

## You Can Say *That* Again

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It has been two decades since the publication of Davidson's twin papers, "Truth and Meaning" (1967) and "On Saying That" (1968). The first proposed that a Tarskian truth theory for a language *L* can be (the heart of) a theory of meaning for *L*. The second proposed a radically novel approach, the paratactic account, to the logical form of indirect discourse. The two proposals are related in a number of ways. The paratactic account claims to show how to construct a truth theory for languages containing indirect discourse and propositional attitude reports. The truth theoretic account of meaning provides motivation and support for the paratactic account. And, somewhat surprisingly, the paratactic account provides a way to get around an objection that many have seen as fatal to Davidson's truth theoretic account of meaning. Indeed, the proposals are so interconnected, that if one fails, it is likely that the other cannot be successfully defended. Our primary aim in this paper is to motivate the paratactic account and defend it from certain widely known criticisms. Along the way, we will spell out various connections between the paratactic account and the truth theoretic account of meaning, and explain how the former can be used to support the latter.

### I

One aim of a theory of meaning for a language *L* is to specify information concerning *L*, which, if someone possessed it, would enable him to interpret utterances of speakers of *L*. But what is it to interpret another's utterances? To answer this question, consider two people, one understands Italian, the other does not. Suppose both hear Andrea utter "*Il gatto siede dietro al forno.*" Each may know that Andrea's utterance is an assertion and that it is true.<sup>1</sup> But only the one who understands Italian, other things being equal, will be justified in believing the cat sits behind the oven on the basis of hearing

Andrea. What semantic information would justify this belief? The inevitable answer is this: *Andrea's utterance is true only if the cat sits behind the oven.* The following reasoning makes this explicit:

1. Andrea's utterance "*Il gatto siede dietro al forno*" is true.
2. Andrea's utterance is true *only if* the cat sits behind the oven.
3. So, the cat sits behind the oven.

Furthermore, the information that:

- 2'. Andrea's utterance is true *if* the cat sits behind the oven

can justify Andrea's uttering "*Il gatto siede dietro al forno,*" supposing that Andrea wants to produce an utterance which is true if a cat sits behind an oven.<sup>2</sup>

An Italian speaker is also in a position to learn from utterances something about the beliefs of Italian speakers, in our example, that Andrea believes that the cat sits behind the oven. Knowledge of truth conditions can play a role in this justification as well:

4. Andrea believes that his utterance of "*Il gatto siede dietro al forno*" is true.
5. Andrea believes that his utterance is true iff the cat sits behind the oven.
6. So, Andrea believes that the cat sits behind the oven.

(4) is based on the presumption of sincerity. (6) does not logically follow from (4) and (5) (unlike the first inference, where (1) and (2) imply (3)). But in this case it is overwhelmingly plausible that (6) is true, given (4) and (5). Why else would Andrea have made the utterance? These observations provide straightforward support for the truism that understanding a language involves knowledge of truth conditions.

A truth theory for a language *L* assigns to the infinitely many possible utterances of *L* truth conditions based (in part) on the syntax of the sentences uttered, and thus systematizes the truth conditions of the sentences of *L*. The information embodied in such a theory, as we just saw, provides justifications for (certain of) the beliefs that a competent language speaker can acquire upon hearing the assertive utterances of speakers of *L*. It also provides (partial) justifications for some of his own utterances. A truth theory for *L* will also specify a great deal of other information concerning *L*, information concerning relations among the truth conditions of sentences of *L* (for example, logical relations) and information concerning reference relations. But our interest here is in a truth theory's role as a systemization of the truth conditions for utterances of *L*.

It seems to us uncontroversial that speakers of a language know the truth conditions of sentences of their language. But whether speakers actually know a truth theory and whether such knowledge (or even knowledge of truth conditions) is causally involved in the production and understanding of utter-

ances are psychological questions we do not intend to address here. Our conception of truth conditional semantics emphasizes its *epistemological* rather than its psychological role. It is clear that a speaker of Italian will be in a position to acquire and be justified in acquiring a great many beliefs about the world and about the mental states of his fellow speakers in virtue of his understanding Italian. A semantic theory of Italian, in our view, should systematize information which a speaker possesses and which justifies the beliefs acquired in the ways we outlined.

A competent speaker of Italian will also be in a position to acquire from his belief that Andrea assertively uttered "*Il gatto siede dietro al forno*" the belief that Andrea said that the cat sits behind the oven. The justifying inference might look like this:

7. Andrea assertively utters "*Il gatto siede dietro al forno.*"
8. [Some premise stating semantic information.]
9. So, Andrea said that the cat sits behind the oven.

What should premise (8) be? It is clear that "*Il gatto siede dietro al forno*' is true iff the cat sits behind the oven" is too weak. Supposing the cat sits behind the oven, then "*Il gatto siede dietro al forno*" is true iff snow is white. This certainly does not justify the conclusion that Andrea said that snow is white. And even knowing that *Andrea* knows his utterance is true iff the cat sits behind the oven, or that this is common knowledge among all the speakers of Italian, will not suffice. The "obvious" missing premise that would suffice is that *Andrea's* utterance *means that* the cat sits behind the oven. But, of course, one main point of "Truth and Meaning" is to replace the view that a theory of meaning for *L* entails sentences of the form "*S* means that *p*" (*M*-sentences) with the view that it entails sentences of the form "*S* is true iff *p*" (*T*-sentences). Davidson made this claim because:

- (i) He thought that, due to the intensionality of "means that," the logical machinery involved in proving correct *M*-sentences would certainly prove vastly more complex, and might ultimately prove unobtainable, and
- (ii) He thought that a theory which issues in *T*-sentences will accomplish what we can rightfully expect from a theory of meaning.

