DESCRIPTIONS AND UNIQUENESS

This paper argues against the Russellian theory of definite descriptions. In contending that this theory is inadequate, I am certainly not alone; the past fifty years have seen a vast number of attacks. What distinguishes my positive proposal from most – although by no means all – other accounts in the literature is how far it goes in agreeing with the Russellians. For I don't contest the claim that definite descriptions can be identified with devices of quantification; I believe that the Russellian theory is mistaken only in picking out the quantificational device.[1]

The paper divides into three sections. In the first, I introduce my semantic proposal accompanied by certain considerations that give it its initial appeal. I also briefly counter two immediate objections. In the second, the semantic proposal is supplemented by a pragmatic one. In the third, I offer my arguments for the resulting view; I follow the Russellians in claiming that a pure quantificational view of descriptions is preferable to views according to which descriptions sometimes refer, and then I argue that among the pure quantificational views my theory fares better than the Russellian alternative.

1.   The semantic proposal

I believe that the semantic import of both definite and indefinite descriptions is simply *existential* quantification. That is, I concur with the Russellian treatment of indefinites, but I reject the Russellian account of definites. For simple sentences containing a singular

definite description in the subject position, I suggest the semantic clause (1) instead of the Russellian (2):

(1) 'The *F* is *G*' is true iff at least one *F* is *G*
(2) 'The *F* is *G*' is true iff at least one *F* is *G* and at most one *F* is *G* and every *F* is *G*

My proposal is not restricted to occurrences of definite descriptions in these simple sentences; I suggest in *almost* full generality that the semantic values of 'a(n) *F*' and 'the *F*' are the same as the semantic value of 'some *F*'. I say "almost" only because I don't want to commit myself to semantic analyses of plurals ('The cats are sleeping on the mat'), mass nouns ('The water is spinning in the bucket'), and generics ('The African elephant lives in groups'). For the record, I suspect that even in these cases the right semantics will be in harmony with (1), rather than (2). That is, I believe that the semantic clauses for these three examples do not contain a universally quantified component: 'the cats' does not describe *all* contextually relevant cats, 'the water' does not describe *all* contextually salient water, and 'the African elephant' does not describe a species of *all* African elephants.[2]

1.1. Two objections

There are two fundamental objections which I will briefly discuss before I begin motivating my view and spelling out its details. The discussion of these objections seems urgent, for they are preemptive: they arise naturally, they seem decisive, and hence, they cast doubt on whether it makes sense to discuss my proposal at all.

The first objection is that the proposal should be dismissed out of hand because it gets the truth-conditions plainly wrong; it is just *obvious* that definite descriptions carry semantic implications of uniqueness. This is a reaction I have gotten from many philosophers. The second objection is that the proposal is a non-starter because it fails to make a semantic distinction between two lexical items which are syntactically distinguished. There are grammatical environments where the indefinite article can occur but the definite cannot or *vice versa.* And if substituting one expression for another fails to preserve grammaticality, the expressions *obviously* cannot have the same semantic value. This is a reaction I have gotten from many linguists.

Let me start with the philosophers' objection. I concede that many (although perhaps not all) uses of definite descriptions carry uniqueness implications; what I deny is that these implications are semantic in nature. (Throughout the paper, I use the term 'implication' in a broad, theory-neutral sense. Implications can be mere suggestions, Gricean implicatures, analytic entailments, logical consequences, and so on.) If someone utters the sentence 'The computer is broken', she thereby expresses the proposition that there is a broken computer within the contextually given domain; uniqueness is only pragmatically suggested. Or so I will argue in this paper.[3]

Clear uniqueness implications occur in two sorts of cases. First, when we use expressions like 'the first dog born at sea in this century' or 'the present king of France', where the common noun phrase *without* the definite article already guarantees or strongly suggests uniqueness. Second, when we emphasize the definite article, as in 'I found *the* solution to your problem' and '*The* painter of the century has an exhibition in the Met'. The former cases are obviously irrelevant in assessing whether definite descriptions carry

semantic uniqueness implications. The latter cases may be relevant, but they are highly contentious: it is by no means clear what happens syntactically, semantically or pragmatically when we stress an expression.[4]

If we lay these cases aside, we are left with no compelling examples of semantic uniqueness implications. We have reasonably clear cases when a sentence containing a definite description fails to be true because there is no object that fits the description. Regarding someone's utterance of 'I had lunch with the present king of France' it seems quite proper to say that something untrue was said. Such a response is inappropriate with regard to someone's utterance of 'I had lunch with the journalist from New York'. This latter utterance may well be problematic if the speaker had lunch with two journalists from New York, but it is by no means obviously untrue.

