fodor and Lepore’s deviant reconstruction of Quine’s argument. Premise 3, as noted above, is entirely of their own making – it corresponds to nothing that Quine actually says. Given Quine’s use of ‘statement’, he would *obviously* not endorse Premise 3. Similarly, Quine would *obviously* not endorse the conclusion that any theory containing the statement ‘it is raining’ must contain the statement ‘the streets are wet’. In short, Fodor and Lepore have deliberately tailored argument TD<sub>FL</sub> to apply to statements, where statements are things that are individuated, at least in part, semantically; so it is no wonder that unfortunate results occur when we read ‘statement’ as sentence, and then try to run the argument. Fodor and Lepore’s first two objections, therefore, do nothing to undermine Quine’s position; they simply highlight the fact that argument TD<sub>FL</sub> is not a happy formulation of the argument from confirmation holism and verificationism to semantic holism, for someone who has undertaken to use the word ‘statement’ to mean sentence. And this is no objection at all to Quine, since argument TD<sub>FL</sub> is *not* Quine’s own formulation.

Fodor and Lepore’s third and fourth objections, however, are serious ones – their force in no way depends on the details of their reconstruction of Quine’s argument. But before looking at them, it is worth formulating a version of the argument for semantic holism that is closer to Quine’s actual argument in *Two Dogmas* than is argument TD<sub>FL</sub>, and that respects Quine’s habit of using ‘statement’ to mean sentence. We can then consider Fodor and Lepore’s third and fourth objections in relation to this formulation.

Here is the argument (which I call TD<sub>Q</sub>, for **T**wo **D**ogmas à la **Q**uine):

PREMISE 1. The statements ‘electrons have negligible mass’ (*P*) and ‘electrons are negatively charged’ (*Q*) are not individually responsible to experience, but only as part of a larger theory *T* (instance of confirmation holism, or Quine–Duhem thesis)

∴ whether a given experience confirms *P*, *Q*, depends on whether it confirms the theory *T*

∴ the conditions under which *P* is confirmed, depend on the conditions under which *Q* is confirmed

PREMISE 2. The meaning of a statement is, or is determined by, the conditions under which the statement is confirmed (verificationism, or Peirce's thesis)

∴ the meaning of  $P$  depends on the meaning of  $Q$

CONCLUSION. If a theory contained only the statement  $P$ , then  $P$  could not have the meaning it does in  $T$  (instance of semantic holism).

Here are Fodor and Lepore's third and fourth objections to taking 'statement' as sentence:

*Objection (iii)*: If statements are sentences, then the Quine–Duhem thesis is “trivialised under at least one of its preferred formulations” (p. 45). The formulation in question, which is certainly one that Quine favours, is this: “any statement can be held onto come what may... conversely, no statement is immune from revision” (*Two Dogmas*, p. 43). Now clearly, any *sentence* can be retained in the face of any data whatever – by changing its meaning – so taking 'statement' as sentence renders trivially true one of the doctrines for which *Two Dogmas* is most famous.

*Objection (iv)*: It makes *no sense* to talk about mere sentences being confronted by data, or entering into confirmation relations with other sentences. The entities that are confronted by data, confirmed or disconfirmed etc., must be entities that are individuated, at least in part, semantically. So if Quine uses 'statement' to mean sentence, he is guilty of saying many things that are nonsensical. In particular, premise (1) of argument  $TD_Q$  is nonsensical.

I examine these two objections in Sections 6 and 7 respectively.

## 6. OBJECTION (III): THE THREAT OF TRIVIALITY

The version of the Quine–Duhem thesis which says “any statement can be held onto come what may, and conversely, no statement is immune from revision”, I shall call the *revisability thesis*. Now the revisability thesis does not play any *direct* role in argument  $TD_Q$ , and its relation to the version of the Quine–Duhem thesis of which Premise 1 of  $TD_Q$  is an instance is unclear.<sup>6</sup> But it is unquestionably a thesis to which Quine is firmly committed, in *Two Dogmas* and elsewhere. However if 'statement' means sentence, the revisability thesis is immediately doomed to triviality, according to Fodor and Lepore. Charity demands that Quine not be interpreted in such a way that one of his central claims comes out trivial, Fodor

and Lepore think, hence ‘statement’ cannot be understood as sentence, in the dialectic of *Two Dogmas*.

