

Semantics, Pragmatics, and The Role of Semantic Content

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Followers of Wittgenstein allegedly once held that a meaningful claim to know that p could only be made if there was some doubt about the truth of p . The correct response to this thesis involved appealing to the distinction between the *semantic content* of a sentence and features attaching (merely) to its *use*. It is inappropriate to assert a knowledge-claim unless someone in the audience has doubt about what the speaker claims to know. But this fact has nothing to do with the semantic content of knowledge-ascriptions; it is entirely explicable by appeal to pragmatic facts about felicitous assertion (that is, a kind of use of a sentence).

According to the contextualist about knowledge, the (propositional) semantic content of knowledge-claims is sensitive to context. In a context in which skeptical possibilities are sufficiently salient, the word "know" expresses a relation that holds between persons and a highly restricted range of propositions. In a context in which skeptical possibilities are not salient, the word "know" expresses a different relation, one that a person can bear to a proposition even if she is in a fairly weak epistemic position with respect to it. In support of her position, the contextualist often points to the undisputed fact that speakers' willingness to make knowledge-claims varies with context. Those who reject contextualism about knowledge typically try to give non-semantic accounts of variations in speaker hesitancy about knowledge-claims. In short, dissenters from contextualism try to argue that the facts that support contextualism are really facts about the *use* of knowledge-ascriptions, rather than their *semantic contents*.

In ethics, one version of internalism about reasons holds that someone understands a sentence containing genuinely normative vocabulary only if they are motivated in a certain way. That is, an internalist about moral reasons holds that being motivated is an essential part of the grasp of the semantic content of moral sentences. An internalist about reasons motivates her position in part by appealing to the fact that it is odd to utter an ethical sentence unless one has the relevant motivation. An externalist about reasons, by contrast, rejects the internalist thesis that being motivated is part of grasping the semantic content of moral sentences. An externalist seeks to explain the evidence about motivation by attributing it to facts (merely) about the proper *use* of ethical sentences, rather than the *semantic content* thereof.

These examples form but a representative few. Appealing to a distinction

between the semantic content of a sentence, and what a use of it only pragmatically conveys is simply a standard maneuver in debates across a wide range of disciplines in philosophy. The importance of the tactic is due to the nature of many philosophical claims. Typically, a philosopher who is discussing a certain discourse, whether it concerns knowledge or the good, makes claims about its content. Sometimes, there are features of the use of a word in that discourse that, if explained by reference to the content of the word, would threaten that philosopher's claims. In such a case, the philosopher who continues to advocate her claims has one of two options. First, she can reject the thesis that the ordinary word that purportedly expresses that content at issue in fact expresses it (typically, this results in an error theory about ordinary discourse). Secondly, she can argue that the features in question are not explained by reference to the semantic content of that word, but are merely pragmatic facts about its use. In short, the distinction between *semantics* and *pragmatics* is fundamental to philosophical theorizing, because much philosophical theorizing takes the form of claims about the content of philosophically central discourse.

So, in a number of debates across, for example, metaphysics, epistemology, and ethics, one theorist's semantic content is another theorist's merely pragmatic effect. But a complicating factor in these debates is the lack of a clear and accepted criterion among philosophers of language and linguists for what counts as semantic versus what counts as pragmatic. That is, among philosophers of language, there is no stable agreement on the semantics/pragmatics distinction. Furthermore, even among those who agree on terminology, there is disagreement about the *scope* of semantic content. That is, it is a subject of much current debate how much of what is intuitively communicated is constituted by semantic content. Many philosophers of language have in recent years argued that sentences have only minimal, even non-propositional semantic contents, much of their natural interpretation in a context being due to non-semantic effects (e.g. Bach (1994)). Others in the philosophy of language and cognitive science community have gone further, to reject altogether any theoretical role for a semantic notion of what is said by a sentence. According to all of these theorists, instead of "truth-conditional semantics", we should be speaking, in the words of Francois Recanati, of "truth-conditional pragmatics" (Recanati (1993, pp. 232ff.)).

Our first aim in this paper is to provide a stable characterization of the distinction between semantics and pragmatics, one that theorists across a range of disciplines can exploit. This characterization will allow us to gain greater clarity about the debates concerning the scope of semantic content. Our second aim in this paper is to argue that much more counts as genuinely semantic than skeptics about the scope of semantic

content have maintained.

Section I. Three Conceptions of the Semantics-Pragmatics distinction

Above, following tradition, we spoke of the distinction between semantics and pragmatics as a distinction between what words mean (semantics), on the one hand, and the *use* speakers make of words (pragmatics). However, this characterization is imprecise and unhelpful. For example, the case of indexical expressions, such as “I” and “today”, shows that one word can have different denotations on different occasions of use. Nevertheless, each indexical word type has a univocal conventional meaning, that is, a meaning that does not vary from context to context. Since the referential content of a use of “I” relative to a context of use seems to be a function of the conventional meaning of the word-type “I”, it seems incorrect to relegate all facts about its content in a context to what speakers use “I” to mean, rather than what the word means. But the initial vague characterization of the semantics/pragmatics distinction does not talk of word meaning relative to a context, and so gives us no handle on these facts. More precision is required.

Following Richard Heck (2001), let us call the conventional meaning of a lexical item *e* in a language *L*, its *standing meaning*.¹ Some terms, such as the number determiners "two" and "three", or proper names such as "Bill Clinton" and "George Bush", seem to have a "stable" standing meaning, in the sense that users using such terms correctly (that is, in accord with their standard meanings), will always refer to the same object or property. Other terms, such as "I", "here", or "this" have "unstable" standing meanings, such that, in different contexts, consistently with these standing meanings, they can be used to refer to different objects. For example, the conventional meaning of "I" in English does not vary across contexts; in every context, when used in accord with its standard meaning, the meaning of "I" is (roughly) the same as "the speaker in the context". But in a context in which Bill Clinton is the speaker, Bill Clinton uses "I" to refer to himself, when using "I" in accord with its standing meaning. In contrast, Gray Davis uses "I" in accord with its standing meaning to refer to himself, that is, Gray Davis. Loosely following recent terminology of John Perry, let us call the object or property that a user refers to in a context when successfully using a lexical item *e* (of a language *L*) in accord with its standing meaning in *L*, the *referential content* of that term

¹ David Kaplan's (1989) technical reconstruction of standing meaning is what he calls character; John Perry's classic terminology is "role". Since we wish here to remain neutral about certain (albeit differing) theoretical commitments that, strictly speaking, Kaplan and Perry's terminology possesses, we adopt Heck's terminology for now.

relative to that context.²

There is a bit of a terminological morass surrounding our distinction between "standing meaning" and "referential content". The term "referential" is most appropriate when used to discuss the content of *referential expressions*, expressions that can be used to refer, as opposed to merely denote, in the sense familiar from the work of Bertrand Russell. Such expressions, following tradition, are assumed to be singular terms, paradigmatically proper names such as "Bill Clinton" and indexicals and demonstratives such as "I" and "this". However, like Perry (2001, p. 79), we intend the expression "referential content" to have wider application than merely to referential expressions in contexts. Our distinction between standing meaning and referential content is meant to correlate with the distinction between, on the one hand, the context-invariant standing meaning of a term, and, on the other, the object, property, or function that the term has as its content in a context, which is potentially distinct from its standing meaning. As a consequence, the expression "referential content" may need to have wider application than merely to the class of referential expressions. For there may be context-sensitive elements in the syntax of a sentence that are not referential expressions, as traditionally conceived (e.g. Heal (1997)). If there are, we would need vocabulary to mark the distinction between standing meaning and content in a context for them as well. So, like Perry, we will speak of the referential content of an expression in a context in this broader sense.

The distinction between the non-relative notion of the standing meaning of a term and the relative notion of the referential content of a term relative to a context provides two general strategies for forging a distinction between semantics and pragmatics, and a third intermediate between them. We discuss each in turn.

According to the first strategy for making a distinction between semantics and pragmatics, the semantic interpretation of a complex expression *e* is the result of composing the standing meanings of the lexical items in *e* in accordance with the semantic composition rules corresponding to the syntactic structure of *e*. So, on this view, semantic properties are only properties of expression types; any property that an expression type has only relative to a context (or any property possessed only by expression tokens) is not semantic. The semantic content of the sentence "I am tired" is the result of combining the standing meaning of "I", the standing meaning of the copula (together perhaps with the present tense), and the standing meaning of "tired".³

² See Chapter 5 of Perry (2001). We say "loosely", because Perry takes referential content to be a property of *utterances* of expressions. In contrast, we take referential content to be a property of an expression relative to a context.

³ Of course, the syntactic structure of "I am tired" is certainly considerably more

Of course, relative to a particular context of use, speakers can use "I" in accord with its standing meaning to refer to a particular person, namely the speaker of that context. But on this first conception of semantics, semantic properties do not accrue to expressions in context. The fact that in a particular context of use, "I" has Bill Clinton as its referential content, is a fact about the pragmatics of "I", how it is used in a given context.

Propositions are the ultimate bearers of truth-values. This fact about the nature of propositions entails that the proposition expressed by "I am a son of a president" varies from context to context. Relative to a context in which Bill Clinton is the speaker, the proposition expressed by "I am a son of a president" is false, whereas relative to a context in which George Bush is the speaker, the proposition expressed is true. However, on this first way of thinking of semantics, no semantic value of an expression varies from context to context. Therefore, on this first way of distinguishing semantics from pragmatics, the *semantic* interpretation of "I am a son of a president" is not a proposition.

This conception of the semantics-pragmatics distinction is familiar from the work of Richard Montague. Montague suggests that the difference between semantics and pragmatics is that semantic values are not relativized to anything (or rather only to models or interpretations of the language), whereas pragmatic values are assigned relative to a context of use (as well as a model). Thus he writes:

It seemed to me desirable that pragmatics should at least initially follow the lead of semantics, which is primarily concerned with the notion of truth (in a model, or under an interpretation), and hence concern itself also with truth—but with respect to not only an interpretation but also a context of use. (Montague, 1974, p. 96)

Few linguists or philosophers now conceive of the distinction between semantics and pragmatics in this first way (though, as we emphasize in the next section, the reasons that justify abandoning it are subtle). According to a more contemporary conception of the semantics-pragmatics distinction, there are two levels of semantic value. The first is the non-relativized notion of the standing meaning of an expression. The second is the relativized notion of the referential content of an expression in a context.⁴ On the most

complex than meets the eye, and presumably contains many non-obvious elements.

⁴ Some philosophers of language have advocated semantic theories that embrace more than two levels of semantic content. For example, Nathan Salmon (1986) holds that an adequate account of tensed discourse requires at least three levels of semantic value, and David Braun (1996) argues that an adequate treatment of demonstratives requires at least three levels of semantic value. However, for the sake of simplicity, we ignore in what follows the possibility that there are more than two levels of semantic value.

influential way of explaining the relation between these two levels of semantic value, the standing meaning of a lexical item determines a *function* that determines its referential content, given a context. Following the influential terminology of Kaplan (1989), the widely used name for this function is *character*; in what follows, when speaking of this formal explication of standing meaning, we adopt Kaplan's terminology. Most importantly, a complex expression relative to a context *c* has a referential content that is the result of combining the referential contents of its constituent terms relative to the context *c* in accord with the semantic composition rules corresponding to the syntactic structure of that expression. The result of this latter process is a genuine level of semantic value, which we shall call the *semantic content* of that complex expression relative to the context *c*.⁵ The semantic content of a lexical item relative to a context *c* is, on this view, its referential content in that context.

On this second conception of the semantics-pragmatics distinction, the sentence "I am a son of a president", relative to a context, has a propositional semantic content. If George is the speaker, and the time is *t*, the propositional content is that function that takes a possible situation *s* to the true if and only if George is a son of a president at *t* at *s*. On this conception of the semantics-pragmatics distinction, the pragmatic content is what the speaker communicates over and above the semantic content of the sentence she uttered.

So, for example, suppose George is asked whether he thinks he is going to be rich when he is older, to which he responds "I am a son of a president." The semantic content of George's sentence, relative to that context, is that he is a son of a president, which is the proposition that results from combining the referential contents, relative to that context, of the parts of the sentence. But by expressing this semantic content, he intends to flout Grice's maxim of relevance, thereby communicating the quite different proposition that it is quite likely that he will be rich, given his political connections. This proposition is not communicated by being semantically expressed by some sentence, but rather as a post-semantic result of the expression of a semantic value. Hence, it is part of the pragmatic content of the speech act, but not what is semantically expressed by the sentence in that context.

⁵ There are basically two different styles of semantic theory. For the sake of simplicity, we take the content of an expression in a context to be a function from possible worlds to the appropriate type of extension; functions from possible worlds to truth-values, we will call *propositions*. On a structured propositions semantics, however, semantic interpretation proceeds in two steps. First, an algorithm assigns structured propositions to sentences in contexts. Secondly, a definition of truth assigns truth-conditions to structured propositions. In what follows, we generally speak in the first style of semantics, but translate into the second in some instances.

On this conception of the semantics-pragmatics distinction, the semantic contents of some terms depends upon non-linguistic context. Those who use "pragmatic" to refer to such contextual effects on linguistic interpretation may speak, somewhat paradoxically, of pragmatic effects on semantic content. But what this means is simply that some lexical items have different contents in different contexts. Non-linguistic facts about the context of use are relevant for fixing the referential content of some lexical items, such as pronouns and unpronounced free variables. But the nature of the lexical item dictates what non-linguistic facts are relevant, and constrains the nature of its referential content in a context. For example, if the lexical item is the English pronoun "she", its standing meaning dictates that only certain sorts of intentions are relevant for fixing its referential content in a context, and constrains that content to be, for example, a salient female human (reference to boats, countries, etc., to one side). That is, speaker intentions are relevant to fixing the referential content of a lexical item in a context only when they are determined to be so by the standing meaning of a lexical item. So, the role played by speaker intentions in semantics remains significantly constrained, even on this conception of the semantics-pragmatics distinction, by the standing meanings of lexical items.

