

Pragmatics, Semantic Underdetermination and the Referential/Attributive Distinction

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It has long been recognised that there are referential uses of definite descriptions. It is not as widely recognised that there are attributive uses of indexicals and other such paradigmatically singular terms. I offer an account of the referential/attribution distinction which is intended to give a unified treatment of both sorts of cases. I argue that the best way to account for the referential/attribution distinction is to treat it as semantically underdetermined which sort of proposition is expressed in a context. In certain contexts the proposition expressed will be a descriptive one, and in others it will be an object-dependent one. I appeal to Sperber and Wilson's (1986) idea that the recovery of the content of an utterance involves pragmatic processes of enrichment of a representation of the logical form of the utterance. According to the account I offer, the first-level descriptive meaning associated with an expression (whether this is an indexical or a definite description) is pragmatically enriched and then used either to track an individual in the context, or is taken to lay down a condition of satisfaction for an individual. The proposition that the listener takes the speaker to have expressed is recovered on the basis of considerations of relevance and contextually available information about the speaker's directive intentions. Although my account has affinities with those of Récanati (1993) and Nunberg (1993), it also differs from theirs in crucial ways. Each of these authors sees asymmetries where I see none. I give reasons for preferring my symmetrical account.

1. Introduction

It has long been recognized that there are referential uses of definite descriptions. It is not as widely recognized that there are attributive uses of indexicals and other such paradigmatically singular terms. Here I offer an account of the referential/attribution distinction which is intended to give a unified treatment of both sorts of cases.

My view has affinities with the views of Récanati (1993) and Nunberg (1993). It is in opposition to the views of Neale (1990), although there are certain elements of Neale's views with which I am sympathetic, and a discussion of these will enable me to articulate some of the crucial assumptions of my own view.

However, I will approach matters in a somewhat oblique way. It turns out to be useful for me to discuss Neale's views with reference to a recent

critique of these views by Schiffer (1995). Schiffer labels a view such as Neale's the Hidden Indexical Theory of Descriptions, and criticizes it on the grounds that it is in conflict with the Direct Reference Theory of Indexicals. Schiffer says: "you cannot reasonably hold that indexicals are directly referential if you hold the hidden-indexical theory of descriptions" (1995, p. 124). Since he also thinks that we have no reason for rejecting the direct reference theory of indexicals, he thinks that therefore we should reject the hidden indexical theory of descriptions. I will show that Schiffer's argument purporting to demonstrate a tension between these two doctrines relies on a faulty assumption. Therefore, Schiffer does not have any basis for rejecting the hidden indexical theory of descriptions.

In the course of uncovering the mistake in Schiffer's reasoning, various interesting facts about the uses of descriptions and indexicals will be uncovered. These point towards an account of the referential/attributive distinction which is different both from the one offered by Neale (1990), and from the one offered by Schiffer. (Not that Schiffer says much about how he would account for this distinction beyond saying that the distinction will have to be viewed rather differently once compositional semantics is abandoned. I won't be commenting on this aspect of Schiffer's views in this paper.)

Neale (1990) and Schiffer (1995) tacitly assume that in order to account for the distinction between referential and attributive uses of descriptions, either one posits a semantic ambiguity, or one accounts for referential uses of descriptions by appeal to a Gricean distinction between what a speaker says and what a speaker means (which includes what is said and what is conversationally implicated). But these two alternatives do not exhaust one's options. There is a third. It may be that we can give a unitary semantic analysis at some rather abstract level for all definite descriptions and yet that a sentence containing a definite description can express either an *object-dependent* or a *general* proposition, depending on facts about the context of utterance.¹ Thus the distinction between referential and attrib-

¹ Both Schiffer and Neale use the expression "object-dependent proposition". It is clear that for Schiffer an object-dependent proposition is the same thing as what others (e.g. Kaplan) have called a *singular* proposition, viz. a proposition which contains an object rather than a mode of presentation of that object as a constituent. Neale on the other hand uses the expression neutrally, to mean either singular proposition in Kaplan's sense or object-dependent proposition in the sense presupposed by Evans (1982), viz. a proposition which contains an object-dependent mode of presentation as a constituent rather than the object itself. (See Neale 1990, ch. 2, pp. 49–50, fn. 1.) My own view is closer to Evans' view. I will continue to use the phrase "object-dependent proposition", though for me this is an ambiguous phrase. I hope it will be clear from the context which of these senses of the phrase is operative. Roughly, when I'm talking about Schiffer's work it means "singular proposition" and when I'm talking about my own views it means "proposition containing object-dependent modes of presentation".

utive uses is accounted for in pragmatic terms, but the account differs from the Gricean one. Pragmatic considerations are invoked at the level of *what is said*, and not merely to determine what the speaker has conversationally *implicated*. The claim is that what the speaker says is captured either by an object-dependent or a general proposition, where this is resolved on pragmatic grounds. I will be arguing that the distinction between referential and attributive uses of descriptions, as well as the distinction between referential and attributive uses of indexicals, can be accounted for in this way.

2. *The hidden indexical theory of descriptions*

Neale (1990) offers an extended defense of the claim that the distinction between so-called referential and attributive uses of definite descriptions is *not* to be accounted for by postulating a *semantic ambiguity* with respect to the determiner “the”. Rather, the distinction is to be accounted for on *pragmatic* grounds, while retaining a unified semantics for all utterances containing expressions of the form “the *F*”.

Neale argues that the correct semantics for “the *F*” is given by Russell’s 1905 Theory of Descriptions according to which utterances containing definite descriptions are to be analyzed as existential quantifications, and definite descriptions are therefore not referring terms, as their superficial grammar might have led one to expect. For example, “The capital of the United States has a large population” is to be analyzed as “There is a capital of the United States, nothing else is a capital of the United States, and every capital of the United States has a large population”. Neale represents this quantificational sentence as follows:

- (1) [the *x*: *x* is a capital of the United States] (*x* has a large population).

Neale then argues that we can account for the *referential* uses of descriptions by distinguishing between the *proposition expressed* by a speaker and the *proposition(s) meant* by that speaker. When one utters a sentence containing a definite description, one expresses a general proposition, but one might also mean something over and above this, which is captured by an object-dependent proposition. Whether or not one means to communicate such an object-dependent proposition will be determined on pragmatic grounds, by appeal to the Gricean conversational principle of cooperation and Grice’s maxims of conversation.

For instance, in some conversational contexts, if the listener takes the speaker simply to have meant the general proposition expressed by the

speaker's utterance of "The capital of the United States has a large population" (viz., that there is a unique capital of the United States and it has a large population), then the listener will have to conclude that the speaker has violated the Gricean maxim of relation, which enjoins the speaker to be relevant. So, if the listener assumes that the speaker is being cooperative, she will infer that the speaker intended to convey something over and above this general proposition, and will conclude that the speaker intended to convey the object-dependent proposition which has the object denoted by the definite description as a constituent, namely the proposition that Washington D. C. has a large population.

Many philosophers have thought that the Russellian analysis of definite descriptions is challenged by the existence of so-called *incomplete* or *improper* definite descriptions. The objection is expressed by Strawson in the following passage:

Consider the sentence, "The table is covered with books." It is quite certain that in any normal use of this sentence, the expression "the table" would be used to make a unique reference, i.e. to refer to some one table. It is a quite strict use of the definite article, in the sense in which Russell talks on p. 30 of *Principia Mathematica*, of using the article "*strictly*, so as to imply uniqueness." On the same page Russell says that a phrase of the form "the so-and-so," used strictly, "will only have an application in the event of there being one so-and-so and no more." Now it is obviously quite false that the phrase "the table" in the sentence "the table is covered with books," used normally, will "only have an application in the event of there being one table and no more." (Strawson 1950, pp. 222–3)

Although it is true that we often use definite descriptions like "the table" without intending to be committed to the claim that there is one and only one table in existence, this does not by itself support the conclusion that the Theory of Descriptions gives the wrong semantics for definite descriptions. It may be that the *context* supplies the listener with further information that completes the description, and that this completed description is such that the speaker is or intends to be committed to there being one and only one table *with such-and-such features*. For instance, it may be that in context the speaker's use of the description "the table" is easily understood as meaning "the table under the window in Strawson's office" or "the table on which the SALT II Treaty was signed" or "the table with wobbly legs that I brought in for repair yesterday".

The idea is that the speaker makes an *implicit* or *hidden* reference to contextual information which is intended to complete the speaker's explicit but incomplete definite description and it is this completed description which is to be analyzed in accordance with the Theory of Descriptions. This is what Schiffer (1995, p. 114) calls the *naïve* hidden

indexical theory of descriptions. It is a naïve theory because it assumes that there is some *definite* range of information which the speaker intends the listener to recover from the context in order to complete the speaker's incomplete description. But one might be skeptical as to whether a speaker ever does or must have some such definite range of information in mind.² Perhaps there are several different ways in which the listener could complete the description in context, each of which would supply a description which fits the requirements of the Theory of Descriptions. And there may be no fact of the matter as to which of these was the completion intended by the speaker.