Fodor and Lepore are clearly correct to say that reading ‘statement’ as sentence renders the revisability thesis trivially true. Obviously, no amount of ‘recalcitrant experiences’ could force us to surrender a given sentence, if we are allowed to simply allocate the sentence a new meaning. Conversely, it is obvious that no sentences are immune from revision, if there is no requirement that a sentence must mean the same before and after any particular revision. Only when the possibility of meaning change is ruled out, does the revisability thesis become substantive. This is a familiar point, made originally by Grice and Strawson (1956) and emphasised by many of Quine’s critics, particularly Adolf Grünbaum. But Fodor and Lepore are wrong to think that this point tells against construing Quine’s ‘statement’ as sentence, for Quine actually *admits* that the revisability thesis is trivial. Replying to Grünbaum (1961), who had levelled the charge of triviality against a revisability version of the Quine–Duhem thesis, Quine (1962) wrote: “your claim that the Duhem–Quine thesis... is untenable if taken non-trivially strikes me as persuasive... For my own part I would say that the thesis as I have used it *is* probably trivial. I haven’t advanced it as an interesting thesis as such” (p. 132, author’s emphasis). Ironically, then, while Fodor and Lepore are at pains to interpret Quine in such a way that the revisability thesis is not rendered trivial, Quine himself says that the thesis *is* trivial. Fodor and Lepore’s interpretative charity, in this case, is quite misplaced.

It is worth asking why Quine does not try to bolster the revisability thesis into a substantive doctrine, instead of admitting its triviality. Why does Quine not simply say “any sentence may be held onto come what may, with its original interpretation intact”? The answer is clear: modifying the revisability thesis in this way avoids triviality only by helping itself to a distinction that Quine is deliberately trying to call into question. The modified formulation above presupposes that there exists a sharp distinction between holding onto a sentence and keeping its meaning fixed, and holding onto a sentence while equivocating. But Quine thinks this distinction is not a sharp one. In judging whether someone has changed the meaning of a sentence he assents to, or has changed his belief, we face a constraint-satisfaction problem that does not necessarily have a unique solution, according to Quine. There thus need be no ‘fact of the matter’ as to whether a given sentence is retained with its original meaning intact, or not. So when Quine says that the Quine–Duhem thesis (in its revisability guise) is ‘untenable if taken non-trivially’, his point is not so much that a non-trivial version of the thesis would be false, but rather that it would rest

on a false presupposition – namely, that it is always a determinate issue whether an equivocation has occurred or not. Hence Quine’s readiness to acquiesce in the triviality of his thesis.

Though the revisability thesis may itself be technically trivial, it does not follow that Quine is not making a highly important point. It only follows that the revisability thesis itself does not express that point. In a useful discussion of this issue, G. Wedeking (1969) found a good way of putting Quine’s point: the difference between those cases where the revisability thesis holds trivially, and the cases where it holds non-trivially, is a difference of degree, not of kind. In other words, holding onto a sentence by revising its meaning, and holding onto a sentence while keeping its original meaning intact, differ by degree not kind. This thesis is certainly not trivial; on the contrary, it flies in the face of the strong pre-philosophical intuition that changing a meaning and changing an opinion are very different matters, sharply distinguishable from one another. Furthermore, Wedeking’s formulation is one that Quine would surely agree with. For in his response to Grünbaum, quoted above, Quine continued: “I am not concerned even to avoid the trivial extreme of sustaining a law by changing a meaning; the cleavage between meaning and fact is part of what, in such contexts, I am questioning” (op. cit. p. 132), which fits well with what Wedeking says. Therefore, while Quine’s own doctrines preclude a substantive formulation of the revisability thesis itself, the triviality of the thesis can be mitigated, at least in part, by making the ‘second-order’ claim that trivial and non-trivial instances of the revisability thesis lie on a continuum.

The triviality of the revisability thesis is mitigated still further by another consideration. For though it may always be possible to hold onto a threatened sentence by varying its meaning, it does not follow that this is always, or indeed ever, a rational thing to do. Though there may be different ways of revising one’s overall theory of the world to accommodate an unexpected experience, including ways that involve pure equivocation, not every one of these logically possible revisions need be equi-rational. Logical consistency is not the only factor that counts. Quine himself has emphasised the importance of *conservatism* in deciding how to modify our existing theory, advocating a ‘maxim of minimum mutilation’. This consideration alone is sufficient to ensure that ‘holding onto a law by varying a meaning’ will usually occupy a very low position, in a ranking of logically possible revisions. For when considering how to revise our theory, we must obviously not regard the individual sentences of the theory as semantically unstructured – considerations of compositionality come into play. Any given item of vocabulary must be given the same interpretation in each of its occurrences in the theory. So if we really wished to hold

onto a threatened hypothesis by allocating it a totally new meaning, this decision would reverberate through the theory – occasioning endless revisions in sentences that share vocabulary with the hypothesis in question. The maxim of minimum mutilation would be flouted.