Let me turn to the linguists' objection. The charge is that the existence of linguistic environments in which either a definite or an indefinite expression is exclusively acceptable (the so-called *definiteness effect*) must obviously be explained semantically, which would be impossible if, as I suggest, there is no semantic distinction between 'the' and 'a(n)'. The contrast between (3a) and (3b) is an example of a phenomenon where, according to the objection, a semantic explanation is called for.

(3a) There is a hole in the bucket.
(3b) ?There is the hole in the bucket.[5]

I accept that there are important differences between 'a(n)' and 'the' with regard to their standard use, that competent speakers must be aware of these differences, and that these differences must account for the awkwardness of (3b); all I reject is an explanation based *entirely* on truth-conditions.[6] Although I don't have a general proposal, it is clear that *sometimes* the explanation of the definiteness effect must be pragmatic:

(4a) The left hand of the goalie was in a sling.
(4b) ? A left hand of the goalie was in a sling.

(5a) ? The outfielder from the Boston Red Sox had a great season.
(5b) An outfielder from the Boston Red Sox had a great season.

It is hard to imagine how these contrasts could be accounted for, if not by appealing to our background beliefs that people have only one left hand and baseball teams have several outfielders. Of course, these might be exceptional cases; the line of reasoning certainly cannot be directly generalized to (3a, b). Still, (4a,b) and (5a,b) make it not altogether unreasonable to expect that all ceases of the definiteness effect should eventually receive some sort of pragmatic explanation. This is where I place my bet.

1.2. Motivation

So, perhaps my semantic proposal is not obviously wrong. Still, why would one believe it? What sort of advantage does it have over, say, the Russellian view? I think the chief advantage is the possibility of a symmetric treatment of implications of uniqueness and non-uniqueness. Consider (6) and (7):

(6) Russell is the author of the *Principia Mathematica*.
(7) Russell is an author of the *Principles of Mathematics*.

Given that Russell co-authored the *Principia* with Whitehead and wrote the *Principles* alone, both of these sentences are anomalous. Furthermore, they are anomalous in parallel ways: (6) is problematic because the presence of the definite article suggests that Russell is the sole author of the *Principia*, (7) is problematic because the presence of the indefinite article suggests that he is not the sole author of the *Principles*. But according to the Russellian view, there is a fundamental difference here. Someone who asserts (6) says

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something false, since what is expressed by (6) entails that the *Principia* was written by a unique person. By contrast, someone who asserts (7) says something true, although she has put things in a misleading way. The Russellian is forced to split the treatment of uniqueness and non-uniqueness implications, relegating the former to semantics and the latter to pragmatics. I consider this as an implausible consequence of the Russellian view.

The intuition that uniqueness and non-uniqueness require a similar treatment is strengthened if we look at interrogative sentences. Consider a teacher who wants to test whether her students know that Newton and Leibniz independently invented the calculus. She might ask one of (8), (9), or (10).

(8) Who is the inventor of the calculus?
(9) Who is an inventor of the calculus?
(10) Who invented the calculus?

Obviously, (10) is the best option: (8) would lead the students astray, while (9) would give away part of the answer. But it seems that the pragmatic suggestions are on equal footing. The indication of (8) that there is a unique inventor of the calculus seems no stronger than the indication of (9) that more than one person can claim that title. Continuing (8) with (8′) is just as awkward as continuing (9) with (9′):

(8′) I don't mean to suggest that exactly one person invented the calculus.
(9′) I don't mean to suggest that more than one person invented the calculus.

Whatever the correct semantics and pragmatics of questions, it seems clearly desirable that one be able to give very similar accounts of the inappropriateness of (8) and (9). But these two accounts would need to be quite different if the Russellian view is correct.

