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Incomplete Definite Descriptions

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The treatment of definite descriptions in [1] is built around two fundamental themes of situation semantics—the context sensitivity of utterances and the partial nature of the information they encode. In emphasizing these themes, Barwise and Perry aim to replace a semantic paradigm in which a description ⌜the F⌝ is used to talk about a unique F-er **in reality as a whole** with one in which it is used to talk about a unique F-er **in some contextually determined situation,** or part of reality. This shift has important consequences for the analysis of so-called "incomplete definite descriptions", like 'the table', 'the cook', and 'the murderer'. Since the descriptive operands in these examples are satisfied by many objects, they do not determine referents for the descriptions when evaluated in the whole of reality. Nevertheless, these descriptions are often used in simple examples of the form (1) to make true statements.

(1) The F is G.

Whereas this is often seen as a serious problem for traditional analyses, it is just the sort of case for which situation semantics was designed. According to Barwise and Perry, what is required by the description in an utterance of an example of this sort is not that there be a unique F-er in the whole world, but only that there be a unique F-er in the relevant contextually determined situation.

This idea is presented in a framework in which the meaning of a sentence is taken to be a relation between contexts and interpretations. Intuitively, a context is a potential situation in which the sentence is uttered by someone, to someone else, using words in some specific way. The interpretation of the sentence in the context is the type of situation that the utterance claims to be instantiated in reality.

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In [1], Barwise and Perry use set theoretical models called "abstract situations" to play the role of potential situations. For example, the potential situation in which Perry is tired and Barwise is not (at 4 pm, July 17, 1986, Stanford, California) is represented by the abstract situation (2).

(2) $\left\{\begin{array}{l}\langle l, \langle\langle \text{tiredness, Perry}\rangle, 1\rangle\rangle \\ \langle l, \langle\langle \text{tiredness, Barwise}\rangle, 0\rangle\rangle\end{array}\right\}$
(where l is the spatio-temporal location: Stanford University-at-4pm-July-17-1986)

An abstract situation—i.e., a set of a certain sort—is said to be factual iff it corresponds to some real situation.[1] The meaning of a sentence is then seen as a relation between abstract situations representing potential contexts of utterance and sets of abstract situations that provide its truth-conditional interpretations in those contexts. In standard cases, an utterance of a sentence S in a context C is true iff some member of the interpretation of S in C is factual.

The structure of this account is notably similar to that found in versions of possible worlds semantics that incorporate Kaplan's distinction between character and content (see [5] and [6]). The most striking difference between the two frameworks is between the completeness of possible worlds (which determine truth-values for all object language sentences) and the partiality of abstract situations (which do not). It is this difference that Barwise and Perry attempt to exploit in their theory of descriptions.

In familiar, possible worlds treatments, a description, $\ulcorner$the $F\urcorner$, is associated with a partial function, f, from possible circumstances of evaluation to unique F-ers in those circumstances. The intension of (an attributive understanding of) an example like (1) is then defined to be the set of circumstances C such that for some (possible) object o, $f(C) = o$ and o "is G" in C. In general, $f(C)$ may vary with C, and the sentence may be taken as "saying" that the F (whoever it may be) is G.

If, in addition, a semantically referential interpretation is desired, it can be obtained by requiring f to be defined not on circumstances of evaluation, but rather on the circumstance given in the context (as is done by Kaplan's $\ulcorner dthat[\iota xFx]\urcorner$; see [4]–[6]). On this interpretation, the intension of (1), relative to a context C^*, is the set of circumstances C such that $f(C^*) = o$ and o "is G" in C (where $C^{*\prime}$ is the circumstance given in C^*). The sentence is then seen as "saying" that a particular individual, o, is G.[2]

In a nutshell, the Barwise–Perry theory of descriptions is just like this, except that circumstances are identified with abstract situations rather than possible worlds. $\ulcorner$The $F\urcorner$ is said to express a partial function, f, from abstract situations to unique F-ers in those situations; and examples like (1) are claimed to be semantically ambiguous, depending on which situations f is required to be defined on. The attributive understanding requires f to be defined on the abstract situations in the interpretation of the sentence (relative to the context). Thus, all these situations will contain unique F-ers, with (potentially) different objects playing this role in different situations. The referential interpretation requires f to be defined on a contextually supplied **resource situation**—typically, one that is given perceptually, or through preceding discourse.[3]

Formally, this means that contexts must be expanded to include resource

situations tied to each referential occurrence of a description in a sentence.[4] For example, a context in which it is assumed that Jones murdered Smith may include the resource situation, *RS*, used to evaluate 'the murderer of Smith'.

(RS) $\{\langle l,\langle\langle$murderer-of, Jones, Smith$\rangle, 1\rangle\rangle\}$.

If f is the interpretation of the description in the context, then f(RS) = Jones and the (referential) interpretation of (3) in the context is the set of abstract situations S such that $\langle l, \langle\langle$insane, f(RS)$\rangle, 1\rangle\rangle$ is a member of S.

(3) The murderer of Smith is insane.

The basic structure of this theory is essentially the same as that of its possible worlds counterpart. What is new is its appeal to situations (rather than possible worlds), as models of partial (rather than total) information. The significance of this shift shows up in the analysis of incomplete definite descriptions—descriptions that have (unique) referents when evaluated in parts of reality, but not in the world as a whole.

According to Barwise and Perry, a description like 'the murderer' can be used referentially in an utterance of

(4) The murderer is insane

to express the statement that Jones is insane, provided that the context includes a resource situation in which Jones is the only murderer (of anyone). Since situations are partial, the exploitation of such a resource situation carries no presumption that the world as a whole contains (or is assumed by the speaker to contain) only one murderer. Barwise and Perry see in this appeal to partiality a crucial advantage for situation semantics.

> Traditional theories are often explained as though the whole world were accessible [to be used as a resource situation] and, indeed, as if this were the only accessible situation. To make this plausible, they choose for their paradigms those rare definite descriptions that are defined for this large situation, such as 'the first child born in the 21st century' or 'the author of *Waverly*'. It is an advantage of our approach that we can naturally explain the fact that most definite descriptions manage to pick out individuals without finding describing conditions that are uniquely satisfied in the whole world. [1], p. 153

However, there is an apparent problem with this. Incomplete definite descriptions can be used attributively, as well as referentially. For example, coming across Smith, foully murdered, one might say "The murderer (whoever he may be) is insane". An account of incomplete descriptions must handle this kind of case, as well as the referential one. Thus, we cannot be sure that the partiality of situations is the key to analyzing descriptions until we have examined the attributive case more closely.

1 Attributive incomplete descriptions There are two perspectives that might be taken on the problem posed by attributive interpretations of incomplete

descriptions. For the traditional theorist, there is little alternative but to rely on contextual supplementation.[5] If C is a context in which (1) expresses a truth, then the interpretation of ⌜The F⌝ in C must be a content that uniquely determines a referent when evaluated in the world in question. It is as if placing the description in the context transformed the operand from F, which is satisfied by many objects, to F', which is satisfied by only one.

In thinking of how this might work, one must distinguish two different ways in which a context might supplement a description. One way involves the addition of extra **descriptive** content to F. For example, an utterance of (4) in which 'the murderer' is understood attributively might be thought of as expressing one of the propositions in (5).[6]

(5a) The murderer of *the president of United Jersey Bank* is insane.
(5b) The murderer of *the man lying on the rug in front of me* is insane.
(5c) The murderer of *my neighbor's boss* is insane.

The problem with this suggestion is that there is often no way of extracting determinate descriptive content from the context. In the example at hand, the speaker may believe that the victim satisfies each of the italicized descriptions in (5a)–(5c), without his intention in uttering the sentence favoring any one of them (or any combination) over the others. Because of this it seems wrong to identify the information semantically encoded by his utterance of (4) with any proposition of the sort given in (5). Moreover, the speaker's remark may be true even if some of the underlined descriptions he associates with the victim do not in fact apply to him, and—worse—apply to someone else who has not been murdered. Thus, the strategy of relying on the context to complete the description by providing extra **descriptive** content seems to be fundamentally flawed.

