QUINE'S BEHAVIORISM

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Abstract:

Some charge W.V. Quine with being a behaviorist. Others attempt to clear him of the charge. In replying to Harman in *Words and Objections*, Quine himself says he is as behavioristic as anyone in his right mind could be, but nowhere does he give us a satisfactory account of how behavioristic that is. It is worthwhile trying to clear up this confusing situation. Two kinds of behaviorism are often distinguished, logical behaviorism and the thesis about the science of psychology known as methodological behaviorism. A careful definition of logical behaviorism, together with a description of relevant aspects of Quine's philosophy, enable us to conclude that Quine is no logical behaviorist. Rather, various moves Quine makes justify ascribing to him a doctrine we call "methodological behaviorism in linguistics." Our definition of this doctrine is based on an extended analysis of methodological behaviorism in psychology.
Quine's Behaviorism*

Students of W.V. Quine's philosophy sometimes undertake to clear him of the charge that he is a behaviorist.\(^1\) However, Quine repays such efforts by saying that he is as behavioristic as anyone in his right mind could be.\(^2\) Is Quine a behaviorist and some commentators simply wrong in attempting to clear him of the charge of behaviorism? Or is Quine's remark that he is as behavioristic as sanity permits perhaps less than the whole story? It is worth trying to clear up this somewhat confusing situation. Accordingly, we will describe one variety of behaviorist Quine is not but which he might be mistaken for. In addition, we will delineate another kind of behaviorism which Quine does adopt. Both tasks will involve drawing together aspects of Quine's philosophy which hitherto have not been linked in discussions of his views.

Quine and Logical Behaviorism

Logical behaviorism is the doctrine that the mental concepts embedded in ordinary or everyday language are analyz-

*As a stimulus to this article a debt is owed to Professor Catherine Elgin's comments on the author's paper, "Indeterminacy, Under-determination and Truth", presented at the meeting of the American Philosophical Association, Pacific Division, San Francisco 1978.

\(^1\)Gilbert Harman tries to clear Quine of the charge in "An Introduction to 'Translation and Meaning' Chapter Two of Word and Object", Davidson and Hintikka (eds.), Words and Objections, (Dordrecht: D. Reidel, 1969), pp. 22-23.


\(^2\)Quine, "To Harman", Words and Objections, p. 296.
able in terms of concepts referring to behavior or dispositions to behavior. More precisely, the logical behaviorist affirms that any sentence containing a mental term in its everyday or commonsense use, is equivalent to a sentence (however complex logically) which contains no mental terms used commonsensically but does contain terms referring to behavior or dispositions to behavior. It is important to note that we make no assumptions here or elsewhere in this article as to how the term "equivalent to" in the preceding sentence is to be construed. The term refers to the relationship between analysandum and analysans of a piece of (correct) philosophical analysis. But we do not assume that this relationship is to be described by terms in the theory of meaning--"synonymy", "entailment", and so on--in their traditionally intended uses. That is, we do not assume that the analysans and analysandum have to be synonymous, mutually entail one another, or the like. Our account of logical behaviorism is entirely compatible with the view about the relationship between analysandum and analysans which Quine himself endorses. On Quine's view this relationship is not synonymy, mutual entailment, or the like. Rather, to say that a term or sentence A is analyzable by means of a term or sentence B, is to affirm that the functions or purposes of A which we care to preserve can be fulfilled or served by using B. Or alternatively, it is to affirm that where we use A, we could use B instead without frustrating any purposes that are important. For example, some would say that the singular indicative English conditional "if p then q" is analyzable in terms of the truth-function "not-(p and not-q)". For the important purpose of the English conditional--to deny the joint truth of the antecedent and falsity of the consequent--can be fulfilled by employing the truth-function. We should emphasize that we are not expressing agreement with

3 A clear statement of a position fitting this definition of logical behaviorism is found in C. Hempel, "The Logical Analysis of Psychology", in Feigl and Sellars (eds.), Readings in Philosophical Analysis, (New York: Appleton-Century-Crofts, 1949), pp. 373-384, esp. p. 378. Of course, Hempel later repudiated logical behaviorism, and nowadays the doctrine in its full generality is out of favor.

Quine's, or anyone's, particular view of philosophical analysis. We have indicated that the term "equivalent to" in our definition of logical behaviorism refers to the relationship between analysandum and analysans in a piece of correct philosophical analysis. And for our purposes in this article this sufficiently delimits the meaning of the term "equivalent to" in the definition. Later we will introduce a different brand of behaviorism and distinguish it from logical behaviorism. And one feature of logical behaviorism to which we have drawn attention will serve to make this distinction, a feature which bears emphasizing in the present context. Logical behaviorism purports to offer an account of mental terms in their everyday or commonsense use. In contradistinction, the variety of behaviorism we will meet in the next section of this article concerns exclusively the formation or construction of concepts in scientific inquiry.