This last point serves to defuse another, related objection that Fodor and Lepore bring against reading Quine's 'statement' as sentence, in the revisability thesis. Taking 'statement' as sentence contradicts Quine's claim that 'compensatory adjustments elsewhere in the theory' will be necessary, in order to hold onto a given statement come what may, they argue. "If statements are just formulas, you don't have to 'make compensatory adjustments elsewhere' in order to hold onto them; if a formula that you like gets into trouble, use it to mean that two and two is four and leave the rest of the theory alone" (p. 47). But this assertion simply flies in the face of compositionality. Deciding to use a given sentence to mean that two and two is four, will obviously call for innumerable other revisions among sentences that share vocabulary with the sentence in question. Fodor and Lepore's claim would only be true if the constituent sentences of the theory were regarded as semantically unstructured, an unmotivated and unrealistic restriction.

To conclude, Fodor and Lepore's third objection to taking 'statement' as sentence, in the dialectic of *Two Dogmas*, misses its mark. Indeed, Quine's admission that the revisability thesis is strictly speaking trivial *forces* us to read 'statement' as sentence, in the assertion "any statement may be held onto, come what may". I have offered a brief explanation of why Quine is content to admit the triviality of his thesis, and suggested two ways in which the triviality might be mitigated. It is worth stressing that argument TD<sub>Q</sub> is not itself affected by Quine's admission that the revisability thesis is trivial, for the version of the Quine–Duhem thesis employed in argument TD<sub>Q</sub> is not equivalent to the revisability thesis. Quine's reluctance to posit a sharp distinction between change of meaning and change of opinion only guarantees the triviality of those versions of the Quine–Duhem thesis *that deal explicitly with the issues of revisability and unrevisability*; and most versions of the Quine–Duhem thesis do not do that. A fully satisfactory treatment of this topic would have to unpack the logical relations between all the different versions of the Quine–Duhem thesis. I cannot engage that task here; but in Section 8 it emerges that the version of the thesis employed in argument TD<sub>Q</sub> can be spelled out in a non-trivial way, that is faithful to Quine's intentions, and that interprets 'statement' as sentence.

## 7. OBJECTION (IV): THE THREAT OF NONSENSE

We arrive at Fodor and Lepore's final and most fundamental objection to reading 'statement' as sentence. It just doesn't make any *sense* to talk about sentences themselves being confirmed by experiences, confronting data etc. they hold. "It makes no sense to ask whether the form of words "the streets are wet" tends to confirm the form of words "it's raining" since that depends entirely on what those forms of words *mean*", Fodor and Lepore write (p. 45, authors' emphasis). And rhetorically "what is it for a *form of words* to be confronted by data?" (p. 47, authors' emphasis). Only if statements are things that have essential semantic properties – i.e., propositions or sentences plus conditions of semantic evaluation – does it make sense to speak of statements being confirmed or disconfirmed, Fodor and Lepore insist. If this objection is well-taken, then argument TD<sub>Q</sub> is certainly in serious trouble, for the argument clearly presumes that we can talk sensibly of sentences being confirmed by experiences.<sup>7</sup> But I shall argue that this objection also misses its mark.

The first thing to note about objection (iv) is that, if correct, it would appear to undermine verificationism completely. Consider what a verificationist wishes to say about sentential synonymy, for example. Sentences are synonymous, she will say, if their conditions of confirmation are the same, if the same experiences tend to confirm both. But if sentences cannot intelligibly be said to be confirmed, verified etc., as Fodor and Lepore think, then the verificationist's assertion clearly makes no sense. But recall that Fodor and Lepore are supposed to be conceding verificationism for the sake of argument! The version of verificationism with which Fodor and Lepore operate reads "confirmation relations constitute semantic relations" (p. 51), a formulation which is neutral with respect to what the relata of confirmation relations are. Now if verificationism, so construed, were really conceded for the sake of argument, and if Fodor and Lepore were right to say that sentences cannot intelligibly be said to bear confirmation relations and properties, it would follow that sentences could not intelligibly be said to bear semantic relations and properties either. But that conclusion is obviously absurd – it clearly *does* make sense to ask about the meaning of a sentence, to ask whether two sentences are synonymous, to ask whether someone understands a particular sentence etc. So if objection (iv) is correct, verificationism is not even intelligible, less still true. Verificationism may be a contentious theory of meaning, but it is hard to believe that it can be so simply refuted. This strongly suggests that objection (iv) is not correct.