There is, however, another way in which a context might supplement a description—namely, by contributing an object to the content of the description in the context. On this approach, the content of 'the murderer' in the context of our example will be a "singular individual concept" involving the victim as one of its constituents. Thus, the content of 'the murderer' in this context will be the same as that of 'the murderer of him', or 'the murderer of that one', with the victim as referent of the indexical. This analysis seems to fit the speaker's intentions quite well. The strategy for the traditional theorist must be to extend it to an appropriately broad range of cases in which incomplete definite descriptions receive attributive interpretations.[7]

The problem for the situation semanticist is different. Whereas the traditional theorist must rely on contextual supplementation of (attributive) incomplete descriptions to ensure that the truth-conditions of examples containing them are not too difficult to satisfy, the situation semanticist, who eschews such supplementation, must do something to ensure that the truth-conditions of such examples are not too easy to satisfy. I said earlier that, standardly, in situation semantics a sentence is true relative to a context iff its interpretation in the context contains at least one abstract situation which is factual. If this principle is retained for attributive examples like (1), then the truth-conditions of these examples will be assimilated to those of (6), since if any one of many F's is G, the interpretation of (1) will always contain a factual situation whose unique F-er is G.

(6) An F is G.

To avoid this, the situation semanticist must find a way of semantically incorporating the uniqueness claim associated with the definite article, without destroying the apparent utility of partial situations in accounting for incomplete descriptions.

Barwise and Perry describe the problem as follows:

> Consider the interpretation P of my utterance of 'I am the cook'.
>
> $$P = \{e | d, c[\![\text{I AM THE COOK}]\!] e\}^8$$
>
> If $e \in P$, then e will have just one person (me) doing the cooking at the relevant location $l = c(\text{COOK})$.[9] But any such e will be part of other e' which have more than one person cooking there. Such e' will not belong to P because there will be no person who is **the** cook. So P is not persistent. This raises a problem for our account of truth in the following way. Suppose my wife and I collaborate on cooking for a party. And suppose at a certain point in the party I say, "I am the cook," referring to l. Is what I have said true or not?
>
> The answer is, "It depends on which situation I am describing." First, suppose someone comes up to me and says, "The food at this party is delicious! Who is the cook?" If I say, "I am the cook," I have clearly not described things accurately. I have claimed to be **the** person who did the cooking for the party. But suppose instead someone comes up to me eating a piece of my famous cheesecake pastry and says, "Who made this?" Then I may truly say that I am the cook.
>
> The first case shows that the account we gave of truth for persistent statements does not work for nonpersistent statements. For in that case there is a factual situation, **part** of the situation referred to by the guest, where I am the unique cook. So there will be a factual (maybe even an actual c.o.e. [situation]) in P, and on our earlier account of truth, my statement would be true, whereas in fact it isn't. But surely nonpersistent statements can be true, for in the second case, what I said was true. A theory that did not allow this would be unfair to me. So we need an account of truth that can be applied to nonpersistent statements. [1], pp. 159–160.

A persistent statement[10] is one whose interpretation is closed under the part-of relation on abstract situations—i.e., one whose interpretation I is such that for every $s \in I$, if s is a part (subset) of a larger situation s', then $s' \in I$. If the interpretation of such a statement contains a factual situation, then the statement not only holds in a part of reality, but continues to hold in all larger (containing) parts. Thus, for persistent statements there is no significant difference between the Barwise–Perry truth-characterization (T), and the alternative characterization (T′).

(T) S is true relative to C iff some member of the interpretation of S in C is factual.

(T′) S is true relative to C iff the actual world (maximal factual situation) is a member of the interpretation of S in C. (If there is no maximal factual

situation, one could require that the interpretation contain some factual s^*, together with all factual situations containing s^*.)

Since nonpersistent statements may hold in part of reality, while failing in reality as a whole, (T) and (T′) are not equivalent for them. Moreover, (T) must be rejected, since the truth-conditions it provides for examples like (7a)–(7c) are obviously too weak. (These are characterized as nonpersistent in [1].)

(7a) The *F* is *G*
(7b) No *F* is *G*
(7c) Every *F* is *G*.

Although (T′) might appear more promising, it makes no use of the partiality that distinguishes situations from possible worlds, and so is repugnant to the situation semanticist. In addition, adopting (T′) would leave the situation semanticist in exactly the same position as the traditional theorist regarding incomplete, attributive, descriptions. According to Barwise and Perry, this is unacceptable.

> Notice also that the problem does not, as one might think, disappear for one who rejects our theory of situations for one big situation, Reality. For then almost none of our ordinary uses of definite descriptions and general *NP*'s are accounted for. For example, if we required that the world were in the interpretation of an utterance, then neither of the true examples above [including the one involving an attributive use of 'the cook'] would count as true. [1], p. 160

Having rejected (T) as providing truth-conditions that are too weak, and (T′) as providing truth-conditions that are too strong, Barwise and Perry adopt a position they describe as descending from a view of J. L. Austin (see [1], pp. 160–161). According to this position, the context of utterance provides not only the basis for an interpretation of the sentence uttered, but also a situation that the speaker is using the sentence to refer to or talk about. The sentence is true relative to the context iff its interpretation in the context contains the actual[11] situation that the speaker is talking about.

Nonpersistent Truth: A nonpersistent sentence *S* is true relative to a context *C* iff there is an actual situation *r* such that the agent of *C* is using *S* to refer to *r*, and *r* is a member of the interpretation of *S* in *C*.

It is instructive to compare this approach to the strategy of contextual supplementation employed by the traditional theorist. The traditional theorist invokes implicit reference to contextually given objects to complete the contents of incomplete descriptions; Barwise and Perry leave the contents of these descriptions unsupplemented, but claim that the utterance as a whole carries implicit reference to a contextually determined situation. There are two contrasts here. One involves the entities doing the supplementing—objects for the traditional theorist vs situations for Barwise and Perry. The other involves what gets supplemented. For the traditional theorist it is the contents of (occurrences of) subsentential constituents. For Barwise and Perry, it is the utterance as a whole, which is associated with a new semantic parameter needed for its evaluation.

Although these differences are fundamental, there is one qualification that should be noted. Barwise and Perry do allow the contents (interpretations) of definite descriptions to be supplemented by implicit, contextually determined reference to spatio-temporal locations. Thus, in the example involving 'the cook' quoted above, both utterances of the description involved reference to the particular location at which the cooking for the party was done. Although in some cases such reference might be enough to secure a unique referent for the description, Barwise and Perry were careful to construct their example so that the description remained incomplete even after this supplementation. Their claim that "almost none of our ordinary uses of definite descriptions and general *NP*'s" are complete in the sense required by the traditional theorist seems to reflect a conviction that their example is typical, and that supplementation of descriptions by contextually determined locations leaves the central problem posed by incomplete definite descriptions unsolved.

2 Problems The first, and most obvious, difficulty with the Barwise–Perry account is its failure to incorporate the results of contextual supplementation into a theory of propositional content. If **truth** is to be made dependent on a certain feature of the context, then **what is said** should be made similarly dependent. This is not done in [1].

For example, consider two different attributive utterances of (4), one made by x upon discovering Smith's body, the other made by y upon discovering Brown's body.

(4) The murderer is insane.

Let us suppose, for the sake of argument, that the utterances are made referring to distinct situations s and s'. Then, depending on the nature of s and s', Barwise and Perry can explain how these utterances might differ in truth value. But what about the assertions made, or beliefs expressed, by these utterances? In [1], Barwise and Perry adopt what amounts to a relational theory of the attitudes—one in which the objects of assertion and belief are the semantic interpretations of utterances. But then, since the interpretations of the two utterances are the same, we get the unacceptable result that they differ in truth-value while saying the same thing.

This difficulty is addressed in [2] (see especially pp. 128 and 158–160). There, Barwise and Perry introduce propositions as objects of the attitudes, and take the proposition expressed by a nonpersistent sentence S relative to a context C to consist of the interpretation, I, of S relative to C (i.e., a type, or class, of situations), plus the real (or actual) situation, r, that S is used to refer to in C. The proposition is then taken to claim that r is of type I.[12]

However, this does not solve the problem. For example, consider a case in which Smith has been murdered by the pathological Smyth (and only Smyth), and Brown has been murdered by the pathological Black (and only Black). In such a case, we want to say that x's assertion about Smith and y's assertion about Brown are true, even though x and y have no idea who the murderers are, and are using (4) attributively. Given the semantics of descriptions in [1], Barwise and Perry can get this result only if x (somehow) refers to a real (or actual) situation, s, in which Smyth is insane and (uniquely) murders Smith, and y

(somehow) refers to a real (or actual) situation, *b*, in which Black is insane and (uniquely) murders Brown.[13] The analysis will then maintain that the proposition asserted by *x* consists of the interpretation of (4) plus *s*, while the proposition asserted by *y* consists of the interpretation of (4) plus *b*.