The (*non-naïve*) hidden indexical theory of descriptions takes this into account, and allows that there may be only some *indefinite* range of contextually available information which the listener must use in order to complete the speaker's incomplete definite description. An utterance containing an incomplete definite description will be true just in case every admissible completion of the description on the basis of contextually available information yields a truth, and will be false just in case it is false on every admissible completion, and will be neither true nor false just in case it is true on some admissible completions and false on others (see Schiffer 1995, p. 115).

Having laid out the hidden indexical theory of descriptions there are two points I would like to stress. Both of these points are made by Neale (1990). On the other hand, Schiffer (1995) mentions neither. The second point will be especially important when I come to formulate my objection to Schiffer's contention that the hidden indexical theory of descriptions and the direct reference theory of indexicals cannot reasonably be held together.

Firstly, both referentially and attributively used definite descriptions can be incomplete, and hence stand in need of contextual completion. For instance, suppose a man and a woman walk into a school for the first time to look it over, with a view to enrolling their child at the school. The students are running riot through the hallways. The man turns to the woman and utters the sentence "The headmaster obviously has no control over the students". (This example is based on one of Peacocke's (1975)). Here the description "the headmaster" must be filled out in context, and means something like "the headmaster of this school we have just entered". But this is an attributive use of "the headmaster", because the speaker does not expect the listener to be able to single out some particular individual on the basis of his utterance. The speaker is in effect saying "The headmaster (whoever he is) has no control".

²This is a worry pressed by Donnellan (1968, p. 204, fn. 5), who suggests that when there is no definite range of information the speaker has in mind which would complete her incomplete description, then the description is being used referentially. However, this is not a conclusion endorsed by Neale (1990).

In other words, it simply doesn't follow from the fact that a description stands in need of contextual supplementation that it is a referring term or is being used as such. Neale (1990) reinforces this point by noting that it is not only definite descriptions which stand in need of contextual completion. This phenomenon is much more widespread, and applies also to quantificational expressions, such as those in "Every child must have his or her own pencil" or "Most men are wearing tuxedos".

For instance, suppose "Most men are wearing tuxedos" is uttered by a salesman to a customer who is trying to decide what to buy to wear at the charity ball being held in the town that night. In such a context, "most men" means something like "most men who are attending the charity ball tonight".

We are not tempted to claim that quantificational expressions are really referring terms. Thus the fact that an expression stands in need of contextual supplementation does not by itself tell one anything about the correct semantics for that expression, or expressions of that kind.

Secondly, it does *not* follow from the fact that an incomplete definite description must be supplemented with non-descriptive information that the description is functioning in this case as a referring expression. For example, it does not follow from the fact that the incomplete description "the headmaster" must be contextually supplemented to yield something like "the headmaster of *this* school" that therefore "the headmaster" is functioning as a referring expression.³ A description with a referential component is not *ipso facto* a referential description (viz., a description functioning as a referential term). Neale (1990, pp. 99–100) makes this point in responding to an argument by Wettstein (1981): "To the extent that one countenances indexical and demonstrative referring expressions—and Wettstein certainly does—if "*b*" is an indexical or demonstrative then '[the *x* : *Rbx*]' is a perfectly good Russellian description, albeit one with an indexical or demonstrative component" (1990, p. 100).

One could reinforce this point by considering again quantificational expressions such as "every child" or "most men". In some contexts "every child" might mean something like "every child here now". The fact that such contextual supplementation with non-descriptive elements is needed in order to interpret the speaker's utterance does not show that "every child" is after all a referring expression, or that it is being used referentially here.

³ Another example which illustrates this point is given by Evans (1982). Suppose you are driving through a town whose streets are in disrepair, and you turn to your companion and utter the words "The mayor ought to be impeached". Here it is plausible to say the "the mayor" must be contextually supplemented to yield "the mayor of *this* town". Yet the description is being used attributively to mean "the mayor, whoever s/he is, should be impeached".

3. Schiffer's "dilemma"

It is now possible to characterize the tension that Schiffer sees between the hidden indexical theory of definite descriptions and the direct reference theory of indexicals. For the purposes of the current discussion, the direct reference theory of indexicals is the view according to which the semantic value of an indexical or demonstrative is exhausted by its referent.⁴

Schiffer begins by noting that if one thinks that contextual information is relevant to the interpretation of a speaker's use of an incomplete definite description, then one should concede that such contextual supplementation is often needed to interpret a speaker's use of an indexical expression as well. For instance, a speaker's utterance of "He irritates me" might require the listener to supplement the pronoun with contextually available information in order to understand the speaker to be referring to the man in the photograph the speaker is looking at, or the man across the room from the speaker.

Schiffer claims that the very same psychological facts that support the hidden indexical theory of descriptions support the claim that, when a speaker utters a sentence containing an indexical which stands in need of supplementation by descriptive information, the speaker performs a *description-theoretic act*; i.e. the speaker expresses a descriptive rather than a object-dependent proposition. Schiffer concludes that anyone who defends the hidden indexical theory of descriptions should by parity of reasoning accept the *hidden indexical description theory of indexicals*.

Someone who was committed to the hidden indexical description theory of indexicals would have to explain why it seems to someone like Schiffer that utterances containing indexicals communicate object-dependent propositions. But this person could in principle opt for an answer which parallels Neale's Gricean defense of the theory of descriptions. That is, the person could distinguish between the proposition expressed and the proposition(s) meant. The proposition the speaker expresses by "He irritates me" would be descriptive, whereas the proposition meant would be object-dependent, and the listener would have to infer this object-dependent proposition on the basis of an appeal to Gricean conversational principles and maxims.

Schiffer concludes that a defender of the hidden indexical theory of descriptions cannot, except in an *ad hoc* manner, opt for the direct reference

⁴Following Mark Crimmins (1992) I would distinguish the theory of direct reference from the theory of *direct contribution*. The latter doctrine says that the contribution a referring term makes to the proposition expressed by the sentence of which it is a part is exhausted by its referent. Crimmins argues against direct contribution, but wishes to maintain direct reference.

theory of indexicals over the hidden indexical description theory of indexicals. In order to opt for the direct reference theory of indexicals over the hidden indexical description theory of indexicals, one would have to *deny* the semantic relevance of the fact that indexicals require contextual supplementation for their interpretation. Yet if one accepts the hidden indexical theory of descriptions, one has to say that with respect to *descriptions*, facts about the need for contextual supplementation *are* semantically relevant. But to posit such an asymmetry between indexicals and descriptions is arbitrary and unmotivated. If psychological facts about the need for contextual supplementation are semantically irrelevant in the case of indexicals they should be irrelevant in the case of descriptions too, in which case one is forced to give up the hidden indexical theory of descriptions.

4. *The rejection of Schiffer's "dilemma"*

My objection to Schiffer's claim that the hidden indexical theory of descriptions cannot reasonably be held together with the direct reference theory of indexicals is as follows. Schiffer assumes that if one holds that an indexical expression such as "he" must be completed in context by appeal to descriptive information, then one is committed to saying that the expression is a disguised description, and that the proposition expressed with its help is description-theoretic. But this is a mistake. The mistake is the mirror of the one mentioned at the end of §2. Just as it does not follow from the fact that a description which is completed using *non*-descriptive information is a *referring* expression or is functioning as such, so too it does not follow from the fact that an indexical which is supplemented with *descriptive* information is a descriptive or *denoting* expression or is functioning as such.

So, someone can very well be committed to the idea that indexicals require contextual completion—or *enrichment*, as I prefer to say, following Sperber and Wilson (1986)—with descriptive information (including information which goes beyond that which can be extracted on the basis of the conventional meanings/characters of the indexicals) *without* thereby being committed to the idea that indexicals are disguised descriptions.

Thus Schiffer has not after all succeeded in showing that no reasonable person can simultaneously hold the hidden indexical theory of descriptions and the direct reference theory of indexicals. The psychological facts appealed to by the defender of the hidden indexical theory of descriptions do not compel the defender rationally to prefer the hidden indexical description theory of indexicals over the direct reference theory of index-

icals, because the psychological facts do not compel the defender to hold the hidden indexical description theory of indexicals in the first place. To think they do is to make the mistake described above.

I hope it is clear that in arguing against Schiffer (1995) and indirectly defending Neale (1990) I am not thereby arguing in favor of Neale's proposals. Neale appeals to the need for contextual completion to defend the Theory of Descriptions against the threat posed by facts about the use of improper descriptions. But this does not mean that anyone who appeals to the need for contextual completion in the understanding of descriptions (and indexicals) is thereby committed to the Theory of Descriptions. I would argue that contextual completion plays a crucial role in the interpretation of *all* utterances. However, I subscribe neither to the hidden indexical theory of descriptions, nor to the hidden indexical description theory of indexicals.

5. A pragmatic account of the referential/attributional distinction

What then is the correct view to hold with respect to the referential/attributional distinction? Three points must be taken into consideration in any satisfactory account of this distinction. Firstly, the fact that an expression stands in need of completion, whether by descriptive or non-descriptive information, does not by itself tell one whether the expression is a referring term or a denoting term, or whether it is being used referentially or attributionally. This suggests that there must be some independent way of marking out the distinction between these two sorts of terms, and between these two sorts of uses, which does not depend on facts about the need for contextual completion.