It can seem that Quine adopts a logical behaviorist analysis of at least some commonsense mental concepts. Consider the following passage from The Web of Belief: "Rather, believing is a disposition that can linger latent and unobserved. It is a disposition to respond in certain ways when the appropriate issue arises. To believe that Hannibal crossed the Alps is to be disposed, among other things, to say "Yes" when asked. To believe that frozen foods will thaw on the table is to be disposed, among other things, to leave such foods on the table only when one wants them thawed."5 Focusing attention on the second sentence in this passage might lead one to conclude that Quine adopts a logical behaviorist analysis of belief—after all, the sentence affirms that belief is a disposition to respond or behave. However, closer inspection of the passage fails to sustain this interpretation. In the last sentence of the passage we are told that a sentence such as

(1) Fred believes that frozen foods will thaw on the table

is equivalent to a conjunction one of whose conjuncts is

(2) If Fred does not want frozen foods to thaw, then he will not leave them on the table.

The term "want" in the antecedent of (2) is, of course, a mental term used commonsensically. So, by employing "want" in his analysis of belief, Quine is eschewing rather than embracing a logical behaviorist analysis of belief. The sentence which a belief sentence like (1) gets equated with on Quine's analysis, contains everyday mental terms which are not shown to be dispensable in favor of terms pertaining to behavior.

The conclusion of the preceding paragraph would be mistaken if Quine adopted a logical behaviorist analysis of the term "want" in its vernacular use. Should he accept such an account, he could eliminate the term "want" in sentence (2) above. This would undercut our claim that the sentence which (1) above gets equated with contains everyday mental terms which are not shown to be eliminable in favor of behavior referring terms. However, Quine rejects this line of thought. He accepts what he calls "the Brentano thesis" to the effect that terms in the intentional vocabulary—"believe", "doubt", "want", and so on—cannot be explained or analyzed exclusively by means of terms outside of this vocabulary. It follows from the Brentano thesis that the term "want" in sentence (2) above cannot be eliminated in the way the logical behaviorist envisages. Quine does think certain everyday mental concepts like belief are analyzable in terms of (multi-track) dispositions to behavior. But in spelling out or describing these dispositions, Quine employs everyday mentalistic terms which on his view are not eliminable. Quine's account of concepts like belief in terms of dispositions to behavior is not a logical behaviorist account.

Quine's treatment of those mental concepts which he is not prepared to analyze along dispositional lines affords even less grounds for regarding him as a logical behaviorist. Consider the following passage:

If there is a case for mental events and mental states, it must be just that the positing of them, like the

6Quine, Word and Object, pp. 219-223. As Quine himself notes, despite his acceptance of the Brentano thesis he does not have the same attitude toward the intentional vocabulary as do philosophers such as Brentano and Chisholm.

positing of molecules, has some indirect systematic efficacy in the development of theory. But if a certain organization of theory is achieved by thus posit­
ing distinctive mental states and events behind physi­
cal behavior, surely as much organization could be a-
chived by positing merely certain correlative physio-
logical events instead. Nor need we spot special cen­
ters in the body for these seizures; physical states of
the undivided organism will serve, whatever their finer
physiology. Lack of a detailed physiological explana­
tion is scarcely an objection to acknowledging them as
states of human bodies, when we reflect that those who
posit the mental states and events have no details of
appropriate mechanism to offer nor, what with their
mind-body problem, prospects of any. The bodily states
exist anyway; why add the others?

It may seem that in this passage Quine is saying we should
dispense with occurrent mental states like pains in favor
of physical states of the human body. But a considera­
tion of the passage together with the context from which it is
drawn--part of which is quoted below--indicates that Quine
is actually advocating an identification of the familiar
pains with physical states of the body; and at the same
time he is refusing to allow any real distinction between
identifying pains with bodily states, and eliminating them
in favor of such states. What Quine himself says about
this identification has the consequence that it is not the
same as the logical behaviorist view of pains, feelings of
anger, and other occurrent mental states:8

But when we explain mental states as bodily states, or
eliminate them in favor of bodily states, in the easy
fashion here envisaged, we do not paraphrase the stan­
dard contexts of the mental terms into independently
explained contexts of physical terms. Thus the 'Jones
is in' of 'Jones is in pain', the 'Jones is' of 'Jones
is angry', remain unchanged, but merely come to be
thought of as taking physicalistic complements rather
than mentalistic complements. The radical reduction
that would resolve the mental states into the indepen­
dently recognized elements of physiological theory is a

8Quine, Word and Object, p. 266. Those who adopt an i­
dentification of occurrent mental states with physiological
states often are anxious to distinguish their position from
logical behaviorism or any other position concerning the
analysis of everyday mental concepts. See for example H.
Feigl, The "Mental" and the "Physical", (Minneapolis: Uni­
separate and far more ambitious program.