But this cannot be right. If it were, then Smyth would be a constituent of *x*'s assertion on a par with Smith—since both are equally constituents of *s*, while being equally absent from the interpretation of (4). But Smyth is not a constituent of *x*'s assertion in the way that Smith is. Intuitively, what *x* says is that Smith's murderer (whoever he may be) is insane. *x* does not say that Smyth is a murderer, or that Smyth is insane. This asymmetry is reflected in the fact that, intuitively, **what x said** (the proposition he asserted) will be true in a counterfactual circumstance *E*, iff in *E*, Smith is murdered by a single, insane, individual. Whether or not Smyth is a murderer, or is insane, in *E* is irrelevant. Thus, the proposition expressed by *x* cannot be what the Barwise–Perry analysis requires.[14]

This point can also be made by systematically varying the contexts of utterance. For example, suppose *x* and *y* assertively utter (4) in contexts identical with the ones just mentioned, save for one crucial difference. In the new contexts Smith and Brown have been murdered by the pathological Smart and Beige, rather than Smyth and Black (though *x* and *y* do not know this). According to the Barwise–Perry analysis, the propositions asserted (and believed) in these contexts cannot be the same as those asserted (and believed) in the original contexts. But this is wrong; it is a mark of **attributive** uses of sentences that their propositional contents are not dependent in this way on the vicissitudes of actual reference.[15]

The failure to account for this fact is due to a fundamental feature of the Barwise–Perry analysis. On that analysis, the interpretation of (4) in *x*'s context is (essentially) the same as its interpretation in *y*'s context—namely, the type of situation *s* such that *s* contains a unique murderer, who is also insane in *s*. Since the victims, Smith and Brown, are not constituents of this interpretation, but are (intuitively) elements of the propositions asserted, the contexts must somehow succeed in introducing them. Unlike the traditional theorist, who sees the contexts as introducing the victims into the individual concepts expressed by the descriptions, Barwise and Perry maintain that what the contexts supply are single real (or actual) situations. The problem is to find situations containing the victims that do not also contain material extraneous to the assertions. This is impossible as long as the interpretation of (4) is the type of situation specified in [1], and the real (or actual) situation referred to is required to be of that type in order for the utterance to be true.[16]

This difficulty results (primarily) from taking single, real (or actual) situations (rather than individuals or properties) to be the entities that contextually supplement the contents of sentences containing incomplete attributive definite descriptions. An equally serious difficulty arises from the other main innovation of the Barwise–Perry analysis—namely, the decision to treat contextual supplementation not as augmenting the interpretations of (occurrences of) descriptions (and other subsentential constituents), but rather as associating the utterance as a whole with a new parameter required for its evaluation.[17] The key problem resulting from this decision involves cases in which **unsupplemented**

descriptions place demands on situations that conflict with those arising from other constituents in the sentence. When this happens, the interpretation of the sentence (relative to a context) will be a type that cannot be satisfied by any real (or actual) situation. Utterances of this sort will then be characterized as false, no matter what situations are selected as their contextually determined referents.

In point of fact, however, many such utterances are true. Examples of this sort include the following[18]:

(8a) The cook is more experienced than the cook who prepared the main course.
(8b) The cook's father is a cook.
(8c) Everyone is asleep and is being monitored by a research assistant.

Each of these examples can be used attributively to express a truth in an appropriate context. A possible context for (8a) and (8b) might be one in which two cooks prepare the food for a party (at the same time and in the same kitchen)—one cooking the main course, the other the dessert. A guest who has no idea who cooked what might truly utter (8a), while munching some dessert. Another guest, agreeing with him, might truly utter (8b), on the basis of having heard earlier that the dessert chef is the son of a famous cook (working in the same kitchen preparing food for a second party).

Although these examples are true and attributive, they do not fit the Barwise–Perry analysis. According to that analysis, the interpretation of (8a) in the context is the type of situation s such that

(i) there is exactly one individual, o, who is a cook (at the relevant location) in s;
(ii) there is exactly one individual, o', who is a cook who prepared the main course (at the same location) in s; and
(iii) o is more experienced than o' in s.

Given that the locations of the cooks in (i) and (ii) are the same, we see that o must be identical with o'. (I here exploit the fact that a cook who prepares the main course is a cook.) But then, since there is no real (or actual) situation in which an individual is more experienced than himself, there is no real (or actual) situation of the type required by the interpretation of (8a) in the context. Thus, Barwise and Perry will wrongly predict it to be false. Analogous predictions will be made regarding (8b) and (8c), based on the facts that no one is his own father, and no one who is sleeping monitors anyone, in any real (or actual) situation.

The lesson here is that contextual supplementation works at the level of constituents of sentences or utterances, rather than the level of the sentences or utterances themselves. If contexts supplement the contents of these constituents (rather than introducing a new parameter of evaluation for entire utterances), then examples like those in (8a)–(8c) can easily be accommodated. Thus, the interpretation of 'the cook' in the context for (8a) will be an individual concept applying to the unique individual who cooked the dessert at the party—a concept also expressed by 'the cook of this' in a related context in which the demonstrative is accompanied by an appropriate demonstration. With this restriction of the description, the utterance no longer imposes impossible requirements on circumstances of evaluation, and can easily be true.[19]

The problem for Barwise and Perry is that they make no provision for this kind of contextual supplementation. This is not to say that they never allow contexts to supplement the interpretations of descriptions. As I noted earlier, they do allow supplementation of descriptions by contextually determined spatio-temporal locations. Because of this they have no more (and also no less) trouble with examples like (9) than the traditional theorist does.

(9) The cook (here) is more experienced than the cook there.

Their trouble lies with cases in which the supplementation required is not a matter of location alone. Thus, in constructing my counterexamples, I was careful to rely on contexts in which contextually determined locations were not enough to provide the interpretations needed. In so doing I was following the practice of Barwise and Perry themselves. When motivating their own account, they were careful to construct cases in which supplementation of descriptions by contextually determined spatio-temporal locations did not "complete" the descriptions, or provide them with unique referents. It was precisely in order to handle such cases that Barwise and Perry introduced their own "Austinian" theory of utterance supplementation by real (or actual) situations. What we have seen is that this theory does not handle the range of cases for which it was designed.

Barwise and Perry could, of course, expand their conception of the contextual supplementation of interpretations of incomplete definite descriptions to allow more than spatio-temporal locations to be provided. However, this would undercut their analysis of the very examples used to motivate their theory, as well as undermine the claimed superiority of their account over its traditional rivals. Once the situation semanticist avails himself of the kinds of contextual supplementation required by the traditional theorist, he loses any evident basis for relativizing the truth-value of nonpersistent utterances to real (or actual) situations referred to. Such an utterance may, instead, be characterized as true iff the set of real (or actual) situations in its (contextually supplemented) interpretation is both nonempty and persistent on the set of real (or actual) situations (i.e., contains all real (or actual) situations of which its members are parts).

Although this treatment of descriptions can be stated within situation semantics, it makes no use of the partiality of situations—treating it more as a bother to be circumvented than an asset to be utilized. For this reason it is not likely to appeal to the situation semanticist. Central to his program is the idea that a proper semantics for a variety of constructions requires switching from total truth-supporting circumstances (of the sort provided by possible worlds) to partial circumstances (of the kind given by situations). Initially it seemed that incomplete definite descriptions would be just the sort of expressions that would provide strong support for this idea. It now looks as if attributive descriptions do not support it at all.

This does not mean that there can be no substantive role for situations of any sort in the analysis of attributive definite descriptions. It is possible that a role might be salvaged, if the **individual concepts** expressed by (some) incomplete descriptions are analyzed as containing contextually determined situations, in roughly the manner discussed in note 17. One might try to deal with the prob-

lems noted there by taking ⌜the F⌝ as equivalent not to ⌜the F **in** that situation⌝, but rather to ⌜the F **relevant to** that situation⌝—where the demonstrative refers to a contextually given situation. For example, an attributive interpretation of an utterance of (4), made upon discovering Smith's body, could be seen as containing the information that the murderer relevant to a particular (perceptually given) situation s, containing the victim but not the murderer, is insane. Intuitively correct truth-conditions might then be forthcoming, on the assumption that in different possible circumstances different murderers are responsible for bringing s about. Whether or not such an approach can be made to work, and extended to a broad range of cases including those in note 7, is an open question. It should be noted, however, that the approach need not involve **replacing** possible worlds as circumstances of evaluation in a semantic theory, but rather can be seen as **adding** situations (of some sort) to the entities invoked by an essentially traditional theory.[20]

3 Beyond situations and attitudes In discussing the Barwise–Perry treatment of descriptions, I have used both the general semantic framework given in [1] and the analysis of definite descriptions presented there. In [2], Barwise and Perry change the framework. Although they do not reanalyze definite descriptions, the thrust of their more general changes suggests the possibility of such a reanalysis. It is worth looking briefly at this possibility to determine whether it holds out any reasonable prospect of reviving their "Austinian" theory of utterance supplementation, and enhancing their ability to handle incomplete definite descriptions.