The second thing to note about objection (iv) is that it appears to embody a straightforward non-sequitur. Fodor and Lepore argue from “whether the sentence ‘the streets are wet’ tends to confirm the sentence ‘it is raining’ depends entirely on what those sentences mean”, to “*it makes no sense* to ask whether the first sentence tends to confirm the second”. But if we are being asked to take this conclusion literally – as asserting the literal unintelligibility of “the sentence ‘the streets are wet’ tends to confirm the sentence ‘it is raining’ ” – then the argument is very puzzling, indeed patently invalid. The form of the argument is this: whether  $x$  and  $y$  stand in the relation  $R$  depends entirely on certain contingent properties of  $x$  and  $y$ , therefore it makes no sense to ask whether  $x$  and  $y$  stand in the relation  $R$ .<sup>8</sup> But on the contrary, if the premise is true, then it clearly *does* make sense to ask whether  $Rxy$  – the answer will depend on whether  $x$  and  $y$  have the properties in question. So from the fact, if it is one, that the existence of a confirmational relation between two sentences depends entirely on what those sentences mean, it does *not* follow that it makes no sense to ask whether one sentence confirms another. It only follows that, in order to answer the question correctly, we would need to find out what the sentences mean.

Note thirdly that it is far from obvious that Fodor and Lepore’s claim, “whether one sentence tends to confirm another depends entirely on what both sentences *mean*”, is actually true. It is perhaps not controversial to say that the existence of confirmational relations between sentences depends *in part* on what they mean – if ‘the streets are wet’ had meant that God is great, rather than that the streets are wet, the confirmation relations it enters into could hardly go unaltered. But is a different matter to say that confirmational relations between sentences depend *entirely* on what they mean, as Fodor and Lepore do. Many contemporary confirmation theorists would deny this, e.g., those who hold that inductive logic is impossible because confirmation is a radically context-dependent notion. On this view, whether an evidence statement tends to confirm a theoretical hypothesis does *not* depend only on the content of both, but also on many other things, such as the alternative hypotheses that were in play at the time, for example. To take account of this sort of possibility, I shall modify Fodor and Lepore’s claim to “whether one sentence tends to confirm another depends *at least in part* on what both sentences mean”. This weaker claim raises essentially the same issues as their original, and has the advantage of being much more plausible.

Fodor and Lepore’s insistence that sentences themselves cannot be the relata of confirmation raises the question of what they would say about truth-bearers. For presumably, if we allow that sentences are capable of

being true, then there can be no objection to saying that the truth of sentence *A* renders the truth of sentence *B* more probable, i.e. that *A* confirms *B*. Of course, Fodor and Lepore might take the line that sentences are *not* appropriate truth-bearers, and introduce some semantically individuated entities for that purpose. This old issue is one that they do not discuss. But if we allow that there is at least room for debate about whether truth can be correctly predicated of sentences, the view of confirmation Fodor and Lepore oppose – that it is a relation between sentences – cannot be so quickly dismissed. Their rhetorical challenge – “how can a mere *form of words* be confirmed or verified?” – can equally be posed about truth, but it is hard to believe that the issue of truth-bearers can be so simply resolved. There is certainly something to Fodor and Lepore’s intuition that “the natural bearers of confirmation relations are trans-linguistic entities like propositions” (p. 53); but if we agree that the analogous intuition about truth does not settle the issue of truth-bearers, then presumably Fodor and Lepore’s intuition will not settle the question of what the bearers of confirmation are. Quine, of course, maintains that sentences are the bearers of truth; given the close link between *confirming x* and *raising the probability that x is true*, Fodor and Lepore would have to show that this view of Quine’s is mistaken, if objection (iv) were to go through.<sup>9</sup> They do not do so, so objection (iv) fails.

But could it be argued that the analogy between truth and confirmation that I have been pushing fails at the crucial point, if one is a verificationist? The advocate of the view that sentences are the bearers of truth wishes to say: ‘sentences are what are true or false, and the truth or falsity of a given sentence depends, in part, on what it means’. That way she avoids reference to any semantically individuated entities, such as propositions or ‘sentences plus conditions of semantic evaluation’. But consider the analogous remark about confirmation: ‘sentences are what are confirmed or disconfirmed, and whether a sentence is confirmed by a given experience depends, in part, on what it means’. Now this is the natural thing for the opponent of propositions to say, but it does look problematic for the verificationist. For according to the verificationist, the conditions under which a sentence is confirmed are supposed to *determine* its meaning, so how can they also *depend* on it? Surely the verificationist who makes the remark about confirmation above immediately encounters a crippling circularity in his purported explanation of linguistic content?

