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TRUTH AND UNDERSTANDING[1]

1. INTRODUCTION

The chief problem about semantics comes at the beginning. What is the theory of meaning a theory of? What are the facts that it is supposed to account for? As the variety of recent and contemporary work in linguistic semantics will attest, the answers to these questions exert a mighty influence on subsequent theory. I won't canvass this variety here, but call attention to a line of reasoning that seems to me attractive, and in harmony with semantic theory as it is actually practiced, if not always with the interpretation of that practice.

Consider the simplest possible answer to our question, namely that the theory of meaning is charged with accounting for facts about meaning. The notion of meaning is at least initially given in our everyday vocabulary: we speak of people knowing the meaning of something, or not knowing it, of their failure to appreciate the full meaning of something, and of what certain signs mean in such-and-such conventional systems. Moreover, it is not difficult in practice to distinguish between the kind of meaning appropriate to language, the kind of meaning appropriate to symptoms and portents (Grice's "natural" meaning), and the kind of meaning or significance with which artworks are said to be fraught. The kind of meaning that a *sentence* has, however, is determined by what it may be used to *say*, and the kind of meaning that words and phrases have is determined by their contributions to the meanings of the sentences in which they occur. It could therefore be proposed that semantic theory is charged with establishing, formally, all of the facts to the effect that so-and-so means such-and-such, or at least all such facts as come readily to the lips of native speakers, hoping in this way to clarify the nature and extent of the human capacity for language.

I think that this simple answer is correct. It turns out, however, that research directed to the end of describing the facts about meaning requires the intervention of other concepts. The reason is that the notion of meaning applies in the first instance only to sentences, and whereas the meanings of sentences must be constructed somehow out of the meanings of words and the meanings of modes of syntactic combination, we are given nothing to go on about the meanings of either except that they "contribute" somehow to the meanings of the sentences in which they figure.[2]

Enter reference. Reference, unlike meaning, attaches to expressions of all syntactic categories, and all modes of syntactic combination, in the latter case as conditions on how the reference of compounds depends on the reference of their parts. Moreover, the reference of an expression is *isolable*, in the sense that the expression carries its reference with it wherever it occurs. Because a theory of meaning requires a concept of this nature, reference is indispensable; it is the backbone of meaning.

But reference, however understood, blurs semantic distinctions. Whether reference is given by sets of possible worlds, or sets of small possible worlds, or objects still further refined, the content of an assertion does not reduce to the reference of the sentence asserted; or so it appears. The reason, I believe, is that content, but not reference, is as fine-grained as the notation used to express it; whereas reference must allow different notations to end up at the same place.[3]

There have been attempts to preserve a standard truth-based conception of content against obvious counterexamples. It has also been suggested that the sensitivity of content to notation may be acknowledged by seeing content as *structured*, so that not just the reference of whole sentences, but also the way in which that reference is built up from the reference of their notational pieces is crucial to their content.[4] Structured content can go only so far, since there can't be any difference between the structured content of . . . A . . . and . . . B . . . where A and B simple expressions with the same content (for example, synonymous words). Then one would have to explain why a person says aye to the question whether . . . A . . . and nay to the question whether . . . B . . . without saying that she believes that . . . A . . . but not that . . . B . . . . A supplement is thus needed in any case.[5]

Assuming that content should be understood in accordance with naive intuitions, and that so understood it cannot reduce to reference, what is the link between the indispensable concept of reference and the target concept of linguistic meaning? I think that the link is the psychological state of the language user, his or her *knowledge* of reference. The facts that semantics must account for comprise the context-independent features of the meaning of expressions that persons must know if they are to be competent speakers of the languages to which those features are assigned. What they must know, I suggest, consists of: facts about the reference of expressions, about what other people know and are expected to know about the reference of expressions, about what they know about what one knows and is expected to know about the reference of expressions, and so on up.[6]

From this point of view, meaning does not reduce to reference, but knowledge of meaning reduces to the norms of knowledge of reference. Such norms are *iterated*, because knowledge of meaning requires knowledge of what others know, including what they know about one's own knowledge. To a first approximation, the meaning of an expression is what you are expected, simply as a speaker, to know about its reference. As a speaker of English, you are expected, for example, to know that 'snow is white' is true if and only if snow is white; to know that 'snow' refers to snow, and that 'is white' is true of just the white things; and to know quite generally that the result of combining a singular term NP with a predicate in the form of an intransitive adjective is a sentence true just in case the predicate is true of the reference of the term. If, and only if, you know these things do you know that the sentence 'snow is white' means that snow is white.