Quine is telling us here that his identification of pains with bodily states does not mean that we can paraphrase sentences containing terms such as "pain" and "feels angry" into sentences containing none but physical terms, whether the terms be physiological or behavior referring. This is tantamount to affirming that the identification in question is not committed to analyzing the commonsense concepts of pain and feeling angry in terms of concepts referring to behavior and dispositions to behavior. For philosophical analysis is paraphrase, i.e. it is equating, in some reasonable sense, one sentence with another sentence.

Despite the fact that Quine does not adopt the logical behaviorist account of a single commonsense mental concept, there is an important affinity between Quine and the logical behaviorist. Both accept what Quine calls "physicalism", which he describes as the view that there are no unbridgeable differences between the mental and the physical.9 We take this view to mean simply that there are no mental phenomena which are neither identifiable with any physical phenomena nor analyzable in terms of any physical phenomena. That the logical behaviorist accepts this physicalist view is clear. Quine's acceptance of it is more complex in its details. As indicated above, on Quine's view occurrent or episodic mental states like a sensation of pain are identifiable with states of the body. Here we clearly have a physicalist viewpoint about mental episodes. But what of non-occurrent mental states like belief? As we have seen, Quine analyzes these as dispositions to behavior. But everyday mentalistic concepts like wanting appear in the analysans. How can this fit in with physicalism? There are two by no means mutually exclusive answers to this query of which Quine can avail himself. On the one hand, he can say that everyday mental terms in the analy-

9Quine, Word and Object, p. 265. It is important to distinguish Quine's use of the term "physicalism" from Carnap's. In Carnap's use, physicalism is the doctrine that every psychological sentence, whether belonging to ordinary language or the language of the science of psychology, is translatable into (logically equivalent to) a sentence of the physical language. See R. Carnap, "Psychology in Physical Language", in A.J. Ayer (ed.), Logical Positivism, (New York: The Free Press, 1959), pp. 165-166. Carnap's physicalism implies Quine's, but the reverse does not hold. Simply holding that all mentalistic terms refer to central nervous system states, would count as being a Quine physicalist but not a Carnap physicalist.
sans of his account of belief refer to *occurrence* mental states identifiable with physical states of the body. On the other hand, he can say that we can analyze or paraphrase the conditionals in the *analysans* of any belief sentence, into sentences about underlying *neural* or physiological structure. For Quine adopts the view that dispositional sentences--or the conditional sentences used to spell out or unpack dispositional sentences--are analyzable in terms of underlying structure. Either of the maneuvers we have described suffices to reconcile Quine's physicalism with his account of non-occurrence mental states like belief.

Quine and Methodological Behaviorism

We have shown that if by the term "behaviorism" we mean "logical behaviorism", then Quine is very far indeed from adopting behaviorism. But this is not the only good sense of the term "behaviorism". In another reasonable sense the term refers to methodological behaviorism, and it is this doctrine that brings us to Quine's behaviorism.

We will do well to initiate our discussion of methodological behaviorism with a pair of passages from Wilfrid Sel

10 Quine, Word and Object, pp. 222-225. Three points are in order. For one, in our definition of logical behaviorism we in effect explained what Quine could mean by saying that dispositional sentences are analyzable in terms of underlying structures or states. Quine provides some details as to how the analysis would go for the case of solubility and fragility in the pages from Word and Object just cited. Secondly, there may be a conflict between Quine's acceptance of the Brentano thesis and any effort on his part to ultimately analyze the disposition which is belief in terms of underlying neural structure. For, the Brentano thesis affirms that intentional terms like "believe" are not analyzable without relying on other intentional terms, and a description of neural structure presumably would eschew intentional terms. Finally, even if Quine ultimately analyzes belief in terms of underlying neural structure, this does not mean that in the end he adopts a logical behaviorist analysis of belief. An analysis of belief in terms of neural structure is an analysis in terms of internal physiological conditions, not one in terms of behavior and dispositions to such.
Philosophers have sometimes supposed that Behaviourists are, as such, committed to the idea that our ordinary mentalistic concepts are analyzable in terms of overt behaviour. But although Behaviourism has often been characterized by a certain metaphysical bias, it is not a thesis about the analysis of existing psychological concepts, but one which concerns the construction of new concepts. As a methodological thesis, it involves no commitments whatever concerning the logical analysis of common sense mentalistic discourse.