We do not want to discuss Davidson's doubts about theories issuing in *M*-sentences here.<sup>3</sup> But Davidson was mistaken in the second claim, since as we have just noted a truth theory falls short in that it fails to justify beliefs concerning what is said. This does not seem to be a minor failing, since knowing that *A* said that *p* on the basis of his uttering *S* is central to understanding *S*. So, defenders of truth theoretic approaches to meaning are left with the problem of discovering a way of representing information which can justify conclusions concerning what is said compatible with the truth theoretic approach. As we will show, the paratactic account, somewhat unexpectedly, provides an end run around this problem.<sup>4</sup>

Our strategy for explaining the paratactic account is to describe a population  $P$  which speaks a language  $L$  for which we stipulate that the account is correct. Let us suppose that  $L$  is a first-order language containing names (of people, places, things, times, and [utterances of] sentences of  $L$ ) and predicates. Among these predicates are three two-place predicates:  $U(a, u)$ ,  $S(u, u^*)$ ,  $SS(u, u^*)$ . The first relates a person to an utterance, the second and third relate one utterance to another. (We will explain them later.)  $L$  also contains indexicals, tenses, and demonstratives. We will suppose that the sentences of  $L$  have truth conditions and that the speakers of  $L$  all know the same truth theory. This will enable, for example, one member of  $P$  to learn from another that snow is white when he hears him assertively utter "Snow is white," assuming, of course, that he believes the utterance is true. The presence of indexicals and demonstratives in  $L$  enables speakers of  $L$  to use a single sentence to convey different information. The information conveyed depends on the utterance's context in systematic ways. For example, an utterance of "I am hungry" is true iff the speaker of the utterance is hungry at the time of the utterance. The presence of indexicals, demonstratives, and tenses causes certain complications in the form of  $T$ -sentences. Suppose that one member of  $P$ , Arabella, hears another, Barbarella, assertively utter "I am hungry." Then Arabella could reason as follows:

10. Barbarella's utterance of "I am hungry" is true.
11.  $(u) (x)$  (if  $u$  is an utterance of "I am hungry" by  $x$ , then  $u$  is true iff  $x$  is hungry)
12. So, Barbarella is hungry.

The truth condition associated with utterances of the syntactic type "I am hungry" is a generalization. Someone who knows it is in a position to employ information she possesses concerning the utterance to draw conclusions about who is hungry. If Arabella did not know that the utterance was made by Barbarella, but, say, that it was made by that woman over there, then she would not be justified in concluding that Barbarella is hungry, but she would be justified in concluding that the woman over there is hungry. Minimally, she will always be justified in the belief that whoever made the utterance is hungry. The truth conditions for a sentence containing a demonstrative are also generalizations:

13.  $(u) (x)$  (if  $u$  is an utterance of "That is  $F$ ," in which "that" demonstrates  $x$ , then  $u$  is true iff  $x$  is  $F$ )

A truth theory for languages which contain indexicals and demonstratives will imply for each sentence type  $S$  of  $L$ , a theorem of the form:

- $$(T^*) (u) (c) \text{ (if } u \text{ is an utterance of } S \text{ in context } c, \text{ then } u \text{ is true in } L \text{ iff } p(f(c), g(c), \dots)),$$

where " $f$ ," " $g$ ," etc., are functions which assign to a context certain of its features, for example, the speaker of  $c$ , the time of  $c$ , and so on. A point

worth noting is that the metalanguage in which a truth theory for an indexical language like  $L$  is constructed may itself contain indexicals and demonstratives. In that case, we can represent in the metalanguage an inference from:

14. Arabella's utterance of "I am hungry" is true.
15. She is hungry, demonstrating Barbarella.

We will not construct a theory for  $L$ , but we will assume that the speakers of  $L$  all know the *same* truth theory for  $L$ . This knowledge will enable a speaker of  $L$  to obtain information from the utterances of other speakers of  $L$ , information not necessarily obtainable by those who do not understand  $L$ .

Speakers of  $L$  have various ways of referring to sentences and utterances, including corner quotes, definite descriptions, names, but an especially convenient means is to refer demonstratively. Demonstrative reference to utterances is convenient, since one can produce an utterance and then demonstrate it. The predicates " $U(a,u)$ " and " $S(u,u^*)$ " work as follows:

" $U(a,u)$ " is true of a person  $a$  and utterance  $u$  iff  $a$  is the utterer of  $u$ .

" $S(u,u^*)$ " is true of utterances  $u$  and  $u^*$  iff  $u$  and  $u^*$  are utterances of the same sentence.

Suppose Arabella assertively utters:

16.  $(Eu) (U(\text{Barbarella},u) \ \& \ S(u,\text{that}))$  [Snow is white.]

Her utterance of (16) consists of two utterances, an asserted utterance, and an utterance demonstrated by this asserted utterance. (The demonstrated utterance is of the bracketed sentence in (16).) The first utterance is true just in case Barbarella made an utterance of the same sentence-type as the second utterance.