The view that I have sketched forges what seems to me the strongest tenable link between truth and the other concepts of reference on the one hand and understanding on the other. It is weaker than the view that knowledge by the theorist of the truth conditions of a person's potential utterances would suffice for understanding that person; and it differs from various emendations to this view, in that it makes use of the information that a person tacitly possesses about the truth conditions of her own utterances. However, if I am right that knowledge of meaning reduces to the norms of knowledge of reference, then arguments to the effect that linguistic meaning meaning simply cannot be

captured in terms of reference must fail; and such arguments appear
very powerful. In the next section I will consider some points against
the strong view that meaning reduces to truth conditions, or truth
conditions plus some supplementary facts, inquiring whether these
points bite against the conception that I am advancing. Then is section
3 I will return to questions about the nature of linguistic data, and
review some aspects of the psychological program.

2. CAN TRUTH LEAD TO MEANING?

Considerations of a type due to John Foster have been advanced to
show that theories of truth cannot go proxy for theories of meaning.[7]
Certainly, to know that for a person A the sentences S is true if and
only if p is not to know that it means that p (even if it does mean this).
One argument growing out of Foster's work, which has been advanced
in several versions by different authors, purports to show that the gap
between meaning and truth conditions persists even when other data or
theoretical parameters are taken into account, including the fact that a
projectible theory of truth for a person will have to harmonize with the
facts about the person's mental and physical states, and our position
with respect to interpreting him. Must a theory of truth, arrived at on
the basis of a rational procedure of interpretation, with the proper
conception of public evidence, and known to be an adequate theory,
serve as an adequate basis for understanding?

   How the argument is to be formulated will depend upon how we
think of evidence, the nature of psychological plausibility, and much
else. We might try to cut through the fog here, as Soames does, by
considering a test case.[8] In the test case, we have, or at least have
gestured toward, a theory of reference that is acknowledged to be
adequate for some person, and we also have what will unexceptionably
pass for truth about what that person means. Then if knowledge of the
theory of reference is compatible with mistaken beliefs about meaning,
that will be a demonstration that knowledge of the one does not bring
knowledge of the other.

   Gianni is a native speaker of Italian. Hence

   (1)   'Firenze è una bella città' is true for Gianni (in the possible
            world w) if and only if Florence is a beautiful city (in w)

and also

> (2)   'Firenze è una bella città' means for Gianni that Florence is
>   a beautiful city

I, the theorist, might know (1) and fail to believe (2), because I
mistakenly believe (3):

> (3)   'Firenze è una bella città' means for Gianni that Florence is
>   a beautiful city and p

where 'p' is replaced by something necessary that I believe, for instance
"Arithmetic is incomplete."

I distinguish two types of response to the argument, which I will call
immanent and *transcendent*. The immanent response has been recently
and usefully elaborated by Ernie LePore and Barry Loewer.[9] This
response grants the argument, but then suggests that certain other
knowledge, not itself of an intensional semantic nature, will when taken
together with knowledge of truth conditions suffice for understanding.

The transcedent response, which may be considered by itself or in
conjunction with an immanent response, is that once we recognize that
what we have to go on in interpretation may admit more than one
possible correct ascription of a language to a person, then we may
conclude that linguistic reality does not really offer counterexamples to
the thesis that knowledge of truth conditions suffices to confer under-
standing.[10] An allegedly mistaken attribution of meaning to Gianni will
either disrupt communication with him, or it will not. If it will not, then
where is the alleged mistake? But if it will, then the mistake should
come to light.