And while the Behaviourist admits, as anyone must, that much knowledge is embodied in common sense mentalistic discourse, and that still more can be gained in the future by formulating and testing hypotheses in terms of them, and while he admits that it is perfectly legitimate to call such a psychology 'scientific', he proposes, for his own part, to make no more than a heuristic use of mentalistic discourse, and to construct his concepts 'from scratch' in the course of developing his own scientific account of the observable behaviour of human organisms.

An actual formulation of methodological behaviorism does not emerge in these passages. But Sellars does make several points of considerable importance, points which enable us to distinguish between methodological behaviorism and logical behaviorism as described in the preceding section. Methodological behaviorism is not a claim about the analysis or explanation of mental terms in their everyday or commonsensical use. It simply implies nothing concerning the analysis of terms such as "belief", "want", and "pain" as commonsensically used. Furthermore, methodological behaviorism is a claim about the way in which concepts are formed or constructed in the science of psychology. In short, it is a thesis about concept formation in one branch


12 As will be evident shortly, methodological behaviorism is more accurately described as a specification of the conditions which a descriptive (extralogical) term must meet in order to be admitted into the vocabulary of psychology. But it will be convenient to follow Sellars in talking of such a specification in terms of construction or formation of concepts.
of non-formal science. The features of methodological behaviorism we have just mentioned distinguish it from logical behaviorism. For logical behaviorism certainly is a thesis concerning the analysis of mental terms commonsensically used. And logical behaviorism says nothing per se about concept formation in any branch of science, psychology or otherwise. To re-enforce the distinction between the two brands of behaviorism we need to briefly discuss a pair of considerations which might seem to blur the distinction as we have attempted to draw it. The claim might be made that the very same mental concepts embedded in ordinary language are or should be carried over into the vocabulary of psychology. Conjoined with this claim, methodological behaviorism would have implications for the explanation of commonsense mental concepts. For, as the clarification of methodological behaviorism we give below indicates, the thesis has quite definite implications for the explanation or definition of concepts used in psychology. However, the claim in question is not part of what methodological behaviorism affirms; as our statement of the thesis will make clear, one can accept methodological behaviorism and reject the claim that commonsense mental concepts are to be carried over into psychology. Indeed, an examination of the writings of many psychologists who adopt methodological behaviorism as we understand it—B.F. Skinner and E.C. Tolman are two examples—would reveal that a variety of familiar mental terms such as "expect", "perceive", and "feel" are assigned new meanings on becoming part of the psychologist's vocabulary. The second of the considerations requiring discussion is that someone who adopted logical behaviorism might wish to say that all concepts used in psychology that do not refer to behavior and publicly accessible circumstances of behavior, are or must be analyzable in terms of behavior referring concepts. This contention is not part of logical behaviorism as we have defined it, but it is something a logical behaviorist in our sense might naturally affirm. And it is a doctrine about concept formation in psychology. This seems to threaten somewhat our effort to restrict logical behaviorism's concern to commonsense mental concepts, and so our manner of distinguishing it from methodological behaviorism. However, the extension of the logical behaviorist position we are considering is also not the same as methodological behaviorism. Affirming that the non-behavior referring terms belonging to psychology are analyzable by means of behavior referring terms, implies that each individual sentence couched in the vocabulary of psychology which contains a non-behavior referring term is equivalent to a sentence all of whose descriptive (non-logical) terms are behavior referring. But methodological behaviorism is not committed to this contention concerning paraphrasing the sentences of psychology. As the
clarification of the thesis we give below indicates, methodo-
dological behaviorism allows that a term may be introduced
into psychology as a theoretical term on the basis of terms
referring to behavior and publicly accessible circumstances
of behavior. And the relation between the theoretical term
and behavior referring terms is not that every sentence
containing the theoretical term can be paraphrased into a
sentence, however complex logically, containing none but
behavior referring terms. This is not in general the rela-
tion between theoretical terms and observation or non-the-
oretical terms. As seems fairly widely acknowledged nowa-
days by philosophers who make any sort of distinction be-
tween the two types of terms, individual sentences contain-
ing theoretical terms cannot in general be equated with
sentences all of whose descriptive terms are observational
or non-theoretical.

We need to say more about the nature of methodological
behaviorism. Again a passage from Sellars will prove help-
ful: 13

But while it is quite clear that scientific Behaviour-
ism is not the thesis that common sense psychological
concepts are analyzable into concepts pertaining to o-
vert behaviour—a thesis which has been maintained by
some philosophers and which may be called 'analytical'
or 'philosophical' Behaviourism—it is often thought
that Behaviourism is committed to the idea that the
concepts of a behaviouristic psychology must be so a-
nalyzable, or, to put things right side up, that pro-
perly introduced behaviouristic concepts must be built
up by explicit definition—in the broadest sense—from
a basic vocabulary pertaining to overt behaviour. The
Behaviourist would thus be saying, 'Whether or not the
mentalist concepts of everyday life are definable in
terms of overt behaviour, I shall ensure that this is
true of the concepts I shall employ.' And it must be
confessed that many behaviouristically oriented psychol-
ogists have believed themselves committed to this aus-
tere programme of concept formation.