Employing this version of the semantics-pragmatics distinction, we can distinguish between two ways in which context determines what is communicated. The first way context may determine what is communicated is by affecting the semantic content, via resolution of the referential content of context-sensitive elements in the sentence uttered. This roughly corresponds to what Stanley and Szabo (2000, pp. 228-9) and Perry (2001, pp. 42ff.) call the *semantic* role of context.⁶ The second way is that context plays a role in determining what is communicated by the linguistic act over and above its semantic content. This is the genuinely pragmatic role of context (Ibid., pp. 230-1).⁷

⁶ We say "roughly corresponds", since Stanley and Szabo (2000) make a point of not adopting the semantics-pragmatics distinction under discussion here (Stanley and Szabo, pp. 229-30). Rather, according to them, the semantic interpretation of an utterance is the proposition it expresses, whether or not all elements in the proposition expressed by the utterance are traceable to elements in the sentence uttered. So what Perry (2001, pp. 44ff.) calls the "content supplemental" role of context is, for Stanley and Szabo, a semantic role of context. We find this terminology disturbing, since it is unclear whether such a notion of the semantics-pragmatics distinction takes semantic content to be a property of expressions in contexts or utterances.

⁷ Stanley and Szabo also discuss what they call the "grammatical role" of context in determining what was uttered, which corresponds directly to what Perry (2001, pp. 40ff.) calls the "pre-semantic" role of context. This is the role context plays in resolving ambiguity. Both Perry and Stanley and Szabo are too quick to lump these roles of context

So, on this second conception of semantics, extra-linguistic context plays a role in determining the semantic content of certain expressions in context. Indeed, for many context-dependent expressions, certain kinds of intentions of speakers will likely be relevant for determining the semantic content of some expressions relative to a context. But this does not undermine the fact that these values are the semantic contents of the relevant expressions, given this semantics-pragmatics distinction. In accord with this, one can define two senses of "pragmatic effect", which we shall henceforth call "weak pragmatic effects" and "strong pragmatic effects". A weak pragmatic effect on what is communicated by an utterance is a case in which context (including speaker intentions) determines interpretation of a lexical item in accord with the standing meaning of that lexical item.⁸ A strong pragmatic effect on what is communicated is a contextual effect on what is communicated that is not merely pragmatic in the weak sense.⁹

On the first conception of the semantics-pragmatics distinction we discussed, there are no pragmatic effects of context on semantic content, whether weak or strong. If there were, for example, a weak pragmatic effect on the semantic content of some expression, then its semantic content would have to be relativized to contexts, to incorporate this sensitivity. But there are no relativized semantic values on this first conception. On the second conception of the semantics-pragmatics distinction, the semantic content of a complex expression in a context is a function of, and only of, the referential contents of its constituents in that context, together with context-independent composition rules. A strong pragmatic effect on what is communicated is one in which context affects what is communicated, but not by affecting the referential contents of any lexical item in a sentence. So, by definition, there are no strong pragmatic effects on semantic content on the second conception of the semantics-pragmatics distinction.¹⁰

together. For the sense of "determine" here is quite distinct from the sense of "determine" we have exploited. Facts about context determine the semantic contents of contextually sensitive items, and the implicatures of the speech act. In contrast, facts about context do not determine which of two disambiguations a given utterance expresses; it is rather that hearers draw on context to figure out which unambiguous utterance was expressed.

⁸ The purpose of the last proviso is to rule out deferred reference, cases such as "The ham sandwich is getting irritated" (said by a waiter), as a weak pragmatic effect, since such cases are not ones in which context works to determine interpretation in accord with the standing meaning.

⁹ Resolving ambiguity is not a sense in which context "determines" what is communicated, and so counts as neither a strong nor a weak pragmatic effect on what is communicated.

¹⁰ The Context Thesis of Zoltan Gendler Szabo (2001) is the principle that "The content of an expression depends on context only insofar as the contents of its constituents do." (Ibid., p. 122). Szabo's context thesis, on the second conception, is a definitional truth about semantic content.

However, unlike the first conception, all weak pragmatic effects of context are cases in which context has a semantic role. That is, all weak pragmatic effects are cases in which context affects semantic content.¹¹

Some theorists, torn between the restrictiveness of the first conception and the perceived permissiveness of the second, choose to split the difference between these ways of approaching the semantics-pragmatics distinction. One way of adopting a semantics-pragmatics distinction intermediate between the first and second conceptions is to distinguish between different kinds of weak pragmatic effects. One can then use the resulting distinction to count some weak pragmatic effects as affecting semantic content, and others as not having effects on semantic content. Here is one way to motivate this position. As John Perry has emphasized, context-dependent expressions come in two classes.¹² First, there are what Perry calls "automatic" indexicals. Two examples of such indexicals, in English, are "I" and "tomorrow". The referential content of these indexicals, in a context, is fixed independently of the beliefs or intentions of its user.¹³ An occurrence of "tomorrow" has, as its referential content, the day after the day it is used, independently of what the speaker intended it to refer to, or believed it referred to.¹⁴ The vast majority of other context-sensitive expressions are what Perry calls "intentional". In the case of, for example, a use of "that man", it is the speaker's intentions that help determine its referential content in a context.¹⁵

¹¹ One might worry that the second conception rules out strong pragmatic effects on semantic content only in spirit. For example, consider a purported strong pragmatic effect on what is communicated by a use of a sentence S. One could imagine transforming this into a weak pragmatic effect, by making some expression in S into an indexical. By this re-translation scheme, one could transform strong pragmatic effects into weak pragmatic effects. However, this maneuver is unpersuasive; the basic reply is that one cannot just *stipulate* that a word is context-sensitive. Given that context-sensitive expressions are typically identifiable, there is a high burden of proof on someone who wishes to maintain that a non-obviously context-dependent expression is in fact context-dependent (for discussion, see Stanley (2000, pp. 430-1). Furthermore, there are tests to distinguish genuine indexical expressions from non-indexicals; for example, indexicals are invariant in interpretation under verb-phrase ellipsis, see Stanley (2003).

¹² See chapter 4 of Perry (2001). See also Perry (1997), which is a precursor.

¹³ Except, as Perry (*Ibid.*, p. 596) points out, that the user must intend the indexicals to be used in accord with their standard meaning.

¹⁴ A locus classicus of this point, at least for "I", is Wettstein (1984).

¹⁵ As Ernie Lepore has pointed out to us, some philosophers, such as Chris Gauker, reject the existence of intentional indexicals. These philosophers are thoroughgoing contextualists; they hold that non-mental features of the context determine the value of all contextual parameters relevant for determining what is said (see Gauker (1997) for a good exemplar of this tradition). For a contextualist, the third conception of the semantics-pragmatics distinction collapses into the second.

Given Perry's distinction between automatic and intentional context-sensitive expressions, one might adopt the following distinction between semantics and pragmatics. The semantic content of a sentence in a context is a function of (and only of) the referential contents of the automatic indexicals in the sentence relative to that context, together with the standing meanings of all other lexical items in the sentence, together with context-independent composition rules. On this account, the semantic content of "I am tired" differs from context to context, since "I" is an automatic indexical. But the semantic content of "that man is tired" does not differ from context to context, since "that man" is an intentional context-sensitive expression, and so has its referential content in a context fixed by appeal to speaker intentions, which cannot, on this view, be relevant to the determination of semantic content.¹⁶

We have now discussed three different ways of drawing the distinction between semantics and pragmatics. We think the second of these three ways of drawing the distinction is most plausible. There are powerful phenomenological considerations in its favor. Consider a sentence relative to a context. The result of composing the referential contents of its parts leads to a quite natural entity to take as its semantic content in that context, one that seems to play a fundamental role in interpretation, as the object of speech acts and attitudes. For example, the result of combining the referential contents of the parts of the sentence "She is tired now" relative to a context in which the speaker intends to refer to Hannah, and t is the time of utterance, is the proposition that Hannah is tired at t . This seems to be the object of propositional attitudes and what is understood in a successful case of communication. So, the entity that results from combining the referential contents of the parts of a sentence relative to a context in accord with composition rules seems to be one that plays a recognizably central role both in theorizing about linguistic interpretation, as well as in giving an adequate account of the semantic contents of some linguistic constructions.

But the main reason for favoring this second way of drawing the distinction between semantics and pragmatics is that there are difficulties facing the first and third ways of drawing the distinction between semantics and pragmatics, the resolution of which leads to the adoption of our favored conception. We devote the next two sections to a detailed discussion of these difficulties.

¹⁶ This third conception of the semantics-pragmatics distinction is, for example, clearly operative in the work of Kent Bach; as he writes, "Contextual information in the narrow, semantic sense is limited to a short list of parameters associated with indexicals and tense, such as the identity of the speaker and hearer and the time of the utterance." (Bach, 2002a, p. 285).

Section II. Semantic content as context-independent semantic value

On the first way of drawing the semantics-pragmatics distinction, semantics is only concerned with assigning unrelativized semantic values to sentences. Accordingly, any value assigned to a sentence that is relativized to a context, point of evaluation or etc. (other than a model for the language) falls within the domain of pragmatics. We know of three ways such a view might be implemented. In this section, we take each in turn and provide criticisms of them.

The first way of implementing the proposal is inspired by the work of Richard Montague. One assigns an unrelativized semantic value to expressions of the language (again, this semantic value may be relativized to a model or “possible interpretation” for the language, but it is not relativized to anything like contexts or points of evaluation; we will suppress this qualification henceforth). This value is a function from “points of reference” to appropriate extensions. Though the need for “double indexing” was recognized after the work of Montague on these topics, one can derive an updated version of Montague’s approach by letting the points of reference be pairs of contexts and points of evaluation, (we will not worry about precisely what elements comprise contexts and points of evaluation, except that contexts have as coordinates at least speakers, locations, times and worlds, and points of evaluation have as coordinates at least worlds). Let us call functions from points of reference so understood to appropriate extensions M-characters. The M-character of a sentence, then, is a function from points of reference to truth values. A sentence such as ‘I am here now’ has an M-character that maps a point of reference $\langle c, i \rangle$ to True iff the speaker of c is in the location of c at the time of c in the world of i . Thus, if we require, as is usual, that the speaker of c be at the location of c at the time of c in the world of c , the sentence will be true at all $\langle c, i \rangle$ where the world of i is the world of c .¹⁷ On the current conception of the pragmatics-semantics distinction, since M-character is the only unrelativized value assigned to expressions, the assignment of M-character to sentences exhausts semantics.

Our objection to this view is essentially that of Stalnaker (1999b). M-characters map context/index pairs to truth values. But then M-characters don’t seem to be the kinds of things that are grasped in understanding sentences. Intuitively, it seems that in understanding a sentence, we combine the *referential contents* of the constituents of that sentence together according to its syntactic structure. Our understanding of a sentence in

¹⁷ This captures the idea that the sentence is “indexically valid”, while avoiding the result that the sentence expresses a necessary truth with respect to a given context c , since it will be false for many pairs $\langle c, i \rangle$ as i is varied; we suppress the relevant definitions of indexically valid and expresses a necessary truth with respect to context c .

a context is due to a compositional procedure that calculates the content of the whole sentence from the referential contents of its parts. But on this conception of the semantics-pragmatics distinction, there is no room for a representation of this process, since sentences are not assigned referential contents in contexts at all. In short, this view does not assign propositions to sentences taken relative to contexts. But propositions are needed to be the things grasped in understanding sentences in contexts. M-characters are not suited to play this role; nor are they appropriate objects of the attitudes or entities on which natural language operators operate. Thus, we think Stalnaker gave the right reason for rejecting this way of implementing this conception of the semantics-pragmatics distinction.¹⁸

On the other two ways of implementing the idea that semantics is distinguished from pragmatics by being concerned only with the assignment of non-relativized values to expression types, semantics consists of assigning to sentences entities that are, or determine, functions from contexts to contents or propositions (i.e. characters). On the first implementation, we assign to sentences (and complex expressions generally) structured characters. Assume that we assign to lexical items characters understood as functions from contexts to contents. The structured character of a complex expression is simply the concatenation of the characters of its lexical parts, where the characters are concatenated according to the syntactic structure of the complex expression. So for example, the structured character assigned to ‘I am hungry now’ would be something like $\langle I', H', n' \rangle$, where I' is the character of ‘I’, H' is the character of ‘hungry’ and n' is the character of ‘now’. This structured character, taken relative to the context c , yields the structured content or proposition $\langle I'(c), H'(c), n'(c) \rangle$.

The first thing to note is that on this conception of semantics, there is no non-trivial semantic composition. For on this view, the semantic content of a sentence is its structured character (sentences only have structured contents or propositions relative to contexts; and so on the current way of understanding the distinction between semantics and pragmatics, these values that are relativized to contexts fall in the purview of pragmatics). But in deriving the structured character of a sentence like “I am hungry now”, one does not compose the characters in accord with the intuitively correct composition rules governing its syntactic structure. For example, one does not “saturate” the character of “am hungry now” with the character of “I” (or vice versa). As already mentioned, the character of “I am hungry now” is rather a result of concatenating the

¹⁸ The focus of Stalnaker's criticism is that Montague's system does not allow for the representation of propositions as values. However, Stalnaker did not appear to conceive of this as a criticism of Montague's way of drawing the semantics-pragmatics distinction. In this sense, we are altering Stalnaker's criticism to fit our target.

characters of the elements of the sentence. So, the semantic content of a sentence is not really determined by composing the semantic contents of the parts via non-trivial composition rules given by the sentence's syntax. Instead, the semantic content of a sentence is determined by concatenating the semantic contents (i.e. characters) of the parts of the sentence. Eliminating non-trivial semantic composition, and in effect trivializing semantics, is an unattractive feature of this conception of the semantics-pragmatics distinction.