Utterances like (16) potentially carry a great deal of information which can be unlocked by someone who knows a truth theory for  $L$ . The first part of (16) has generalized truth conditions (17):

17.  $(v) (c)$  (if  $v$  is an utterance of " $(Eu) (U(\text{Barbarella},u) \ \& \ S(u,\text{that}))$ ," then  $v$  is true in  $c$  iff Barbarella made an utterance which is of the same sentence-type as  $d(c)$ ,

where " $d(c)$ " is the utterance demonstrated in context  $c$ . If Cinderella believes that Arabella's utterance is true and knows its truth conditions, then she will be licensed to conclude that Barbarella made an utterance of "Snow is white." The soundness of the inference requires Cinderella to recognize that the demonstrated utterance is of "Snow is white" but, since such an utterance has *just* been produced and since she is a speaker of  $L$ , we may assume that her phonological and syntactic knowledge warrants this belief. Although it is conventional in  $L$  that the demonstrated utterance is, other things being equal, not an assertion, Cinderella may be in a position to extract information from it.

Suppose that she believes that Barbarella, as well as Arabella, is reliable. She could then reason as follows:

18.  $(Eu) (U(\text{Barbarella}, u) \ \& \ S(u, \text{that}))$  [from previous inference]
19.  $U(\text{Barbarella}, u^*) \ \& \ S(u^*, \text{that})$  [by existential generalization]
20.  $u^*$  is true. [Barbarella's reliability]
21. That is true. [Utterances of the same non-indexical sentences have the same truth value]
22. "Snow is white" is true. [That is an utterance of "Snow is white"]
23. "Snow is white" is true iff snow is white. [from the truth theory]
24. So, snow is white.

Observe the role played by Arabella's having produced and then demonstrated an utterance in this inference. The demonstrated utterance "stands in" for Barbarella's utterance, so she can apply her semantic knowledge to it and learn from it, for example, that snow is white.

It should be clear that (16) plays a role similar to a direct discourse report in English. *L* also contains a device similar to English *indirect* discourse. Such a device is needed for at least the following reason. We saw that Cinderella could conclude from Barbarella's reliability and the truth conditions for the second part of (16) that snow is white. Her reasoning involved the assumption that if  $S(u, u^*)$  and  $u$  is true, then  $u^*$  is also true. But generally this is false. Utterances of the same sentence, for example, "I am hungry," obviously may differ in truth value. On the other hand, utterances of sentences of different syntactic types can agree in import; that is, in the information which someone who understands the utterances can obtain in virtue of his understanding. When Barbarella utters "I am hungry," Arabella can produce an utterance with the same import by uttering "She is hungry," demonstrating Barbarella. We will say that utterances which agree in import *samesay* each other. In *L* the samesaying relation is expressed by " $SS(u, u^*)$ ." So, Arabella utters:

25.  $(Eu) (U(\text{Barbarella}, u) \ \& \ SS(u, \text{that}))$  [She is hungry.] [demonstrating Barbarella]

In asserting the first half (25), Arabella is asserting that Barbarella produced an utterance which samesays the utterance of the bracketed sentence in (25). Cinderella can use her knowledge of the truth conditions of each utterance that together compose an utterance of (25) to conclude, in accordance with patterns of inference now familiar, that:

- (i) Barbarella made an utterance which samesays that, demonstrating the second part of (an utterance of) (25), and
- (ii) Barbarella is hungry.

The question naturally arises of when two utterances samesay each other. We can begin to answer this by considering the point of reports like (25). In uttering the demonstrated utterance in (25), Arabella is attempting to convey

to Cinderella some of the information which would have been conveyed to her had she heard and understood Barbarella's utterance. For Arabella's report to be correct it need not convey all the information contained in Barbarella's utterance—that is probably impossible—but it is usually required that it convey the information that could be extracted in virtue of knowing the truth conditions of the utterance and certain of the features of contexts of the two utterances, for example, the utterer, time of utterance, demonstrata, and so forth. In saying this we are not providing necessary and sufficient conditions for  $SS(u, u^*)$ , but merely giving an initial explanation of the relation. We will suppose that the practices of indirect reporting in  $L$  suffice to (approximately) fix the extension of  $SS(u, u^*)$  for utterances of  $L$ . But it may prove impossible to explicate this relation in other terms or even provide an axiomatized theory of it. We will return to these points later.

Competent speakers of  $L$  know a correct truth theory for  $L$ , know that speakers of  $L$  know the truth theory, and grasp the samesaying relation sufficiently well to know generally whether  $SS(u, u^*)$ . Is this knowledge sufficient to account for  $L$  speakers' understanding  $L$ ? We previously saw that knowledge of a truth theory (and even knowledge that the truth theory is common knowledge among a certain population) falls short in capturing one central aspect of linguistic competence. We saw that  $A$ 's knowing a truth theory for  $L$  does not license inferences from  $B$  assertively uttered  $u$  to  $B$  said that  $p$ , for example, from " $B$  assertively uttered 'Snow is white'" to " $B$  said that snow is white." But speakers of  $L$  do possess information that licenses that inference from " $B$  uttered  $u$ " to " $(Eu)(U(B, u) \ \& \ SS(u, \text{that}))$ ." For example, suppose  $A$  knows that  $B$  assertively uttered "I am hungry." Then knowing that this utterance samesays her own utterance, should she make one, of " $B$  is hungry" (or her thought of " $B$  is hungry") justifies her in concluding that  $(Eu)(U(B, u) \ \& \ SS(u, \text{that}))$ , where the demonstratum is an utterance (or thought) of " $B$  is hungry."<sup>5</sup> *If*:

26.  $(Eu)(U(\text{Barbarella}, u) \ \& \ SS(u, \text{that}))$ . [She is hungry.]

is a correct paraphrase of:

27. Barbarella said that she is hungry.

then we have solved the problem of how to complete the inference from " $A$  assertively uttered  $S$ " to " $A$  said that  $p$ " within a truth theoretic account of meaning.