Now I think it is reasonable to say, that, thus con-
ceived, the behaviouristic programme would be unduly
restrictive. Certainly, nothing in the nature of sound
scientific procedure requires this self-denial. Phy-
sics, the methodological sophistication of which has so
impressed—indeed, overly impressed—the other sciences,

does not lay down a corresponding restriction on its concepts, nor has chemistry been built in terms of concepts explicitly definable in terms of the observable properties and behaviour of chemical substances. The point I am making should now be clear. The behaviouristic requirement that all concepts should be introduced in terms of a basic vocabulary pertaining to overt behaviour is compatible with the idea that some behaviouristic concepts are to be introduced as theoretical concepts.

The account of methodological behaviorism Sellars develops here amounts to the following thesis: Descriptive terms in the science of psychology must refer to behavior (or, we should add, publicly accessible circumstances of behavior), or they must be introduced by means of terms referring to behavior. Some clarification of this thesis is in order. In particular, we need to indicate in some detail what counts as introducing a term by means of terms referring to behavior and publicly accessible circumstances of behavior. To this end we will describe the two most important procedures that fall under this heading.

One good way to introduce a term by means of behavior referring terms is via an explicit definition—a rule for eliminating the term defined from contexts in which it occurs—whose definiens contains, besides logical or topic-neutral terms, only terms referring to behavior or intersubjectively accessible circumstances of behavior. (Our characterization includes among explicit definitions what Russell calls "definitions in use", and others call "contextual definitions"). An example would be the term "habituation" introduced by means of the following definition: habituation = df. decrease in behavioral response to repeated stimulation. We also want a more indirect procedure employing explicit definition to count as introducing a term by means of behavior referring terms. A concept may be introduced by an explicit definition whose definiens is not restricted to logical plus behavior referring terms. Yet the introduction of the term in question may still count as introducing it by means of behavior referring terms. It will count just in case the terms in the definiens which are neither topic-neutral nor behavior referring are themselves introduced by means of behavior referring terms. For instance, the concept of intelligence might be introduced by the following definition: intelligence = df. the disposition to understand quickly. The term "understand" in the definiens does not refer to behavior or publicly accessible circumstances of behavior. But the definition of intelligence would satisfy the methodological behaviorist requirement on term introduction if the term "un-
derstand" in the definiens is itself introduced by means of behavior referring terms—either by explicit definition relying on such terms, or another term introducing procedure that uses behavior referring terms. But if the term "un­
derstand" in the above definition is not itself somewhere introduced by a procedure employing behavior referring terms, then the definition fails to introduce the term "in­
telligence" by means of behavior referring concepts.14

As Sellars remarks in the long passage quoted in the pa­
ragraph before last, explicit definition as treated above is not the only way to introduce a term that does not it­
self refer to behavior or public circumstances so as to conform to methodological behaviorism. The behaviorist re­
quirement allows that terms in psychology may be introduced as theoretical terms. More fully, introduction of a term by means of behavior referring terms includes specifying the term's use via the same type of device—what philoso­
phers have variously called "correspondence rules", "dic­
tionaries", "interpretative sentences", and the like—which are used in any science to introduce theoretical terms so as to connect them with observation or antecedently fami­
iliar terms. Knotty problems surround the notion of a theo­
retical term. But we can amplify a bit what we have just said in a way useful for present purposes without becoming overly embroiled in these difficulties. Borrowing from Hempel, let us use the term "interpretative sentence" to refer to a sentence that specifies the use of a theoreti­
cal term by means of observation or antecedently available

14 We may think of explicit definition as describing the meaning rather than merely determining the reference or ex­
tension of the term explained. In this event, we will want to count fixing the reference of a term by using only beha­
vior referring terms as an additional device satisfying the methodological behaviorist requirement. But efforts to de­
termine the reference of a term relying on concepts that are neither behavior referring nor introduced by means of behavior referring concepts, fail to satisfy the require­
ment. For example, determining the reference of the term "pain" by saying that it refers to the mental state which on occasion causes people to say "ouch", does not meet the behaviorist requirement. Or it fails to meet it as long as the term "mental state" is left unexplained in terms of concepts pertaining to behavior.
terms. Now specifying a theoretical term's use via interpretative sentences will count as introducing it by means of behavior referring terms provided that this is the case: all the observation or antecedently familiar terms in the interpretative sentences are terms referring to behavior or publicly accessible circumstances of behavior. Or to put the matter somewhat differently, theoretical terms appear in the formulation of scientific theories. Some sentences belonging to or associated with the theory—these will be the theory's interpretative sentences—connect certain of the theoretical terms with observation or antecedently familiar terms. Now if all the antecedently available terms in the interpretative sentences of the theory refer to behavior and public circumstances of behavior, then the theoretical terms occurring in those interpretative sentences have been introduced by means of behavior referring terms. But if even some of the non-theoretical descriptive terms in the interpretative sentences are not behavior referring—and, we should add, have not already been introduced on the basis of behavior referring terms—then the theoretical terms in the interpretative sentences collectively fail to meet the methodological behaviorist condition on term introduction.