Those who are moved by such symmetry considerations will need to reject the Russellian account either of indefinite or definite descriptions. But I don't think the Russellian account of indefinite descriptions can be rejected, and even if it could,

certainly not on account of these considerations. After all, the non-uniqueness implications are present even if we substitute the overtly quantificational 'some' or 'at least one' for the indefinite article in (7) and (9). So, as one moved by symmetry, I am left with the second alternative: I claim that neither the uniqueness implications of definite descriptions not the non-uniqueness implications of indefinite descriptions are semantic. What I need to do now is to explain how pragmatic uniqueness and non-uniqueness implications arise.

2. The pragmatic supplement

In some cases, using a definite description for an object appears to be different both from referring to the object and from characterizing it purely qualitatively:

> Consider … the following case. A speaker tells a story which he claims to be factual. It begins: 'A man and a boy were sitting at a fountain', and it continues: 'The man had a drink'. Shall we say that the hearer knows which or what particular is being referred to by the subject expression in the second sentence? We might say so. For, of a certain range of two particulars, the words 'the man' serve to distinguish the one being referred to, by means of a description which applies to him. … the hearer, hearing the second sentence, knows *which* particular creature is being referred to *of the two particular creatures talked about by the speaker*; but he does not, without this qualification, know what particular creature is being referred to. The identification is within a certain story told by a particular speaker. It is identification within this story; but not identification within history.[7]

We sometimes use definite descriptions not to pick out something from all the things there are, but to pick out something from all the things "talked about by the speaker". One of the characteristic functions of descriptions is to help the hearer to *keep track of* the speaker's story: indefinite descriptions apply to things not mentioned before; definite descriptions apply to those already mentioned.[8]

Talk about novel and familiar things relative to a stage of the discourse raises many discomforting questions. First of all, what are these 'things' mentioned in a discourse? What sense can be made of the claim that when someone says 'A man and a boy were sitting at a fountain' there are three things that were mentioned: a man, a boy and a fountain? Second, what sort of familiarity is at issue? In what sense do I get to be familiar with a man just because I hear a sentence with the indefinite description 'a man' in it? And finally: How are we to integrate this talk about novel and familiar things into a semantic theory? To clear things up, I will introduce a picturesque metaphor and some theory. Both are from Heim (1983).[9]

2.1. Files

Interpreting the talk of others is similar to a clerical task: one must construct and continuously update a file which systematizes the information conveyed. When a new sentence is interpreted, descriptions occurring in it are assigned *file-cards* and the content of the sentences is documented on them. (I will call this process the *filing* of the sentence.) From this perspective, the difference between an indefinite and a definite description is merely that the filing of the former involves the introduction of a new file-card, whereas the filing of the latter involves the update of some appropriate old card. Of course, there may not be an appropriate old card, in which case one is forced to treat a definite description as if it were indefinite:

> *Novelty*: For every indefinite description, start a new card.
> *Familiarity*: For every definite description, if there is an appropriate old card in the file, update it; otherwise start a new card.

Let me use an example to illustrate how this works in a simple case. A speaker begins to tell a story by uttering (11):

(11) A man greeted a woman. The woman picked up a book from the table.

Upon hearing the first sentence, the hearer creates two new file-cards (call them *1* and *2*) and writes conditions on them: *is a man*, *greeted 2* on card *1*, *is a woman*, *is greeted by 1* on card *2*. Then the hearer introduces a new card (call it *3*) for the indefinite in the next sentence. Recognizing that 'the woman' is used to characterize the woman the first sentence talks about, whereas 'the table' is not used to characterize anything mentioned before, she assigns card *2* to the 'the woman' and starts a new card (call it *4*) for 'the table'. She writes the condition *picked up 3 from 4* on card *2*, the conditions *is a book* and *was picked up by 2 from 4* on card *3*, and the conditions *is a table* and *3 was picked up by 2 from it* on card *4*. This completes the filing of (11).

A file – a collection of file-cards – is a semantic representation, which has truth-conditions. The truth-definition involves implicit existential quantification: a file is true if and only if it is satisfied by *some* sequence of individuals. So, the file associated with (11) is true just in case there is a sequence of individuals $\langle \mathbf{i}_1, \mathbf{i_2}, \mathbf{i_3}, \mathbf{i}_4 \rangle$ such that $\mathbf{i}_1$ is a man who greeted $\mathbf{i_2}$, $\mathbf{i_2}$ is a woman who is greeted by $\mathbf{i}_1$, and who picked up $\mathbf{i_3}$ from $\mathbf{i}_4$, $\mathbf{i_3}$ is a book picked up by $\mathbf{i_2}$ from $\mathbf{i}_4$, and $\mathbf{i}_4$ is a table from which $\mathbf{i}_2$ picked up $\mathbf{i}_3$. Heim ends up interpreting (11) in the way more traditional semantic theories would interpret (11′), i.e. as having the simplified logical form of (11″):