The "if" above is, of course, a big one. The way (26) functions in  $L$  is similar to the way (27) functions in English. However, there are numerous objections to the paratactic account—the claim that (26) is a correct paraphrase of (27)—that have been voiced. We turn next to a consideration of the most important of these.

## II

Semantic theory for some fragment of natural language has two aims. One is the construction of a truth theory for the fragment. The other is the systemization of logical properties of, and relations among, sentences of this fragment. These two aims are related and commonly thought to be simultaneously satisfiable by paraphrasing the sentences of the fragment into a formal notation for which truth and truth-in-a-model are definable. Propositional attitude attributions, and specifically indirect discourse, have long been known to possess features which frustrate the construction of satisfactory theories of truth and implication. Perhaps the most discussed feature is the apparent failure of the principle of substitutivity of identity:

From  $t = t'$  and  $\phi(t)$ , where " $t$ " and " $t'$ " are singular terms and the wff  $\phi(t')$  is obtained from the wff  $\phi(t)$  by replacing an occurrence of  $t$  by  $t'$ .

Thus, the inference from (28)–(29) to (30) is an apparent instance of substitutivity of identity but is invalid:

- 28. Galileo said that the earth moves.
- 29. The earth = the third planet from the sun.
- 30. So, Galileo said that the third planet from the sun moves.

One kind of response to this problem is to deny that the inference is really an instance of substitutivity of identity. Frege claims that the reference of a singular term depends on whether it occurs in a propositional attitude context (Frege 1892, 57). In (29), "the earth" refers to the earth, but in (28) it refers to the sense of "the earth." Quine's view is that singular terms in propositional attitude contexts do not refer at all. Thus, "the earth" is no more a meaningful component of (28) than "cat" is of "concatenation" (1960, chap. 6). These accounts "explain" the failure of substitutivity of identity by claiming that the semantic value of an expression in a propositional attitude context differs from its ordinary semantic value. The cost of this approach is a loss of *semantic innocence* (Davidson 1968, 108). The semantically innocent believe that occurrences of the same word in and out of propositional attitude contexts possess the same meaning. Surrendering semantic innocence makes it difficult to understand how is it that one can learn from an utterance of "Barbarella said that the cat sits behind the oven" that the cat sits behind the oven?<sup>6</sup>

One of the most striking features of the paratactic account is that while it is similar to the Fregean and Quinean accounts in denying that the inference from (28)–(29) to (30) involves a genuine failure of substitutivity, it, unlike them, preserves semantic innocence. Explaining how this works will require us to add to our discussion in section I of the logic of first-order languages with demonstratives and indexicals. We will suppose that our language contains subscripted demonstratives: "that<sub>1</sub>," "that<sub>2</sub>," etc. The truth value of the utterance of a sentence with demonstratives and/or indexicals depends both on the



sentence uttered and on the context of utterance. A context is specified by an  $n$ -tuple of features of a possible utterance or sequence of utterances, for example  $\langle$ a possible world, speaker of utterance, location of speaker, time of utterance, {a sequence of items to serve as demonstrata}, . . .  $\rangle$ . We assume that indexicals and demonstratives are logical constants constrained so that “ $I$ ” is always assigned the speaker, “that <sub>$n$</sub> ” is assigned the  $n$ th demonstratum. We also assume that contexts are constrained so that the utterer is located at the place and time in the world of the context. “ $S$ , therefore,  $S^*$ ” is valid iff there is no context and no assignment of interpretations to the nonlogical vocabulary in  $S$  and  $S^*$ , which makes  $S$  true and  $S^*$  false. On this account, “I am  $F$  and I am  $G$ , therefore, I am  $F$ ” is valid and so is “I am here now.”

Let us see how this account applies to the paratactic paraphrases of indirect discourse sentences. According to the paratactic account, the first-order paraphrase of (28) is (31):

28. Galileo said that the earth moves.  
 31.  $(Eu)(U(\text{Galileo}, u) \ \& \ SS(u, \text{that}))$  [The earth moves.]

The paraphrase consists of two sentences. According to the account, a typical utterance of (28) is an assertion equivalent in import (and purport) to the first sentence in (31). Since (31) contains a demonstrative, it is not true or false except relative to a context. A typical utterance of (31) creates a context relative to which “that” refers to an utterance of the bracketed sentence. It is obvious that according to our account of validity, (31) implies “Galileo said something,” that is, “ $(Eu)(Eu^*) (U(\text{Galileo}, u) \ \& \ SS(u, u^*))$ ,” since relative to any context in which (31) is true, “that” refers to something which samesays Galileo’s utterance (contra Arnauld 1976, 289).

According to the paratactic account, the paraphrase of (28)–(30) is (31)–(33) respectively:

31.  $(Eu)(U(\text{Galileo}, u) \ \& \ SS(u, \text{that}))$  [The earth moves.]  
 32. The earth = the third planet from the sun.  
 33. So,  $(Eu)(U(\text{Galileo}, u) \ \& \ SS(u, \text{that}))$  [The third planet from the sun moves.] $\rangle$

Since there are contexts in which the occurrences of “that” in (31) and (33) refer to different individuals (strictly speaking, in  $L$  they must have different subscripts), this inference is invalid. It is also clear that the inference is not an instance of substitutivity of identity, since the singular terms “the earth” and “the third planet from the sun” do not even occur in (31) and (33). The expressions that occur in the demonstrated utterances possess their usual semantic values—their usual truth conditions—and so the account is semantically innocent. (It is just this feature that allows someone who knows the truth conditions for both “Galileo said that” and “The earth moves” to infer from an utterance of (31) and Galileo’s truthfulness that the earth moves.)