Gianni interacts with people back home, and also with tourists like
me. Holding as I do (3), I am bound to find that a rather ordinary
sentence, suitable for insertion in travel brochures, is going on about
the incompleteness of arithmetic. In Florence, Gianni gestures toward
the Duomo, volunteering "Firenze è una bella città." Is he trying to
impress me with his knowledge of logic? Surely I'll find out that (3) is
false, and latch on instead to (2). In my coming to see the falsehood of
(3), however, the truth theory played no role (this can be seen indirectly
from the fact that, when I correct my hypothesis about what Gianni
means, I need not revise the truth theory at all). The transcendent
response therefore has the feature that mistakes like (3) are corrected

on the basis of coming better to understand Gianni's meanings, not the
truth conditions of his utterances.

For the purposes of the present discussion, it is assumed that *some*
materially adequate theory of truth for Gianni, together with *some*
conception of what is canonically provable within it, will have the
property that the canonically provable truth conditions of an arbitrary
sentence (the "target" equivalences, in some formulations) constitute a
translation of that sentence. The considerations derived from Foster,
and advanced in Soames's example, do not question this assumption,
but ask instead how such a theory may be chosen without adverting to
the concept of meaning. The choice of a conception of canonical proof
(which includes the form of the axioms) can readily depend upon
psychological hypotheses, or "constraints," governing reference and
satisfaction, It cannot, however, depend directly upon assumptions
about what people intend, by virtue of the linguistic forms they use, to
be saying; for if it did, then it would depend upon meaning by another
name. In my fanciful illustration, I guessed at Gianni's meaning based
upon my beliefs about what he would be likely to be interested in
telling me. If getting at theories of truth that are revelatory of meaning
goes like that, then the transcendent response does not provide a
conception of meaning based on truth. By taking in the contents of
speech acts, it swallows meaning whole.

Consider now the immanent response, taken in isolation from the
transcendent one. According to LePore and Loewer, the knowledge
that supplements knowledge of truth conditions is the knowledge of
when utterances match in content, or stand in the samesaying relation.[11]
Now, knowledge of when utterances would match in content obviously
is required for understanding. But LePore and Loewer's defense of
truth-theoretic semantics is not in any evident way different from the
proposal that interpretation should proceed by translation into one's
own speech. In terms of our example, suppose I come to know that
Gianni's 'Firenze è una bella città' matches my 'Florence is a beautiful
city' in content. Then I come to know that (3) is false, and that (2) is
true. With a theory of truth for my own language, I can then infer (1)
with or without a theory of truth for Gianni.

If I am right to suggest that LePore and Loewer's view amounts to
the thesis that translation into one's own speech, supplemented with a

theory of truth for that speech, is sufficient for understanding, then it appears that the theory of truth can be jettisoned too. For I know routinely all the disquotational facts about meaning in my own speech, and if I add these to my translation I will know about meaning in Gianni's.

Our original question was: can a theory T for L, all of whose semantic concepts are drawn from the theory of reference, have the property that knowledge of T, and knowledge that it is correct for L, confers understanding of L? The immanent response is that the answer is positive, provided that besides the semantic concepts T contains information about when utterances of L and utterances in the language used in expounding T have the same content. But then the latter information alone confers understanding.[12] The transcedent response is that the answer is negative, but the theory of reference and truth has a role to play in clarifying interpretive practice. That thesis can hardly be false, since meaning is tied to truth conditions in the weak sense that if s means that p, then s is true if and only if p.

On the conception that I am proposing, what replaces (1) is something like (4):

(4)   (Gianni knows that) one is expected to know that 'Firenze è una bella città' is true for one (in the possible world w) if and only if Florence is a beautiful city (in w)

To complete the picuture, we have to add that (4) is the strongest thing that one is expected to know about the truth conditions of the particular sentence in question. Thus Gianni knows that one is not in general expected to know about the incompleteness of arithmetic. That is enough for him to know, and for me to discover, that (3) is false.