Our second concern about this way of understanding the semantics-pragmatics distinction is that we are skeptical about the utility of the sole semantics values, structured characters, allowed by such an approach. We see no use for these structured characters, and so do not see that a theory that employs them has any advantage over a theory that does not assign characters to complex expressions at all, but only assigns characters to syntactically simple expressions. If we are correct about this, then the current conception of the semantics–pragmatics distinction results in semantic values having no real use. Obviously, this would be a good reason to reject the current conception.

But are we correct in thinking that structured characters have no real use? David Braun (1993a) has argued that we should accept a semantic theory that includes structured characters. Braun's primary argument involves complex demonstratives. Braun considers the following two complex demonstratives:

- 1) that man
- 2) that man who is either talking to Bush or not talking to Bush

Braun assumes that the content of a complex demonstrative in a context is its referent. (1) and (2) have the same content in every context (assuming we hold all contextual factors, including associated demonstrations, speaker intentions, etc., constant -- see Braun (Ibid., note 7)). If we understand character functionally, as a function from context to content, (1) and (2) have the same character. But, Braun objects, (1) and (2) seem to differ in meaning. However, if we assign them only functional characters, we assign them no meanings on which they differ. Hence, Braun argues, we need to introduce structured characters, and assign different structured characters to (1) and (2). In this way, we can honor the intuition that (1) and (2) have different meanings.

Thus, Braun argues that, contrary to what we have claimed, there is an important use for structured characters. Before responding to Braun here, it is worth noting that he never actually gives an assignment of structured characters that assigns different structured characters to (1) and (2).¹⁹ Given the incomplete nature of Braun's proposal

¹⁹ See, e.g., the first paragraph of his section 11—the problem is that he never assigns

with respect to (1) and (2), it is somewhat difficult to evaluate.

Overlooking this shortcoming, we have two responses to Braun's argument. First, even within the sort of framework Braun presupposes, on which the content or propositional contribution of a complex demonstrative in a context is its referent in that context (which we reject—see below), we are not convinced that honoring the pre-theoretical intuition that (1) and (2) have different meanings requires assigning them different structured characters. Even if the two phrases as a whole are assigned no characters (characters only being assigned to their syntactically simple parts) or only functional characters (so that (1) and (2) get assigned the same character), surely the fact that one phrase contains words with contents (or characters) that the other phrase does not contain would be enough to explain normal speakers' intuitions that the phrases differ in meaning in some way. Indeed, Braun seems to admit this himself when he writes: 'We judge that (1) and (2) differ in meaning at least partly because they have different meaningful parts.'²⁰ So even within a framework of the rough sort endorsed by Braun, Braun has failed to give good reasons for assigning structured characters to (1) and (2).

Second, there are accounts of complex demonstratives that explain Braun's data without any appeal to character. For example, consider the quantificational account of complex demonstratives recently defended in King (2001). On this account, (1) and (2) are contextually sensitive quantifiers. As such, the predicative material in them gets contributed to propositions expressed in contexts by sentences in which they occur.

structured characters to complex nominals like 'man who is talking to Bush or not talking to Bush'.

²⁰ p. 101. In a footnote to this remark, Braun says there are two other reasons for thinking that (1) and (2) differ in meaning. First, he says that to understand (2) one must grasp certain characters that one need not grasp to understand (1) (e.g. those of 'talking', etc.). Second, he claims that (1) and (2) would receive different translations into other languages. But none of this requires positing structured characters for (1) and (2) either. One could claim that understanding (1) and (2) requires grasping the characters of their lexically simple parts and how those parts are syntactically combined. This would mean that understanding (1) requires grasping characters that need not be grasped in understanding (2), even if we have assigned no character to (1) and (2) as whole phrases (or only a functional character). Further, one could claim that it is a constraint on translation that one translate a syntactically complex phrase of one language into a syntactically complex phrase of the other languages that has the same syntax and parts with the same meaning as the phrase being translated (at least, when this is possible). Again, this explains why (1) and (2) would be translated differently and does not require assigning structured characters to (1) and (2). Finally, Braun also argues that intuitive differences in the meanings of certain dthat terms in an extension of English containing dthat terms requires assigning them different structured characters. However, the response we give here to the comparable claim about English complex demonstratives carries over straightforwardly to the claim about dthat terms in an extension of English.

Thus, (1) and (2) used in the same context make different contributions to propositions expressed in those contexts by sentences in which they occur. Obviously, the fact that (1) and (2) in any context have different contents (i.e. make different contributions to propositions) should explain why we have the intuition that they differ in meaning. So King's account of complex demonstratives straightforwardly accounts for the intuition that (1) and (2) differ in meaning without positing structured characters.¹⁹

We conclude that Braun has given no compelling reason for positing structured characters. So we are left with the conclusion that on the way of distinguishing semantics from pragmatics we have been considering, where the sole job of semantics is to assign structured characters to complex expressions, the semantic values so assigned (structured characters) have no real function. Again, this is significant problem with this approach.²⁰

The final way to implement the view that semantics is distinguished from pragmatics in that the former is only concerned with assigning unrelativized semantic values to sentences (and complex expressions) is to take the job of semantics to be the assignment of functional characters to sentences (and complex expressions). On this way of proceeding, complex expressions are assigned as semantic values functions from contexts to appropriate contents. Further, the functional character assigned to a complex expression is compositionally determined from the functional characters of its simple parts and how they are syntactically combined.

To illustrate, consider the sentence 'I am here', and assume that as usual the characters of 'I' and 'here' are functions from contexts to the speakers of the contexts and the locations of the contexts, respectively. Loosely following Kaplan's notation, regiment 'I am here' as:

(3) Located (I, Here)

The character of 'Located' will be a (constant) function from contexts to a two-place

19 There are several other accounts of complex demonstratives that, like King's, account for the data discussed by Braun, without appealing to character. For example, according to Lepore and Ludwig (2000), complex demonstratives are similar to quantifier phrases in that the content of the nominal in a complex demonstrative affects the content of the whole sentence containing it. This theory, too, explains Braun's data without appeal to character. So too does the "appositive" account of complex demonstratives advanced by Joshua Dever (2001).

20 The only other argument we know of that structured characters have some important role to play was given in Richard (1983). Richard argued that structured characters (which he calls meanings) have a role to play in the semantics of belief ascriptions. We don't think such an account of the semantics of belief ascriptions is promising, and Richard himself no longer endorses the position he defended in this paper (see Richard (1990, p. 122, n. 8).

relation between individuals and locations, (since we want structured contents, relations should be understood as relations-in –intension). Write ‘C(e)’ for the character of expression e. Then, suppressing considerable detail, the clause assigning a character to 3 (assuming the characters of ‘I’ and ‘Here’ mentioned above) loosely runs as follows:

(4) C(‘Located(i,p)’ for ‘i’ an individual term and ‘p’ a position term =
 f such that for any context c , $f(c) = \langle C(\text{‘Located’})(c), \langle C(\text{‘i’})(c), C(\text{‘p’})(c) \rangle \rangle$)

So the character of (3) is a function that maps a context c to the structured proposition $\langle L, \langle s, o \rangle \rangle$, where L is the relation that the character of ‘Located’ maps every context to, and s and o are the speaker and location of the context c , respectively. Note that we cannot complain here, as we did on the previous account, that there is no real compositional semantics. Here there is: the characters (semantic values) of parts of a sentence combine in accordance with the syntax of the sentence to give the characters (semantic values) of the whole.

So what is wrong with this view? Our first concern is that such an account intuitively assigns the wrong semantic significance to syntactic combination.²¹ This fact is obscured somewhat by clause (4). For clause (4) leaves implicit the semantic significance that it accords to the syntactic concatenation of the elements of ‘Located(i,p)’. So let us consider how the view would work with a simpler example. On this view, the significance of syntactically combining e.g. a name and a simple predicate, say ‘Njeri runs’, is not that of predicating a property of an object. For the compositional semantics for this sentence must combine the character of ‘Njeri’ with that of ‘runs’ to yield the semantic value (character) of the whole sentence. Thus the semantic significance of the syntactic concatenation here is that of a function that maps a pair of a function f from contexts to objects and a function g from contexts to properties to a function h that maps a context c to the pair $\langle f(c), g(c) \rangle$. This seems grossly implausible as the meaning of the syntactic relation of predication.

Furthermore, it simply does not seem that in understanding such a sentence in a context, speakers employ this compositional semantics to determine a character for the sentence, and then apply it to the context yielding the relevant structured proposition. Intuitively, it seems rather that speakers evaluate in a context the characters of syntactically simple expressions in a sentence, and compositionally combine the resulting referential contents in grasping the proposition expressed by the sentence. Thus, the account seems to get the phenomenology of linguistic understanding wrong.

²¹ The concern we develop here applies equally to the first way of implementing this conception of the semantics-pragmatics distinction.

However, the most important objection to this account is that (phenomenological considerations of the sort just raised aside), there seems to be no empirical difference between this account and one that assigns characters only to syntactically simple expressions. After all, the job of character is to give us content, and we can assign contents to complex expressions in contexts using only the characters of the parts, and combining the contents they determine in those contexts. Thus, imagine a theory that assigns no character to the sentence (3) as a whole, but assigns it a content in every context as follows:

(4') The content of 'Located (i, p)' in any context c is $\langle C(\text{'Located'})(c), \langle i^*, p^* \rangle \rangle$ where i^* is the content of i in c and p^* is the content of 'p' in c .

(We presuppose a recursive assignment of referential contents in contexts to complex individual and position terms— in the general case 'i' and 'p' could be syntactically complex in 4'.) As did (4), (4') assigns to the sentence 3 relative to a context c , the content: $\langle L, \langle s, o \rangle \rangle$, where L is the relation that the character of 'Located' maps every context to, and s and o are the speaker and location of the context c , respectively.

The point is that both a semantics that assigns characters to simple expressions and recursively assigns characters to complex expressions and a semantics that assigns characters to only simple expressions allow for an assignment of the same contents in contexts to simple and complex expressions. So unless the functional characters of complex expressions have some additional job to do, they are unnecessary. But there seems to be no such additional job. Thus, on the present proposal, the only semantic value that is assigned via semantic composition, i.e. the characters of complex expressions, have no purpose. We could just as well do everything we need to without them. So here again, the present conception of semantics makes semantics out to be something that assigns only values with no real use to complex expressions. This, we think, is sufficient to dismiss the account.

In this section, we have discussed three different ways of implementing the first conception of the semantics-pragmatics distinction, which stipulates that semantic values must be context-independent. We have found difficulties with all three ways of implementing this approach. This suggests the need for some semantic values to be relativized to contexts. But this insight is consistent both with our favored way of drawing the semantics-pragmatics distinction, and with the third way of drawing the distinction, according to which only a highly restricted range of context-sensitive expressions count as having genuine context relative semantic values. In the next section, we turn to a criticism of this third way of drawing the semantics-pragmatics distinction.

Section III. Semantic content as minimally context-dependent

On the first way of drawing the distinction between semantics and pragmatics, semantic content is context-independent semantic value. On our favored way of drawing the distinction between semantics and pragmatics, there is a level of semantic value, which we are calling semantic content, that is relativized to context. One and the same expression can have different semantic contents in different contexts. On this conception of semantics, relative to a context, every indexical and demonstrative element in a sentence has potentially different *semantic* contents in different contexts. For example, the semantic contents of both "I" and "she", relative to different contexts, may be different.

Some philosophers, however, hold that our favored conception of the semantics-pragmatics distinction allows context to affect semantic content to a greater degree than is plausible. We begin this section by discussing two worries that may motivate rejecting our favored conception in favor of the third, and more restrictive conception of the semantics-pragmatics distinction discussed in the first section. We then turn to an extended discussion and critique of this third conception of the semantics-pragmatics distinction.

The first worry one might have with our favored conception of the semantics-pragmatics distinction that might move one towards the third conception of the semantics-pragmatics distinction is that it does not allow for a distinction between speaker meaning and semantic content. For example, there is a distinction between the semantic content of a sentence on an occasion, and what the speaker meant by uttering that sentence on that occasion. Suppose John is confronted by a nice man drinking water, who John falsely believes to be drinking a martini. John utters the sentence "The man with the martini is nice". The semantic content of John's sentence on that occasion concerns the property of being a man drinking a martini, rather than the man to whom he intends to refer. However, John's referential intentions concern the man he sees drinking water, so his speaker meaning is a proposition about that particular man. One might worry that by allowing speaker's referential intentions to affect semantic content, as one is likely to do in adopting this second conception of the semantics-pragmatics distinction, one blurs this important distinction.²² Restricting semantically relevant contextual effects

²² We say "likely", because of Lepore's point, mentioned above, that one may adopt our preferred way of distinguishing semantics from pragmatics, but adopt a thoroughgoing anti-intentionalism about demonstratives and indexicals generally, of the variety favored by Chris Gauker. However, we think it very likely that speaker intentions do play a role

to "automatic" indexicals, in Perry's sense, obviates this concern.