Despite these important virtues, the paratactic account has not won anything like general acceptance. The literature is replete with objections to the

account. But in view of how beautifully the paratactic account works in *L* to enable the speakers of *L* to fulfill the functions of indirect discourse, it seems to us to be worthwhile, though perhaps heroic and quixotic, to see to what extent the account as an account of *English* indirect discourse can be defended from these objections. Though it would be impossible to review and respond to every criticism in the literature, we have identified a few serious kinds of objections. Almost all the criticisms can be separated into three sorts: (a) it is too strong, (b) it is too weak, and (c) it fails to generalize, for example, to other propositional attitudinal ascriptions and *de re* constructions. In this paper we address all these with the exception of how to extend the account to *de re* attributions.<sup>7</sup>

It has seemed to a number of commentators that (28) is *about* Galileo and perhaps an utterance of his, but *not* about an English utterance, while its purported paraphrase (31) is about an English utterance. We doubt that intuitions concerning what a sentence is about should carry much weight by themselves in deciding the correctness of paraphrases. However, the objection would be a good one if it could be shown that because of this difference (31) implies or in some way requires the existence of something whose existence is not required by the truth of (28). The worry is that (31) does imply or require the existence of an English utterance while (28) does not. Let us see if this is correct.

While it may seem that (31) implies "There exist English utterances," in fact it does not. Given our characterization of implication for a language with demonstratives, (31) does not *imply* the existence of any utterance other than Galileo's. On that account, recall, *S* implies *S\** iff there is no context and no interpretation of the nonlogical vocabulary relative to which *S* is true and *S\** is false. (31) is true relative to a context *C* iff there is an utterance made by Galileo which bears the samesay relation to the referent of "that" in *C*. Consider a domain containing a single utterance *u\** such that  $U(\text{Galileo}, u^*)$  and  $SS(u^*, u^*)$  and the context *C* relative to which "that" refers to *u\**. Relative to that context, (31) is true and " $(\exists u) (\exists x) (U(x, u) \ \& \ u \neq u^*)$ " is false. So, (31) does not imply the existence of any utterance other than an utterance by Galileo.

Even though (31) does not imply "There exist English utterances," still, according to the paratactic account, an utterance of (28) makes reference to an English utterance. Some authors think that a consequence of this is that the paratactic paraphrase of (34) is false, even though (34) is true (Lycan 1973, 139; Blackburn 1975, 184; Bigelow 1980, 17). If this charge were correct, then it would seem to show that (28) and (31) are not equivalent. But the charge is incorrect. The paratactic paraphrase of (34) is (35):

34. It is possible that Galileo said that the earth moves even though no English utterance ever existed.  
 35.  $(\exists x) ( (x = \text{that}) \ \& \ P(U(\text{Galileo}, u) \ \& \ SS(u, x) \ \& \ (y) - \text{English } (y)))$   
 [The earth moves.]>

In possible world semantics, (35) is true relative to a context in which the demonstratum of "that" is an utterance  $u^*$  of the "The earth moves" iff there is some possible world  $w$  and utterance  $v$  made by Galileo in  $w$  and  $u^*$  samesays  $v$  in  $w$  and there are no English utterances in  $w$ . If the truth of  $SS(v, u^*)$  in  $w$  required that  $u^*$  exist in  $w$  and be an English utterance, then (35) would be false. But neither of these seem to be the case. In particular, we see nothing wrong with supposing that  $SS(v, u^*)$  may be true at  $w$  even though  $v$  and  $u^*$  do not exist in the same world. Within the context of possible world semantics, it is not unusual to appeal to similarity relations across worlds, for example, the counterpart relation, which relates individuals in different worlds. Samesaying is such a relation.

There is another objection to the paratactic account based on the fact that an utterance of (28) makes reference to an English utterance due to Brian Loar (reported in Schiffer 1987a, 131–133). Call an occurrence of a singular term in a sentence *primary* iff it is not properly contained within the occurrence of another singular term, for example, "George" is not primary in "George's car is red." Loar claims that principle (*P*) is true:

(*P*) If the occurrence of  $t$  in "A said that . . .  $t$  . . ." is primary and refers to  $x$ , then that sentence is true only if  $A$  referred to  $x$ .

For example, suppose that Arabella utters "The president is funny" and Barbarella reports her by saying "Arabella said that Ronald Reagan is funny." According to (*P*), Barbarella's report can be true only if Arabella referred to Ronald Reagan in making her utterance. If Barbarella said "Arabella said that the star of *Bedtime for Bonzo* is funny," then her utterance still meets the test since "*Bedtime for Bonzo*" has secondary occurrence.

Loar (see also Burge 1986, 193–194; Blackburn 1975, 184) observes that the paratactic account results in a violation of (*P*). According to (*P*), a problem is created for the paratactic account by (utterances of) sentences like (36):

36. Laplace said that Galileo said that the earth moves.

An utterance of (36) may be true even though Laplace never referred to an utterance of English. But the paratactic paraphrase of (36) is (37):

37. ( $Eu$ ) ( $U(\text{Laplace}, u)$  &  $SS(u, \text{that})$ ) [Galileo said that the earth moves.]

According to (*P*), if (37) is a correct report, then Laplace must have referred to the referent of the second occurrence of "that," since it has primary reference. But its referent is an English utterance of "The earth moves" and it is certain that Laplace never referred to this utterance. Since (36) may be true even though Laplace never referred to an utterance of English, it follows, according to Loar, that the paratactic account must be mistaken. In short, Loar, noticing that on the paratactic account an utterance of (36) is about an English utterance, asks how Laplace could have said that, since he never referred to an English utterance? We are not impressed. (*P*) does not seem to

us to be generally true and in the case of iterated indirect discourse reports we can easily see how the paratactic account not only violates the principle but motivates its violation.