There are three basic changes in theoretical perspective introduced in [2]:

(i) Types of situations are no longer identified with abstract situations, or sets of such; but rather are regarded as theoretical primitives to be thought of, roughly, as properties of real situations. The meaning of a sentence is seen as a relation which takes one from a type-of-situation in which it is uttered (a context) to the type-of-situation it describes in the context (its interpretation). This eliminates the need for abstract situations as basic entities of the theory.

(ii) Propositions are introduced, apparently in two varieties. The proposition expressed by a persistent utterance U is thought of as claiming that the type-of-situation T which is the interpretation of U, is realized—i.e., that some real situation or other is of type T. The proposition expressed by a nonpersistent utterance U includes both the type T and a particular real situation, s, referred to by U; the proposition is taken to claim that s is of type T. As before, utterances containing attributive definite descriptions are thought of as nonpersistent.

(iii) Higher-order properties are introduced in the interpretations of certain noun phrases, including ⌜an F⌝, ⌜no F⌝, and ⌜every F⌝.

It is this third change that is most important for the issues at hand.

In [1], the interpretation of indefinite descriptions closely paralleled that of definite descriptions. Thus, the interpretation of ⌜an F⌝ was taken to be a relation between abstract situations, s, and individuals, o, who "are F" in s. In

[15], I argued that this account was inadequate, and suggested that the interpretations of examples like those in (10a)–(10b) involve attributions of second-order properties to first-order properties.

(10a) There are *F*'s
(10b) An *F* is *G*.

In (10a) the property of being instantiated is attributed to the property *F*; in (10b) the relation of co-instantiation is applied to the properties *F* and *G*. In [2] this suggestion is incorporated into the revised version of situation semantics.[21]

Barwise and Perry illustrate the new analysis with the following, complex example.

(11) 'Hesperus' referred to a heavenly body$_i$ and 'Phosphorus' referred to it$_i$ too.[22]

The interpretation of (11) is the type of situation **s** such that

in **s**; at *p*: co-instantiated, [**x**], [**y**]; yes

where *p* is a location that temporally precedes the location of utterance, and [**x**] is the type-of-object **x** such that

in **s**; at *p*: heavenly body, **x**; yes

and [**y**] is the type-of-object **y** such that

in **s**: at *p*: refers to, 'Hesperus', **y**; yes
in **s**: at *p*: refers to, 'Phosphorus', **y**; yes

Types-of-objects are theoretical constructs that play the role of (complex) properties of objects. For two such types to be co-instantiated is for there to be an object of which both are types. Thus, (11), which is seen as saying that there is a real situation in which [**x**] and [**y**] are co-instantiated, gets assigned the correct truth-conditions.

Barwise and Perry extend this "higher-order" analysis to 'no' and 'every', which are taken to stand for the disjointness and inclusion relations on types (see [2], pp. 146–147). Thus, (13b) and (14b) take their places alongside (12b) as interpretations of the corresponding (a) sentences—where [**x**] is the type-of-object **x** such that **x** is *F* in **s** at *l* ([**x**| in **s**: at *l*, *F*, **x**; yes]), and [**y**] is the type-of-object **y** such that **y** is *G* in **s** at *l* ([**y**| in **s**: at *l*, *G*, **y**; yes]).

(12a) An *F* is *G*.
(12b) [**s**| in **s**; at *l*, co-instantiated, [**x**], [**y**]; yes]

(13a) No *F* is *G*.
(13b) [**s**| in **s**: at *l*, disjoint, [**x**], [**y**]; yes]

(14a) Every *F* is *G*.
(14b) [**s**| in **s**: at *l*, included, [**x**], [**y**]; yes]

Moreover, the analysis cannot stop here. As I show in [16] and [17], the problems that force the higher-order analysis of indefinite descriptions apply with even greater force when definite descriptions are involved. Thus, the analysis of these expressions given in [1] must be replaced with a higher-order

account. Although Barwise and Perry do not say anything about this in [2], it seems clear that something along the lines of (15a) and (15b) is needed.

(15a) The *F* is *G*.
(15*b*) [**s**| in **s**: at *l*, co-instantiated, [**x**], [**y**]: yes
uniquely instantiated, [**x**]; yes]

In these examples, [**x**] and [**y**] represent the properties of being an *F*, and being a *G*, **in s**. For example, the interpretation of (13a) is the type of situation *s* in which **the property of being an F in s** bears the disjointness relation to **the property of being a G in s**. A real situation, *r*, is of this type only if it contains these properties as constituents, and they bear the disjointness relation (at the location in question). Of course, if the two properties really are disjoint (at the location), then there can be no individual who is both an *F* and a *G* (at the location) **in r**—i.e., there can be no individual *o* such that

in *r*: at *l*, *F*, *o*; yes
G, *o*: yes.

However, if *r* is a real situation of type (13b), there may still be a real situation, r^*, of which *r* is a part, in which some individual is both an *F* and a *G* at the relevant location.

(16) in r^*: at *l*, disjoint, [**x**| in *r*: at *l*, *F*, **x**; yes], [**y**| in *r*: at *l*, *G*, **y**; yes]; yes
in r^*: at *l*, *F*, *o*; yes
in r^*: at *l*, *G*, *o*; yes

The reason this is possible is that there is no conflict between

(i) the existence of an individual that is both an *F* and a *G* in some part of reality; and
(ii) the disjointness of the properties of being *F*-in-a-certain-smaller-part-of-reality, and of being *G*-in-that-part-of-reality.

Thus, a real situation may be of the type (13b) even if larger situations containing it are not.[23]

On this analysis, utterances of (13a), (14a), and (15a) remain nonpersistent in a straightforward sense; their interpretations are types which may hold in parts of reality while failing to hold in larger, containing parts. Thus, they pose the same problems for theories of truth and propositional content that they did under the earlier analysis of [1]. In particular, one cannot maintain that an utterance of (15a) is true iff its interpretation is realized by some real situation or other, for to do so would be to fail to capture the uniqueness claim associated with the definite article. To avoid this, Barwise and Perry appeal to the "Austinian" theory of utterance supplementation, exactly as before.

Because of this, exactly the same problems arise as did earlier. For example, under the new analysis, the interpretation of an utterance of

(8b) The cook's father is a cook

must be something along the lines of (17), where [**x**] and [**y**] are:

[**x**| in **s**: at *l*, cook, **x**; yes]
[**y**| in **s**: at *l*, father-of, **y**, **x**; yes
cook, **y**; yes]

(17) [**s**| in **s**: at *l*, uniquely instantiated, [**x**]; yes
co-instantiated, [**x**], [**y**]; yes]

As before, this type can be realized by some real situation only if someone is his own father. Thus, Barwise and Perry wrongly predict that it cannot be true.

Next consider an attributive utterance of (4) made by Mary upon discovering Smith's body.

(4) The murderer is insane.

Under the new analysis, the interpretation of Mary's utterance is the type,

(18) [**s**| in **s**: at *l*, uniquely instantiated, [**x**]; yes
co-instantiated, [**x**], [**y**]; yes]

where [**x**] and [**y**] are:

[**x**| in **s**: at *l*, murderer, **x**; yes]
[**y**| in **s**: at *l*, insane, **y**; yes]

In order for the utterance to be true, it must refer to some real situation *r* of this type. Intuitively, this means that **the property of being a murderer (at *l*) in r and the property of being insane (at *l*) in r** must bear (in *r*) the higher-order properties and relations specified in (18). This can be the case only if *r* also contains a unique individual *o* such that for some individual *o'*, *o* is a murderer of *o'* (at *l*) in *r*, and *o* is insane (at *l*) in *r*. Let us suppose that Smyth really is the (unique) murderer of Smith (though Mary does not know this), and that Mary's utterance is true. Then the individuals *o* and *o'* in *r* must be Smyth and Smith, respectively. Since the proposition expressed by Mary's utterance is, on the Barwise-Perry analysis, a complex consisting of the type (18) together with the situation *r*, this means that Smyth and Smith are equally constituents of Mary's assertion. But this, as we have seen, is wrong.