Secondly, although Schiffer is wrong when he claims that anyone who holds that indexicals must on occasion be contextually enriched with descriptive information is committed to the view that indexicals are (or are in these uses) disguised descriptions, he is correct when he says that there are cases in which indexicals and demonstratives are used attributionally. Schiffer offers the following example of an attributionally used indexical: "...upon encountering a huge footprint in the sand, you might exclaim, 'He must be a giant!', and arguably what you would mean is *that the man whose foot made the print, whoever he is, must be a giant*" (1995, p. 123, Schiffer's emphases).

Nunberg (1991) presents several putative examples of attributionally used indexicals, which are cited by Récanati (1993). Further examples are

given by Nunberg (1993). The following is an example along the lines of one cited by Nunberg (1993, p. 21). Suppose that Bill Clinton is giving a press conference to introduce his latest appointee to the Supreme Court. He utters the following sentence:

- (2) The Founding Fathers invested *me* with the power to appoint Supreme Court justices.

Here Clinton is not saying that the Founding Fathers had Bill Clinton in mind in particular when they wrote the Constitution. Obviously they could not have done so. For this reason it is plausible that what is said by an utterance of (2) in the circumstances imagined is something like the following:

- (3) The Founding Fathers invested *the president* with the power to appoint Supreme Court justices.

Another example based on one given by Nunberg (1991) is the following:

- (4) *You* are entering Grand Rapids.

Suppose this is printed on a board at the side of a road leading into Grand Rapids. In this context the pronoun in (4) does not refer to you or to any specific individual. Rather, (4) means something like:

- (5) *The appropriately positioned reader(s) of this message* is (are) about to enter Grand Rapids.⁵

A third example, inspired by one using “I” given by Nunberg (1993, p. 20), is the following. Suppose you are standing around with a group of your colleagues after a talk by a visiting speaker. You turn to the visitor and say:

- (6) *We* traditionally go for drinks after the talk.

Here you are not referring to the group including yourself and your colleagues who are standing around the visitor at this moment. Rather, you are saying something like:

⁵It may be that “you” in (4) is not being used attributively, but is functioning as a bound variable. E.g. in “He who hesitates is lost” or “If you want to succeed as an actor you must have a good agent” the pronouns “he” and “you” are variables bound by an implicit universal quantifier. It has long been recognized that pronouns can function as bound variables. For instance, this fact is mentioned by Kaplan (1989, pp. 489–90), and he brackets out such uses from the account he gives of demonstratives, indexicals and pure indexicals. If it is thought that the pronoun “you” in (4) is likewise better treated as a bound variable, I would offer the following replacement example: Suppose you are alone in the house and not expecting your spouse to return for many hours. You hear a loud crash as the door bangs open, and you think that an intruder has entered your house. Just then your spouse walks into the room, and you say “I thought you were a burglar”. Here it is plausible to say that what you thought was that *the person who crashed through the door* was a burglar. You did not entertain the thought that your spouse was a burglar.

- (7) There is a tradition for *the people present at the talk* (whoever they are) to go for drinks after the talk.

Thus any account of the distinction between referential and attributive uses of expressions must enable us to explain not only cases of descriptions being used referentially, but also cases of indexicals and demonstratives being used attributively.⁶

Thirdly, the fact that both referring and denoting terms have both referential and attributive uses suggests that the distinction between referential and attributive uses must be accounted for on *pragmatic* grounds. But it is an open question as to what sort of pragmatic account is appropriate. In the discussion thus far I have not challenged the tacit assumption made by Neale (1990) that either one posits a semantic ambiguity for “the *F*” and treats “the *F*” as it occurs in referential uses as a homonym of “the *F*” as it occurs in attributive uses, or one accounts for referential uses of descriptions by appeal to the Gricean notion of a conversational implicature. Similarly, Schiffer (1995) tacitly assumes that the only sort of pragmatic account available is a Gricean one.

These do not exhaust the options. There is an alternative pragmatic explanation, which appeals to the Theory of Relevance developed by Sperber and Wilson (1986). Several researchers have appealed to Relevance Theory in giving an account of the referential/attributional distinction. Récanati (1993, chs. 15–6) argues for a relevance-theoretical treatment of the distinction as it applies to definite descriptions and indexicals respectively. Rouchota (1992, 1994) appeals to Relevance Theory to give an account of the distinction as it applies to definite and indefinite descriptions respectively. The basic premise behind these accounts as it applies to definite descriptions is that expressions of the form “the *F*” are not semantically ambiguous but, rather, *semantically underdetermined*. To interpret a sentence containing such an expression, pragmatic processes of various sorts must operate on an incomplete conceptual representation of the meaning of such a sentence, so as to yield a complete

⁶I would argue that other terms which are usually thought of as singularly referring terms (e.g. proper names and natural kind terms) can *also* be used attributively. Here I part company with Nunberg (1993, pp. 21–2 and fn. 26). E.g., suppose you and I both believe that Jane is a timid, wimpy sort of person. You are telling me a story about how Jane allowed someone to take advantage of her, and I ask you why Jane did not do something to prevent the situation. You might reply “Oh you know, Jane is just Jane”, meaning to say that Jane just is a wimpy sort of person. (Thanks to Sue Sroda for this example.) Similarly, there are situations in which the listener is intended to use the (Putnamian) stereotype associated with a natural kind term in a criterial rather than an identifying way. Thus in some contexts I might utter the sentence “He is a man” and mean that the person I am referring to is strong and rational and unemotional (or whatever one’s stereotype of a man is!). So my utterance might be true even if it turned out that the person I am referring to is a cyborg and not a human male.

representation of the truth-evaluable content which that sentence has when used in some particular conversational context. Pragmatic processes of various sorts have been posited by relevance theorists, but at bottom all these processes are supposed to operate in accordance with what Sperber and Wilson call the Principle of Relevance, which will be discussed in more detail below.

I too favor a relevance-theoretical account of the referential/attributive distinction. I will argue for a view according to which “the *F*” has a unitary meaning at the level of what might be called linguistic semantics—see Rouchota (1994, p. 446)—but I’ll argue that at the propositional level a sentence containing a definite description can express either an object-dependent or a general proposition, depending on facts about the context of utterance. I will also say something about the sorts of pragmatic processes which lead a listener to recover the proposition expressed by a speaker on the basis of a grasp of the linguistic meaning of the speaker’s expressions. A parallel pragmatic account will be given for the referential/attributive distinction as applied to indexicals.

I should stress that this pragmatic account is different from one which appeals to the Gricean notion of conversational implicature in order to account for referential interpretations of definite descriptions and attributive interpretations of indexicals. Gricean conversational implicatures are inferred on the basis of what the speaker *said* (i.e. on the basis of the proposition expressed by the speaker’s utterance). But according to the relevance-theoretical alternative that I am defending, pragmatic processes are needed even for the determination of what the speaker *said*, and not merely to determine what the speaker conversationally *implicated*. That is, pragmatic processing is needed for the recovery of what Sperber and Wilson call *explicatures*, as well as for the recovery of implicatures.

Here I can give only a brief sketch the view I favor. Let us suppose that when a listener interprets a speaker’s utterance, the initial syntactic processing of the utterance occurs in the way that linguists in the Chomskyian tradition say it does. This initial language processing is carried out inside a language module, which is governed by its own proprietary rules and principles, and whose internal processing is not influenced by consciously accessible beliefs. If we think of this language module as a receiver and/or interpreter of utterances, its input is a representation of the acoustic or visual or tactile properties of an utterance (depending on whether the utterance is spoken or written or etched in Braille) and its output is a representation of the utterance’s logical form (LF), in the linguist’s rather than the philosopher’s sense of “logical form”. It is the output of this decoding process which is the input to the pragmatic processes of disambiguation, reference assignment and enrichment posited by Sperber and

Wilson. It is not until these pragmatic processes have operated on the representation of the utterance's LF that the listener is able to recover the proposition expressed by the speaker's utterance.