This reflection prompts reconsideration of Fodor and Lepore’s claim “whether one sentence tends to confirm another depends, at least in part, on what both sentences mean” – a claim virtually equivalent to the ‘analogous remark about confirmation’ above. Let us grant that this claim is

true. Fodor and Lepore see this as a decisive objection to taking sentences to be the relata of confirmation; I have argued that they are wrong to do so. However, the claim does seem to spell trouble for a verificationist account of meaning, as explained above. So it looks as if a descendant of objection (iv) may survive to trouble Quine's argument for semantic holism. The new objection allows that it makes good sense to talk about sentences being verified, confirmed, facing the tribunal of experience etc. But it points out that whether or not sentences stand in these confirmational relations depends on their contents. And in this it sees a serious tension with verificationism, and hence with premise (ii) of argument TD<sub>Q</sub> – for verificationism asserts that the direction of dependence between content and confirmation is the other way around. Let us call this objection (v).

Note that objection (v) is a perfectly general objection to verificationism as a theory of meaning, and has nothing in particular to do with argument TD<sub>Q</sub>. A full treatment of the objection would go beyond the scope of this essay. Nonetheless, the advocate of argument TD<sub>Q</sub> will need to address the objection somehow, if his case for semantic holism is to stand, so it is worth considering briefly what the options are.

#### 8. OBJECTION (V): THE THREAT OF EXPLANATORY CIRCULARITY

It is important to clarify the nature of objection (v). The issue is *not* supervenience – though talk of the 'direction of dependence' between content and confirmation conditions can make it sound as though it is. The verificationist who says 'the meaning of a sentence is determined by the conditions under which it is confirmed' is not making a claim of supervenience, but of type-identity. He is not saying merely that sameness of confirmation conditions implies sameness of content, but also that sameness of content implies sameness of confirmation conditions. So when the advocate of objection (v) says 'but whether one sentence confirms another depends on what they mean', her objection is not that the verificationist thinks content supervenes on confirmation conditions while in reality things are the other way around; for the verificationist does not think that. Rather, the charge is one of explanatory circularity. The verificationist is being accused of violating a non-circularity condition that claims of identity must satisfy, if they are to be genuinely explanatory.

When the verificationist equates the meaning of a sentence with its confirmation conditions, he purports to be giving a substantive explanation of what meaning *is* – an account of what it is for a sentence to have the meaning it does. Now in general, when we explain a concept by equating it with another, the success of the explanation requires that we have 'independent

access' to both sides of the equation. Consider for example the statistical mechanical explanation of temperature: 'the temperature of a gas is its mean molecular kinetic energy'. Here the independent access condition is obviously satisfied – we can discover what the mean kinetic energy of a gas is, without first knowing its temperature, and vice versa. But imagine if this were not the case – e.g., that the only way to determine the mean kinetic energy of a gas, were to measure its temperature and then perform some computation. In that case, the purported explanation of temperature would obviously be hopeless. It would be like saying 'the temperature of a gas is twice its temperature divided by two'; this statement is true, but obviously does not explanation what temperature is. Now according to objection (v), to determine whether or not a relation of confirmation obtains between two sentences, we would first need to know their meanings. How, after all, could you hope to discover whether a given observation tends to confirm a given sentence, if you did not know what the sentence meant? Therefore, the objection goes, the independent access condition is violated, and the verificationist's attempted explanation of meaning – 'the meaning of a sentence is given by its confirmation conditions' – is revealed as totally vacuous.<sup>10</sup>

So far as I can see, the verificationist has only one possible line of response – to explain the notion of 'confirmation conditions' in such a way that a sentence's confirmation conditions can be established, at least in principle, without first having to know its meaning. And something like this is actually attempted, at least implicitly, by many verificationists, including Quine and Dummett.<sup>11</sup> Quine's philosophy contains two, somewhat different attempts to develop the notion of confirmation or verification in a suitable way. The first is by resorting to behaviourism, and understanding 'the experiences which would tend to confirm a given sentence' as the experiences which would tend, as a matter of behaviouristic fact, to cause people to assent to the sentence if queried.<sup>12</sup> The second is by equating the meaning of a (non-observational) sentence with the observation sentences that it implies, *and construing 'implication' in a strictly logical sense*, as derivability using the logic of truth-functions and quantification. It is crucial that implication be understood in this narrowly logical sense, and not as semantical entailment, if the observation sentences implied by a given sentence are supposed to be determinable without first having to determine what the sentence means.<sup>13</sup> The relation between these two Quinean strategies is not clear, and neither strategy is unproblematic in itself. But clearly, on either strategy the threat of circularity posed by objection (v) is alleviated. Confirmation, or evidence, is explained in such a way that sentences' confirmation conditions can plausibly be regarded

as explanatory prior to their content, paving the way for a verificationism immune from the charge of explanatory circularity.