Here is an example of an apparent counterexample of (*P*). Barbarella utters "I want a car like that," pointing at a Saab 900. Arabella correctly reports "Barbarella said that she wants a car like that," pointing at a different Saab 900. Barbarella did not refer to the car which is the demonstratum of Arabella's second "that." A defender of (*P*) might reply that the occurrence of "that" is really a secondary occurrence by claiming that the above sentence is really expressing "I want a car of the same type as that." "The same type as that" has primary occurrence. But this paraphrase is itself controversial—it cannot be this easy to establish that types exist—and so is unsuitable as part of a defense of a principle designed to establish the failure of the paratactic account. In any case, we can show how the paratactic account *motivates* a violation of (*P*).

Recall that in *L* the point of Arabella's indirectly quoting Barbarella to Cinderella was for Arabella to produce an utterance which would convey to Cinderella what Barbarella's utterance would have conveyed to her had she been in a position to hear and understand it. Now suppose that Arabella, a speaker of *L*, attempts to conform to (*P*) when reporting what Laplace said. We assume that Laplace speaks a version of French for which the paratactic account is correct. Suppose that Laplace uttered *Galilei dit que. [La terre bouge.]*" If Arabella wants to report what Laplace said while conforming to (*P*), she needs to say "Laplace said that. [Galileo said that]," where the demonstratum of the second "that" must be the very same utterance Laplace demonstrated. Not only is this likely to be very inconvenient—Laplace's utterance is long gone—but if her audience does not understand Laplace's utterances, that is, does not know their truth conditions, then the point of indirect discourse is lost. If instead Arabella demonstrates not Laplace's utterance but an utterance of her own which samesays Laplace's utterance, then her audience (which we assume understands her utterances) will be in a position to learn that if Galileo spoke the truth, the earth moves. If we are right, then Laplace's utterance of "*Galilei dit que la terre bouge*" and Arabella's utterance of "Galileo said that the earth moves" samesay each other even though they refer to different utterances. We see no problem with this. So, although it is true that on the paratactic account an utterance of (28) will be about an English utterance, we have seen that this entails neither that this sentence logically implies the existence of English utterances nor the falsity of the modal (34). And while the paratactic account does lead to a violation of (*P*), that principle is not always true and in the case of indirect discourse, it is justifiably violable.

A second kind of objection is that the paratactic paraphrase of an indirect discourse statement is logically weaker than the paraphrased statement (Arnauld 1976, 289–291; Platts 1979, 123; Burge 1986, 203; Schiffer 1987a,

134–137). For example, each of the following has been claimed to be logically valid:

38. Galileo said that Osiander and Bellarmine are wrong.
39. So, Galileo said that Bellarmine and Osiander are wrong.
40. Galileo said that the earth moves.
41. So, Galileo said that the earth moves.
42. Galileo said that the earth moves.
43. The earth moves.
44. So, Galileo said something true.
45. Galileo said that the earth moves.
46. Everything Galileo said is true.
47. So, the earth moves.

Each of these inferences appears to be valid, yet their paratactic paraphrases are not valid. The inference from (38) to (39) fails, since there are contexts relative to which the two occurrences of “that” refer to different utterances. (The occurrences of “that” will be paraphrased by “that<sub>*i*</sub>” and “that<sub>*k*</sub>,”  $i \neq k$ , since their actual demonstrata differ.) For exactly the same reason (40) does not imply (41).

Before concluding that this shows the paratactic account is hopeless, let us note that this feature of the account is sometimes an advantage, especially when compared with competing accounts. According to these, “*A* says that *p*” relates a person and a proposition—the proposition expressed by “*p*.” These accounts differ in what they count as a proposition: a class of possible worlds, a Fregean thought, a structured entity, for example <individual, a property>. Consider each of the following inferences:

48. Galileo said that the earth moves.
49. So, Galileo said that the earth moves and (*p* or  $\neg p$ ).
50. Galileo said that bachelors are unmarried males.
51. So, Galileo said that bachelors are bachelors.
52. Galileo said that Cicero = Cicero.
53. Galileo said that Cicero = Tully.>

Each of the propositionalist accounts just mentioned validates one of these inferences, but each seems invalid. Defenders of propositionalist accounts have devoted a considerable amount of effort attempting to persuade their readers (and themselves?) that the inference each one claims to be valid really is valid (Hintikka 1969; Stalnaker 1984; Salmon 1986). But their defenses seem to us to be lame. It is difficult to believe, for example, despite her protestations to the contrary, that Lois Lane believes that Superman is Clark Kent (see Schiffer 1987b). The paratactic paraphrases of each of the above inferences are, of course, invalid for exactly the same reason that the infer-

ence from (38)–(39) is invalid. But pointing to the faults of other accounts does not show that the paratactic account is correct about the inferences with which we began this discussion.

We begin by talking about the paratactic paraphrase of the arguments (42)–(44) and (54)–(56) respectively (see Davidson 1969, 50–52):

54.  $(Eu)(U(\text{Galileo}, u) \ \& \ SS(u, \text{that}_1))$  [The earth moves.]

55. The earth moves.

56. So,  $(Eu)(U(\text{Galileo}, u) \ \& \ \text{true}(u))$

It is obvious that (54)–(56) is invalid. However, if we add to this argument premise (57), the argument is valid:

57.  $\text{That}_1$  is true iff the earth moves.