My response to Foster's considerations has perhaps changed the subject. As originally conceived within Davidson's approach, the problem was to find some information not itself of a linguistic semantic character that, when it embedded a translational theory of truth for a person such as Gianni, would bring understanding of Gianni. What I have offered is the view that one will understand Gianni when one knows what he, Gianni, knows and is expected to know about reference and truth. The general principles and certain theorems of a theory of truth for Gianni will figure in one's knowledge about him. But the

theory of truth for Gianni's speech is not something that one starts with, augmenting it with conditions or constraints so as to make it acceptable as a theory of meaning. Rather, truth comes in as something Gianni knows about, and the deliverancess of the theory are of interest only insofar as knowledge of them is part of Gianni's linguistic competence.

What rules out (3), I have suggested, is the fact that Gianni knows that one is not expected to know about the incompleteness of arithmetic. This and similar facts are part of a theory of what Gianni is expected to know about truth and reference, and about the extent to which Gianni actually knows what he is expected to know, and knows that he is expected to know it. I am supposing that a theory of this kind will exhaustively answer any questions about what Gianni means by his words. The theory of Gianni's competence will incorporate a theory of truth. But even an ideally competent Gianni will know only some of the consequences of that theory, and there will be others perhaps that he knows but does not think it right to expect others to know. Statements of truth conditions that go beyond these bounds are irrelevant to understanding, resting as it does on common knowledge, and so irrelevant to meaning as well.[13]

There are plenty of things we know and expect others to know that are not pertinent to language: that two and three make five, that when it rains the streets become wet, and so forth. Gianni's competence about the reference of 'Firenze' or the truth conditions of 'Firenze è bella' doesn't include such information. On the other hand, it arguably does include the information that Florence — the reference of 'Firenze' — is a city, and there is no more language involved in the cityhood of Florence than in the disposition of the streets to become wet after rain. Thus some notion of linguistically relevant knowledge has to be built into our picture of Gianni's competence. However, I don't see this fact as a limitation of the theory. For the attempt is not first to form a conception of linguistic knowledge properly so called, and then within that conception to articulate a proper theory of Gianni's grasp of it. Rather, one formulates a theory of what Gianni knows and expects others to know about truth and reference, and counts as pertinent to language whatever that knowledge comprises.[14] Thus it is not to be assumed that linguistically pertinent knowledge is restricted to the sort recorded in the usual, elementary basis clauses of the theory of truth, or that it may not include knowledge of contingent matters of fact.[15]

3. SEMANTIC FACTS

A person can know something without being in full command of the concepts that may be used to characterize what she knows. I know that atoms are very small, but I am not in full command of the concept *atom*. I also know that 'atom' is true of x if and only if x is an atom, and that to say of a thing 'It is an atom' is to say of it that it is an atom, again without being in full command of the concept *atom*.

Considering these and similar examples, I think that we should conclude that knowledge of the disquotational facts about truth, satisfaction, reference, meaning, and saying should not be overrated. Knowing them is knowing something all right, but not very much. If so, then the disquotational facts about meaning are not more robust than the corresponding facts about truth. In fact, as I have argued elsewhere, we can go further. Suppose that clausal complements make a self-referential semantic contribution; i.e., that they denote themselves, or things similar to themselves, viewed not merely as strings of marks, but rather as syntactic structures with an interpretation, they and their parts having all the referential properties that they would have if occurring in isolation. In that case (5) becomes (6):

(5)   'Snow is white' means that snow is white

(6)   'Snow is white' means something similar to 'snow is white', understood as if uttered

But (6) cannot fail to be true. So (5) is true.[16]

If (5) is not robust, since one can know it without knowing what snow is, or what it is for something to be white, it is not exactly trivial either. As I conceive it, a monolingual speaker of Chinese, who happened to have got ahold of the information that 'snow is white' was an English sentence, would not know (5). That person would know that 'snow is white' means (in English) something similar to itself (the first part of (6)), but would be unable to utter it as a sentence of his own, thus failing the second part. So the Chinese speaker would not know (6). On the other hand, your power and mine to utter 'snow is white' as a sentence understood as it in fact is does not depend on our having knowledge of snow or whiteness. Similarly, I know that 'atoms are very

small' means that atoms are very small, despite my comparative igno-
rance about atoms.[17]