The idea that the representation of the LF of an utterance may not yield a complete proposition has long been recognized, though it was generally assumed that disambiguation and reference assignment were the only things needed to yield a complete proposition. Moreover, reference assignment was frequently supposed simply to be a matter of searching the context for an object which satisfied the descriptive character associated with the expression. This is the way that Kaplan, for example, conceives of reference assignment for the class of expressions he calls pure indexicals (see Kaplan 1989, p. 491). Sperber and Wilson's contribution has been to show that further pragmatic processes of enrichment are often needed in order to recover an utterance's explicature.⁷

Relevance theorists have posited various sorts of enrichment processes. Récanati (1993, ch.14), for example, taking off from discussions by Sperber and Wilson (1986) and Carston (1991), discusses three sorts of primary pragmatic processes, which he labels saturation, free enrichment and transfer. Free enrichment in turn is conceived as involving either a process of strengthening or one of enlarging, and transfer is said to be either analogical or metonymical. I will say a little more about the character of some of these processes when I discuss some examples below. There are also several discussions in the literature which challenge the views of relevance theorists. For instance Bach (1994) agrees with Sperber and Wilson that reference assignment and disambiguation are not the only pragmatic processes needed in order to recover the proposition expressed by an utterance, but he wishes to draw the boundary between implicatures and explicatures at a somewhat different place from Sperber and Wilson. Bach thinks that we have to recognize a middle ground between explicature and implicature, which he calls implicature. He posits two different sorts of processes, which he calls completion and expansion, which are involved in the recovery of

⁷ Sperber and Wilson think that in addition to the proposition expressed by an utterance, which I am identifying with that utterance's explicature, an utterance also has many higher-level explicatures, resulting from embedding the utterance's truth-evaluable content in expressions of propositional attitude. E.g. when Sperber utters the sentence "I've had breakfast", he expresses the proposition that Sperber has had breakfast on the day of his utterance. But he also expresses the higher-level explicatures that Sperber has said that Sperber has had breakfast on the day of his utterance, that Sperber believes that Sperber has had breakfast on the day of his utterance, and so on. These higher-level explicatures are deemed not part of the truth-conditional content of the speaker's utterance. I will say no more here about higher-level explicatures, and in the text when I talk of an utterance's explicature, I will mean the utterance's truth-evaluable content, i.e. the proposition expressed by the utterance or what is said by the utterance—these are all different ways of saying the same thing, for the purposes of this paper.

explicatures and implicatures respectively. However, here I will have to gloss over some of these finer points.

The claim that is crucial for my current discussion is that there are at least two levels of processing which are involved in the recovery of the proposition expressed by a speaker's utterance. At the first level, a process of decoding yields a representation of the utterance's LF. At this level we have an incomplete conceptual representation, which does not yet specify the complete content of the speaker's utterance. My claim is that it is at the level at which a representation of LF is available that all definite descriptions of the form "the *F*" are given a unitary analysis. Here I will follow Récanati (1993) and simply assume that the meaning of such a descriptive phrase is analyzed in terms of descriptive concepts, and leave unspecified exactly what sort of analysis is involved. But at this level, the meanings of indexicals and demonstratives, such as "that man", "I", "you", "he", "now", "today", "hereabouts", and so on, are *also* given in purely descriptive terms. For instance, the character associated with "I" is something like "the utterer of this token", the meaning of the pronoun "he" is something like "the male in the context", and so on.⁸

Now, in order to understand what proposition is expressed by a speaker's utterance, the representation of the utterance's LF has to be enriched in various ways with information available in context. Enrichment is an essentially *non*-modular inferential process.⁹ The process depends on consciously accessible *non*-linguistic information. That is, the listener will construct assumptions using information extracted from context on the basis of observation, or using information which is retrieved

⁸ Smith (1989) would challenge the claim that indexicals such as "I", "here" and "now" have fixed characters, which are invariant from context to context. He argues that the character associated with "now" cannot be "the time at which this token is produced", since "now" does not always refer to the time at which it is uttered. He thinks that "now" can also refer to moments of time in the past or the future relative to the time of the utterance. "Now" can also sometimes refer to imaginary times, and there are non-temporal uses of "now", in which "now" refers to a position in a non-temporal sequence (e.g. a particular place or stage in a mathematical proof). However, Smith does think there is a fixed meta-rule associated with an indexical, which determines which lower-level rule is to be used in a particular context.

If Smith is right about this, then the unitary semantic analysis I am proposing will be at the level of this meta-rule. In other words, context will have to do even more work than it has generally been assumed, but this by itself is no embarrassment to my view.

⁹ Wilson and Sperber (1991) argue for the non-modularity of pragmatics, and claim that pragmatics is the domain in which grammar, logic and memory interact. Sperber (1995) argues that thought is thoroughly *modular*. However, Sperber's new position may still be compatible with what I say in the text, as he still believes that pragmatic processes are driven by a non-domain-specific process of relevance-guided attention, and he still believes that such pragmatic processes involve meta-representational capacities of the sort presupposed by my account.

from encyclopedic or long-term memory. So the picture is as follows: one of the inputs at this second (pragmatic) level of processing of a speaker's utterance is the representation of the utterance's LF, which is constructed at the first level of (syntactic and semantic) processing. Other inputs are the ordinary beliefs and assumptions which are accessible in the listener's current mental context. The output is a representation of the content of the speaker's utterance. Elsewhere I have argued that communication is successful if the content of the thought the listener comes to entertain as a result of this interpretive process is relevantly similar to the content of the thought expressed by the speaker's utterance (Bezuidenhout 1997).

An example which illustrates the fact that pragmatic enrichment makes use of consciously accessible, non-linguistic information is the following:

(8) The policeman spoke to John last night. He had just been arrested. Here the first-level descriptive information "the male in the context who had just been arrested" associated with the pronoun "he" is not identifying, because two males, viz. John and the policeman, have been made salient in the prior discourse context, and either could be the intended referent. But, let us suppose, it is mutually manifest to speaker and listener that John is a lawyer who specializes in the defense of policemen accused of corruption. The listener will use this mutually manifest background assumption to conclude that the policeman was the one arrested last night, with the result that "he" is treated as coreferring with "the policeman".

A similar sort of example makes the point with respect to definite descriptions. Consider:

(9) John pushed open the front door of the house and peered inside.
The hallway was dark.

Here it is understood that the hallway being referred to is the hallway in the house which John has just entered. The listener will access encyclopedic information about typical houses and the typical layout of a house, in order to enrich the meaning of "the hallway" and establish its referent.

In example (8) above I assumed that the pronoun "he" was being used referentially; that is, the speaker intended the listener to use the first-level descriptive information "the male in the context who had just been arrested" in an identifying way. But I would argue that this fact about the speaker's intentions is itself something which must be determined in context. That is, the listener has to decide whether the speaker intends the first-level descriptive information associated with a term to be used in an *identifying* way, or in what I'll call a *criterial* way. Call the speaker's intention that the first-level descriptive information associated with an expression be used in a certain way the speaker's *directive intention*. I am claiming that this directive intention is itself something which needs to be identified on the basis of contextually available information. The

speaker's directive intentions can be inferred from mutually manifest facts about what is or is not identifiable from the context, about what the listener can be expected to know, about who the speaker is likely to be acquainted with and so on.

Typically, when a speaker utters a sentence containing an *indexical*, the listener is intended to use the first-level meaning in an identifying way. In this case the listener will treat the first-level descriptive information as a clue to its source, and hence come to think of the speaker's intended referent under what I would call an *object-dependent mode of presentation*.¹⁰

For instance, suppose the speaker utters "He is a giant" in a context in which a very large and tall man is visually copresent to the speaker and the hearer. The first-level descriptive meaning associated with "he" is "the [large] male in the context". In the imagined case there is something which is so obviously identifiable as the male in the context that the listener is likely to infer that the speaker intends the first-level descriptive information to be used in an *identifying* way, and hence will interpret the speaker as expressing an object-dependent proposition.

In some contexts the descriptive information "the male" will be inadequate for purposes of identification, because there is more than one male present. In this case the first-level descriptive meaning will have to be supplemented with contextually available information, by a process of pragmatic enrichment. Example (8), the example about John and the policeman, is one in which enrichment of the first-level meaning must first occur before the listener can use this in an identifying way to grasp what the speaker said.

¹⁰On my view a sense or mode of presentation is a way of cognitively organizing information. One way to cash this out is to see the cognitive system as involved in the classification of information into mental files or dossiers. Thus the distinction between a mode of presentation which is relational (or *de re*) and one which is satisfactorial (or descriptive) is a distinction involving two different kinds of ways of cognitively organizing information; two different cognitive means for the classification of information. An *object-dependent* mode of presentation is individuated (at least partly) in terms of the object which is the causal source of the information it organizes. This means that information is stored in a mental file if it originates from a certain source. Here it is important to stress that the information gets into the mental file in virtue of the existence of a certain sort of causal or other comparable epistemic relation holding between the cognitive system and some source object, and not because of some principle internal to the cognitive system which sorts information according to whether or not it pertains to the object which is judged to be the source of that very information. The latter sort of case would involve a mode of organization which is descriptive rather than relational. A *descriptive* mode of presentation is one which involves a principle of organization internal to the cognitive system. This means that information gets into the mental file according to whether it pertains to an object which the system "judges" to satisfy some condition, where the "judgment" may be unconscious.

On the other hand, the speaker may sometimes intend the listener to use the first-level descriptive information in a criterial way, in which case the listener is not intended to use the information to track some object. Instead, the descriptive concept itself becomes a constituent in the proposition the listener entertains, and the listener thinks of the object under a descriptive mode of presentation. This is the case with Schiffer's example "He is a giant", said by a speaker who sees a huge footprint in the sand. The listener is intended to use the descriptive information "the [large] male in the context" in a criterial way, given that there is nothing readily identifiable as a man in the context.

Schiffer's example also illustrates the point that enrichment may be needed *even in cases in which the pronoun "he" is used attributively*. To adequately grasp the content of the speaker's utterance, the first-level descriptive meaning has to be enriched to something like "the [large] male whose feet left these prints in the sand", and this completed description is the one which the listener is intended to use criterially. Hence the listener understands the speaker to have said that the man who left the footprints in the sand, whoever he is, is a giant.