The additional premise (57) expresses a truth known to anyone who knows that “ $\text{that}_1$ ” refers to an inscription of “The earth moves” and who understands this inscription. Of course, any English speaker who examines this argument will know this. So, the paratactic account has a ready explanation for why the argument (54)–(56) appears valid to an English speaker even though it is an enthymeme. A perfectly similar account can be given of the argument (42)–(44).

An explanation can also be given of the apparent validity—apparently, that is, according to the paratactic account—of the inferences (38)–(39) and (40)–(41). The missing premises in the first of these inferences are:

58.  $SS(\text{that}_1, \text{that}_2)$

59.  $(u) (u') ((\text{True}(u) \ \& \ SS(u, u')) \rightarrow SS(u, u'))^8$

Premise (58) will be known by anyone who knows that  $\text{that}_1$  is of “Osiander and Bellarmine are wrong” and that  $\text{that}_2$  is of “Bellarmine and Osiander are wrong” and understands English. Recall that someone who understands English is able to recognize when an utterance of one sentence samesays an utterance of another sentence. So, according to the paratactic account these two inferences are not valid, but they can be turned into valid inferences by adding premises known to any English speaker who attends to them.

The fact that the inferences (42)–(44) and (45)–(47) are not valid according to the paratactic account suggests a slightly different objection. As we have seen, it is on the paratactic account logically possible for someone, for example, to know that Galileo said that the earth moves without understanding what Galileo said. This follows since on the truth theoretic account of meaning what Galileo said includes knowing the truth conditions of what Galileo said. The fact that speakers of English who hear someone utter “Galileo said that the earth moves” and believe the utterance true will understand what Galileo said only partially answers this objection. It must be admitted that on the paratactic account *A* may know that *B* said that *p* without understanding what *B* said. But is this so obviously a bad consequence? Think of *A*, who mistakenly enters a room in which a physicist is lecturing and hears the lec-

turer utter "We conducted three tests of Bell's inequalities." *B* asks *A* what the physicist said and *A* replies "He said that he and his colleagues conducted three tests of Bell's inequalities—but I must admit I did not understand what he said since I have no idea what Bell's inequalities are." There seems to us to be nothing preventing all of *A*'s utterances from being true, contrary to the assumption that underlies the objection.<sup>9</sup>

A third kind of objection to the paratactic account concerns whether it can be extended to propositional attitude reports other than "says that," to *de re* attributions, and to interrogative constructions ("*A* said who the Prime Minister is"). There are formidable problems to be confronted in developing such extensions and we have by no means solved them all. However, we do think that the situation is considerably more promising than it is commonly thought. Here we will confine ourselves to showing how the paratactic account can be extended to propositional attitude reports.

The natural extension of the paratactic account to belief reports is to paraphrase, for example, (60) as (61):

60. Galileo believes that the earth moves.  
61. Galileo believes that. [The earth moves.]

According to the account, "believes that" relates a person to an utterance, so that (61) is true just in case Galileo bears this relation to the demonstrated utterance of "The earth moves." Schiffer thinks that this account cannot be correct (see also, Haack 1971, 360-61; Leeds 1979, 51; Bigelow 1980, 17). Schiffer writes:

The representation of the saying—that relation as ["(*Eu*)(*U*(Galileo,*u*) & *SS*(*u*,that)"] is plausible because if "Galileo said something" is true, then there can be no barrier to inferring "*(Eu)S*(Galileo,*u*)" for there is always Galileo's own utterance to be an utterance to which he stands in the saying-relation as portrayed in ["(*Eu*)(*U*(Galileo,*u*) & *SS*(*u*,that)"]. But if "Galileo believed something" is true, then there *is* a barrier to inferring "*(Eu)B*(Galileo,*u*);" namely, that there may not be any actual utterance that gives the content of Galileo's belief. . . . Believing could be represented as a relation to actual utterances only if one could be assured that for every belief there was some actual utterance that gave the content of that belief; but of course one cannot be so assured. (1987a, 126-27)

Schiffer thinks that the only revision open to the paratactic account is to declare that belief relates a person, not to an utterance, but to an utterance-kind, and this revision undermines Davidson's extensionalism. But Schiffer is mistaken. There is a viable alternative.

It is relatively uncontroversial that someone believes that *p* just in case he is in a token (brain) state which has the content that *p*. Let *B*(*a*,*s*) be the relation that holds between an individual *a* and a token state, for example, an

event of neuron firings, which is a belief state of *a*.<sup>10</sup> The full paratactic account of (60) is (62), and (63) is paraphrased by (64):

62.  $(Es) (B(\text{Galileo},s) \ \& \ SS(s,\text{that}))$  [The earth moves.]  
 63. Galileo believes something.  
 64.  $(Es)B(\text{Galileo},s)$

(64) does not entail that there exist any actual utterance which samesays *s*. Our account assumes that belief states and utterances can samesay each other. We think this is untendentious.

It seems possible to extend this account to other kinds of propositional attitudes. (65) is paraphrased as (66):

65. Galileo desires that the earth moves.  
 66.  $(Es)(D(\text{Galileo},s) \ \& \ SS(s,\text{that}))$  [The earth moves.],

where  $d(a,s)$  holds of a person and a token state of desire. Sentences like (67) seem to create problems for this approach (Higginbotham 1986, 39), since they do not contain “that” and the complement of “wants” is not a sentence. But we tentatively suggest that it be paraphrased by (68):

67. Galileo wants the earth to move.  
 68.  $(Es)(W(\text{Galileo},s) \ \& \ SS(u,\text{that}))$  [the earth to move]

This paraphrase assumes that the content of Galileo’s mental state is the same as the content of the demonstrated utterance of “the earth to move.”