(11′) A man greeted a woman who picked up a book from a table.
(11″) $\exists x \exists y \exists u \exists w(x$ is a man $\wedge y$ is a woman $\wedge u$ is a book $\wedge w$ is a table $\wedge x$ greeted $y \wedge y$ picked up u from $w)$

The theory can be extended to cover other noun phrases besides descriptions. Proper names are subject to Familiarity: filing of a sentence containing the name 'John' normally requires that the hearer update a previously introduced file-card with the condition *is John* on it. Quantification brings in a new level of complexity. When filing the sentence 'Every man laughed' one introduces a new file-card with the condition *is a man* and tentatively updates this card with the condition *laughed.* The sentence is true relative to the previous file just in case *every* tentative update results in a true file. And so on.[10]

Up to a point, Heim's theory answers the puzzling questions surrounding the familiarity theory of definiteness. It assigns truth-conditions to sequences of sentences containing descriptions in a two-step process, relying on a translation from sentences to files and on a semantic interpretation of the files. It clarifies the notion of novelty and familiarity with regard to a stage of discourse. What is novel or familiar is not an object but a file-card, it is novel or familiar with regard to a file, and its novelty or familiarity consists simply in its being present in or absent from that file. Of course, the big question remains: What *are* these files? (The metaphor surely should not be taken literally.) I will try to say something about this in the next subsection.

2.2. Mental files

There is a problem for Heim's theory. Novelty and Familiarity are presented as *rules of update*, specifying how to incorporate information into already existing files. Since filing

is part of the assignment of semantic value, one might expect that these rules are strictly followed. But this is not the case. Consider the following examples:

(12) The detective ordered a Martini. As soon as the waiter left he knew that something was wrong. Then he realized what it was. He had just ordered a Martini from a waiter who looked exactly like the murderer he was after.

(13) A man in a dark suit was talking to a man holding a large envelope. After talking for about a minute they left the station going in opposite directions. Thirty seconds after they left, the man showed up and nervously looked around.

Following Novelty, one must introduce a new file-card for 'a waiter' in the last sentence of (12), and following Familiarity, one must update one of the old file-cards in interpreting 'the man' in the last sentence of (13). It seems to me that we don't do either of these things; we simply act as if the indefinite description in (12) were definite and as if the definite description in (13) were indefinite. The consideration that overrides Novelty in interpreting (12) seems to be a desire to avoid the construction of a file that is *redundant*: clearly, there was only one waiter the detective ordered from. What trumps Familiarity in interpreting (13) seems equally obvious: there are two appropriate file-cards one could update and the choice between them is *arbitrary*. So, besides the two rules of update there seem to be also two *constraints on update*:

Non-redundancy: When filing an utterance, don't create redundancy.
Non-arbitrariness: When filing an utterance, don't make arbitrary choices.

Since they can be overridden, Novelty and Familiarity cannot be more than rules of thumb and hence have no place in semantics. Not that semantic interpretation is free of defeasible reasoning – far from it. We use such reasoning in deciding whether a particular occurrence of 'bank' means the edge of a river or a financial institution, whether a particular occurrence of 'this' refers to the object the speaker is pointing to or the object she is looking at, or whether 'every' takes wide or narrow scope in the

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sentence 'Every child likes most animals' as it is used on a particular occasion. But these are all examples where due to our lack of contextual information, we either don't know which semantic rule to apply or we don't know how to apply it. Once we do know these things, the application of a semantic rule is automatic. (I take this to be an essential feature of semantic rules.) Since the above examples show that we don't apply Novelty or Familiarity automatically, these rules cannot be semantic.

This creates a dilemma. On the one hand, Heim's theory (or something close to it) is the best we have for explaining the intuition that we use indefinite descriptions to introduce something new into the discourse and we use definite descriptions to talk about something that has already been introduced. On the other hand, it seems that Heim's rules of update have no place in a semantics. It looks like we either have to throw out the best account we have of a linguistic phenomenon, or abandon the sensible idea that semantic rules are not mere rules of thumb.