Similar remarks apply to the example of the signpost with the message "You are entering Grand Rapids". The reader is intended to take the first-level descriptive information associated with the pronoun "you" (viz. "the reader of this message") in a criterial rather than an identifying way, given the manifest fact that any particular reader of the sign is not likely to be personally acquainted with the architects of the sign. But first the descriptive information has to be enriched to yield something like "*the appropriately placed* reader of this message". For instance, someone who views the sign through binoculars from far away is not appropriately placed. Nor is someone who sees the sign as she glances over her shoulder on the way out of Grand Rapids.

Example (2), the Bill Clinton example, works in a slightly different way. It is clear that the Founding Fathers did not have any intentions directed towards Bill Clinton in particular, or towards any particular person living today. This will lead the listener to assume that the first-level descriptive information associated with Bill Clinton's use of the pronoun "me" (viz. "the utterer of this token") must be used in a criterial, rather than an identifying way. But first this character must be pragmatically enriched. Here a different sort of pragmatic process, one that Récanati (1993, ch. 14) calls *metonymical transfer*, is needed. A pragmatic process of transfer enables the listener to move from a focus on the property of being the utterer of the token "me" to a focus on a property associated in the context with the utterer of the token, in this case the property of being the president of the United States. The listener will therefore understand Bill Clinton to have

said that the Founding Fathers invested the president of the United States with the power to appoint Supreme Court justices. Of course, the inference here, from the property of being the utterer to the property of being the president, relies on a good deal of background and contextual knowledge, e.g. about who the Founding Fathers were, about what they were doing when they wrote the Constitution, about how it is possible to distinguish a person from the role he occupies, and so on.

It should be clear that the distinction between attributive and referential uses of definite descriptions is going to be handled in a similar way. The speaker intends the listener to use the descriptive concept recoverable at the first level either in an identifying or a criterial way. But this descriptive information may need to be pragmatically processed in various ways before it can be used in the intended way. For instance, a pragmatic process of free enrichment might be needed, or a process of metonymical transfer might first have to operate.¹¹

In the remainder of this section I would like to address three possible objections to the account I have sketched. Firstly, since the pragmatic

¹¹Rouchota (1994) discusses various uses of *indefinite* descriptions. Besides referential and attributive uses, she distinguishes what she calls specific uses (e.g. “A *colleague of mine* is coming for dinner tonight”, where it is clear the speaker has a particular individual in mind, but the listener is not expected to be able to identify this individual), predicative uses (e.g. “This is a *fish*”), generic uses (e.g. “A *pig* likes to roll in the mud”) and functional uses (e.g. “An *hostelry* has stood on this spot for 200 years”, where it is not assumed that some one hostelry stood in that place throughout the 200 years). She explicitly mentions that definite descriptions have attributive, referential and functional uses (e.g. “The *president* changes every four years”). However, it is clear that definite descriptions also have specific uses (e.g. “The *man I met on holiday* is coming to visit me tomorrow”), predicative uses (e.g. “He is the *president*”) and generic uses (e.g. “The *wolverine* is a fierce animal”). I would claim that many of these sorts of uses are possible for indexicals and demonstratives as well. Besides referential and attributive uses, there are predicative uses (e.g. “You are *you*”, where this means something like “You are the person with such-and-such qualities”), generic uses (e.g. “*He* who hesitates is lost”) and functional uses (e.g. “The provost speaks to *this group* every year”, where it is not assumed that the same people constitute the group every year). Rouchota (1994) shows how the various uses of indefinite descriptions can all be accounted for on the basis of the general communicative principle of relevance. I would like to claim that all the various uses of definite descriptions, indexicals and demonstratives can likewise be accounted for in relevance-theoretical terms, and that the accounts we give for the uses of these different classes of expressions will exhibit interesting parallels. I hope that in this paper I have taken a small step towards providing such a unified account. In holding out for such a unified account I depart somewhat from Rouchota (1992 and 1994), as she argues that referential uses of definite and indefinite descriptions are *not* parallel. In the case of referential uses of definite descriptions she argues that an individuated representation of the referent—which may be somewhat similar to what I would call an object-dependent mode of presentation of the referent—is a part of the *explicature* of the utterance, whereas in the case of the referential use of an indefinite description she argues that the proposition containing an individuated representation of the referent is merely an *implicature*.

account I am giving has many similarities to the one offered by Récanati, it is necessary to face an objection raised by Neale (1990, ch. 3, pp. 110–2, fn. 36). He argues that an account like Récanati's in effect reduces to one according to which "the *F*" is semantically ambiguous. Secondly, one may insist that I say more about the unitary semantic analysis which I claim is possible at the level of LF, to allay fears that the analysis fails to respect the principle of compositionality of meaning. Thirdly, it is necessary to spell out in more detail how context can play the role I attribute to it, since context plays such a central role in my account. I'll address these problems in turn.

Neale's complaint is that a view according to which what is expressed by "The *F* is *G*" is sometimes a general or object-independent (OI) proposition and sometimes an object-dependent (OD) proposition (depending on features of the conversational context) is tantamount to a view which says that "the *F*" has two meanings. Neale's reasoning seems to be as follows: we understand what it is for something with a unitary meaning to lead to different propositions in different contexts. For instance, the standard view about indexicals is that the character of an indexical is fixed, but that the same character can determine different propositions in different contexts. However, although different propositions result from the same character in different contexts, the resulting propositions are all of the same type; they are all OD propositions (if we ignore alleged cases of attributive uses of indexicals). But on my account, the proposition which results from the allegedly unitary first-level descriptive meaning of "The *F* is *G*" is sometimes an OD proposition and sometimes an OI proposition. The objection is that we have no explanation for how such very different *types* of propositions could result from something with a unitary meaning. The only sensible explanation is that there are two *different* meanings, a referential meaning [[the F_R]], and a quantificational meaning [[the F_Q]], which lead to these two different types of propositions.

However, I do not think that this argument is decisive. For one thing, in appealing to the way the character of an indexical is used in the recovery of a proposition as a model against which to assess a proposal like mine, Neale tacitly assumes that the character of an indexical always determines an OD proposition. But this begs the question against the proposal I favor, because my claim is that attributive uses of indexicals require us to entertain the possibility that the character of an indexical sometimes determines an OI proposition. So as yet we have no reason to deny that some one type of first-level meaning could lead to the recovery of two different types of proposition at the second level, given that there is sufficient difference in the context. Of course, this puts a heavy burden on the notion of context, and one is now obliged to say more about how context is used in the recovery of the proposition expressed, which is the third problem I said I would

address. Before turning to this problem, I need to say a little more in defense of my claim that we can give a unitary semantic analysis of the meaning of a definite description of the form “the *F*” at level of LF, whether the description is used referentially or attributively.

Earlier I said I wanted to remain neutral about the semantic analysis to be given for descriptions of the form “the *F* is *G*” at the level of LF, and I said simply that the analysis will involve descriptive concepts. But one might worry (as did a reviewer for this journal) that by remaining neutral at this point I side-step the hard problem of giving a compositional account of the meaning of “the *F*” or of “the *F* is *G*”.

The unitary meaning that I am positing at the level of LF for a definite description of the form “the *F*”—whether this description is used referentially or attributively at the propositional level—is represented as a structured set of semantic features or lexical concepts. As a first pass, I suggest that “the *F* is *G*” is to be analyzed as follows:

[[Feature *F* is uniquely instantiated by an *x* which has the feature *G*]].

This is an incomplete conceptual representation, which will need to be contextually completed. First of all, enrichment processes may operate which add features retrievable from memory or perception to this representation. Then contextual evidence of the speaker’s directive intentions will determine whether the complete proposition expressed by the speaker existentially quantifies over the slot for a unique individual in the LF representation, or, rather, contains a *de re* concept of a unique individual which can be tracked by its possession of the enriched set of features.

Nothing in the LF representation requires that the unique *F* be an actually existing object. Here I agree with Rouchota (1994, p. 454) that “hearers will assume that the individuals and objects being talked about exist unless they have reason to believe that such an inference is not warranted: for example, in fictional contexts or when a description falls within the scope of a possible world setting operator”. In other words, the existential presupposition will be a pragmatically determined aspect of the meaning recovered.

The above analysis supposes that the determiner “the” signals *uniqueness*, and that the main difference between definite and indefinite noun phrases (NPs) is that the former encode the feature of the uniqueness of the referent. Support for this comes from consideration of examples such as: “There are several red balls and one blue ball in the container. Please hand me a red ball and the blue ball.”

Several linguists have disputed the idea that “the” signals the uniqueness of the referent. Heim (1982) has argued that the difference between definite and indefinite NPs is that the latter introduce new discourse referents, whereas the former signal discourse referents which are already famil-

iar. Support for this comes from examples such as the following: “Irene put forward a proposal. The proposal was unanimously accepted.” However, Heim’s view is problematic, for, when coupled with one fairly widely accepted characterization of discourse anaphora, it appears to rule out the possibility of using definite descriptions non-anaphorically.