We are not persuaded by this concern. If speaker intentions are relevant for determining the semantic content of some indexical expressions, then there must be a principled distinction between the kinds of speaker intentions that are relevant to the fixation of semantic content and those that are not. It is important to be as clear as possible, in particular cases of context-sensitive expressions, which speaker intentions are semantically relevant, that is, relevant for the fixation of semantic content. However, we see no basis for skepticism about the possibility of distinguishing, in particular cases, those intentions that are semantically relevant from those that are not.²³

A second concern one may have with our favored conception of the semantics-pragmatics distinction is that allowing context to affect semantic content always brings with it a cost in complexity and systematicity to the semantic theory. This is a rather imprecise concern, but nevertheless, we suspect, a quite influential one. The concern is that there is an inverse correlation between the amount of semantic context-sensitivity a semantic theory recognizes and the systematicity and simplicity of that semantic theory. This concern would lead one to adopt the third conception of the semantics-pragmatics distinction over our favored conception (and taken to its limit, the first conception over the third).

We suspect this concern reflects a long-standing prejudice from earlier debates in the philosophy of language. For example, consider the stalking horses of Grice's "Logic and Conversation" (Grice (1989a)). These philosophers (Grice's "informalists" and "formalists") held that the natural language counterparts of the logical expressions were so laden with context-dependency and vagueness in their use, that any "logic" of these natural language expressions would be "unsimplified, and so more or less unsystematic"

in determining the reference of many indexical expressions.

23 For example, Jeffrey King, in his quantificational analysis of complex demonstratives, appeals to speaker intentions to fix the properties that saturate the argument places of the relation expressed by 'that'. King is quite explicit (King (2001), pp. 28-31) about what sort of speaker intentions are relevant for the determination of content. Siegel (2002) supplies a particularly subtle discussion of the nature of those perceptual intentions that are relevant for reference fixing. Siegel's discussion makes significant progress towards a criterion to distinguish between those sorts of intentions that are relevant for reference fixation, and those that are not. (We should note a particular debt to Maite Ezcurdia for discussion of these issues; her work bears directly on drawing the required distinctions between semantically relevant and semantically irrelevant speaker intentions.)

(Ibid., p. 24).²⁴ In contrast, Grice's favored approach is to provide pragmatic explanations of context-dependency, whenever possible, presumably leaving the semantics "simple" and "systematic".

We suspect that this dialectic has led philosophers of language, whether knowingly or not, to adopt the position that preserving the simplicity and systematicity of a semantic theory for a natural language somehow requires giving pragmatic (non-semantic) explanations of context-dependency whenever remotely possible. But to adopt this position is to accept the view that giving a context-dependent semantic treatment of a linguistic construction is tantamount to treating that construction as resistant to "systematic" semantic analysis. In the intervening decades between Grice's work and today, there have been analyses of a host of constructions (such as modals, indicative conditionals, quantifier phrases, and adjectival modification, to name but a few) that incorporate context-dependence into the semantics without compromising the systematicity of the semantic theory (in a sense, this was also the purpose of Montague's work on formal pragmatics). The view favored by Grice's opponents concerning the ramifications of semantic context-dependency looks therefore to have been superseded by later developments.

In fact, we believe an even stronger response is possible to the view that semantic context-dependency is correlated with less simple and more unsystematic semantic theorizing. For it can turn out that claiming that certain sorts of context-dependency are not semantic can result in a less simple and more inelegant semantic theory. This point is the basis of our criticism of the third way of distinguishing semantics from pragmatics. By relegating certain contextual effects to pragmatics, this third way of forging a distinction between semantics and pragmatics results in a more complex and inelegant semantic theory.

Recall that on this third conception of the semantics-pragmatics distinction, among context-sensitive expressions, only the content of automatic indexicals affects semantic content (relative to a context). So, automatic indexicals are the only semantically context-dependent expressions, on this conception. Non-automatic context-sensitive expressions do not contribute their contents to the semantic content (relative to a context) of sentences containing them. So, the semantic content of the sentence "I am human" is, relative to a context, the proposition, about the speaker of that context, that she is human. In contrast, the semantic content of the sentence "She is human" is not the

²⁴ Though in Grice's writings, these philosophers do not explicitly use the phrase "context-dependence" or "vagueness", this is one plausible reading of what is meant by "unsystematic".

proposition, about the demonstrated woman, that she is human. The reason that the semantic content of "She is human" is not the proposition about the demonstrated woman to the effect that she is human, on this third conception, is that the pronoun "she" is not an automatic indexical, and so its content in a context does not contribute to the semantic content of sentences containing it.

The first point to note is that this third conception of the semantics-pragmatics distinction is quite similar to the first conception. For the list of automatic indexicals is highly restricted, confined to words such as "I", "today", and "tomorrow".²⁵ The vast majority of context-sensitive expressions are intentional. So semantic theories in accord with the first and third conceptions of the semantics-pragmatics distinction share considerable overlap in their assignment of semantic content. As a result, the third conception of the semantics-pragmatics distinction inherits many of the concerns facing the first. But there are additional problems with it besides.

On this third conception of the semantics-pragmatics distinction, the semantic content of "I am human", relative to a context, is the proposition, concerning the speaker in the context, that she is human. But the semantic content of "She is human", relative to a context, is not a proposition. The English pronoun "she" perhaps does possess some context-independent meaning; the referential content of "she" relative to a context must be female. So it seems one plausible semantic content for "She is human", relative to a context, is the property of being a female human, a function from a possible situation to the set of women in that situation (or a "propositional radical" that determines such a function).

But this is, *prima facie*, a worrisome result. The sentences "I am human" and "She is human" differ only in that the first contains the first person pronoun in subject position, and the second contains the third person pronoun (and the concomitant facts about case). As far as their structural features, the sentences are identical. So the mapping rules from sentences to semantic contents should be the same. But the sentence "I am human", relative to a context, is supposed to express a proposition, a function from possible situations to truth-values, while the sentence "She is human", relative to a context, expresses a property, viz. the property of being a female human, a function of a very different sort. On this conception of the semantics-pragmatics distinction, if the subject term of a sentence is non-indexical, or an automatic indexical, then, roughly speaking, it contributes an object to the semantic content of that sentence relative to a

²⁵ As Robyn Carston (ms.) has pointed out, even indexicals such as "now" and "here" are not really automatic, since speaker intentions determine the temporal scope of the referential content of "now" relative to a context, and the spatial dimensions of "here" relative to a context.

context, but if it is a non-automatic indexical or demonstrative, then it contributes a property that is conjoined with the property expressed by the predicate of that sentence. It is not immediately clear how to derive these results in a non-ad hoc fashion.

We have focussed, for simplicity's sake, on very simple sentences in making this point. But it should be clear that the point generalizes to a host of different constructions. For example, according to this third conception of the semantics-pragmatics distinction, (5) and (6), despite sharing the same syntactic structure, have semantic contents of drastically different types:

(5) Every woman who met me yesterday is smart.

(6) Every woman who met her yesterday is smart.

(5), relative to a context, expresses a proposition. (6) does not express a proposition, even relative to a context, because it contains the non-automatic indexical "her". Even more problems are involved in constructing the semantic value of a sentence like "That man in her car is wearing a hat", where the complex demonstrative "that man in her car" involves a kind of double incompleteness. What kind of semantic values such sentences express, according to this third conception of the semantics-pragmatics distinction, and how to construct non-ad hoc semantic rules that assign these semantic contents to these sentences, is an interesting technical question.²⁶

It is no doubt possible to write some kind of semantic algorithm to do the trick of assigning distinct types of semantic values to (5) and (6), relative to a context. However, making semantic content sensitive to the effects of context on the content of all context-sensitive lexical items, as on the second conception of the semantics-pragmatics distinction, results in simpler semantic theory. We can draw a moral here, one that tells against the view with which we began concerning the allegedly disruptive effects of contextual sensitivity on the systematicity of semantics. It can indeed turn out that allowing certain contextual effects to have semantic import allows one to give a simpler semantics than would be otherwise possible. Whether there is in the end a compelling "simpler semantics" argument against advocates of this third conception of the semantics-pragmatics distinction depends, of course, upon the details of an as yet non-

²⁶ Thomas Hofweber has made the following suggestion to us. One could add, to each domain of type T, a set of 'incomplete' entities of that type. So, in addition to complete properties, there would be incomplete properties, and in addition to complete propositions, there would be incomplete propositions. Composition rules could, for example, combine an incomplete object with a complete transitive verb meaning to yield an incomplete property. This move seems ad hoc to us. One wonders with what right one can classify an "incomplete X" as an X at all. Furthermore, one wonders how one would marry this semantics with the notion of "pragmatic enrichment". How would interpreters 'add' on constituents to meanings, thus construed?

existent semantic theory that is in accord with it.

There is another set of worries that faces the advocate of this third conception of the semantics pragmatics distinction who adopts the structured proposition conception of semantics. On this method of semantic interpretation, semantics takes place in two stages. First, there is an algorithm assigning structured propositions to sentences relative to a context. The resulting structured entity is a concatenation of the semantic contents of the elements of the sentence. The second stage of semantic interpretation involves giving a truth-definition for the resulting structured propositions. At this stage in the semantic process, the elements of the structured proposition are combined in accord with semantic composition rules.²⁷

The advocate of this third conception of the semantics-pragmatics distinction might find this framework attractive. For example, she could argue that non-automatic indexicals contribute, say, an ordered pair of a property and an object representing a gap, such as the empty set, to the structured proposition expressed by sentences containing

²⁷ Things are actually a bit more complicated than we make them out to be here. We talk here as though no significant composition of semantic contents of the elements of a sentence occurs in the mapping from sentence to proposition. This is true on the account of structured propositions sketched in King (1995, 6), on which the structures of propositions are identical to the structures of sentences expressing them (in a context). Thus, the semantic contents (in the context) of the lexical items in the sentence are not composed in any significant way in the mapping to the proposition: the proposition is literally the concatenation of these semantic contents, and is structurally identical to the sentence expressing it. By contrast, in the mapping from propositions to truth values, there is significant composing of the constituents of the proposition (i.e. the semantic contents of the lexical items in the sentence expressing the proposition) to yield a truth value. However, one might hold that in the mapping from sentence to proposition e.g. a complex predicate contributes a property or a property and a time to the proposition (this view is suggested by clauses (22) and (28) of Salmon (1986, pp. 145-6)). On this view, the semantic contents of the lexical items in the predicate apparently are semantically composed to yield the property contributed by the predicate to the proposition (this would require a recursive assignment of properties to complex predicates, which Salmon does not actually provide—see again clause (28)). On this view, then, some significant semantic composition occurs in the mapping from sentence to proposition and the rest occurs in the mapping from proposition to truth value. How much composition occurs in the first stage mapping from sentence to proposition depends on how much of the sentence structure is “preserved” in the structure of the proposition. King (1995) argues that an account on which no significant composition occurs in the first stage mapping is preferable. In any case, the more sentence structure is preserved in proposition structure, the less composition occurs in mapping from sentence to proposition, and the more occurs in the mapping from proposition to truth value. The point remains that on any theory of structured propositions that preserves most of the structure of a sentence in the structure of the proposition, most of the significant composition of semantic contents occurs in the mapping from propositions to truth-values.

them.²⁸ The structured proposition assigned by the algorithm to a sentence is not a function of the composition rules corresponding to the syntactic structure of that sentence; the semantic values of the words in the sentence are simply concatenated in the structured meaning. So in the mapping to the structured proposition, one does not have to face the question of how to compose the semantic content of a non-automatic indexical with other elements. One could then argue that pragmatics intrudes before the truth-definition for structured propositions. In particular, pragmatics would intrude to assign values to the empty slots in the structured proposition.

On this picture, the semantic content of a sentence such as (6) would be a concatenation of properties and functions of various sorts, corresponding to the semantic values of the lexical items in (6). However, in the semantic content, corresponding to the place of the non-automatic indexical 'her' in (6), would be an object representing a gap and the property of being a woman. Pragmatics would then somehow replace this ordered pair by a contextually salient woman. Then, together with the semantic composition rules corresponding to the syntactic structure of the sentence, one could calculate the truth-conditions of the resulting proposition.

However, we believe that the picture that results amounts, if anything, to a rejection of a genuine distinction between semantics and pragmatics, rather than a novel way to draw one. On the structured propositions picture defended by King (1995, 6), Soames (1987), and others, semantic interpretation is a two-stage process. First, there is the assignment of a structured entity to a sentence relative to a context. Second, there is the definition of truth for that entity. On the picture we are now considering, pragmatics intrudes between the first stage of this process and the second. That is, pragmatic processes enter in to "fill in" the empty slots in the structured entity.²⁹

We believe that no one who thinks that there is an interesting and important distinction between semantics and pragmatics should be content with the resulting picture of semantics and pragmatics. For the view amounts to a rejection of the possibility of a strictly compositional semantics for a language containing non-automatic indexicals. In mapping the sentence to the structured entity, one does not appeal to the composition rules corresponding to the syntactic structure within the sentence; one simply concatenates the semantic values of the individual terms in the sentence. The composition rules expressed by the syntactic structure of the sentence are relevant only

28 Braun (1993b), following a suggestion by Kaplan, advocates a gappy structured meanings account for the semantic content of sentences containing names without bearers.

29 Soames (this volume) develops a picture like this, albeit not one clearly motivated by the distinction between automatic and non-automatic indexicals.

for the definition of truth for the resulting structured entities. But pragmatic mechanisms intervene before the truth-definition, on this picture. That is, the gaps in the semantic contents are "filled" by enrichment before the definition of truth.