The central part of the argument derived from Foster uses the fact
that, as we understand the notion of meaning, tiny adjustments in the
complement sentence may turn a truth 'S means that p' into a false-
hood 'S means that q'. That is what leads Soames to suggest (Soames,
op. cit.: 594 (fn. 2)) that "the basic argument can be made to apply to
any attempt to found meaning, or knowledge of meaning, on theories of
truth with respect to a circumstance . . . (provided standard recursive
clauses in the truth theory are maintained)." The conclusion seems hard
to escape; on the self-referential view of complement clauses, it is to be
expected.

I have said that although content is not reducible to truth conditions,
it is reducible to the knowledge of what one is expected to know about
them. In this sense, the account of content will be based on truth. The
application can be illustrated by means of elucidations of the meaning
of ordinary words for perceptual things. I want to consider here,
however, its application to the logical constants, which seems to me
again to reveal problems both with the view that content reduces to
reference and with the view that content should be taken as primitive.

When the account of propositions, the contents of sentences, is not
based on truth, there is a certain underdetermination of meaning of the
logical constants that appears objectionable. Suppose, for example, that
negation and conjunction are functions carrying propositions and
ordered pairs of propositions respectively into other propositions. In
the setting of possible worlds semantics, whatever the independent
difficulties with its conception of a proposition, we know exactly what
functions these are: negation maps a proposition into its complement,
and conjunction maps an ordered pair of propositions into their inter-
section. Negation and conjunction might be given to us in various ways,
but we are clearly entitled to speak of *the* negation of the proposition p,
or *the* conjunction of p and q. Since the identities of p and q are fixed
in terms of truth in possible worlds, the identities of negation and
conjunction are fixed as well.

However, if propositions are cut loose from truth conditions, and
negation is a function from propositions to propositions, then for all the
theory says the negation of a proposition can be any proposition

whatever that is true when the argument is false, and false when its argument is true. Similar remarks go for conjunction and, mutatis mutandis, for the quantifiers.[18] But shouldn't the nature of negation be exhausted by the condition that it maps truth into falsehood and falsehood into truth? When prepositions are primitive, it isn't. There will be many, equally good, candidates.[19]

The point that I have raised comes out also in a setting where propositions are taken to be structured contents. Soames, for example, takes the sign '¬' of negation as contributing its own its own truth function, NEG. The negation of a proposition P is the ordered pair $\langle NEG, P \rangle$. The characterization of truth makes $\langle NEG, P \rangle$ false if P is a true proposition, true if P is a false proposition. But the choice of NEG for '¬' was inessential.[20]

On the view that I am taking, you know what the simple sign for negation expresses if you know what one is expected to know about its effects on truth. But that is just (7):

(7)   ¬ S is true if S is false and false if S is true

(In this case, what you have to know does not actually assign '¬' a reference, but rather treats it syncategorematically.) Thus we have a conception of what the negation of something is, and that it is unique. I would apply the above conception to knowledge of the meanings of the quantifiers as well.

I am applying to semantics a research program that goes forward in syntax and phonology, asking, "What do you know when you know a language, and how do you come to know it?" I have supposed that the central notion that figures in knowledge of meaning is knowledge of reference, in particular knowledge of the truth conditions of sentences. If this is right, then Gianni speaks Italian because he knows a certain theory, which he applies and expects others to apply in speech and understanding, and in his other significant uses of language, and you know English because you know a certain theory of reference which you apply, and expect others to apply.

How is the theory acquired, and in what specific form is it made available to the mature speaker? There is reason to believe that semantic competence exploits domain-specific patterns of learning and cognitive development; in short, a language faculty. Our grasp of the

particular modes of correlation of form and meaning typical of human first languages, and the convergence of intuitive judgments among persons of diverse experience (and little or no relevant experience) both support this presumption. Our specialized cognitive faculties need not be restricted to the motor and perceptual, as though everything outside this realm, including thought about the objective world and ourselves and other people as both members of it and observers of it, were an undifferentiated mass of general knowledge. On the contrary, such knowledge, including knowledge of meaning, may be in Chomsky's sense highly modular in character.