Of course, even if it is granted that our replies to the various objections help deflect them, one still might wonder why it would not be better to have an account which completely avoids them? That is, wouldn’t it be better to have an account which entails Galileo’s utterance is true iff the earth moves, and given that it is true that the earth moves and Galileo said that the earth moves, then Galileo said something true *without the help of all the additional premises*, and which did not have utterances of “Galileo said that the earth moves” being about an English utterance, and so on? And in fact aren’t such theories readily available, namely, the Fregean theory, for example, which claims that sentences in indirect discourse (or other propositional attitude sentences) express a relation between a person and (not an utterance but) a *proposition*. On such an account (28) is true iff (69):

28. Galileo said that the earth moves.  
 69.  $(Ep) (p = \text{the proposition that the earth moves and Galileo says } p)$

On Frege’s view, the words on the right of “that” refer to their usual senses. So, the sentence says something like this: Galileo said the thought composed of such and such senses in such and such ways. The reasons propositions seem so well suited to be the relata of propositional attitudes is that, first, they are abstract entities, so that (69) does not entail the existence of any utterance of an utterer of (28), and second, they have the truth conditions essentially, so



that (69) together with "It is true that the earth moves" entail that "Galileo said something true."

We have shown that none of the objections to the paratactic account we have considered is fatal to it. The account, like other accounts (Russell's theory of descriptions, possible world accounts of subjunctive conditionals, Davidson's account of action and event sentences), has consequences which seem surprising to our intuitions. But we think we have shown that the account is sufficiently explanatory of our practices of indirect discourse and attitude reports to be counted as plausible, more plausible than its propositionalist rivals.<sup>11</sup> If the paratactic account is correct, then, as we have shown, it provides a way of overcoming what has been a vexing problem for truth theoretic accounts of meaning, the problem of specifying what someone says in uttering  $u$ .<sup>12</sup>

#### Notes

1. Evidence for an utterance being an assertion and for a particular utterance being true need not be semantic. For example, one might know that certain sentential forms and tones of voice indicate assertion and that a particular person's assertions in certain circumstances are generally true without knowing what his assertions mean.

2. Andrea may have various reasons for wanting to produce an utterance which is true if the cat sits behind the oven. One is that he wants his audience to acquire the belief that the cat sits behind the oven and he believes that his producing an utterance which is true if the cat sits behind the oven is likely to accomplish this. The reasonableness of the latter belief may involve his believing that the audience believes "*Il gatto siede dietro al forno*" is true iff the cat sits behind the oven.

3. See our "Idle Meaning," forthcoming.

4. There are two problems concerning truth theoretic proposals that sometimes are conflated. There are truth theories for  $L$  which entail  $T$ -sentences where  $S$  and " $p$ " differ in meaning. In fact, any (interesting) truth theory will have this feature. The second problem is that " $S$  is true iff  $p$ " does not *say* that  $S$  means that  $p$ . Davidson tried to remedy the first problem by requiring that truth theories meet certain empirical constraints on the theory of interpretation and the second by adding that an interpreter must know not just that  $S$  is true iff  $p$ , but that " $S$  is true iff  $p$ " is entailed by a theory meeting those constraints. We argue in "What Davidson Should Have Said," forthcoming, that Davidson's remedies are inadequate.

5. Arabella's thought that  $(Eu)(U(\text{Barbarella}, u) \ \& \ SS(u, \text{that}))$  [She is hungry.] will be true as well and for the same reason, if we suppose that the thought itself has a paratactic structure; that is, contains a demonstrative element referring to the thought that she is hungry. We are indebted to Stephen Schiffer and Ernest Sosa for helping us get clear about this.

6. Davidson's main objection to the Fregean and Quinean accounts is that it does not seem possible to construct finitely axiomatized truth theories for them, since they contain infinitely many primitive predicates. Davidson also mentions that these accounts are not semantically innocent. These two points are related, since it is the proliferation of words and their meanings which blocks finite axiomatization. But even if it were possible, as it seems to be for the Fregean theory, to produce a finitely axiomatized truth theory, the loss of semantic innocence would still be objectionable, since we would have no explanation of how someone is warranted in concluding that the cat sits behind the oven from an utterance of "Barbarella said that the cat sits behind the oven." See our "Idle Meaning," forthcoming.

7. We show how to extend the paratactic account to *de re* attributions in "Idle Meaning."

8. A qualification on premise (59) is needed for utterances of sentences which do not contain context sensitive features.

9. The intelligibility of *A*'s remarks suggest that the relation between knowing what someone said and understanding what he said is one of conversational implicature.

10. This relation may have a functional characterization and the state may possess syntactic properties, but we are not assuming either.

11. In our "Idle Meaning," we actually discuss propositional accounts and show that in addition to the problem we discussed in this paper, namely, that these accounts countenance inferences intuitively invalid as valid, there are other even more serious problems with these accounts.

12. Earlier drafts of this paper were read at the Universities of Bologna, Milan, Minnesota, Siena, Modena, Pisa, Venice, and at the Conference on Information Based Semantic Theories in Tepotzlan, Mexico. We would like to thank all those who have helped us improve this paper, in particular, John Biro, Andrea Bonomi, Michael Hand, James Higginbotham, Paolo Leonardi, Ernesto Napoli, Eva Picardi, Stephen Schiffer, and the graduate students in LePore's philosophy of language seminar, spring 1988.

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