So, on this picture, composition rules do not just compose semantic values; they compose semantic and pragmatic values. Indeed, on this view, in interpreting most sentences, composition rules do not compose only semantic values. Significant composition of the elements of structured propositions is then, strictly speaking, part of pragmatics, not semantics. Perhaps one way of describing this is as a rejection of the possibility of a strictly compositional semantics for a natural language. There is only an attenuated sense in which one is preserving a significant role for semantic content on such a way of dividing the labor between semantics and pragmatics.

According to the first conception of the semantics-pragmatics distinction, the semantic content of an expression was its context-independent semantic value, and every other kind of content associated with the sentence was pragmatic in nature. On our favored conception of the semantics-pragmatics distinction, there are two levels of genuinely semantic content. On the first level are properties of individual words, rather than complex expressions. This is standing meaning, or character. On the second is semantic content, a property of expressions relative to contexts. The semantic content of any term relative to a context is the referential content in that context that is in accord with its standing meaning, and the semantic content of a complex expression is derived by combining the semantic contents of its parts in accord with the composition rules corresponding to its syntactic structure. On the third conception of the semantics-pragmatics distinction we have been discussing in this section, only some context-sensitive terms contributed their contents in a context to the semantic content, relative to that context, of more complex expressions containing them.

We know of no compelling arguments against our favored way of drawing the semantics-pragmatics distinction. In contrast, we have raised concerns with the two natural competing conceptions. Some of these concerns may be met by greater attention to the technical details of a semantic theory that respects, say, the third conception of the semantics-pragmatics distinction. But until such a theory is advanced, in the absence of any compelling objections against our own favored conception of the semantics-pragmatics distinction, it should clearly be the default conception of the relation between semantics and pragmatics.

On this conception, the effects of context on semantic interpretation are restricted to what we have called above "weak pragmatic effects". That is, context can only affect the semantic interpretation of an expression by being involved in the interpretation of

some constituent of that expression. But semantic content is not limited to denotation assignment to "automatic" indexicals. The content of any syntactic constituent is relevant to the semantic content of expressions containing it. This is the picture of semantic content we will assume in the remainder of this paper.

Section IV. Skepticism and Modesty

Some disagreements in the philosophy of language concern the correct conception of the semantics-pragmatics distinction. No doubt some of these disagreements are terminological. But perhaps some are not. For example, in the last two sections, we have suggested that there are some ways of drawing the distinction between semantics and pragmatics that face objections that our preferred conception does not. This suggests that there are some non-terminological issues involved in deciding what the "correct" distinction between semantics and pragmatics is. Be that as it may, once one fixes upon one way of drawing the distinction between semantics and pragmatics, many obviously non-terminological disputes arise.

We have settled upon one favored way to draw the semantics-pragmatics distinction. In this section, we use this semantics-pragmatics distinction to describe three different views about the relative importance of the semantic content of a sentence, as we have characterized it. The disputes between these positions are definitely not terminological. In fact, they are largely empirical disputes, the resolution of which will require decades of cross-linguistic syntactic and semantic research, together with psychological studies. The different positions we describe correspond essentially to predictions about the ultimate outcome of these investigations.

The first position, and one which will centrally occupy us in the final section of this paper, is what we may call *semantic skepticism* about what is said. Semantic skeptics hold that at no stage in linguistic interpretation does the semantic content of a sentence play a privileged role. For example, what is accessible in linguistic interpretation is a level of content that is thoroughly affected by strong pragmatic effects, in the sense discussed in the first section. Indeed, according to the semantic skeptic, there is no reason for an account of language understanding to grant the semantic content of a sentence, in the sense we have adopted, any important role. Every interesting level of content is affected by strong pragmatic effects.

According to the semantic skeptic, individual words have semantic content. However, there is no interesting notion of semantic content for sentences. The attitude of the semantic skeptic towards the semantic content of a sentence is therefore much like

the attitude we adopted in the second section towards the character of a sentence. It is certainly an entity that one can define. But it lacks an interesting or central role in an account of any significant natural language phenomenon. Semantic skepticism has been one of the major positions among cognitive scientists for the last twenty years, thanks in large part to the influence of Relevance Theory, the theory of linguistic interpretation introduced and defended by Dan Sperber and Deirdre Wilson (1986). Its other prominent advocates include Robyn Carston, Stephen Levinson, and Francois Recanati, all of whom have been defending for years, on various grounds, the thesis that there is no interesting semantic notion of what is said by a sentence.³⁰

The second position is what we call *semantic modesty* about what is said. In contrast to semantic skeptics, semantically modest theorists do believe that the semantic content of a sentence has a significant role to play in an account of linguistic understanding. Such theorists are loath to give up on a theoretically important notion of the semantic content of a sentence. However, they believe this role to be minimal. In particular, the semantically modest theorist agrees with the semantic skeptic that what is accessible to interpreters as the content of a speech act is thoroughly affected by strong pragmatic effects. Indeed, semantically modest theorists have produced some of the strongest arguments for this conclusion. However, the semantically modest theorist insists that the semantic content of a sentence still has a privileged role to play in an account of linguistic understanding. That is, the semantically modest theorist holds that there is an important notion of sentence content that is not sensitive to strong pragmatic effects.

Semantic modesty is a position that comes in degrees. On the one extreme, there are those who hold that most of our intuitions about what is said by a sentence in a context are affected by strong pragmatic effects. On the other end of the spectrum, are theorists who hold that while generally intuitions about what is said by a sentence are reliable guides to semantic content, there are a restricted range of cases in which strong pragmatic effects may affect speaker intuitions about what they take to be the semantic

³⁰ It is true that Sperber and Wilson (1986, Chapter 4) do talk of "sentence meanings". However, for them, sentence meanings "do not encode thoughts"; they are rather "sets of semantic representations, as many semantic representations as there are ways in which the sentence is ambiguous." (p. 193). Semantic representations, in turn, are "incomplete logical forms" (Ibid.). So, sentence "meanings" are in fact not semantic content at all -- they are sets of expressions. What plays a theoretical role in Relevance Theory is not any notion of semantic content for a sentence, but rather the *syntax* of a sentence -- its syntactic logical form. It is this that is subject to pragmatic enrichment, to obtain the representation of the thought. So, on Sperber and Wilson's theory, there is no role played at all by any notion of the *content* of a sentence, as opposed merely to its syntax.

content of a sentence. In what follows, we restrict the thesis of semantic modesty to the first extreme of this spectrum, since this is the position that has gained particular popularity among philosophers of language.

Three philosophers who have directly argued for an extreme version of semantic modesty are Kent Bach (1994), (2002a,b) and Herman Cappelen and Ernie Lepore (1997, 2002).³¹ A different group of philosophers of language are led to embrace semantic modesty indirectly, by some of their antecedent semantic commitments concerning certain linguistic constructions. Most salient in this regard are the *neo-Russellians*. Neo-Russellians have a certain view about the semantic content of propositional attitude sentences. The neo-Russellian position is that the semantic content of a sentence such as "John believes that Mark Twain was an author", relative to a context, is that John bears the belief relation to the singular proposition, concerning Mark Twain, that he was an author. According to the neo-Russellian, this is the very same semantic content, relative to the same context, as the sentence "John believes that Samuel Clemens was an author." However, neo-Russellians recognize that speakers intuitively believe that these sentences have different semantic contents, since speakers intuitively believe that their semantic contents can diverge in truth-value. So, neo-Russellians are committed to the view that there is a class of sentences with a semantic content that is relatively opaque to speaker intuitions. Neo-Russellians therefore find semantic modesty an immensely plausible position.³²

The main worry with semantic modesty is its tendency to collapse into semantic skepticism. Advocates of semantic modesty expend their greatest efforts arguing for an error theory about ordinary speaker intuitions about semantic content. That is, just like advocates of semantic skepticism, semantically modest theorists are most eager to establish that what ordinary speakers grasp in a speech act is not the semantic content of the sentence uttered relative to that context, but is instead thoroughly infected by strong pragmatic effects. But rarely do semantically modest theorists bother to explain what privileged role they believe semantic content in fact plays in language understanding. So

31 One difference between the version of semantic modesty advocated by Bach and the version advocated by Cappelen and Lepore is that (as we have discussed above) Bach thinks that the semantic content of a sentence relative to a context can be a non-propositional entity, whereas Cappelen and Lepore retain the thesis that it must be a proposition, or (in their Davidsonian framework) a truth-condition.

32 Of course, one can imagine a neo-Russellian who rejects full blown semantic modesty, and restricts her views about the inaccuracy of speaker intuitions about semantic content to propositional attitude ascriptions. Such a neo-Russellian is, we take it, a target of Saul (1997). In recent years, neo-Russellians have exhibited an attraction to the more extreme forms of semantic modesty.

it ends up being somewhat of a mystery what role these theorists believe semantic content has in an account of language understanding.

For example, one reason theorists have in producing semantic theories is to explain the systematicity and productivity of language understanding.³³ Given a finite vocabulary, and grasp of the composition rules expressed by syntactic structures, speakers have the ability to grasp the propositions expressed by an infinite number of sentences. If language users employ a compositional semantic theory in grasping the contents of speech acts, then one has a satisfactory explanation of the systematicity and productivity of speaker's grasp of an infinite number of novel utterances. For then one can explain a language user's grasp of what is expressed by the utterance of a novel sentence by appealing to the fact that she grasps the words in the sentence and their modes of combination, together with whatever contextual information is required to interpret the context sensitive elements in the sentence. Given compositionality, nothing else is required to explain her grasp of the proposition expressed, since what is expressed by the utterance is then a function of what she already grasps.

But it is difficult to see how the semantically modest theorist can appeal to this justification for taking the project of semantic theory seriously. For the semantically modest theorist holds that, in ever so many cases of successful communication, when someone utters a sentence, her interlocutor grasps a proposition that is not determined compositionally from the values of the elements in the sentence and their composition. Rather, tacit unsystematic pragmatic processes intervene. This is, after all, why competent hearers are so often wrong about semantic content, according to the semantically modest theorist. So the semantically modest theorist is committed to an alternative explanation of our grasp of an infinite number of novel utterances, one that does not proceed by attributing our competence to a simple, compositional mechanism. So it is hard to see how she could accept arguments for the necessity of semantic theory that proceed on the assumption that grasp of a compositional semantic theory is the only way to explain our ability to grasp an infinite number of novel utterances given finite means.

According to the semantically modest theorist, there is some role to be played by their minimal notion of the semantic content of a sentence, relative to a context. This role cannot be played by the semantic contents of words relative to a context, together with their syntactic structures. The difficulty of distinguishing between semantic skepticism and semantic modesty is that it is hard to see what explanatory role could be played by such a minimal notion of the semantic content of a sentence relative to a context, that

³³ Thanks to Ernie Lepore for discussion that led to this point.

could not also be played solely by appeal to the semantic contents of words (relative to contexts), together with the syntactic structure of sentences. But unless there is a genuine explanatory role that is played by the semantically modest theorist's notion of sentence content, relative to a context, semantic modesty dissolves into semantic skepticism.

A final worry about semantically modest theorists is that their views threaten to undermine the very data for semantic theories. As Stanley and Szabo (2000, p. 240) note, "...accounting for our ordinary judgements about the truth-conditions of various sentences is the central aim of semantics. Since these judgements are the data of semantic theorizing, we should be careful with proposals that suggest a radical revision of these judgments." So, semantic modesty not only obscures the purpose of the semantic project, but also removes the central empirical data for its claims. For if, as semantic modesty has it, speaker judgements about truth-conditions are not reliable guides to the semantic content of sentences, it becomes unclear how to evaluate semantic proposals (cf. also DeRose (1995, section 16), (1999, sections 9&10)).

So, from our perspective, both semantic modesty and semantic skepticism pose similar threats. First, it is difficult to see what the purpose of semantic theory should be, on either view. For according to these views, what is intuitively said by an utterance of a sentence is not significantly constrained by the syntactic structure of that sentence, since the result of semantically interpreting the syntactic structure of a sentence relative to a context far under-determines what is intuitively said by that utterance. Secondly, one may worry about the explanatory value of accounts of what is intuitively said by an utterance that appeal to pragmatic processes unconstrained by syntax. Given the degree to which pragmatic mechanisms can affect what is intuitively said on these views, the sense in which such theories make explanatory predictions about intuitive judgements is unclear. For example, one worry is that the unconstrained nature of such accounts leads to an unconstrained over-generation of predictions about what a sentence can be used to intuitively say, relative to a context (cf. Stanley (2002b, 161-67)). In contrast, an account of what is intuitively said by a sentence relative to a context of the sort advocated here and in Stanley (2000), that appeals only to syntax, semantics, and weak pragmatic effects, does not involve appeal to mysterious unconstrained processes. So there needs to be a rather strong justification for the view of semantic skeptics and semantically modest theorists that what is intuitively said is not so constrained.

The kind of arguments such theorists advance all take the following form. First, they produce a linguistic construction L, uses of which speakers intuitively believe to have a certain interpretation I relative to a context c. Then, they argue that the interpretation I cannot plausibly be the semantic content of L in c, because I is not just

the result of assignment of referential contents in *c* to the parts of *L* and composition. That is, proponents of semantic skepticism and modesty argue that the relevant interpretation is the result of strong pragmatic effects. If so, then speaker intuitions about semantic content are sensitive to strong pragmatic effects.