In closing, I will briefly consider an objection to the picture that I have been presenting of language learning as an intellectual achievement. The objection is that language learning seen in this way necessarily attributes to the learner a prior grasp of concepts that have to be brought to bear in framing hypotheses about reference, and therefore distorts our relation to content. Again, Soames expresses the objection well: in a semantic theory that ties reference to understanding, and both to knowledge, we seem to invoke an antecedent grasp of propositions, so that language learning is reduced to learning which proposition a sentence stands for. And Soames objects to this picture on the grounds that knowing about propositions is often not distinct from getting ahold of the sentences that in fact express them.

I intend the view that I have outlined of the nature of contents and our often partial knowledge of them explicitly to allow for the possession of a belief in partial ignorance of its content; indeed, the view positively embraces the phenomenon of partial knowledge, and a certain distance between our conceptual grasp and the things we can have beliefs about. There is no assumption that in coming to know that atoms are very small, or that the sentence 'atoms are very small' means that atoms are very small, I had to already know tacitly or unconsciously what the MIT undergraduates explicitly know about atoms. In this respect, the view agrees with Soames that we need not picture all of language learning in terms of the labelling of concepts antecedently available (although many studies of language acquisition do suggest that much of language learning really is like this).

Nevertheless, there is a real clash between the view that Soames and many others take and the one that I am defending. Soames holds that coming to understand the sentences of a language is a matter of "satisfy-

ing conventional standards regarding their use."[21] I am saying that coming to satisfy conventional standards regarding the use of sentences depends upon coming to know about reference.

NOTES

[1] This article was written for an American Philosophical Association Symposium of the same title held in San Francisco, March 1991, with Scott Soames as cosymposiast and Mark Richard commenting; a longer version has appeared in *Iyyun*. It is also a descendent of a paper given under the title "Semantics Past and Future" at a meeting of the Bar-Hillel Colloquium, Jerusalem, Israel, in January 1991, Tanya Reinhart commenting. The comments of Reinhart and of Richard, and Soames's contribution to the symposium, have prompted some revisions in the text; but because of the occasional nature of their drafts I have not cited them explicitly. For other comments on this article and its antecedent I am indebted particularly to Noam Chomsky, Martin Davies, Alexander George, Gabriel Segal, and Robert Stalnaker.

[2] Mark Johnston in "The End of the Theory of Meaning" *Mind and Language 3*, 1 (1989): 28—42 proposes what he calls a "minimalist" theory of meaning, which has no substantive conception of the contribution of the meaning of a word to the meaning of a sentence. In the minimalist theory, for example, we can say of the meaning of 'is white' only that it is such that, when combined with the meaning of 'snow', it yields the meaning of 'snow is white' — that is, that snow is white. The explanatory vacuity of the minimalist theory suggests to Johnston that meaning has been overrated. I think that Johnston's conclusion can be accepted without undermining a conception of semantics that puts at the center, not meaning itself, but rather people's knowledge of and beliefs about truth and reference, knowledge that determines knowledge of meaning.

[3] It has been argued, particularly by Brian Loar, that the notion of content needed for psychological explanation is still more refined than the notation of our common language: see Loar, "Social Content and Psychological Content," in R. Grimm and D. Merrill (eds.), *Contents of Thought* (Tucson: The University of Arizona Press, 1988): 99—110. Although Loar's thesis does imply that reference in our common language is not adequate for getting at content, it does not imply that reference in a tailor-made psychological language is inadequate. However, I am inclined to believe that our common language already contains the means for getting at what Loar calls psychological content; if so, then his considerations make no essential difference to the present point of discussion.

[4] I have taken the phrase from Max Cresswell, *Structured Meanings* (Cambridge, Mass.: The MIT Press, 1985).

[5] Similar problems for the structured meaning idea arise from the tacit use of combinatorial semantic rules that are not themselves represented in the meanings assigned; I elaborate on this theme in work in preparation.