There is, I believe, no way to avoid these problems short of abandoning the "Austinian" theory of utterance supplementation in favor of the more traditional account. This point can be illustrated by considering a particularly simple technique for dealing with the problem posed by attributive utterances of (4). Up to now, I have assumed that Barwise and Perry intend the first-order properties of objects that are the arguments of higher-order properties in the interpretations (12b)–(15b) to be indexed for particular situations. On this assumption, *r* will be of type (15b) only if in *r*, the property of being an *F* (at *l*) **in r**, and the property of being a *G* (at *l*) **in r**, bear the appropriate higher-order properties and relations. Suppose we drop this assumption of indexing. Then what is required for *r* to be of the appropriate type is for the property of being an *F* (at *l*) to be uniquely instantiated in *r*, and for the properties of being an *F* (at *l*), and being a *G* (at *l*), to be co-instantiated in *r*. With this amendment, it is possible for a real situation to be of type (15b) without **itself** containing any individual that is *F* or *G*. Thus, in the example involving Mary's utterance of (4), we no longer are forced to include Smyth in the proposition asserted.

However, this is no victory for the Barwise–Perry treatment of incomplete descriptions. For if the unindexed property of being an *F* is uniquely instantiated (in any real situation), then there must be exactly one individual *o* for whom there exists a real situation *r'* such that *o* is *F* in *r'*—i.e., if the property of being *F* really is uniquely instantiated, then there must be just one individual who is *F*, in reality as a whole.[24] Thus, under the amended analysis, utterances of (15a) are persistent, and the original motivation for the "Austinian" theory of utterance supplementation is eliminated. (Analogous points hold for (13a) and (14a).) Moreover, any semantically significant contextual supplementation of "incomplete" *NP*'s, ⌜the *F*⌝, ⌜no *F*⌝, and ⌜every *F*⌝, will have to proceed by augmenting the operand, *F*, exactly as in the traditional approach.

This result does not depend on abandoning indexing. What the problematic examples show is that the Barwise–Perry strategy of contextually supplementing attributive uses of incomplete definite descriptions (and other *NP*'s) will not work. Unlike the traditional theorist, who appeals to contextually given objects to complete the contents of incomplete descriptions (and other *NP*'s), Barwise and Perry leave the contents (interpretations) of subsentential constituents unsupplemented.[25] In place of such supplementation, they add a contextually determined situation, referred to by the utterance as a whole, to the proposition expressed. It is precisely this that causes the problems. Thus, Barwise and Perry have no choice but to modify their account to allow for contextual supplementation of the traditional sort.

For example, what is needed in the case of (8b) and (4) is for the types

[**x**| in **s**: at *l*, cook, **x**; yes]
[**x**| in **s**: at *l*, murderer, **x**; yes]

corresponding to the operands of the descriptions to be replaced by the contextually augmented types[26]:

[**x**| in **s**: at *l*, cook, **x**, *o'*; yes]
(where *o'* is the contextually indicated food)
[**x**| in **s**: at *l*, murderer-of, **x**, Smith; yes]
(where Smith is the indicated victim)

However, once this kind of contextual augmentation of interpretations is made generally available, the stated rationale for the "Austinian" theory of utterance supplementation evaporates.

That theory was developed to avoid the following dilemma: If utterances of (13a), (14a), and (15a) are potentially nonpersistent, then to characterize them as true iff their interpretations are realized by some real situation or other is to assign them truth-conditions that are too weak. On the other hand, if interpretations of these utterances are not contextually augmented, in the manner of the traditional approach, then to characterize them as true iff their interpretations are realized in reality as a whole is to assign them truth-conditions that are too strong. The "Austinian" theory was designed by Barwise and Perry to chart a middle course. The failure of the theory suggests an analysis in which these utterances are true iff they have contextually augmented interpretations that are both realized and persistent.

What this amounts to is simply the traditional theory, encoded in the (re-

vised) framework of situation semantics. The central idea of the framework—namely, the partiality of the basic semantic objects—plays no role in the account. Thus, attributive descriptions, and other general *NP*'s, do not support the idea that a proper semantics requires truth-supporting circumstances that are partial, in the manner of situations.

4 Attributive/Referential This conclusion about attributive descriptions has implications for the analysis of referential uses as well. Once the interpretations of incomplete definite descriptions are allowed to be contextually augmented there is no longer such an evident need for partial "resource situations" in which to evaluate them. We have already seen that an attributive utterance of the description in (4), made upon discovering Smith's body, should be analyzed not as expressing the concept **unique murderer**, but rather as expressing the concept **unique murder of o** (where *o* is Smith).[27]

(4) The murderer is insane.

A unified treatment of descriptions will also assign this concept to referential uses of the description—for example, to utterances in which the murderer is present at the discovery of the body and the speaker wishes to assert of him that he is insane. If these different uses of (4) represent a genuine semantic ambiguity, then the proposition semantically expressed by the referential interpretation is the proposition that *i* is insane, where *i* is the unique individual who satisfies the contextually augmented description in the circumstance of the context—i.e., the unique individual who murdered Smith.

The point to notice is that there is no need for the circumstance of the context to be partial in order for the description to determine an object. If the individual concept semantically associated with the description in the context were simply that of being a unique murder, then the referential interpretation would require a partial circumstance. However, the contextual augmentation of the concept eliminates this need, and allows a semantically referential interpretation to be defined (if such an interpretation is desired) using the world as a whole. Thus, semantically referential interpretations do not require partial circumstances of evaluation.[28]

Moreover, it is not obvious that there really are such interpretations. There are, of course, **referential uses** of descriptions of the sort noted by Donnellan in [3]. However, these uses cannot be identified with **semantic interpretations.** Imagine, for example, a speaker using the description in (19) to identify a certain woman *w* he has in mind.

(19) The woman next to Jones drinking champagne is a famous philosopher.

Donnellan observes that in such a case it may be correct to characterize the speaker as having truly said of *w* that she is a famous philosopher—something that could also have been said by uttering 'She is a famous philosopher' with appropriate contextual indication of *w* as the referent of 'she'. Donnellan goes on to point out that this characterization may be correct even if *w* is, in fact, drinking sparkling water rather than champagne. The reason it may be correct is that the description may successfully identify the person whom the speaker has in mind even when it fails to denote her semantically.

The mechanism that allows this is discussed by Kripke in his commentary on Donnellan's original paper ([7], pp. 14–15).

> Two people see Smith in the distance and mistake him for Jones. They have a brief colloquy: "What is Jones doing?" "Raking the leaves," "Jones," in the common language of both is a name of Jones: it **never** names Smith. Yet, in some sense, on this occasion, clearly both participants in the dialogue have referred to Smith, and the second participant has said something true about the man he referred to if and only if Smith was raking the leaves (whether or not Jones was). How can we account for this? Suppose a speaker takes it that a certain object *a* fulfills the conditions for being the semantic referent of a designator, "**d**". Then, wishing to say something about *a*, he uses "**d**" to speak about *a*; say he says "ϕ(**d**)". Then, he said, of *a*, on that occasion, that it ϕ'd; in the appropriate Gricean sense (explicated above), he **meant** that *a* ϕ'd. This is true even if *a* is not really the semantic referent of "**d**". If it is not, then **that** *a* ϕ's is included in what he meant (on that occasion), but not in the meaning of his words (on that occasion).

There are three significant features of this account. First, it shows that the phenomenon of **referential use** is not limited to descriptions, but extends to other expressions, such as proper names, for which no relevant semantic ambiguity exists.[29] Second, it explains referential use in terms of a general process in which semantic information, the speaker's intentions, and background information are combined. Third, it accounts for how a person using the description in (19) might say something true about someone, *w*, even if the description fails to denote *w*. The reason this is possible is not that the description has a special semantics invoked for the occasion, but that there is a contextually recognized presumption that *w* fits the standard semantics of the description,[30] and that the speaker intends to exploit this presumption.[31]

This pragmatic account poses a dilemma for those who see referential **uses** of definite descriptions as reflexes of semantically referential **interpretations**. To insist that the **speaker's** assertion that *w* is a famous philosopher reflects the **semantic** content of (19), **even in contexts in which w does not satisfy the description**, is to ignore the distinction between semantic and pragmatic information, and to invite the multiplication of unmotivated semantic ambiguities, not only for descriptions, but also for names and other expressions.[32] However, to posit semantically referential interpretations **only** for cases in which the object fits the description is to complicate the semantics in a way that may be unnecessary. Surely, any pragmatic account capable of explaining the speaker's referential assertion in cases in which the description (or name) does not fit the object talked about will apply equally well to cases in which it does. Thus, if semantically referential interpretations are to be defended, more evidence than has so far been presented will have to be given.