Opponents of such arguments have in recent years argued that the examples discussed by semantically skeptical and semantically modest theorists are insufficient to support their conclusions.³⁴ For example, Stanley and Szabo (2000) argue, as against advocates of semantic skepticism and semantic modesty, that our intuitions about what is said by quantified sentences track the semantic content of these sentences, and additional work extends these points to a number of different constructions that semantically skeptical and semantically modest theorists have taken to show that speaker intuitions about semantic content are not reliable.³⁵

In the next section, we challenge one powerful argument in favor of semantic skepticism or modesty, one that has not yet received a response. Versions of the argument have been around for several decades. Perhaps the simplest form of the argument involves negated sentences such as:

- (7) a. John doesn't have three children, he has four.
- b. I'm not happy, I'm ecstatic.

Assuming, as is usual, that "three" means at least three, in these cases, the negative element appears not to negate the semantic content of the sentence, but rather the semantic content together with its implicature. For example, a pragmatic (scalar) implicature of "John has three children" is that John has no more than three children. Intuitively, what is negated in (7a) is the proposition that John has three children and no

34 See Stanley and Szabo (2000), Stanley (2000), (2002a), (2002b), and Szabo (2001).

35 The debate surrounding attitude-ascriptions is more complicated. One basic problem is that different parties in the debate do not share the same conception of semantic content. For example, Crimmins and Perry (1989) and Crimmins (1992) argue, apparently in response to the neo-Russellian, that modes of presentation affect the semantic content of propositional attitude ascriptions. But Crimmins and Perry have a different conception of semantic content than the average neo-Russellian. According to Crimmins and Perry, there are "unarticulated constituents" of the semantic content of some sentences (an unarticulated constituent of an utterance *u*, in the sense of Crimmins and Perry, is an element of the semantic content of *u* that is not the value of any element in the sentence uttered). Like us, most neo-Russellians accept a conception of semantic content according to which, by definition, there are no unarticulated constituents of semantic contents. So the substance of the debate between Crimmins and Perry, on the one hand, and neo-Russellians, on the other, concerns the right definition of semantics, rather than attitude constructions. Peter Ludlow (1995) has, however, argued quite directly for the syntactic representation of modes of presentation, which meets the neo-Russellian more squarely on her own ground.

more than three. If so, then such cases are examples of strong pragmatic effects on the intuitive content of the speech act, and therefore support an error theory of speaker intuitions about semantic content, in the sense of "semantic content" we have adopted. Let us call this alleged kind of strong pragmatic effect, a "pragmatic intrusion".

There are problems with the pragmatic intrusion account of the examples in (7). Larry Horn has convincingly argued that the examples in (7) are instances of 'metalinguistic negation', where one is denying the appropriateness of an utterance, rather than its content, and even provides compelling phonetic diagnostics for such uses of "not". Horn's discussion undermines any clear argument from examples such as (7) to an error theory of speaker intuitions about semantic content. For example, it shows that it is wrong to characterize these cases as ones in which what is negated is semantic content somehow augmented with pragmatic implicatures. So defenders of pragmatic intrusion have wisely chosen not to stake their case on these uses of "not".

In recent years, however, increasingly more sophisticated arguments for pragmatic intrusion have made their way into the literature. For example, Robyn Carston (1988) has, with the use of these more sophisticated arguments, tried to provide evidence for the existence of the non-Gricean, relevance-theoretic pragmatic process of *explicature*. More recently, Stephen Levinson has argued that the sorts of examples discussed by Carston support a related notion, what he calls *implicature intrusion*. Both explicature and implicature intrusion, if genuine, would entail the existence of strong pragmatic effects on the intuitive content of speech acts.

The debate between Carston and Levinson is important for pragmatics, but not for our purposes. Our expression "pragmatic intrusion" is intended to be neutral between notions such as that of the relevance theoretic explicature, Recanati's free enrichment, and the more Gricean notion of implicature intrusion. If there is a significant range of cases of pragmatic intrusion, then that would provide strong support for the existence of strong pragmatic effects on what is intuitively said. In the next section, focussing on Carston and Levinson's arguments for pragmatic intrusion, we argue that the case for pragmatic intrusion is not compelling.

Section V. Pragmatic intrusion.

Levinson himself is admirably cautious about his arguments for pragmatic intrusions. As he notes, "There will always be doubts about whether a better semantic analysis of the relevant construction might not accommodate the apparent pragmatic intrusions in some other way." (Levinson (2000), p. 214). In this section, we intend to

substantiate Levinson's concern, by showing that the existence of pragmatic intrusion has yet to be substantiated. The arguments for it in the literature rest upon an inadequate grasp of the syntax and semantics of the particular constructions that appear to give rise to it.

The first case of pragmatic intrusion discussed by Levinson involves the comparative "better than". The first set of examples, discovered by Wilson (1975, p. 151), involve sentences like the following:

(8) Driving home and drinking three beers is better than drinking three beers and driving home.

As Wilson notes, it would seem that what is said by (8) is that it is better to first drive home, and then to drink three beers, than to first drink three beers, and then to drive home. If Grice is correct that 'and' does not have a temporal meaning, then the temporal information has to come from a pragmatic effect. But then what is said by (8) appears to be sensitive to the pragmatics of the use of the clauses flanking 'better than'. If so, then there are strong pragmatic effects on the intuitive contents of speech acts.

But as the discussion in and of Cohen (1971) makes clear, appealing to the data about the temporal nature of conjunction is complex. According to most twenty-first century syntactic theories, each clause contains a tense phrase, the contents of which give information about the time that the proposition expressed by the clause concerns. So in a sentence such as "John came in and sat down", there is a tense phrase associated with each verb in the underlying syntactic structure. Relative to a context, this conjunction expresses a proposition of the form "John came in at time t and sat down at $t+n$ ". As Levinson sums up the situation (p. 199), for all the data shows, "Grice's position with respect to 'and' could be maintained, while the truth-conditional nature of the 'and then' inference could be attributed to the implicit indexical sequence of reference times in the two verbs."³⁶

However, the conjuncts in (8), as Levinson notes, do not involve finite clauses, and hence have no obvious tense. Furthermore, (8) is a generic sentence, which adds an additional factor to the interpretation of the data. However, we think that the same response is available, despite these additional complexities. For many non-finite clauses do carry clear temporal information. For example, consider:

36 The fact that the temporal element in the second conjunct is later than the temporal element in the first conjunct is due to a pragmatic maxim governing the description of events; as Partee (1984, p. 254) describes the condition, "...there is a past reference time $r-p$ specified at the start of the discourse, and...the introduction of new event sentences moves the reference time forward." We will argue that this is a pragmatic maxim that affects semantic content, by influencing the semantic content of temporal elements in the syntax.

(9) a. John will remember bringing the cake.

b. John remembered to bring the cake.

(9a) can express the proposition that John will remember bringing the cake *today*. (9b) can express the proposition that John remembered to bring the cake *today*. Such evidence suggests the existence of an indexical temporal element in the syntax of some gerunds and infinitives, which, relative to a context, can be assigned a contextually salient time or event.³⁷ Furthermore, the infinitives and gerunds in (9) can be modified by explicit temporal adverbs such as "today" and "tomorrow". On virtually all contemporary accounts of the functioning of such adverbs, they modify the values of syntactically represented times or events.³⁸

There is also additional clear syntactic evidence in favor of the existence of a temporal element in many infinitives and gerunds. For example, this element can interact with higher operators in variable-binding configurations, as in:

(10) a. John asked to bring a cake many times.

b. John tried singing many times.

The sentences in (10) are ambiguous. On one reading of (10a), John asked something many times; on this reading, the temporal quantifier "many times" binds a temporal element associated with the verb "ask". But on the second reading, John asked once, at some contextually salient past time, to bring a cake many times. On this reading, the temporal quantifier "many times" binds a temporal element associated with the infinitive "to bring a cake".³⁹ Similarly, there is a reading of (10b) according to which John tried once in the past to sing many times. Such evidence provides support for the existence of a temporal element associated with many infinitives and gerunds (see Stanley (2000), (2002a)) for discussion of this strategy).⁴⁰

³⁷ We are in fact agnostic here as to the precise nature of the contextually sensitive temporal element here (though see King (forthcoming)). For example, in Higginbotham's (2002) account of sequence of tense, tenses express relations between events. On Higginbotham's account, times would not be the values of the syntactically represented context-sensitive elements.

³⁸ See Enc (1987, p. 652), King (forthcoming), Ogihara (1986, pp. 41-9; 56-60). Parsons (1990, Chapter 11) is another obvious example, though whether Parsons accepts the letter of this point depends upon the relation between his "subatomic" representations and syntax proper. Discourse Representation Theoretic accounts of temporal adverbs also treat them as setting descriptive conditions on syntactically represented temporal elements, though in the case of such theories, they are represented syntactically only in the level of syntax called Discourse Representation Structure (see Partee (1984)).

³⁹ It does not matter for our purposes whether this temporal element is in argument or adjunct position; we do not here commit ourselves on this matter. If the temporal element is an adjunct, perhaps its presence is optional.

⁴⁰ There is now a rather large and intricate literature in syntax on the question of tense in

There is thus good evidence for a temporal element in the syntax of many non-finite clauses. (8) is a generic sentence, and so involves an unselective generic quantifier.⁴¹ The temporal elements in the non-finite clauses in (8) are bound by this generic operator, yielding the interpretation in (11):

(11) Gen- x, y [Better-than(x driving home at y and x drinking three beers at $y+1$), (x drinking three beers at y and x driving home at $y+1$)].

(11) is the semantic content predicted by a standard theory of generics, coupled with a plausible hypothesis about the syntax of non-finite clauses. Thus, the right syntax and semantics for constructions such as (8) simply predicts they have the readings at issue. No appeal to effects of implicature on intuitive content are required in this explanation.

Suppose a theorist is in the position of arguing that the semantic content of a certain construction must be augmented by pragmatic information to account for natural readings of that construction. To make out this claim, it is incumbent upon the theorist to provide a sketch of the correct syntax and semantics of the relevant construction. For it is only then that one can evaluate the claim that the syntax and semantics for the relevant construction does not by itself deliver the reading at issue. Far too often, those who advocate the thesis that a certain reading of a construction is due to pragmatics rather than semantics fail to live up to their obligation, and so make claims that are highly speculative and hence difficult to evaluate. Before we can evaluate the other alleged examples of pragmatic intrusion, we need to sketch a semantics for "better than", with respect to which we can evaluate the claim that one cannot come up with a syntax and semantics that deliver the right readings.

For the sake of simplicity, we will treat only the "better than" relation that relates propositions.⁴² One natural proposal for the semantics for "better than", as a relation between propositions, is as in (12):

(12) Better-than (p, q) if and only if the most similar p -worlds are preferable, in

infinitives and gerunds, starting with Stowell (1982). Infinitives and gerunds that must inherit their tense properties from the matrix clause, and hence do not allow temporal modification, are usually not thought to contain a tense phrase (or to contain one that is deficient in its case assigning properties). The gerunds in examples such as (8) are not contained in embedded clauses. However, they clearly can be modified by temporal adverbs such as "today" and "at nine o'clock". Again, this alone suggests that they contain a temporal element.

41 For unselective binders, see Lewis (1998) and Heim (1982, Chapter 2). An unselective binder binds multiple variables in its scope.

42 If "better-than" expresses a relation between properties, then we can take "Better-than (p, q)" to be true with respect to a situation if and only if the closest worlds in which p is instantiated are preferable, in the contextually salient sense, to the closest worlds in which q is instantiated.

the contextually salient sense, to the most similar q-worlds.

There are two dimensions of contextual sensitivity required for this semantics. First, the relation of similarity between possible worlds that is relevant for the truth-conditions of a better-than sentence in a context is determined in part by facts about that discourse context. Secondly, the sense of preferability at issue is also a function of the discourse context.⁴³

We do not mean to advocate this as a semantics for "better than"; we find it unpleasantly skeletal. But, as we shall show, one can account for the other alleged examples of pragmatic intrusion without abandoning it. That is, as far as we have seen, the semantics just described can account for all of the data, without the existence of pragmatic intrusion. Or so we will argue.

Here are the first set of examples that appear to make Levinson's points, but do not involve apparent temporal readings of "and":

- (13) a. Eating *some* of the cake is better than eating all of it.
- b. Having a cookie *or* ice cream is better than having a cookie and ice cream.
- c. Having *two* children is better than having three.

We are not certain whether "better than", in the examples in (13), relates properties or propositions. But let us suppose that they relate propositions.⁴⁴ Given the semantics in (12), the examples in (13) all come out true and unproblematic on fairly plausible assumptions. For example, it is quite plausible that, in a given context of use in which the salient preferability relation is health, the most similar worlds in which (say) some cake-eating happens are ones in which some of the cake is eaten, rather than all of it. Similarly, it is plausible that the most similar worlds in which a cookie or ice cream is eaten are ones in which it is not the case that both are eaten. So, given plausible assumptions, these examples do not raise the specter of pragmatic intrusion.

But consider (14):

- (14) Buying *some* of that cake is better than buying *all* of it.

Suppose, in the context in which (14) is uttered, the entire cake is on sale in the

43 For example, in a context in which health is at issue, that John has spinach is preferable to that John has cake. But in a context in which pleasure is at issue, the opposite may be true.

44 The sentences in (13) are generic sentences. Take (13a); it means something like "Gen(x)(x's eating some of the cake is better than x's eating all of it)". On this account, "better-than" relates the proposition expressed by the open sentence "x eating some of the cake" to the proposition expressed by the open sentence "x eating all of the cake", relative to the assignment function introduced by generic quantifier. So what one is comparing is propositions according to which one person ate some of the cake with propositions according to which that very person ate all of the cake.

supermarket. There is no obvious way to purchase only some of it. In this context, the most similar worlds in which some of the cake is purchased are ones in which all of the cake is purchased. But then the semantic account given in (12) predicts that the truth of (14) requires such worlds to be preferable to themselves (in the contextually determined sense of 'preferable'). So (14) should seem radically false. But it seems that (14) can nevertheless be truly uttered.