Moreover, both of Quine's ways of construing the notion of confirmation generates an answer to Fodor and Lepore's rhetorical question, "what is it for a *form of words* to be confronted by data?", ensuring that objection (iv) gets no foothold. It is worth examining what confirmation holism looks like, relative to each of the Quinean accounts of confirmation. On the first, behaviourist account, confirmation holism becomes the claim that, for the typical sentence of a natural language, there is no one set of experiences such that speakers of the language will be disposed to assent to the sentence when queried if and only if that set of experiences occurs. In other words, no one-one correlation can be set up between sentences of the language, and experiences that cause assent to sentences (upon query); the link between experiences and acceptance/rejection of sentences of the language is much more complicated. This claim is not trivially true, but it is highly plausible, however exactly 'experiences' is understood. Could it seriously be maintained that each hypothesis of a sophisticated scientific theory, for example, can be associated with a single set of experiences whose occurrence would cause assent to/dissent from the sentence? On the second Quinean story, confirmation holism becomes the claim that the majority of the sentences of a natural language do not by themselves logically imply any observation sentences, but only when taken together in relatively large bundles. This claim too is non-trivial yet highly plausible – unless it is true, it is hard to see how scientific disagreements could persist at all, given that Quinean observation sentences are ones whose truth-values can be quickly ascertained by any competent speaker of the language.<sup>14</sup>

Furthermore, it is evident that when confirmation holism is understood in either of these two ways, and verificationism – the equation of confirmation conditions and content – is admitted, then semantic holism follows immediately; thus the validity of argument TD<sub>Q</sub> is sustained. It may be objected that both of Quine's stories about confirmation is open to serious philosophical objections, and that both involves a substantial departure from our pre-theoretical notion of evidential support. That may be so, but some such departure is probably inevitable, if the verificationist is to successfully circumvent objection (v). In any case, my concern throughout has been the validity of Quine's argument for semantic holism, and not the correctness of his general philosophical outlook. And it is clear that, *if* we allow Quine to construe the notion of confirmation in either of his two favoured ways, then argument TD<sub>Q</sub> emerges as valid, and immune from each of objections (i)–(v).

To conclude the section, objection (v) is certainly a serious challenge to the coherence of verificationism, in any its guises. However, an adequate verificationist response is by no means out of the question. Within the terms of his own philosophy, Quine appears to have the resources to meet the challenge, by construing the notion of confirmation in a suitable way. Furthermore, so construed, confirmation holism comes out as non-trivial but plausibly true, and argument TD<sub>Q</sub> as valid.

## 9. CONCLUSION

My concern has been to defend the validity of Quine's argument for semantic holism from Fodor and Lepore's attack. Fodor and Lepore argued that it is very unclear what Quine means by a 'statement' in his argument; and that no univocal interpretation of 'statement' could possibly be satisfactory. I have argued that it is perfectly clear what Quine means by a 'statement', namely a sentence, and that Fodor and Lepore's four objections to reading 'statement' as sentence all fail. Their first two objections depended entirely on an unusual reconstruction of Quine's argument. Their third objection – that under the suggested interpretation of 'statement' one of Quine's favourite doctrines is rendered trivial – failed, because Quine admits the triviality of the doctrine in question. Their fourth objection – that sentences cannot be the relata of confirmation – was defused by pursuing an analogy between confirmation and truth. This analogy led to objection (v), the threat of circularity in the verificationist account of content, an objection which Quine appeared to have the resources to meet. It seems, then, that the inference from confirmation holism and verificationism to semantic holism is valid after all, just as first appearances indicated. *Two Dogmas of Empiricism* remains a provocative and controversial article, but it does not contain the elementary fallacy that Fodor and Lepore allege.<sup>15</sup>

## NOTES

<sup>1</sup> The argument can be found, with varying degrees of explicitness, scattered throughout Quine's writings. Three explicit occurrences are in 'Reply to Roger F. Gibson, Jr.' (1986a), *The Roots of Reference* (1974) p. 38, and 'Epistemology Naturalized' (1969) pp. 80–1. The argument can also be found, with explicit acknowledgement of its Quinean pedigree, in R. F. Gibson (1982) p. 80–1, and B. Loar (1982) p. 273.