[6] The features of common knowledge that I allude to here have figured prominently in accounts of language as conventional, articulated prominently in David Lewis, *Convention* (Cambridge, Mass.: Harvard U.P., 1969) and "Languages and Language," in K. Gunderson, (ed.), *Minnesota Studies in the Philosophy of Science, vol. 7* (Minneapolis: University of Minnesota Press, 1975), reprinted in Lewis, *Philosophical Papers*, vol. I (Oxford: Oxford U.P., 1983): 163—188; and in Stephen Schiffer, *Remnants of Meaning* (Cambridge, Mass.: MIT Press, 1987.

[7] Foster, "Meaning and Truth Theory", in G. Evans and J. McDowell (eds.). *Truth and Meaning* (Oxford U.P., 1976): 3—32.

[8] The example below is taken from Scott Soames, "Semantics and Semantic Competence," in J. Tomberlin (ed.), *Philosophical Perspectives 3: Philosophy of Mind and*

Action Theory (Altascadero, California: Ridgeview Publishing Company, 1989): 575—596.

[9] "What Davidson Should Have Said," in E. Villanueva (ed.), *Information, Semantics, and Epistemology* (Oxford: Basil Blackwell, 1990): 190—199.

[10] I identify the transcendent response with certain suggestions of Donald Davidson, going back to some remarks in Davidson's *Inquiries Into Truth and Interpretation* (Oxford: Clarendon Press, 1984). I do not mean to tie the response as I sketch it here to Davidson's own views, however.

[11] LePore and Loewer, *op. cit.*: 197. I am abstracting here from the question whether it is utterances or sentence types in their contexts of utterance that are to match in content.

[12] The difficulty I am pressing for the immanent response depends crucially on the assumption that disquotational knowledge of meaning is routine, a point I discuss below but do not defend here (see Higginbotham, "Knowledge of Reference," in A. George (ed.), *Reflections on Chomsky* (Oxford: Basil Blackwell, 1989): 153—174 for some discussion). Even if the difficulty is waived, and samesaying is not regarded as a "semantic" relation, the theory of reference for L becomes on the immanent response an idle wheel; moreover, questions crowd in about what it is to understand one's *own* language, if the knowledge that, say, 'snow is white' means that snow is white is so substantial.

[13] The last three paragraphs were prompted by critical discussion by Scott Soames.

[14] A point that has emerged with particular clarity in some recent studies is that material knowledge enters into the acceptability conditions for a variety of syntactic types, including the formation of middle verbs (e.g., the word 'read' in 'the books read quickly') and the absolutive 'with' (as in: 'With John in the hospital, we'll have to go without our best player'), the latter being discussed especially in Gregory Stump, *The Semantic Variability of Absolute Constructions* (Dordrecht, Holland: D. Reidel, 1985).

[15] For some further discussion, see Higginbotham, "Elucidations of Meaning," *Linguistics and Philosophy 12*, 3 (1989): 465—517; p. 470.

[16] This point is elaborated in my "Knowledge of Reference." The formula "understood as if uttered" is taken from Tyler Burge, "Self-Reference and Translation," in F. Guenthner and M. Geunthner-Reutter (eds.), *Meaning and Translation* (New York: NYU Press, 1978: 137—153.

[17] I am indebted here to comments by Mark Richard.

[18] I am indebted here to comments by Tanya Reinhart.

[19] The point arises in particular if propositions are added as a primitive type to intensional logic. See Richmond Thomason, "A Model Theory for Propositional Attitudes," *Linguistics and Philosophy 4*, 1: 47—70; 50 *passim*.

[20] For example, we could have taken '¬' to express $\langle\langle NEG^*, NEG+ \rangle, NEG\rangle$ where $(NEG+(f))(x)=NEG(f(x))$ and $((NEG^*(F))(f))(x)=NEG((F(f))(x))$. With a certain latitude in the form of a definition of truth, still more outlandish interpretations of '¬' are possible.

[21] Soames, *op. cit.*: 589.

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