Barwise and Perry do not provide it. In [1], they are more concerned with articulating a framework for stating referential interpretations than with marshalling evidence for them. The switch from abstract to real situations in [2] seems to entail a restriction of referential interpretations of descriptions to cases

in which the description really applies to the object talked about—for if the resource situation is real, the constituent of it that satisfies the description must really have the properties required by the description. The question that remains unanswered is why such interpretations are needed, given that referential uses of names and descriptions that do not semantically apply to the intended individual must be treated pragmatically.[33]

5 Conclusion In light of all this, it is reasonable to conclude that the semantics of definite descriptions do not call for partial circumstances of evaluation. This does not mean, of course, that they cannot be treated in a revised framework of situation semantics. However, it does mean that they fail to provide support for the central tenet of the program—namely, that a proper account of semantic information requires total circumstances of evaluation to be replaced by partial situations.

It is, of course, true that partial circumstances can be used to construct fine-grained semantic contents that are better candidates for objects of propositional attitudes than those provided by standard possible worlds accounts. However, this is also true of the semantic contents provided by other theories—in particular theories that identify the contents of sentences (in contexts), with structured, Russellian propositions (see [12], [13], [15]–[17]). Such propositions are complexes in which the contents of subsentential constituents are combined in a structure closely related to that of the sentences that express them. These propositions are not themselves circumstances of evaluation, but rather determine, without being determined by, sets of truth-supporting circumstances.

In earlier work ([15]–[17]) I argued that this conception of semantic content is superior to those developed using either partial or total truth-supporting circumstances. For example, I argued (using auxiliary assumptions common to the Russellian and situational frameworks) that the semantic contents of the following (a) and (b) examples must be distinguished, despite the fact that, intuitively, they are true in the same circumstances.[34]

(20a) t is F and t is G
(20b) t is F and t is G and something is such that it is F and it is G

(21a) t is an F and t is G
(21b) t is an F and t is G and an F is G

(22a) t = the F and t = the G
(22b) t = the F and t = the G and the F = the G

As Salmon points out in [14], the arguments involving these examples can be extended to show that the (a) and (b) sentences in (23) and (24) must also have different contents.

(23a) tRt
(23b) tR itself (i.e., t self-R's, or $[\lambda x(xRx)]t$)

(24a) t is F and t is G
(24b) t is F and G (i.e., $[\lambda x(F(x) \ \& \ G(x))]t$)

In each case, syntactic differences in sentences are paralleled by semantic differences in their contents. Accordingly, I see these results as confirming the basic

intuition behind the structured propositions approach: Semantic contents of sentences are not circumstances of evaluation, but rather are "syntactically" structured complexes which themselves undergo evaluation.

However, situation semanticists see things differently. While conceding that these examples must be assigned different contents, Barwise and Perry will take them as indicating that the initial conception of situations must be modified to allow the necessary distinctions. In particular, the principles in (25) will be given up in favor of their counterparts in (26).[35]

(25a) A situation in which *o* is *F* is one that supports the truth of the claim that something is *F*.
(25b) A situation in which *o* is *F* and *o* is *G* is one that supports the truth of the claim that an *F* is *G*.
(25c) A situation in which exactly one object *o* is *F*, and, moreover, *o* is *G* supports the truth of the claim that the *F* is *G*.
(25d) A situation in which *o* bears *R* to *o* is one that supports the truth of the claim that *o* bears *R* to itself, i.e., that *o* self-*R*'s.
(25e) A situation in which *o* is *F* and *o* is *G* is one that supports the truth of the claim that *o* is both *F* and *G*.

(26a) In order for a situation to support the truth of the claim that something is *F* it must be one in which the property of being *F* has the property of being instantiated; for this it is not sufficient for it to be a situation in which *o* is *F*.
(26b) In order for a situation to support the truth of the claim that an *F* is *G* it must be one in which the properties of being *F*, and being *G*, bear the co-instantiation relation; for this it is not sufficient for it to be a situation in which *o* is *F* and *o* is *G*.
(26c) In order for a situation to support the truth of the claim that the *F* is *G* it must be one in which the properties of being *F*, and being *G*, bear the co-instantiation relation, and the property of being *F* has the property of being uniquely instantiated; for this it is not sufficient for it to be a situation in which exactly one object *o* is *F*, and, moreover, *o* is *G*.
(26d) In order for a situation to support the truth of the claim that *o* bears *R* to itself (i.e., self-*R*'s) it must be one in which *o* has the property of self-*R*ing; for this it is not sufficient for it to be a situation in which *o* bears *R* to *o*.
(26e) In order for a situation to support the truth of the claim that *o* is *F* and *G* it must be one in which *o* has the compound property of being *F*-and-*G*; for this it is not sufficient for it to be a situation in which *o* is *F* and *o* is a *G*.[36]

These modifications in the notion of a situation raise the question of whether we ought to continue to regard them as a species of truth-supporting circumstance. They might even lead one to wonder whether the modified situational approach and the structured proposition approach are really notational variants of the same underlying view. Although important similarities exist, I do not think they are. It must be remembered that the appeal of partial circumstances of evaluation in situation semantics is not limited to the construction of

fine-grained objects of the attitudes. Rather, partiality is supposed to be systematically significant in the analysis of a variety of constructions. Thus, it is of considerable theoretical importance to determine whether it really is. Initially it was thought that definite descriptions provided strong evidence for partiality. I have argued that, in fact, they do not; the analysis of definite descriptions is not facilitated by the kind of partiality that situation semantics provides.

NOTES

1. Intuitively, an abstract situation is factual just in case whenever it represents properties or relations as holding (or not holding) among specific objects at given locations, the properties and relations really do (do not) hold among those objects at those locations. In [1], Barwise and Perry express this by saying that factual situations **classify real situations** (parts of reality). More specifically, a factual abstract situation *f* classifies a real situation *r* iff whenever *f* represents properties or relations as holding (or not holding) among specific objects at given locations, *r* is a part of reality in which those properties and relations do (do not) hold among those objects at those locations. If, in addition, *f* specifies everything that holds (as well as everything that does not hold) in *r*, then Barwise and Perry call it **actual**, and claim that it (exactly) **corresponds** to *r*.

   According to Barwise and Perry, every factual abstract situation is part of (i.e., is a subset of) some actual abstract situation; and for every finite set of factual abstract situations, there is an actual abstract situation of which each member is a part (subset). Nevertheless, they remain largely noncommittal on the question of which factual situations are actual. As a result, the distinctions between actual and factual, and between (exact) correspondence and classification, are put to little use. Thus, for my purposes it is sufficient to distinguish factual from nonfactual abstract situations. When I speak of a factual situation as corresponding to a real situation, I shall mean that the factual situation is a correct, but not necessarily complete, representation of the real situation.

2. The question of whether referential **uses** of definite descriptions should be seen as reflecting semantically referential **interpretations** is a controversial one discussed in [3], [7], [18], and [11]. Although Barwise and Perry assume that such interpretations are needed, I will remain neutral on this point for the moment. Later, I will indicate why I think that such interpretations are not required.

3. In the semantics, these are, of course, abstract situations. However, [1] does not clearly specify whether or not they have to be factual. Thus, Barwise and Perry do not clearly indicate where they stand on the controversial question of whether the semantic interpretation of a description in a context may be an object that the description does not, in reality, apply to. Later, I will suggest a clarification of their stance based on changes in situation semantics discussed in [2].

4. In situation semantics a context is a certain kind of situation, which may contain extra resource situations as constituents. This contrasts with Kaplan's conception of a context in possible world semantics. In particular, a context for Kaplan contains a single world, which is used to evaluate all semantically referential descriptions in a sentence (constructed with the '*dthat*' operator). However, this difference may or may not be semantically significant. Whether or not it is depends on the treatment of incomplete definite descriptions, and the resolution of the question of whether resource situations can be nonfactual. The picture that I will argue for

turns out to minimize the semantically significant differences between the two approaches.