<sup>2</sup> Some of Quine's holistic pronouncements give the impression that he wishes to deny that individual sentences have meaning at all, rather than saying that the meaning of an individual sentence derives from the contribution it makes to the whole theory. But this

cannot be Quine's considered position, for he himself is fond of drawing the following analogy with Frege: before Frege, the word was taken as the basic unit of meaning. Frege took a step in the right direction by taking the sentence as the basic unit, and Quine recommends that even this cuts the pie too finely – the basic unit is the theory. (See Quine (1981)). This analogy would clearly make no sense, if Quine held that individual sentences literally have no meaning. For in saying that the sentence rather than the word is the unit of significance, Frege did not mean that individual words have no sense; on the contrary, the sense of a word, for Frege, derives from the contribution it makes to the senses of whole sentences. See Heal (1994) for a good discussion of this issue.

<sup>3</sup> Fodor and Lepore admit to being a little unsure as to whether the argument whose validity they contest (from confirmation holism plus verificationism to semantic holism) really does occur in *Two Dogmas*. Given the exegetical controversies surrounding that essay, such caution is well-placed. However, Quine has explicitly endorsed this argument elsewhere, as have a number of his followers (see note 1). Furthermore, since *Two Dogmas* certainly contains commitments to confirmation holism and to verificationism, and since it is standardly regarded as a *locus classicus* for semantic holism, as Fodor and Lepore say, the argument in question is safely attributable to *Two Dogmas*, in my view.

<sup>4</sup> This conclusion can actually be independently, and conclusively confirmed, for in *Philosophy of Logic* (1970) Quine tells us what he meant by 'statement' in previous writings: "in earlier books . . . I . . . used the word [statement] merely to refer to declarative sentences, and said so. Later I gave up the word in the face of the growing tendency at Oxford to use the word for acts that we perform in uttering sentences" (p. 2). So, *contra* Fodor and Lepore, there is really no room for substantive debate about what Quine meant by 'statement' in *Two Dogmas*.

<sup>5</sup> I have permuted the order of Fodor and Lepore's four objections for convenience; what I call their first, second, third and fourth objections occur in their text in the order 1, 4, 2, 3 respectively.

<sup>6</sup> Fodor and Lepore do not address the issue of how the revisability thesis is related to other versions of the Quine–Duhem thesis; nor do I. In this regard, it is important to note that with objection (iii), Fodor and Lepore are *not* saying that reading 'statement' as sentence generates problems for argument TD<sub>FL</sub> itself; rather they are saying that it cannot faithfully represent Quine's intention, as it trivialises one of his favourite theses. That is why they do not need to commit themselves on the relation between the revisability thesis, and the version of the Quine–Duhem thesis employed in Premise 1 of argument TD<sub>FL</sub>.

<sup>7</sup> Indeed, if objection (iv) is correct, then virtually every one of Quine's philosophical articles contains assertions that are nonsensical. Quine's writings from about 1960 on (when he deliberately abandoned the word 'statement' in favour of 'sentence' – see footnote 4) is replete with talk of sentences being confirmed by experiences, facing the tribunal of experience, commanding or not commanding their own fund of empirical consequences, being or failing to be separably testable etc. For example, in *Pursuit of Truth* (1990a), Quine talks about the "empirical content of a testable sentence" (p. 17), asks how big a "testable set or conjunction of sentences" must be (p. 17), rejects the "naive conception of scientific sentences as endowed each with its own separable empirical content" (p. 16), and much more.

<sup>8</sup> Compare: whether Athens will be more polluted than Rome in the year 2010 depends entirely on whether Athens or Rome grows faster, therefore it makes no sense to ask whether Athens or Rome will be more polluted in the year 2010.

<sup>9</sup> See *Philosophy of Logic* (1970) ch. 1 for Quine's views on truth-bearers.

<sup>10</sup> 'Vacuous' here means unexplanatory, not vacuously true. Indeed, it is quite consistent with objection (v) to hold that the verificationist equation of meaning and confirmation conditions is false. This would be the case if sameness of confirmation conditions and sameness of meaning were not co-extensional. The point of objection (v) is that even if these two concepts are co-extensional, still no substantive explanation of linguistic meaning has been provided, due to failure of the independent access condition.

<sup>11</sup> Dummett's way out of the difficulty, according to Dag Prawitz (1987), is to invoke the supposed distinction between canonical and indirect methods of verification. This distinction is meant to generalise the canonical proof/indirect proof distinction from mathematical to empirical contexts. The idea here is to equate knowing a sentence's meaning with knowing its *canonical* means of verification, while allowing that to know a sentence's *indirect* means of verification typically requires first knowing its meaning. This strategy concedes the truth of objection (v) in relation to indirect verification conditions, but holds that canonical verification conditions are suitable candidates for a substantive explanation of meaning.