An expression is a discourse anaphor if it is being used to refer to some item which has been of focal interest in the preceding discourse context. Ehlich (1982) puts this as follows:

The anaphoric procedure is a linguistic instrument for having the hearer continue (sustain) a previously established focus towards a specific item on which he had oriented his attention earlier. The anaphoric procedure is performed by means of anaphoric expressions. (Ehlich 1982, p. 330)

The point of this way of characterizing anaphoric uses of expressions is that it does not suppose that there is a *linguistic* antecedent for the anaphorically used expression (i.e. a coreferring expression in a sentence used earlier in the discourse). All that is required is that the referent of the anaphorically used expression be something which had somehow (either linguistically or non-linguistically) been made salient in the prior discourse context. However, if one accepts this way of characterizing discourse anaphors, then the distinction between anaphorically and non-anaphorically used expressions amounts to the difference between expressions which are used to signal referents which are already familiar and referents which are new. This is precisely how Heim (1982) characterizes the difference between definite and indefinite NPs. Thus Heim’s semantic proposal would have the consequence that definite descriptions cannot (or cannot without infelicity) be used to introduce *new* discourse referents. Since it is clear that they *can* be so used, her semantic proposal must be rejected.

The following examples show that it is possible to use definite descriptions to introduce new referents. Moreover, new referents can be introduced by means of *either* a referentially *or* an attributively used definite description. The content inside the braces in (10) and (11) below represents the content which will be retrieved in the conversational context by a process of pragmatic enrichment:

- (10) *The gas company* {which is responsible for maintaining our gas lines} is sending a man to fix the leak.
- (11) Enter the Coca Cola Sweepstakes now! *The grand prize winner* {of the Sweepstakes} will win an all-expenses-paid trip for two to the Bahamas.

In the case of (10), imagine that your spouse has just returned home, and it is clear that he has noticed the smell of gas for the first time, perhaps because he sniffs ostentatiously. (Here I am drawing on the discussion by Sperber and Wilson 1986, p. 55.) You utter (10). In this context, the description “the

gas company” is being used referentially, but it is also being used to establish a new discourse referent. The referent is established here despite the fact that you and your spouse have not previously discussed the gas leak nor talked about the possibility of calling the gas company to send someone to repair the leak. In (11) on the other hand, the description “the grand prize winner” is being used attributively, to refer to the winner of the Sweepstakes, whoever s/he turns out to be. The description is also being used to introduce a new discourse referent.

It is true that in both these cases the referent, though new relative to the discourse context, is nevertheless easily accessible. Thus I am in agreement with Kempson (1986), who argues that it is not the familiar/unfamiliar distinction which is marked by “the”, but rather whether the discourse referent is *easily accessible* or not. Support for this comes from examples such as the following: “Ruth and Irene decided to go fishing. But after Ruth fell into the river they had to go straight home. So they didn’t catch any fish.” Here the referent of “the river” should be highly accessible, as talk of fishing should have activated the listener’s script for a fishing trip, which will include the knowledge that such trips involve going to a body of water, such as a river or a lake.

Kempson (1995) argues that the feature marked by “the” is *procedural* rather than *conceptual*. That is, it encodes an instruction to look for the most accessible discourse referent. The feature of accessibility will not itself become a part of the proposition expressed by “the *F* is *G*”.¹²

¹²The procedural/conceptual distinction also arises when we are talking about the referential use of a term, for we can ask whether the descriptive features which are a part of the enriched LF become a part of the proposition expressed, or whether these features play a merely procedural role, which help to identify the referent in the context, but which do not themselves become aspects of the truth-evaluable content of the utterance. Rouchota (1992) argues with respect to referential uses of definite descriptions that these descriptive features do become a part of the proposition expressed. She argues that the difference between referential and attributive uses of definite descriptions is not that the descriptive features are truth-conditionally relevant in the attributive case and irrelevant in the referential case. Rather, the descriptive features are always truth-conditionally relevant. But in the referential case, what Rouchota calls an individuated representation of the referent becomes a part of the proposition expressed, along with the descriptive features. She gives a relevance-theoretical justification for the claim that these descriptive features are not merely procedural aspects of meaning. I too have intuitions according to which the descriptive features recovered at the level of LF are truth-conditionally relevant, even in the case of a referential use of an expression. Bezuidenhout (1996a) argues that the object-dependent modes of presentation associated with indexicals and demonstratives are truth-conditionally relevant. I claim that the descriptive features which constitute the enriched character of a referentially used indexical are truth-conditionally relevant because they become *incorporated into* the object-dependent mode of presentation which is a constituent of the proposition expressed by the utterance containing the indexical. Bezuidenhout (1996b) discusses in some more detail the relation between the procedural/conceptual distinction and the issue of truth-conditional relevance of *de re* modes of presentation.

In the light of this discussion about the semantic role of “the” perhaps it would be best to say that there are a *couple* of features, namely uniqueness and accessibility, which are made available by the use of a definite NP. Which of these features is more important in aiding the listener to retrieve the speaker’s intended referent may vary from context to context. Furthermore, following Kempson (1995), we should say that these features of uniqueness and accessibility encode procedures. They are not conceptual elements which become a part of the truth-evaluable content of the utterance containing the definite NP. With this in mind I suggest the following amended version of my earlier analysis of “the *F* is *G*”:

[[Feature *F* is instantiated <uniquely/accessibly> by an *x* which is *G*]].

I turn now to the third worry, which is that I haven’t said enough about how contextual features can play the role I say they do. In the discussion of examples (2)–(9) above I made sketchy remarks about how contextual clues help in the recovery of the proposition expressed by a speaker’s utterance, and I gave labels for the various sorts of pragmatic processes which I am claiming are involved in this interpretive process. But one might insist on a deeper and more unified explanation of such examples. This can be given in terms of Sperber and Wilson’s principle of relevance.

In our everyday interactions with the world many stimuli compete for our attention. Not all of them will be worth our effort to process cognitively. Other people’s utterances are among the stimuli competing for our attention. The difference between verbal stimuli and other stimuli is that the former communicate a guarantee of their own optimal relevance. This is captured in the *principle of relevance*, which says that an utterance communicates a guarantee of its own optimal relevance.

The degree of relevance of an utterance is a function of its cognitive costs and benefits. On the benefit side, relevance is a matter of the number of contextual effects arising from the processing of that utterance in the listener’s current mental context. There are three sorts of contextual effects an interpreted utterance might have: (1) it can lead to new implications when conjoined with other assumptions accessible in that context, (2) it can lead to the abandonment of an existing assumption *A* by contradicting *A*, and (3) it can strengthen an existing assumption *A* by providing evidence for *A*. On the cost side, relevance is a matter the amount of cognitive effort needed to process that utterance in the listener’s current mental context. An interpretation of an utterance is optimally relevant if it has adequate contextual effects for no gratuitous processing effort.

When a speaker produces an utterance she is guaranteeing her listener that the utterance is optimally relevant, so that processing the utterance is worth the listener’s while. The listener does not have to consider multiple alternative interpretations. If the speaker has designed her utterance well,

the first interpretation the listener retrieves will be the correct one (i.e. the optimally relevant one).

Pragmatic processes, e.g. disambiguation, reference assignment and enrichment processes of various sorts, conform to the principle of relevance. In all the examples I gave above, it should be possible to explain why a certain interpretation is the correct one by appeal to considerations of optimal relevance. Take Schiffer's example "He is a giant" said in the presence of a huge footprint in the sand. This is presumably highly visually salient, and so will be a part of the listener's mental context. Moreover, if it is categorized as a human male footprint, its size will suggest that the person who left the footprint is larger than average. All this information will be a part of the listener's cognitive environment. In this cognitive environment, the speaker can assume that the listener will enrich the character associated with the pronoun "he" so as to yield the representation [[male who left this huge footprint in the sand]]. This will be an interpretation which can be accessed with little processing effort. Also, if there is no large male mutually manifest to speaker and listener either in the physical environment or made salient in the previous discourse context, the listener will understand the speaker to have meant the representation to be used attributively, and will interpret the speaker as having expressed the object-independent proposition that the male who left the footprint in the sand, whoever he is, is a giant. This is an interpretation which has sufficient contextual effects to be worth the cognitive effort to process. For instance, it will strengthen the listener's assumptions that the footprint is human, and that the footprint is large for a human, and this might be relevant if speaker and listener are looking for signs of a human presence, and for evidence as to what sorts of humans they are likely to encounter.

I agree that it is also possible for the listener to assume that the speaker intended the representation [[male who left this huge footprint in the sand]] to be used to track a particular individual, and thus to conclude that "he" is being used referentially. This conclusion might be based on the fact that the speaker is looking fearfully towards a clump of bushes. This interpretation would lead to a different range of contextual effects. For instance, it would imply that although there is currently no large male visually co-present to speaker and listener, the male who left the print is close by, perhaps hiding behind the bush to which the trail of footprints leads. If it is also mutually manifest that large males are aggressive, this might lead the listener to infer that the speaker is warning the listener to get ready to run away.