Our clarification of methodological behaviorism is complete. Again, the thesis requires that descriptive terms in psychology refer to behavior and publicly accessible circumstances of behavior, or that they be introduced by means of behavior referring terms. And we have made an

15 See for instance C. Hempel, Philosophy of Natural Science, (Englewood Cliffs: Prentice-Hall, 1966), p. 88. Two comments are in order. For one, under the heading of specifying or describing a term's use we include any determination of ways in which statements containing the term can be tested. The sentences to which the label "interpretative sentence" is intended to apply do just this for theoretical terms. See Hempel, Philosophy of Natural Science, pp. 72-75, p. 100. Secondly, we emphasize that the term "interpretative sentence" is neutral between divergent views about the exact character of the way, or ways, in which the use of theoretical terms is specified by means of antecedently familiar terms. We do not build into the meaning of "interpretative sentence" any such views as that interpretative sentences are analytic, and so immune to revision in light of experience; or that interpretative sentences are, or should be, operational definitions; and so on. For a good recent discussion of the precise nature of interpretative sentences, see K. Schaffner, "Correspondence Rules", Philosophy of Science, 36 (1969), pp. 280-290.
effort to ensure that this requirement makes a quite definite claim concerning concept formation in psychology by supplementing the general statement of the requirement with a fairly specific indication of what counts as introducing a term via behavior referring terms.

In Sellars use the term "methodological behaviorism" refers exclusively to a thesis about concept formation in psychology. However, it is easy to envisage an exactly parallel thesis about concept construction in any one of the behavioral sciences other than psychology—and the parallel thesis would have as much right to be regarded as a methodological behaviorism as does the thesis concerning psychology. It will be convenient to alter somewhat Sellars' terminology. What he simply calls "methodological behaviorism", we will from now on refer to as "methodological behaviorism in psychology". We thus make available such terms as "methodological behaviorism in economics" and "methodological behaviorism in sociology". It should be fairly easy to see how such terms are to be understood on analogy with the Sellarsian account of methodological behaviorism in psychology.

We are now in a position to characterize a variety of behaviorism to which Quine subscribes—a kind of behaviorism which, as we will indicate, plays a highly significant role in this thought. For Quine linguistics is to be classed with the rest of the behavioral sciences. The appropriateness of this classification is due to the circumstance that in linguistics, just as in the other behavioral sciences, facts about human behavior, verbal or otherwise, play a major role in the acceptance and rejection of hypotheses. Of course, in contradistinction to other behavioral sciences, linguistics has as its exclusive concern human languages, including devising manuals for translating between languages. Now in accord with the terminological recommendations of the preceding paragraph, we can speak of methodological behaviorism in linguistics. This is the thesis that descriptive terms in linguistics must refer to behavior (including of course verbal behavior) and publicly accessible circumstances of behavior, or they must be introduced by means of terms referring to behavior and circumstances. It is important to note that the points made previously about methodological behaviorism in psychology apply to this parallel thesis about linguistics. For one, methodological behaviorism in linguistics is not per

se a thesis about the analysis of terms for talking about language—"meaning", "means the same as", and so on—in their everyday or vernacular uses. Rather it is a thesis about concept construction in the science of linguistics. What we are saying here bears emphasizing. We distinguish between the use of expressions in casual contexts such as a conversation with the butcher or the baker, and the use of expressions in serious theoretical inquiry.17 And methodological behaviorism in linguistics applies exclusively to the employment of terms in serious inquiry about language. If terms like "means the same as" in their vernacular use are to be used in the serious study of language, then they must in that use refer to behavior or be explained by means of behavior-referring terms. But if semantic terms in their everyday use are restricted to casual contexts, methodological behaviorism in linguistics is not committed to any particular explanation or analysis of them. Secondly, the remarks concerning term introduction made above in connection with methodological behaviorism in psychology apply to methodological behaviorism in linguistics as well. In other words, the notion of introducing a term via behavior referring terms is used in the same way in methodological behaviorism in linguistics as it is in the parallel thesis about psychology. Thus, the devices or procedures we discussed previously—explicitly defining terms on the basis of concepts referring to behavior, and introducing terms as theoreticals on such a basis—continue to count as introducing terms by means of behavior referring concepts.