<sup>12</sup> 'Experiences' can be understood in various different ways. Quine himself thinks of experiences as episodes of neural stimulation, but this is obviously inessential to the basic behaviourist idea.

<sup>13</sup> In any case, Quine obviously cannot help himself to the notion of semantical entailment, while rejecting the notions of analyticity and synonymy. To reject these latter notions *is* to reject semantical entailment.

<sup>14</sup> This is the underlying idea behind Quine's notion of observation sentences, not his precise definition. Quine has actually struggled with the precise definition of an observation sentence over the years; see his 'Three Indeterminacies' (1990b).

<sup>15</sup> I would like to thank Bill Newton-Smith, Richard Corner and Jerry Fodor for comments on an earlier version of this paper, and two anonymous referees for their useful suggestions.

#### REFERENCES

- Fodor, J.: 1986, 'Banish disContent', in W. G. Lycan (ed.), 1992, *Mind and Cognition*, Blackwell, Oxford.
- Fodor, J. and E. Lepore: 1992, *Holism: A Shopper's Guide*, Blackwell, Oxford.
- Gibson, R. F.: 1982, *The Philosophy of W. V. Quine: An Expository Essay*, University Press of Florida, Tampa, Florida.
- Grice, H. P. and P. F. Strawson: 1956, 'In Defence of a Dogma', *Philosophical Review* **65**, 141–58.
- Grünbaum, A.: 1962, 'The Falsifiability of Theories: Total or Partial? A Contemporary Evaluation of the Duhem–Quine Thesis', *Boston Studies in the Philosophy of Science* **1**, 178–95.
- Heal, J.: 1994, 'Semantic Holism: Still a Good Buy', *Proceedings of the Aristotelian Society* **94**, 325–39.
- Loar, B.: 1982, 'Conceptual Role and Truth Conditions', *Notre Dame Journal of Formal Logic* **23**, 321–75.
- Nozick, R.: 1986, 'Experience, Theory and Language', in L. E. Hahn and P. A. Schlipp (eds.), *The Philosophy of W. V. Quine*, Open Court, La Salle, Illinois.

- Prawitz, D.: 1987, 'Dummett on a Theory of Meaning and its Impact on Logic', in B. Taylor (ed.), *Michael Dummett: Contributions to Philosophy*, Martinus Nijhoff, Dordrecht, Holland.
- Quine, W. V.: 1953, 'Two Dogmas of Empiricism', in his *From A Logical Point of View*, Harvard University Press, Cambridge, Massachusetts.
- Quine, W. V.: 1960, *Word and Object*, MIT Press, Cambridge, Massachusetts.
- Quine, W. V.: 1962, 'A Comment on Grunbaum's Claim', in S. G. Harding (ed.): 1976, *Can Theories be Refuted?*, Reidel, Dordrecht, Holland.
- Quine, W. V.: 1969, 'Epistemology Naturalized', in his *Ontological Relativity and Other Essays*, Columbia University Press, New York.
- Quine, W. V.: 1970, *Philosophy of Logic*, Prentice-Hall, New Jersey.
- Quine, W. V.: 1974, *The Roots of Reference*, Open Court, La Salle, Illinois.
- Quine, W. V.: 1981, 'Five Milestones of Empiricism', in his *Theories and Things*, Harvard University Press, Cambridge, Massachusetts.
- Quine, W. V.: 1986a, 'Reply to Roger F. Gibson Jr.', in L. E. Hahn and P. A. Schlipp (eds.) *The Philosophy of W. V. Quine*, Open Court, La Salle, Illinois.
- Quine, W. V.: 1986b, 'Reply to Robert Nozick', in L. E. Hahn and P. A. Schlipp (eds.), *The Philosophy of W. V. Quine*, Open Court, La Salle, Illinois.
- Quine, W. V.: 1990a, *Pursuit of Truth*, Harvard University Press, Cambridge, Massachusetts.
- Quine, W. V.: 1990b, 'Three Indeterminacies', in R. B. Barrett and R. F. Gibson (eds.), *Perspectives on Quine*, Blackwell, Oxford.
- Wedeking, G.: 1969, 'Duhem, Quine and Grünbaum on Falsification', in S. G. Harding (ed.): 1976, *Can Theories be Refuted?*, Reidel, Dordrecht, Holland.

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