As Levinson emphasizes, the phenomenon exhibited by (14) occurs with other determiners. For example, suppose that we live in a world in which 90 percent of all child-births give rise to triplets. It can nevertheless be true that:

(15) Having two children is better than having three children.

But, on the assumption that the semantic content of "two" is "at least two", the semantic clause in (12) appears to entail that (15) cannot be true in this situation. This is counter-intuitive.

There are three general strategies one can exploit in this situation. First, one can retain the semantic clause (12), and defend the thesis that (14) and (15) do not express true propositions relative to the envisaged situations. One might, for example, maintain that utterances of (14) and (15) communicate true propositions, despite the fact that the sentences in context express false ones.⁴⁵ Secondly, one can retain the semantic clause in (12), and argue that pragmatic processes affect the intuitive content. The third option is to reject (12), and seek an alternative semantic analysis of a comparative like "better".

Pragmatic intrusion approaches are versions of the second strategy, the one that Carston and Levinson adopt. In other words, they would retain the semantics in (12), and argue that the scalar implicature of "some" "enriches" the semantic content of (14), and the scalar implicature of "two" enriches the semantic content of (15).⁴⁶ On this account, there are strong pragmatic effects on the intuitive content of the utterance, which is the conclusion that Carston and Levinson wish to draw.

However, on both Carston and Levinson's account, it is unclear how an implicature "enriches" semantic content. "Enrich" is certainly not a technical term; it is unclear what enriching a semantic content with an implicature is supposed to amount to in the end. In this respect, they have yet to provide an account of the phenomena. As we will now argue, closer attention to the way in which context affects these constructions reveals that only weak pragmatic effects are involved in the cases at hand. That is, we

45 See Levinson's discussions of the "Obstinate Theorist" in Chapter 3 of Levinson (2000).

46 In fact, surprisingly, Carston and Levinson do not provide a semantics for "better than." Nevertheless, their strategy is clearly to retain a relatively simple semantics for "better than", and to account for the complexities pragmatically.

agree with Carston and Levinson that the second strategy is a promising one for accounting for the data. But the *way* in which pragmatics affects the intuitive content only involves a weak pragmatic effect of context on semantic content, that is, one triggered by the syntax and semantics.

There is a distinctive feature of the cases discussed by these authors, namely that they involve placing focal stress on the relevant expressions. Consider again:

- (13) a. Eating *some* of the cake is better than eating all of it.
b. Having a cookie *or* ice cream is better than having a cookie and ice cream.
c. Having *two* children is better than having three.

In each of these cases, one needs to place stress on the italicized expression to obtain the relevant reading.⁴⁷ The key to explaining the data lies in recognizing the effects of focal stress.

Giving focal stress to a word makes salient a contextually appropriate contrast class. So, for example, consider:

- (16) John met *Bill*.

A speaker may utter (16), with focus on “Bill”, with the intention of asserting that John met Bill, as opposed to another contextually salient person or persons. One way of treating the phenomenon of focus is by saying that placing focus on a constituent gives rise either to the presupposition that the sentence-frame does not hold true of any of the contextually salient alternatives, or the implicature that it does not.⁴⁸ Suppose that Frank is the contextually salient person in the context of utterance of (16). Then, on this rough analysis, an utterance of (16) presupposes or implicates that it is not the case that John met Frank.

In the case of (16), a proper name is placed in focus. However, in the examples in (13), determiners (“some”, “two”), and connectives (“or”) are the expressions that are placed into focus. The same general analysis is applicable here, that focussing the expression gives rise to a presupposition or implicature that the sentence-frame is not true of contextually salient alternatives. However, in the case of these expressions, it is not as obvious to the untrained observer what the contextually salient alternatives in fact are.

In fact, determiners such as “some”, and connectives such as “or”, are

47 In footnote 26, p. 400, Levinson even explicitly suggests placing focal stress on words like “some” in constructions like (13a) if one has trouble with the intuitions.

48 We are neutral on whether focus gives rise to a presupposition or an implicature in what follows; as we discuss below, in either case, Carston and Levinson’s examples only involve weak pragmatic effects. It is worth mentioning that some theorists (e.g. Glanzberg (this volume)) hold that focus is syntactically represented. Since this position would stack the deck in favor of our position, we do not adopt it in what follows.

conventionally associated with contextually salient alternatives, via the “scales” of scalar implicatures. For example, the scale for “some” is <some, all>, and the scale for “or” is <or, and>. These scales reflect an intuitive ordering of the "logical strength" of their members.

For example, placing focus on “some” in (17) gives rise to the presupposition or the implicature that the sentence-frame that results from deleting the occurrence of “some” is not true of the other element in the scale associated with “some”:

(17) *Some* bottles are on the table.

In other words, placing focus on “some” in (17) gives rise to the presupposition or the implicature that the sentence-frame ‘x bottles are on the table’ is false as applied to the determiner meaning expressed by “all”. Similarly, placing focal stress on "or" in (18) gives rise to the presupposition or the implicature that the relevant sentence frame is false for the function denoted by "and":

(18) John can eat cake *or* John can eat cookies.

So, to sum up, focussing an element that is conventionally associated with a scale affects interpretation by giving rise to a presupposition or an implicature that the sentence frame is false for the members of that scale that are of greater "strength".⁴⁹

This fact has implications for the evaluation of complex constructions. For example, consider conditionals. On the standard Lewis analysis, a subjunctive conditional is true if and only if its consequent is true in the worlds most similar to the actual world in which its antecedent is true. So, the semantics of subjunctive conditionals, like the semantics of "better than", involves reference to a similarity relation between worlds. Focussing an element can influence the selection of the similarity relation relevant to the truth-conditions of a particular subjunctive conditional.

Suppose that Frank met Sue at the airport, and invited her to our party, an invitation she declines. Hearing this, John utters:

(19) If *Paul* had met Sue at the airport, she would have accepted the invitation.

John's utterance is true if and only if the most similar worlds in which Paul had met Sue at the airport and Frank did not meet Sue at the airport, are ones in which Sue accepted the invitation. This is so, even if the most likely way for Paul to meet Sue at the airport would be for Paul to go with Frank. Perhaps Paul cannot drive, so, in some more absolute sense, the most similar worlds to the actual world in which the antecedent is true are ones in which Frank and Paul had met Sue at the airport. But such worlds are irrelevant to evaluating the truth of (19) in the envisaged context. By placing focal stress on "Paul" in

⁴⁹ The connection between focus and scalar implicatures is well-documented; see Rooth (1996, p. 274).

uttering (19), John forces the selection of a similarity relation that is sensitive to the contrast class.⁵⁰

On one view of focus, focussing a constituent gives rise to a certain implicature or presupposition. If this view is correct, then this implicature or presupposition can affect the intuitive content of a subjunctive conditional. But this is not a strong pragmatic effect. Recall that on the conception of semantics we have adopted, speaker intentions, including those involved in implicatures, can affect semantic content, but only by affecting the choice of referential content in a context of some element in a sentence. In the case of focus and subjunctive conditionals, the way in which the implicature affects the semantic content of subjunctive conditionals fits this model.

We assume that the similarity relation relevant for the semantic content of subjunctive conditionals is traceable to the syntax of the conditional construction, perhaps to the words "if" or "then" themselves. So, the implicature that emerges by focussing a constituent affects the referential content of the element in the syntax of subjunctive conditionals that has, as its referential content relative to a context, a similarity relation. This is a weak pragmatic effect of context on what is communicated, rather than a strong pragmatic effect. Hence, even on the view that focus gives rise to an implicature, the fact that focus affects the intuitive content of subjunctive conditionals ends up as merely a weak pragmatic effect.

These facts are directly relevant to the facts cited by Levinson:

- (20) a. Eating *some* of the cake is better than eating all of it.
b. Having a cookie *or* ice cream is better than having a cookie and ice cream.

Focussing "some" in (20a) gives rise to the presupposition or implicature that the sentence frame "eating x of the cake" is false of the other member of the scale associated with "some", namely the determiner meaning of "all". This presupposition or implicature does affect the truth-conditions of (20a). But the way it affects the truth-conditions of (20a) is not by "enriching" the semantic content. One dimension of contextual sensitivity of "better-than" constructions, according to this semantics, is the relation of similarity between worlds. By focussing "some" in (20a), one invokes a similarity relation according to which the most similar worlds in which some of the cake is eaten are not ones in which all of the cake is eaten. Similarly, by focussing "or" in (20b), one forces a similarity relation in which the closest worlds in which a cookie or ice cream is had are

⁵⁰ Of course, this point holds for indicative conditionals as well. Suppose we don't know whether Frank or Paul picked up Sue at the airport, but we do know that if Frank was present, Sue would decline to go to any party. Someone then utters "If *Paul* met Sue at the airport, she is at the party now."

ones in which it is not the case that a cookie and ice cream are had.

In other words, just as with subjunctive conditionals, by focussing the relevant words, one affects the choice of the similarity relation between worlds that is relevant for the truth-conditions of the "better-than" construction in that context. So, the truth-conditions of these constructions are affected by scalar facts, but independently of processes such as explicature or implicature "intrusion". Nor does the scalar information "enrich" the semantic content. Rather, the truth-conditions of "better-than" sentences are sensitive to the choice of a similarity relation between worlds, and focus affects the choice of the relation.

To show that the effect here is a weak pragmatic effect, we would have to demonstrate that the similarity relation is the value of some element in the syntax of comparative construction. We have not here provided an explicit syntax for comparatives, and so we cannot justify in detail the thesis that selection of a comparative relation is merely a weak pragmatic effect of context. However, we assume that it is likely that in the final implementation of the semantics in (12), one would trace the introduction of the similarity relation to some element in the expression "better than". If so, then it is possible to account for all of these alleged examples of pragmatic intrusion without accepting its existence. On the account we have given, one can easily explain the data within the semantics. For, assuming that the similarity relation is the value of some element in the comparative, the account just sketched exploits only weak pragmatic effects in deriving the relevant readings. This is an effect of context on semantic content, given the conception of semantics that we adopted in the first section.

The semantics given in (12) is no doubt oversimplified. And, as mentioned, we have not produced an analysis of the syntax of these constructions to justify our claim that the similarity relation is the value of some element in the syntactic structure of these constructions. Our point has merely been to show that it is not difficult to describe an account of the phenomena discussed by Carston and Levinson that does not invoke pragmatic intrusion, and indeed only makes appeal to weak pragmatic effects.⁵¹

Levinson's next set of examples involve indicative conditionals (see Carston (1988, section 7)). Here are some of his examples:

- (21) a. If you ate *some* of the cookies and no one else ate any, then there must still be some left.
b. If the chair *sometimes* comes to department meetings that is not enough;

⁵¹ Levinson (p. 201) also gives examples of what he claims are cases in which manner implicatures affect the intuitive content of sentences containing "better-than". However, we find these examples straightforwardly unconvincing, and so do not discuss them here.

he should always come.

Levinson's point is that the intuitive content of (21a) is (22a), and the intuitive content of (21b) is (22b):

- (22) a. If you ate some but not all of the cookies and no one else ate any, then there must still be some left.
b. If the chair sometimes but not always comes to department meetings that is not enough; he should always come.

But if the intuitive content of the sentences in (21) is as given in (22), then it would seem that the implicatures of the antecedents affect the intuitive content of the sentences in (21).

However, Levinson is wrong to claim that these readings of the sentences in (21) are due to pragmatic intrusion. Rather, the readings in (22) of the sentences in (21) are genuinely semantic, due again to the focal stress placed on the words "some" and "sometimes"; Levinson's pervasive use of italics throughout his examples itself strongly suggests that this is how Levinson means them to be read (see again Levinson's footnote 26). Without placing stress on "some" in (21a), it is not naturally read as having the reading (22a). But this suggests that the relevant readings of the examples in (21) comes from the interaction between the semantics for focus and the semantics of the indicative conditional, rather than the purported phenomenon of pragmatic intrusion.

We assume a simple semantics for conditionals, where both indicative and subjunctive conditionals receive the same analysis in terms of possible worlds, the difference between them being due to the similarity relation relevant for their truth-conditions.⁵² As Robert Stalnaker has argued, indicative conditionals normally exploit a similarity relation that counts only those non-actual worlds compatible with the mutually accepted background assumptions as similar worlds for purposes of semantic evaluation. In contrast, subjunctive conditionals involve a similarity relation that reaches outside the worlds compatible with the mutually accepted background assumptions. An indicative conditional is true if and only if the consequent is true in every one of the most relevantly similar worlds in which the antecedent is true. With Stalnaker, we assume that the actual world is always the most similar world, so that non-actual worlds are only relevant for the semantic evaluation of an indicative conditional when the antecedent is false (Stalnaker (1999c, p. 69)). Finally, we again assume the syntax (and its semantics) of the conditional triggers a search for the contextually relevant similarity relation.⁵³

⁵² Thanks to Brian Weatherson for discussion of the following treatment of conditionals.