Various moves Quine makes strongly support attributing to him the thesis of methodological behaviorism in linguistics. One such maneuver is as follows. A linguist embarked on the enterprise of devising a manual for translating between languages, including radically foreign languages, needs a battery of terms or concepts to formulate hypotheses, describe observations he makes, and so on. In chapter two of *Word and Object*, Quine delineates a vocabulary—"assent to a sentence", "stimulus meaning of a sentence", and the like—to be employed in the enterprise of

17 This is the fashion in which the distinction is made by Quine himself in *Word and Object*, p. 210. Hitherto in this article we have spoken of the everyday use of an expression, rather than its use in casual contexts. But they amount to the same thing.
translation. And the vocabulary Quine introduces conforms to methodological behaviorism in linguistics in a fairly conspicuous fashion. Quine introduces by explicit definition the concept of the affirmative stimulus meaning of a sentence. The definition is this: A stimulation y is a member of the affirmative stimulus meaning of a sentence S for a speaker if and only if there is a stimulation x such that if the speaker were given x, then were asked S, then were given y, and then asked S again, he would dissent the first time and assent the second. This definition relies on the logico-mathematical term "is a member of" and other such terms. The descriptive terms in the definiens are "assent", "stimulation", and so on. And these terms refer to behavior—as in the case of "assent"—or to publicly accessible circumstances of behavior—as in the case of "stimulation". Nor is the definition of affirmative stimulus meaning an isolated example. Quine defines the notion of a sentence that is stimulus analytic for a speaker as one that he would assent to under any stimulation. Here again the descriptive terms in the definiens refer to behavior and publicly accessible circumstances of behavior. Examples could easily be multiplied. But presumably the point is clear. The vocabulary or set of concepts Quine commends the use of in the enterprise of translation seems rather plainly to conform to the thesis of methodological behaviorism in linguistics. This surely is reason to attribute the thesis itself to Quine.

A second important piece of evidence for ascribing to Quine methodological behaviorism in linguistics emerges in the following passage from his paper "Linguistics and Philosophy":

When I dismiss a definition of behaviorism that limits it to conditioned response, am I simply extending the

18 The vocabulary Quine introduces is not just for philosopher's talk about the linguist's activities—though it is useful for that purpose too. The linguist engaged in translation actually formulates his claims—for example, a hypothesis about how to translate the native occasion sentence "Gavagai" into English—using the Quinian vocabulary. See Quine, Word and Object, p. 30.

19 Quine, Word and Object, p. 32.

20 Quine, Word and Object, p. 55.

term to cover everyone? Well, I do think of it as covering all reasonable men. What matters, as I see it, is just the insistence upon couching all criteria in observation terms. By observation terms I mean terms that are or can be taught by ostension, and whose application in each particular case can therefore be check intersubjectively. Not to cavil over the word "behaviorism", perhaps current usage would be best suited by referring to this orientation to observation simply as empiricism; but it is empiricism in a distinctly modern sense, for it rejects the naive mentalism that typified the old empiricism. It does still condone the recourse to introspection that Chomsky has spoken in favor of, but it condones it as a means of arriving at conjectures or conclusions only insofar as these can eventually be made sense of in terms of external observation.

In this passage Quine expresses his adherence to the view—to which he rather indiscriminately applies both the terms "behaviorism" and "empiricism"—that all criteria must be couched in observation terms, or alternatively, conjectures must eventually be made sense of in terms of external observation. It seems natural to take this doctrine to assert that all descriptive terms or concepts must refer to publicly observable phenomena, or be explainable by means of concepts referring to such phenomena. Applied to the study of language the doctrine is clearly much the same as the position we have labelled "methodological behaviorism in linguistics." Quine himself presents the doctrine in question in the context of a paper treating of language learning and kindred matters in linguistics. Consequently, it seems fair to say that Quine accepts methodological behaviorism in linguistics. Examples of passages from Quine's writings in which the methodological behaviorist requirement emerges could be multiplied. However, we trust that the passages we have made reference to or cited constitute sufficient evidence for our attribution to Quine of methodological behaviorism in linguistics.

Quine's methodological behaviorism in linguistics is not a doctrine on the periphery of his philosophy, but is connected with quite central aspects of his views. It is worth describing one of the ways in which the doctrine in question plays a significant role in Quine's thought. Doing so will fill out our account of Quine's methodological behaviorism in linguistics by setting it in a larger context.