5. I assume here that a speaker who uses 'The murderer is insane' attributively may succeed in asserting a truth, and also that the sentence may semantically express that truth in the context of utterance—even though there is more than one murderer in reality as a whole. An alternative view might accept the pragmatic claim about what the speaker asserts, while rejecting the semantic claim about what the sentence expresses in the context (maintaining instead that the sentence semantically requires there to be a unique individual i for whom there is some i' or other such that i murdered i').

   One point against this alternative is that although it recognizes that the speaker has said something true, it also seems to allow a straightforward sense in which he has asserted something untrue—namely the proposition that his sentence semantically expresses in the context. Intuitively, however, it does not seem as if, in this case, the speaker has said anything false. This contrasts with **referential** uses in which the description, ⌜the F⌝, employed by the speaker does not fit the intended referent. In such cases it may be quite natural to say that the speaker truly asserted of the intended referent that he is G, while mistakenly asserting that the F is G.

   In what follows, then, I will assume that there is a range of cases in which attributive uses of ⌜The F is G⌝ semantically express truths relative to specific contexts of utterance, even though ⌜the F⌝, when taken in isolation from all contextual supplementation, fails to pick out a unique object. This is not to say that the alternative, purely pragmatic treatment does not deserve further investigation. Perhaps there are some cases for which it is correct. However, the semantic hypothesis seems quite natural for a range of cases, and should be pursued.

6. These examples are to be understood as expressing general propositions, with the italicized descriptions taken attributively.

7. See [18] and [11] for discussion. It should be pointed out that the strategy I have prescribed for the traditional theorist works best for examples like 'the murderer' and 'the cook', where an extra argument place is available to be filled by a contextually specified object. Examples like 'the book' and 'the table' are more challenging since the nature of the contextual supplementation is not as clear. In many cases, the supplementation may involve spatio-temporal locations; e.g., 'the table there then'. However, there seem to be cases in which the supplementation is more idiosyncratic—for example, uses of 'the car' to express what might also be expressed by 'our car'. An important and vexing problem for the traditional theorist is that of finding significant semantic uniformity in the process of contextually supplementing the contents of incomplete descriptions.

8. This notation says that the interpretation P of the sentence in the context given by the "discourse situation" d with "speaker's connections" c is the set of abstract situations e "described by" the sentence in the context. Intuitively, a discourse situation is a situation in which a specified person is speaking certain specified words at a specified time and place to a specified audience. Speaker connections are facts indicating the objects, properties, and spatio-temporal locations that the speaker is using various of his words (including pronouns, proper names, and tense indicators) to refer to.

9. The spatio-temporal location at which the cooking is said to take place is specified in the context by one of the "speaker connections"—the one associated with the word 'cook'. In effect, the speaker simply has a location in mind that he wishes to

talk about, and which is included in the interpretation of his utterance. (In the notation, 'c' represents the speaker's connection function, which assigns appropriate contextually determined entities to the relevant words in the sentence.)

10. A statement, for Barwise and Perry, is an utterance of a sentence in a context.

11. See note 1 above for the distinction between actual and factual abstract situations. Although Barwise and Perry formulate their "Austinian" theory using the notion of an actual situation, they make no explict use of the difference between actual and factual for that theory.

12. In [2] Barwise and Perry eliminate abstract situations as basic entities of the theory in favor of real situations and types of situations. Thus, they take the contextually determined situations referred to by utterances to be real situations, rather than the actual situations that exactly correspond to them. However, this theoretical change makes no significant difference to the "Austinian" theory of utterance supplementation. It may, therefore, be put aside for the present. In the next section the changes in basic theoretical stance proposed by Barwise and Perry will be looked at more closely.

13. Barwise and Perry provide no information regarding how reference to appropriate situations is determined. Although there are potential problems arising from this lacuna, none of my criticisms will depend on them.

14. The notion of a (persistent) statement being true in an alternative circumstance is modeled in [1], (pp. 60–61 and 139–141) by the notion of its being true in an alternative structure of situations. Where I is the interpretation of the statement, the statement is true in a structure, E, of situations iff some situation of type I is factual in E.

    The introduction of propositions corresponding to nonpersistent statements would seem to involve an obvious extension of this idea. The proposition $\langle s, I \rangle$ expressed by a nonpersistent statement should be true in an alternative structure, E, of situations iff s is of type I and is factual in E. However, this leads to the intuitively incorrect truth conditions discussed above.

    As stated, it also leads to the incorrect result that $\langle s, I \rangle$ may be false in a counterfactual circumstance in which Smyth is both insane and the unique murderer of Smith—where I is the interpretation of (4), and s has Smyth murdering Smith but no information about Smyth's sanity. Such a "proposition" might be assigned to an utterance of (4) in a case in which the speaker successfully refers to the actual situation in which Smyth murders Smith, but nevertheless expresses a falsehood due to Smyth's (actual) sanity.

    Although various moves might be attempted to deal with one or another aspect of the truth-conditions problem, I see no way of completely solving it as long as the propositions expressed by nonpersistent statements are construed in the manner suggested by Barwise and Perry.

15. The problem can easily be extended to attributive utterances of (4) that are untrue. Suppose, for example, that x utters (4) in a context exactly like the original, save for the fact that, unknown to x, the victim has not been murdered, but rather has died of natural causes. There is no reason in this case to select a situation in which Smyth murdered Smith as the contextually determined referent of the utterance, especially if, as we may assume, Smyth is unknown to x. (In fact, we cannot select such a situation if the referent of the utterance must be real or actual.) However, if we do not select such a situation, then we fail to capture the apparent fact that **what x says** in the new context is the same as **what x says** in the original context.

Moreover, if we select, in the new context, a situation s' in which Smith has not been murdered at all, then it is hard to see how the resulting proposition $\langle s', I \rangle$ could be true in any counterfactual circumstance (structure of situations). Finally, assigning the utterance no referent in the context is unacceptable, since it leads to the incorrect conclusion that x and y **say the same thing** in contexts in which, unknown to them, the respective victims (Smith and Brown) have not been murdered.

16. The problem would, of course, remain even if the contextually specified situation were allowed to be factual, rather than real or actual. However, the insistence on the latter further emphasizes the difficulty, since actual situations are potentially more inclusive (bigger) than merely factual situations (see note 1). As a result, there is not much hope of excluding material extraneous to the assertions.

17. Though related, these two innovations of the Barwise–Perry analysis are distinct. One way of maintaining the first without the second would be to allow contextually determined situations to supplement the contents of incomplete descriptions. On this approach, an incomplete description ⌜the F⌝ can be thought of as containing indexical reference to a situation, in the manner of ⌜the F in that situation⌝. With the situation included as a constituent of the content of the description, the sentence as a whole can be evaluated in a total circumstance of evaluation, or possible world, as in the traditional account. For the most part, the problems illustrated above using utterances of (4) carry over to this approach as well (with the exception of the one noted in the penultimate paragraph of note 14). However, the approach does not fall prey to the refutation discussed below involving the sentences in (8a)–(8c).

    The opposite is true of approaches that maintain the second innovation while dropping the first. One way to construct such an approach would be to let the contextually determined "referent" of an utterance be a type, R, of situation (or a set of abstract situations), rather than a single real (or actual) situation. For example, in the case of x's attributive utterance of (4), the "referent", R, might be the type of situation (or set of abstract situations) in which someone or other murdered the victim, Smith. The resulting proposition $\langle R, I \rangle$ could then be characterized as true in a circumstance (structure) iff the set of factual situations of the circumstance (structure) which were both of type R and of type I, was nonempty and persistent on the set of factual situations of the circumstance (i.e., contained all factual situations of the circumstance of which its members were parts).

    This modification would, of course, change the account significantly. However, as the examples in (8a)–(8c) will show, it is still fundamentally inadequate.

18. Examples like (8a) have received considerable attention in the literature on "discourse referents". See, for example, [8], pp. 348–350, and [9], pp. 265–266.