The fact that these alternative interpretations are possible does not show that my original analysis was incorrect. It simply shows that Schiffer's example is under-described. A realistic conversational setting

would contain much more information than I have specified in my examples, and if we had such a realistic setting before us, it would be easier to say more conclusively what is the optimally relevant interpretation of the speaker's utterance. Here I will rest content with having indicated the main outlines of the sort of account that is available by appeal to the principle of relevance.

6. Comparison with rival accounts

It should be clear that and how my account of the referential/attribution distinction differs from the one offered by Neale (1990). It should also be clear from the frequent citations to the work of Récanati and Nunberg that my account owes much to their work. However, my view also differs from theirs in certain crucial respects. In this section I will explain how our accounts differ, and offer reasons for thinking that my account is superior.

The main difference between my account and Récanati's is that whereas my account of the referential/attribution distinction is essentially the same for both descriptions and indexicals, Récanati treats these cases differently. He thinks that with respect to attributively used indexicals an extra level of processing is needed. He follows Sperber and Wilson (1986) in thinking that the first stage of syntactic processing results in the recovery of a representation of the LF of an utterance, which then needs to be pragmatically enriched. However, whenever a listener interprets an utterance containing an indexical expression, a pragmatic process at the second level which Récanati calls *synecdochic transfer* leads the listener to entertain an object-dependent or *de re* concept or mode of presentation. This is a pragmatic process which leads from the first level descriptive meaning of the indexical to a *de re* concept, which on Récanati's conception contains the first-level descriptive concept as a part (hence the term "synecdochic transfer"). Then, if the indexical is being used attributively, a third level of pragmatic processing leads from the *de re* concept to another descriptive concept. This descriptive concept is the one which ultimately becomes a part of the proposition that the listener understands the speaker to have expressed.

On the other hand, when a description is used referentially there will be just two levels of processing. The first level of syntactic processing yields a representation of the LF of the utterance containing the description, and at this level the meaning of the description will always be represented in terms of descriptive concepts. But then, if the description is being used referentially, this descriptive concept leads by a pragmatic process of syn-

ecdochic transfer to a *de re* concept, and the listener understands the speaker to have expressed an object-dependent proposition.

The difference between indexicals and descriptions according to Récanati lies in the fact that indexicals have a feature REF as part of their first-level meaning. This triggers a non-optional pragmatic process of synecdochic transfer. Descriptions, on the other hand, do not have REF as a part of their first-level meanings. Hence the process of synecdochic transfer is optional with descriptions. It must be contextually triggered, which it will be in those cases in which a description is used referentially.

I have two objections to Récanati's account. Firstly, it is not clear that when indexicals are used attributively there is an extra level of processing of the kind he posits. He wants to retain the idea that indexicals differ essentially from descriptions, and that there is an asymmetry between indexicals and descriptions with respect to their possible uses. He says:

It is true that *both indexicals and descriptions can be used either referentially or descriptively* ... Yet, at the basic level, indexicals must be given a *de re* interpretation, contrary to definite descriptions. That an attributive or descriptive interpretation of indexicals becomes possible at the *next* level of interpretation does nothing to undermine the asymmetry thesis thus understood. (1993, p. 314, his emphases)

A little later he says:

The descriptive use of the indexical presupposes a more basic, referential interpretation, whereas the attributive use of a description is basic and does not presuppose a prior referential interpretation. (1993, p. 316)

The last quotation suggests that Récanati thinks that in order to hold that indexicals and descriptions are truly symmetrical in their uses one has to argue that an attributive use of a description presupposes a more basic referential interpretation. But a defender of the symmetry thesis need argue no such thing. It is only if one is already persuaded by Récanati that there is an extra level of processing required in the case of attributive uses of indexicals that one would be compelled by the symmetry thesis to posit such a basic referential use for the attributive uses of descriptions too. But what the defender of the symmetry thesis ought to dispute is precisely Récanati's claim that an extra level of processing is required in the case of indexicals used attributively.

If one thinks about actual examples, it seems implausible to posit such an extra level of processing. Take Schiffer's example "He is a giant", uttered in the presence of a huge footprint in the sand. Récanati would say that the first-level descriptive meaning associated with "he" has as a component the feature REF, which triggers a non-optional pragmatic process

of synecdochic transfer. The result is that the listener comes to entertain a *de re* concept about the referent of “he”. Then a third level of pragmatic processing takes the listener from this *de re* concept to the descriptive concept *man who left this huge footprint in the sand, whoever he is*. But it is implausible to say that in this case the listener first comes to think of the referent in an identifying way, and then retreats to thinking of the referent in a merely criterial way. I would argue that it is precisely because the listener is unable to think of the referent in an identifying way in the context (i.e. because the listener is unable to track an individual in the context) that the listener understands the speaker to have used the indexical attributively.

My second objection to Récanati’s view stems from the fact that he does not say anywhere how the pragmatic process of synecdochic transfer is contextually triggered in the case of the referential use of descriptions. I would argue that he needs to appeal to a speaker’s directive intentions of the sort I invoked in my account of the referential/attribution distinction. But if directive intentions are sufficient in certain contexts to secure referential interpretations of descriptions in those contexts, then they should equally be sufficient in certain (other) contexts to secure attributive interpretations of indexicals in those contexts. And if directive intentions can do this work in both sorts of contexts, then we can offer a *symmetrical* account of the referential/attribution distinction of the sort I outlined in the previous section.

Nunberg (1993, pp. 31–3) is also critical of Récanati’s claim that indexicals have the feature REF and hence that at some basic level indexicals must always be given a *de re* interpretation. Nunberg thinks that this involves a conflation of what he calls the index and the referent/interpretation of an indexical. He claims that what he calls *strong indexicals* have a deictic component which picks out a contextual element (the *index*), which then serves as a pointer to the *referent* or *interpretation*. But indexicals do not refer to their indices. The recovery of the index is not the recovery of a basic-level interpretation.

Nunberg thinks that reflection on cases of *deferred reference* is helpful. For example, suppose two day care workers are talking about the professions of the mothers of the children in their class. One of them points to one of the boys in the class and says “She is a banker”. Here the boy child is the index and the child’s mother is the referent of “she”. In such cases it is clear that the thing immediately singled out, the index, is not the referent. Rather, the referent is something which stands in some contextually determined relation to the index, and the listener must appeal to considerations of relevance and to contextually available information about the speaker’s intentions in order to recover the referent.

The same point about the need to distinguish the index from the referent can be made by reflecting on uses of the first person plural pronoun “we”. For example, suppose someone is talking to one of her colleagues, who asks her where she spent her vacation and she replies “We went to the Bahamas”. Here the index is the speaker, but the referent is some contextually determined group to which the speaker belongs, in this case presumably the speaker’s family.

The index and the referent/interpretation may coincide as in typical uses of the first person singular pronoun “I” and its variants “me”, “my”, “mine”. But once one has made a distinction between the index and the referent of an indexical, one can see that these might diverge, and this opens up the possibility of attributive uses of indexicals. As Nunberg conceives of attributive uses, these are cases in which the referent/interpretation of an indexical is a *property*, rather than an individual. This is illustrated by the earlier example (2), in which Bill Clinton utters the sentence “The Founding Fathers invested me with the power to appoint Supreme Court justices”. The index of Bill Clinton’s use of “me” is Bill Clinton himself, but its interpretation is the property of being the president of the United States.

Unlike Récanati, Nunberg does not attempt to give a sketch of the psychological processes involved in utterance interpretation. However, he does say that the interpretation of a pronoun such as “we” is “ordinarily a *two-stage process* in which the hearer has to first resolve the deictic component to determine the index, then resolve the relational component to determine the interpretation” (1993, p. 9, my emphasis). Later he says that there will be no *linguistic* source for the object or property which is the interpretation of a pronoun such as “we” (1993, p. 15). That is, the linguistic meaning or character of “we” *underdetermines* the interpretation, which is instead “accomplished in the contextual background, ...in a process mediated by the speaker’s intentions, the linguistic context, considerations of relevance and so on” (1993, p. 17).

As for the process whereby the hearer resolves the deictic component in order to determine the index, Nunberg thinks that this happens in one of two ways. In the case of “dedicated indexicals” such as “I”, “we”, “now”, “here” and so on, Nunberg believes that the linguistic meaning or character determines the index in the context, in much the way that Kaplan thinks that pure indexicals determine their contents in context. The difference between Nunberg and Kaplan is that what Kaplan would call the referent, Nunberg would say is simply the index, which may or may not coincide with the referent.

But in the case of pronouns like “he”, which Nunberg thinks have no explicit deictic component, he thinks that some sort of accompanying

demonstration is needed in order to determine the index. And he thinks that in the *absence* of such a demonstration the pronoun could not function as a strong indexical, though it may have a weaker sort of indexicality, functioning as what Nunberg calls a contextual. He gives the following as an example of a pronoun which is functioning simply as a contextual, and not a strong indexical: Suppose Nunberg's wife has just returned from a trip to the zoo with his daughter. Nunberg says to his wife: "You look exhausted: what did she do?" Here the pronoun "she" refers to someone (Nunberg's daughter) who is "simply salient in the context or in the consciousness of the participants" (1993, p. 33).