Quine's rejection of the terms belonging to the theory of meaning—"synonymy", "analyticity", and so on—in their
traditionally intended uses is at the very heart of his philosophy. Quine calls these terms together with their traditional definitions "intuitive philosophical semantics", or sometimes simply "intuitive semantics". In criticizing intuitive semantics Quine pursues two complementary lines of argument. He argues that the terms of intuitive semantics, like such terms as "unicorn" and "hippogriff", denote nothing. Quine also argues that the terms of intuitive semantics have not and cannot be adequately explained or clarified. Quine's methodological behaviorism in linguistics plays a key role in the second of these approaches to dismantling intuitive semantics. For instance, the definition of sentence synonymy offered by intuitive semantics can be put as follows: Two sentences are synonymous if and only if they command assent and dissent concommitantly, and this is due to understanding the sentences rather than to beliefs about how things happen in the world. Quine's criticism of this definition is basically that no sense can be made on the basis of verbal behavior of a distinction between assent to or dissent from sentences due solely to understanding meanings and assent or dissent due in part to generally shared theory about the world. And in general, in Word and Object Quine's criticism of the terms and definitions of intuitive semantics is that they cannot be explained on the basis of verbal behav-

22 The traditionally intended use of, for instance, the term "analytic sentence" is described in Quine, "Two Dogmas of Empiricism", in From a Logical Point of View, (New York: Harper and Row, 1963), p. 21. Quine can be found using terms like "intuitive semantics" in Word and Object, p. 65, p. 66.

23 Both lines of criticism are evident in "Two Dogmas". In the first four sections of the article Quine argues that attempts which have been made hitherto to clarify analyticity, are inadequate. In the last two sections, and especially the last one, Quine argues--relying on his doctrine that our theory about the world is like a field of force whose boundary conditions are experience--that there are no analytic statements in the traditionally intended sense.

24 Quine, Word and Object, p. 62.

behavior. 26 Now this criticism tacitly relies on Quine's methodological behaviorism in linguistics. That intuitive semantics cannot be explicated in behavioral terms is no criticism, except in conjunction with the methodological behaviorist requirement that descriptive terms in the study of language be made sense of in behavioral terms. It is important to add here that for Quine the effect of the criticism we have just described is not merely that the terms and definitions of intuitive semantics should be expunged from the conceptual apparatus of those to whom we apply the term "linguist", as distinguished from those to whom we apply the term "philosopher". As is well known, for Quine philosophy is continuous with science, including the science of linguistics. Consequently, the philosopher's em-

26 We emphasize that we are simply describing Quine's position here, not endorsing it ourselves. It might be said that Quine is not entitled to the claim that intuitive semantics cannot be explained in behavioral terms. For, the objection would continue, Quine has at best shown that the terms of intuitive semantics cannot be explicitly defined by means of concepts pertaining to behavior—after all, what Quine does in Chapter 2 of *Word and Object* is explicitly define notions such as stimulus synonymy in behavioral terms, and then show that they are poor approximations to the concepts of intuitive semantics. Quine has not shown that the terms of intuitive semantics cannot be introduced as theoretical terms on the basis of behavior referring concepts. This is an important objection to Quine's critique of intuitive semantics, an objection whose soundness we will not attempt to determine in a footnote. However, it is worth mentioning that for the intuitive semanticist's notion of, say, analyticity to be introduced as a theoretical concept on the basis of concepts pertaining to behavior, the following would have to be the case: the notion of analyticity in question appears in a theory whose interpretative sentences link the concept of analyticity with behavior referring concepts. But Quine is apparently in a position to object to any such theory. Presumably a theory in linguistics incorporating the intuitive semanticist's concept of analyticity would imply that there are analytic statements. Yet as we have noted in the text and footnote 23 of this article, Quine's case against intuitive semantics includes arguments for the view that its terms such as "analytic statement" denote nothing. This view together with Quine's supporting arguments are at least among the reasons available to Quine himself for saying that the terms of intuitive semantics cannot be introduced as theoretical terms on the basis of behavior referring terms.
ployment of semantic terms is no more exempt than the linguist's from the methodological behaviorist requirement. Quine's critical point about the resistance of intuitive semantics to clarification in behavioral terms argues for the extrusion of intuitive semantics from all serious theoretical work on language, including that done by philosophers.

Concluding Remarks

We have shown that there is excellent reason for saying that Quine does not adopt logical behaviorism, despite a prima facie logical behaviorist cast to some passages in his writings. However, we have indicated that Quine does indeed accept the variety of behaviorism we have labelled "methodological behaviorism in linguistics". This is Quine's behaviorism. We feel confident that Quine accepts methodological behaviorism in other behavioral sciences such as psychology. But it is methodological behaviorism in the study of language that is especially prominent in Quine's philosophy. It is this brand of behaviorism which, as we have indicated, is connected with central aspects of his views, such as his rejection of analyticity, synonymy and company as traditionally construed.

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