19. It should be noticed that the examples in (8a)–(8c) which undermine the Barwise–Perry analysis are of the same sort as those originally used to motivate it. Thus, in discussing the key example used to motivate the "Austinian" approach to utterance supplementation, Barwise and Perry say the following:

> First, suppose someone comes up to me and says, 'The food at this party is delicious! Who is the cook?' If I say, 'I am the cook' I have clearly not described things accurately. I have claimed to be **the** person who did the cooking for the party [when in fact two people collaborated]. But suppose instead someone comes up to me eating a piece of my famous cheesecake pastry and says, 'Who made this?' Then I may truly say that I am the cook. [1], p. 159

Both here and in the examples in (8) the context can be seen as containing either an implicit or an explicit demonstration. Despite this, Barwise and Perry do not use the demonstration to restrict the interpretation of the description 'the cook'. Instead, they invoke reference to a contextually determined situation by the utterance as a whole. The examples in (8a)–(8c) show that this approach will not work. Since these examples illustrate the same phenomenon as the original example, the "Austinian" approach must be rejected, even for the cases that motivated it.

20. Although no full-fledged theory of this sort has been developed, suggestions along these lines are made in [8], pp. 348–350, [10], p. 18 note 16, and [11], pp. 42–43.

21. The point in [15] was not just that examples like those in (10a) and (10b) require a higher-order analysis, but that this change motivates an alternative semantic framework in which the semantic contents of sentences are structured, Russellian propositions, rather than types of truth-supporting circumstances. Barwise and Perry adopted the higher-order analysis, without accepting the alternative semantic framework. More on this below.

22. The subscripts indicate that the indefinite description is to be understood as the antecedent of the pronoun. For more on this example see [15], note 6, and [2], pp. 151–158.

23. This account is an interpretation of the very sketchy remarks by Barwise and Perry in [2]. It is supported in particular by their continued inclination to treat examples like those in (13–15) as nonpersistent, and by the remark on p. 144 that they now want to allow the possibility that a situation may be of a given type even though not all situations of which it is a part are of that type. An alternative (less likely) interpretation, which does not have these features, is discussed below.

24. Barwise and Perry assume that for any two real situations, s and s', there is a real situation, s'', of which both are parts. Thus if there were a real situation in which the property of being F had the property of being uniquely instantiated, and also real situations in which different objects were F, then there would be a real situation combining these. But such a situation is impossible, and so cannot be real.

25. Except for reference to contextually determined spatio-temporal locations.

26. Contextually augmented types incorporating the analysis of ⌜the F⌝ as ⌜the F relevant to that situation⌝ (discussed at the end of the previous section) could also be used here.

27. Or **unique murderer relevant to s** (where s is a perceptually given situation containing o).

28. This example is a particularly clear case in which contextual augmentation eliminates the need for partiality. However, it is meant to illustrate the admittedly programatic hypothesis that this sort of trade-off will hold generally.

29. Although Barwise and Perry posit a referential/attributive ambiguity in the semantics of definite descriptions, they do not do so for proper names. According to them, each proper name n has the property expressed by ⌜being an n⌝ semantically associated with it. Although this property is not part of the interpretation of the name, it is supposed to constrain its reference. Barwise and Perry indicate that the property is to be understood metalinguistically, as something like having the name n, or being named n ([1], pp. 166–167).

Exactly what it is to have the name n, or to be named n, is not explained. However, they seem to have in mind some substantial, sociolinguistic condition. For one

thing, the property of having the name *n* seems, on their account, not to be indexical—I do not have the name *n* in one context simply in virtue of the fact you happen to call me *n* in that context, while failing to have it in other contexts. For another thing, Barwise and Perry regard an utterance of ⌜He is *n*⌝ as providing substantive metalinguistic information to the hearer, in virtue of the fact that *n* is semantically associated with the property of having the name *n* (which constrains its reference). But this would be impossible if the property of having the name *n* relevant to a particular utterance of *n* were just the property of being the referent of that utterance. Finally, the examples given by Barwise and Perry involve an individual's having his given name, as well as certain special cases like 'Wednesday' and 'Christmas'. All of this seems to point to a view in which having the name *n* is a matter of being associated with the name by some established convention of the linguistic community.

One question that arises for this view is how to account for private nicknames and temporary names—"Let's call him 'Bozo' ", or "Get lost Bozo". But whatever is said about this, the analysis does seem to have the right consequences for Kripke's Smith/Jones example. When the speaker sees Smith in the distance and mistakes him for Jones, his use of 'Jones' semantically refers to Jones, not Smith. Moreover, although the speaker may succeed in saying something true about Smith, his words say something false about Jones. Thus, whatever may be the case for definite descriptions, Barwise and Perry need something like Kripke's pragmatic mechanism to account for referential uses of proper names.

30. As Donnellan points out, the speaker does not actually have to believe the presumption, so long as he recognizes that the conversational participants are willing to accept it, if only "for the sake of argument".

31. If Kripke's pragmatic account is accurate, then the speaker may have asserted more than one thing—the (false) proposition semantically expressed by his sentence in the context, and the true proposition determined by the pragmatic mechanism.

32. Kripke maintains that even quantified statements in a purely Russellian language can have referential uses [7], pp. 16–18.

33. One piece of evidence for semantically referential interpretations given in [1], p. 147 involves the following example:

> 3. *The dog growled at the rabbit that sneezed.*
>
> Suppose Jim has been telling us about a situation. He has mentioned only one dog, Clarissa, and two rabbits: Hugh, who sneezed while eating Clarissa's food, and Fang. We would naturally take Jim's utterance of (3) to describe the event *e*:
>
> in *e*: at *l*: growling at, Clarissa, Hugh; yes
>
> where *l* is the location to which Jim was referring, a location temporally preceding that of the utterance. The definite descriptions contribute Clarissa and Hugh to the event described. Two factors enable them to do this:
>
> 1. the properties various parts of the expression designate;
> 2. the unique possession of those properties by Clarissa and Hugh in the situation built up by Jim's discourse.

In this example, Jim's discourse is taken to provide a resource situation for semantically referential interpretations of the descriptions in (3). Suppose, however, that Jim's story has been systematically false. In particular, suppose that Clarissa is really a wolf and that Hugh did not sneeze (also suppose that no other dog or sneezing rabbit is talked about). Then the discourse will not provide any **real** resource situation in which the descriptions are semantically defined. Thus, (3) will

not semantically express the proposition that Clarissa growled at Hugh. However, **the speaker** may have asserted this. Moreover, all of this could occur without the speaker or his audience realizing that the story was false. But then, since pragmatic mechanisms explain the speaker's referential assertion in this case, why is a special semantic interpretation needed when the story happens to turn out true?

In fact, the problem goes much deeper. For many cases of this sort, in which a description is used in a discourse, no singular proposition is either asserted or expressed. For example, suppose I say: "**A student** came to my office before I arrived this morning and removed a book. I noticed something was wrong because when I got there the door was ajar, and the janitor said that he had not been in. What really bothers me is that **the student** must have a key to the building." I might say this having no idea about the identity of the intruder (but just thinking that whoever it is must be a student). In such a case there is no individual about whom I am talking, no assertion that he (or she) came to my office, removed a book, and has a key to the building, and no singular proposition toward which I bear a propositional attitude (the propositional attitude of being bothered that) if my remark turns out to be true.

34. In these examples, '*t*' stands in for a proper name, demonstrative, pronoun, or variable.

35. In [2] Barwise and Perry explictly give up (25a,b) and adopt (26a,b), on the basis of arguments involving (20) and (21). Since the arguments involving (22–24) are exactly analogous, I am confident that they would give up (25c–e) and adopt (26c–e) as well. (The arguments involving (20–22) utilize the auxiliary assumption that a situation (circumstance) that supports the truth of each conjunct supports the truth of a conjunction, and vice versa.) In fact, Perry has accepted the argument involving definite descriptions in his comment on Soames [16], given at th Pacific Division Meetings of the American Philosophical Association, March 1985. That argument, it turns out, is based on an example slightly more complex than (22).

    (i) t = the x:Fx & t = the x:Gx & the x:Fx = the x:Fx & t = the x:$t = x$

    (ii) (i) & the x:Fx = the x:Gx

    (Any two-place relation can be used in these examples in place of identity.)

36. In each of these cases (26a–e), the denial that situations of a certain type **support the truth** of a sentence, does not carry with it the claim that it is (metaphysically) possible for the sentence to be untrue when situations of the relevant type are real (or actual). For it may be that although r does not itself support the truth of S, it is connected by what Barwise and Perry call a "necessary constraint" to a situation r' which does—in which case the existence of r will guarantee that S is true, without, in the technical sense, **supporting the truth** of S.

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