⁵³ One difference between this treatment of indicative conditionals and Stalnaker's treatment is that we do not adopt Stalnaker's selection function, that singles out a unique closest world for the semantic evaluation of a conditional even when the antecedent is

Placing the above rough remarks about focus together with this straightforward analysis of the indicative conditional, we may analyze Carston and Levinson's examples as follows. The focal stress on "sometimes" and "some" gives rise to a presupposition or implicature. For example, in (21a), the speaker intends to give rise to the presupposition or the implicature that not all of the cookies have been eaten by the hearer; this corresponds to the scalar implicature of "some". Similarly, in (21b), the speaker intends to give rise to the presupposition or the implicature that the chair does not always come to department meetings. So doing affects the choice of the contextually salient similarity relation for the sentences in (21). For example, in (21a), by focussing "some", the speaker forces a similarity relation in which all the most similar (non-actual) worlds are ones in which the speaker did not eat all the cookies. This account directly yields the prediction that the conditionals in (21), with "some" and "sometimes" focussed, have the truth-conditions given by the sentences in (22).

Let us go through this reasoning in detail with one example. Consider again:

(21a) If you ate *some* of the cookies and no one else ate any, then there must still be some left.

By focussing "some", the speaker forces the selection of a similarity relation for the evaluation of (21a) according to which the most similar (non-actual) worlds are ones in which "you ate X of the cookies" is false of the member of the scale associated with "some", which is the determiner meaning of "all".⁵⁴ In other words, by focussing "some", the speaker selects a similarity relation in which the most similar worlds do not include any worlds in which the addressee ate all the cookies. So, in the most similar worlds in the context set, it is not the case that the hearer ate all of the cookies. Applying the simple semantics for the indicative conditional to (21a) with this similarity relation, one then considers all of the most similar worlds in which the hearer ate some of the cookies and no one else ate any. Since all of these worlds are already worlds in which the hearer did not eat all of the cookies, the consequent is true in all such worlds.

It therefore falls out from an independently motivated account of focus, and an independently motivated account of indicative conditionals, that the sentences in (21) have the same truth-conditional effect as the sentences in (22). This effect is achieved without any appeal to pragmatic intrusion.⁵⁵ Of course, as with the discussion of "better

false. Fans of conditional excluded middle may retain Stalnaker's assumption if they like.
54 Henceforth, we shall suppress "non-actual".

55 If the effect of focus is to give rise to a presupposition, the account of the data in (21) is even smoother. For in this case, the focus induced presuppositions will by definition be part of the context set for evaluation of the indicative conditional, and no appeal to a focus induced shift of a similarity relation is needed.

than", definitively establishing our case that these examples involve only weak pragmatic effects would require demonstrating conclusively that the similarity relation for indicative and subjunctive conditionals is the value of some element in their syntax (e.g. called upon by the lexical meaning of 'if'). We believe this to be plausible, but do not claim to have made the case for it here.

In the preceding discussion, we have emphasized the role of *focus* in the evaluation of conditionals. In particular, we have shown that the "alternative set" for a focussed element in a conditional may affect the semantic evaluation of that conditional, by affecting the choice of the similarity relation for that conditional. We take this to be an instance of the more general fact that the similarity relation for a conditional is affected by the assumptions made by conversational participants. As we discuss below, there are examples similar to the ones discussed by Carston and Levinson, in which no element is focussed. Nevertheless, the same kind of response is available for such examples. For the general point is the familiar one that the similarity relation for indicative and subjunctive conditionals is determined as a function in part of the psychological states of the participants in conversational contexts. If there is an element in the syntax that is assigned a similarity relation, relative to a context, such examples are simply more evidence of weak pragmatic effects.

Levinson gives several other alleged examples of kinds of pragmatic intrusion in conditionals. The first kind of example is as in:

(23) If you have a baby and get married, then the baby is strictly speaking illegitimate. (Levinson's (25a), p. 206).

Here, Levinson again relies upon the thesis that the semantic content of a conjunctive sentence is not sensitive to temporal information. Given this assumption, the semantic content of the conjunct does not entail that the birth precedes the marriage. Then, the information that the first conjunct temporarily precedes the second will have to be an implicature, one that furthermore enriches the semantic content of the conditional. However, we have already seen above that the assumption behind this argument, that the semantic content of a conjunctive sentence is not sensitive to temporal information, is incorrect. So these examples of Levinson (his (25)a-d) bear no additional comment.⁵⁶

The rest of Levinson's examples also rely on controversial assumptions about what is and is not part of semantic content proper. For example, consider Levinson's

⁵⁶ Another group of Levinson's examples (his (26c) and (26c'), p. 207) rely on the thesis that the semantic content of possessive constructions, such as "Bill's book is good" is not sensitive to the contextually salient possession relation. This claim is not supported by the sort of detailed discussion of the syntax and semantics of possessive constructions that would be required to support it, and so is not worthy of lengthy consideration.

example ((26a), p. 206)):

(24) If Bill and Penny drive to Chicago, they can discuss sociolinguistics in the car for hours.

The antecedent of this conditional may have the intuitive content that Bill and Penny drive to Chicago together. Levinson assumes that the information that Bill and Penny are driving together to Chicago is not part of the semantic content, but rather is what he calls a 'together' implicature. However, most semanticists working on collective and distributive readings of verbs would certainly not treat this as a pragmatic implicature but rather as part of semantic content. For example, the semantic content of the antecedent of (24), on some theories, would be taken to be a proposition concerning a driving event with a plural agent.⁵⁷

A further class of examples, again made salient by Robyn Carston (1988), involve causal relations. Consider:

(25) Mr. Jones has been insulted and he's going to resign. (Carston, *Ibid.*)

This sentence is naturally understood as communicating that there is a causal connection between the fact that Jones was insulted, and his resignation. However, it would not be in the spirit of Grice's "modified Occam's Razor" to postulate a distinctive causal sense of "and".⁵⁸ After all, consider:

(26) John took out his key and opened the door.

A sentence such as (20) is naturally understood as communicating that John's door-opening was a result of the fact that John took out his key. If one postulated a distinctive sense of "and" to account for the apparent causal reading of (25), one may have to postulate another distinctive sense of "and" to account for the apparent resultative reading of (26). Such sense-multiplication is to be avoided if possible.

However, one can account for Carston's data without postulating distinctive causal or resultative senses of 'and'. As Jennifer Saul (2002) has suggested, there are general (and we think defeasible) pragmatic rules governing the order of listing of reported events (rules that can, as we have seen, affect the semantic evaluation of the

⁵⁷ An anonymous referee for this paper commented that if the collective/distributive distinction is due to a genuine ambiguity that affects semantic interpretation, as we suggest here, this would have the false consequence that any utterance of the sentence "If Bill and Penny drive to Chicago, Bill will get there first (as his car is the fastest)" would be semantically anomalous. But this objection is confused. If there is a genuine ambiguity between collective and distributive readings, then an utterance of the envisaged sentence would not be semantically anomalous, since the person who utters the sentence would intend the distributive reading of the antecedent of the conditional (according to which there are driving events with different agents).

⁵⁸ This principle reads "Senses [of words] are not to be multiplied beyond necessity." For Grice's discussion of it, see Grice (1989b, pp. 47ff.).

temporal element associated with verbs). In particular, the maxim of manner requires speakers to "list events in the order in which they occurred, and to cite causes before effects." (Ibid., p. 362). As a result, unless they believe that the maxim of manner is being flouted, interpreters generally conclude from utterances of (25) that the first event causes the second, and in the case of (26), that the second is a result of the first.⁵⁹

However, there is a more complex group of sentences, concerning which, *contra* Saul, no such account is plausible.⁶⁰ These cases involve conjunctions embedded inside conditionals, such as:

(27) If Hannah insulted Joe and Joe resigned, then Hannah is in trouble.

(27) seems to express the proposition that if Hannah insulted Joe and Joe resigned as a result of Hannah's insult, then Hannah is in trouble. Saul (Ibid., p. 363) claims that there is a "perfectly reasonable [Gricean] explanation" of these facts as well, one that "will precisely parallel" the explanation of utterances of sentences such as (25) and (26).

However, Saul overstates matters when she suggests that an explanation in terms of the maxim of manner of the intuitive truth-condition for utterances of (27) is "precisely parallel" to the explanation of utterances of sentences such as (25). There are significant differences between the two explanations, which make an explanation in terms of manner in the case of utterances of sentences such as (27) considerably less plausible.⁶¹

In the case of Saul's explanation of utterances of (25) and (26), the speaker expresses a true proposition, and, by saliently adhering to the maxim of manner, communicates a proposition that is informationally richer. It is perfectly plausible, in this case, to take the speaker as intending to express the true proposition that does not involve causal information, and thereby communicating an informationally richer proposition that does. However, the purportedly parallel account of utterances of (27) is different. In this case, speakers would typically express a false proposition not involving causal information, and thereby communicate a true proposition that does. Furthermore, in this latter case, it is not particularly plausible to suppose that speakers are aware of the false

⁵⁹ Saul herself assimilates this phenomenon to *implicature*, stating that the speaker implicates that the second event is a cause or result of the first. We ourselves are agnostic as to whether this is best described as an implicature.

⁶⁰ We are particularly grateful to Robyn Carston for forcing us to treat this style of example in detail.

⁶¹ Saul is aware of these differences (Ibid.). But she disagrees that they impinge on the plausibility of the explanation. It is also worth mentioning that the example Saul herself discusses is a case of apparently temporal 'and' embedded in the antecedent of a conditional. As we have made clear above, such temporal readings are generated *within* the semantics, though of course not by an alleged temporal reading of "and." There is no need for a post-semantic explanation of such cases.

proposition they express in uttering (27).⁶² These are significant difference between the two explanations.

Of course, speakers do sometimes knowingly express false propositions, and thereby communicate true ones. This is what happens, for example, in non-literal speech. But we are not considering cases of non-literal speech here; someone who assertively utters (27) does not intend to be speaking non-literally. There should be a strong presumption against treating speech that is intended literally (and used correctly) on the model of non-literal speech. In sum, the purported explanation for the intuitions in (27) has significant theoretical costs, ones that the explanation for the intuitions in (25) and (26) do not have. These costs should be unattractive whatever one's theoretical commitments. However, for those who reject semantic skepticism and semantic modesty, they are simply untenable.

Fortunately, however, there is no reason to give a non-semantic account of the intuitive readings of (27). The relevant reading of (27) is simply predicted by the semantics for indicative conditionals that we have endorsed. In a context in which the speaker has in mind a causal relationship between Hannah's insulting of Joe and Joe's resignation, all relevantly similar worlds in the speaker's context set in which Hannah insulted Joe and Joe resigned, will *ipso facto* be ones in which Joe's resignation is due to Hannah's insult. The speaker's context set is what is epistemically open to her. This may include worlds in which the conjunction holds, and there is no causal relationship between the conjuncts. But given that it is salient that she has a causal relationship in mind, such worlds will not be the most relevantly similar worlds in the context set. So, if she has a causal relation in mind between the two events, that is just to say that the similarity relation for indicative conditionals will select those worlds in which there is a causal relationship between the conjuncts of the antecedent as the most similar worlds to the world of utterance in which the antecedent is true. So, the causal reading of (27) is predicted by the simple semantics for the indicative conditional that we have adopted above.

We have argued in this section that the examples of pragmatic intrusion given by Carston and Levinson are not convincing. The intuitions behind these examples can be accommodated within semantic interpretation, without requiring strong pragmatic effects

⁶² It is worth noting that the explanation here is even more extreme than pragmatic accounts of quantifier domain restriction. Defenders of such accounts can argue that the false proposition they claim to be expressed by someone who utters a sentence like "Everyone is at the party" is easily accessible ("Do you really mean *everyone*?"). However, the false proposition supposedly expressed by (27), on this pragmatic account, is not so easily accessible. It is therefore harder to see how the speaker could intend to say it, or intend to make as if to say it.

to explain them. We think a general moral follows from this investigation. Before claiming that a set of intuitions cannot be due to semantic interpretation, theorists need to have investigated all of the semantic options. For, as Levinson admirably acknowledges, claims about what can only be derived pragmatically may very well be vitiated by subsequent syntactic and semantic investigation.

Conclusion

An important obligation of the philosophy of language is to provide a clear distinction between semantics and pragmatics. However, at the center of the philosophy of language and cognitive science there has been a sustained debate about the scope and interest of semantic content, with many theorists arguing that semantic content plays a marginal role in an explanation of linguistic behavior. These debates have been clouded by disagreement over the proper definitions of "semantic" and "pragmatic". Our intention in this paper has been to provide a clear characterization of semantic content, and then use it to evaluate the debate about the scope and interest of semantic content.

As we have emphasized, these different positions on the scope of semantic content are, at this stage of research, merely educated guesses. Many philosophers and cognitive scientists maintain that, once syntactic and semantic inquiry are finished, it will turn out that the semantic content of a sentence relative to a context is not a good guide to what speakers typically use that sentence to communicate. This position has radical consequences for standard methodology in philosophy. If it is true, it is unclear, for example, whether any of the strategies canvassed at the beginning of this paper are legitimate. In the final section, we have addressed one of the strongest arguments in favor of skepticism about the scope of semantic content, and shown it to be unpersuasive. Our view is that, as yet, such skepticism remains unwarranted.⁶³

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⁶³ We have given this paper at the Kentucky Language Association, the Universidad Nacional Autonoma de Mexico, the Oxford Philosophical Society, and it was also discussed at the Bay Area Philosophy of Language Reading Group; thanks to participants at all of these events. Herman Cappelen, Robyn Carston, Maite Ezcurdia, Richard Heck, Ernie Lepore, and Rich Thomason deserve particularly special thanks. Kent Bach, Michaela Ippolito, Matthew Stone, Zoltan Gendler Szabo, and Brian Weatherson also helped with valuable suggestions. Thanks also to two anonymous referees for OUP.

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