Nunberg also thinks that indexicals and demonstratives without an explicit deictic component which are *not* accompanied by a demonstration cannot be used to make a deferred reference (1993, pp. 34–5). In this way he distinguishes between contextuials and strong indexicals, since deferred interpretations are always possible for terms functioning as strong indexicals.

I have two objections to Nunberg's views. Firstly, it seems to me that it is possible to think of cases in which a pronoun such as "he" has deferred reference even though the use of the pronoun is *not* accompanied by a demonstration. Suppose you and a friend have been having a running conversation about the Unabomber. One day you are chatting about something else, when there is a loud explosion in the room next door. You turn to your friend and say "He is at it again". Here it is the loud explosion which is "salient in the context or in the consciousness of the participants", but the explosion is not the referent of the pronoun. Rather, the explosion is the element which is picked out in context, and which serves as a pointer to the interpretation. The explosion is the index, and the Unabomber is the referent. Thus I would argue that Nunberg's distinction between strong indexicals and contextuials is not as clear-cut as he assumes it is.¹³

¹³ Nunberg could argue that my counterexample fails, because there is a demonstration which accompanies the use of the pronoun "he", namely the loud explosion. This demonstration would be an example of what Kaplan (1989, p. 490, fn. 9) calls an "opportune" demonstration; one which requires no special action on the part of the speaker. Kaplan's own example involves someone shouting "Stop that man" when only one man is trying to escape. However, if we weaken the notion of a demonstration in this way, then we should be prepared to allow that something which is "salient in the context or in the consciousness of the participants" (Nunberg 1993, p. 33) can count as an opportune demonstration. Then in Nunberg's example "You look exhausted: what did she do?", the pronoun "she" would after all be accompanied by a demonstration (an opportune one). Hence, Nunberg cannot weaken the notion of a demonstration in order to avoid my counterexample without at the same time blurring his own distinction between strong indexicals and contextuials.

Secondly, cases of deferred reference which require an accompanying gesture present a problem for Nunberg. Take the example I gave above of two day care workers discussing the professions of the mothers of the children in their care. One worker points to a boy child and utters the sentence “She is a banker”. On Nunberg’s view, since “she” is not a dedicated indexical, it must be accompanied by a demonstration in order for a deferred interpretation to be possible. But as Wittgenstein remarked long ago (*Investigations*, part I, paragraph 28), the act of pointing itself requires interpretation. How does the second day care worker interpret the first worker’s gesture, and understand that the gesture picks out the boy and is not a mistaken attempt to gesture at a girl? After all, the pronoun “she” carries gender information which conflicts with the gender information available from the visually salient child in the direction of the first worker’s pointing gesture.

The answer must be that this understanding is achieved by the listener’s grasp of “the speaker’s intentions, the linguistic context, considerations of relevance and so on” Nunberg (1993, p. 17). In other words, the processing which gets the hearer from the linguistic meaning to the index is of a piece with the processing which Nunberg admits is involved in the listener’s recovery of the referent/interpretation on the basis of the index. But if this processing is all of a piece, it is not clear that the best way to conceive of it is as Nunberg does, as a two-stage process which involves the recovery of the index first and only then the recovery of the referent/interpretation.

My proposal in the previous section has the merit of regarding this process as more seamless than Nunberg allows. I suggested that pragmatic processes of enrichment, which are governed by considerations of relevance, operate on the first-level descriptive information encoded in the linguistic meaning of an expression. In addition, contextual information about the speaker’s directive intentions is needed to determine whether this enriched information is to be used in an identifying or a criterial way.

In the case of the day care worker’s utterance “She is a banker”, I would say that the first level descriptive information associated with the pronoun “she” is simply “the female in the context”. This information must be contextually enriched. Information from memory and the perceived environment will presumably be available to the listener. In particular, remembered information from the previous discourse context will suggest to the listener that the female in question is a mother of one of the children in the class, and the fact one child in particular is made visually salient by the speaker’s gesture will suggest that the mother in question is the mother of that child.

There is still a question as to whether this information is intended to be used in an identifying or a criterial way. That is, is this a referential or an

attributive use of the pronoun? This will depend on facts about the particular conversational context. Suppose that both the speaker and the listener are well acquainted with the mothers of the children and can match up mothers with their children, and that this fact about their acquaintance with the mothers is mutually manifest to speaker and listener. Then the pragmatically enriched information recovered by the listener is presumably intended to be used in an *identifying* way. Hence the listener will understand the speaker to have expressed a proposition with an *object-dependent* mode of presentation as a constituent. And “She is a banker” uttered in the imagined context will involve a *referential* use of the pronoun. On the other hand, if the listener doesn’t know the mothers very well, or cannot match mothers to children in a reliable way (say because she has only just started her job at the day care center), and this fact is mutually manifest to speaker and listener, then presumably the enriched information is intended to be used in a *criteria* way, and the listener will understand the speaker to have expressed a proposition containing a *descriptive* mode of presentation. In this situation, “she” has been used *attributively*. The latter case would be similar to Schiffer’s example of the person who utters “He is a giant” in the presence of a huge footprint.

7. Conclusion

I have claimed that there are both referential and attributive uses of both descriptions and indexicals, and I have tried to offer a unified account of all these cases. I argued that the best way to account for the referential/attribution distinction is to treat it as semantically underdetermined which sort of proposition is expressed in a context. In certain contexts the proposition expressed will be a descriptive one, and in others it will be an object-dependent one. (Remember though that by “object-dependent-proposition” I mean “proposition one of whose constituents is an object-dependent mode of presentation” and not “singular proposition”. See fn. 1.) On this score I disagree with Neale (1990), who argues, at least with regard to descriptions, that the proposition expressed is always description-theoretic.¹⁴ However, I do think that some of the features of Neale’s

¹⁴By extension, given that Neale argues against Récanati’s claim that “The *F* is *G*” can express either an object-dependent or an object-independent proposition depending on facts about the context, I presume that Neale would argue that in the indexical case the proposition expressed is always object-dependent, and that in those cases in which an indexical is used attributively, there is some object-independent proposition over and above the proposition expressed which is the proposition meant.

account point the way to a more adequate account, and I also think that these features protect Neale from a recent critique by Schiffer (1995) of the hidden indexical theory of descriptions.

Neale does grant that the referential/attributional distinction must be given a pragmatic explanation, but the explanation he provides is one along Gricean lines. That is, Neale is prepared to admit that a speaker can communicate an object-dependent proposition by the use of a description. But this object-dependent proposition is one which is merely conversationally implied according to Neale, and not directly expressed. On the other hand, the pragmatic account I have appealed to is the one outlined by Sperber and Wilson (1986). It recognizes that pragmatic processes are involved not only in the recovery of what is implicated, but also in the recovery of what is said.

I have appealed to Sperber and Wilson's idea that the recovery of the content of an utterance involves pragmatic processes of enrichment of a representation of the logical form of the utterance. According to the account I offered, the first-level descriptive meaning associated with an expression (whether this is an indexical or a definite description) is pragmatically enriched and then used in either a criterial or an identifying way. The proposition that the listener takes the speaker to have expressed is recovered on the basis of considerations of relevance and contextually available information about the speaker's directive intentions.

My account treats descriptions and indexicals in a symmetrical way. In this regard I am in disagreement with Récanati (1993). Récanati also appeals to the work of Sperber and Wilson, and the idea of pragmatic processes of enrichment play a crucial role in Récanati's account as well. However, Récanati treats indexicals and descriptions in an asymmetrical way. He argues that indexicals always have a basic level *de re* interpretation, even in those cases in which the indexical is used attributively. I have argued that Récanati is mistaken on this score, and that it is implausible to argue that attributive uses of indexicals always involve such an extra level of processing.

My account also has affinities with the views of Nunberg (1993), though he too sees asymmetries where I see none. He argues that there are indexicals of two sorts, which he calls contextuals and strong indexicals. Strong indexicals as he conceives of them function differently from definite descriptions, because the interpretation of strong indexicals always involves first the recovery of an index, and only subsequently the recovery of the referent/interpretation. This would mean that we cannot give a symmetrical account of the referential/attributional distinction as it applies to descriptions and indexicals. I have challenged the idea that there is a principled distinction between contextuals and strong indexicals. In addi-

tion, I have challenged the idea that the interpretation of strong indexicals is a two-stage process, in which first the index is recovered and only then the referent/interpretation. I have argued that the process is a more seamless one, in which the recovery of the index and of the referent/interpretation are of a piece, and governed by similar sorts of considerations of relevance and considerations about the speaker's intentions.¹⁵

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¹⁵ Yael Ziv has expressed some skepticism about my account. She correctly points out that philosophers and logicians like neat symmetrical accounts, and that they may see symmetries where there are in fact none. I would like to think that I am being responsive to the facts about how utterance interpretation actually works, and that I am not simply imposing my neat philosophical account on a set of phenomena which bear no relationship to my theory. Actually, I do not think that what I have been engaging in is pure philosophy. It is more like speculative psychology; and my account should be thought of as one possible hypothesis alongside others, to be tested and revised by considering how well it accounts for the data of actual language use.

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