But there is a way out from this dilemma: we should keep Heim's files but rob them of their semantic significance. When interpreting a sequence of sentences on a particular occasion of their use, we do not retain in memory all their phonological, syntactic and semantic details: what we need is something that enables us to keep track of the speaker's story by remembering what sorts of things were talked about and what was said of them. We should think of files as mental representations which help us in doing this. Mental files have truth-conditions but these do not stand in any straightforward relation to the truth-conditions of the sentences uttered by the speaker: in constructing mental files we use not only semantic rules but pragmatic principles as well. Four of these principles are Novelty, Familiarity, Non-redundancy and Non-arbitrariness.[11]

One might object that postulating mental files is nothing but wild speculation. This is true. But those of us who believe that linguistic theory ought to be psychologically real habitually engage in such wild speculations. We postulate phonological, syntactic and semantic representations to explain the linguistic judgments of ordinary speakers and we believe that in this way we manage to capture features of the human language faculty. What is unusual here is only the idea that besides the standard representations, we should believe in one which is constructed partly on pragmatic grounds.

If one thinks of files in this pragmatic way, one is free to adopt just about any view concerning the semantics of 'a(n)' and 'the'. My view is that they both have the semantic value we associate with the quantifier 'some'. This view preserves the central insight of Heim's theory: the fundamental difference between the way we use indefinite and definite descriptions is that the former introduce new elements into the discourse, while the latter pick out ones already introduced. Since I think *this* difference is a pragmatic one, I don't postulate a semantic difference between the two kinds of descriptions.

2.3. The derivation of uniqueness and non-uniqueness implications

Mental files can help explain how uniqueness and non-uniqueness implications arise pragmatically. The source of the phenomenon is that we are bound to reason about the mental files of others under circumstances of uncertainty. Let me explain.

We have to distinguish between those file-cards that someone has created during a particular conversation from those that she already had when the conversation began.[12] Suppose at some point in a conversation which has not touched on the Pope, you say to me: "I saw the Pope on a bicycle." Since I have no file-card from our current conversation with the condition *is a Pope* on it, it seems that I have to start a new file-card. But of course I already *have* a file-card with the condition *is a Pope*, it's just that I introduced that card during some previous conversation. Clearly, what I have to do is to update that old card, instead of introducing a new one.

The file-cards introduced in the course of a particular conversation are *public* with regard to the participants; the file-cards with which the participants enter into the conversation are by and large *private*. As the example shows, it matters from the perspective of our communicative efforts what private file-cards our interlocutors may have, and so, we are bound to reason about such matters. I suggest that our reasoning is guided by the following two meta-principles:

(I) Make only utterances you may assume can be filed in accordance with all the rules and constraints of update.

(II) Without specific reason you may assume nothing about the private file-cards of your interlocutor, except that the relevant part of her mental file is true.

(I) requires little commentary. As utterances of (12) or (13) illustrate, speakers occasionally do violate this principle. There are stylistic reasons for this, just as there are stylistic reasons to utter contradictions, to make irrelevant comments, or to engage in self-repetition. But these are exceptional cases; the rules and constraints of update would have no bite if one did not have to believe, or at least legitimately assume, that the filing of one's utterance can be done in accordance with them.

(II) should not be controversial either. It seems clear that one is not entitled to make assumptions about what sorts of previous conversations one's interlocutor has had without specific reason. (Specific reasons include *very* general ones, like: "Typically, Americans have never heard of Tadjikistan, let alone its prime minister. Since Joe is American, I think he doesn't have a private file card with the condition *prime minister of Tadjikistan* on it.") The sole exception is that one may presume that the conversationally relevant part of the file of one's interlocutor is true.[13] The presumption is extremely weak, theoretically it could be overridden by *any* reason whatsoever. But it would be flatly irrational not to take it as a default assumption that one's interlocutor has largely true beliefs. Within reason, truth, like innocence, must be presumed.

The two meta-principles being in place I can turn now to the derivation of uniqueness and non-uniqueness implications. The first step is an observation that had certain conditions obtained, the utterance could not have been filed in accordance with (I). From this, assuming the speaker is not violating (I), it follows that the speaker can legitimately assume that those conditions do not obtain. And from this, assuming that the speaker is not violating (II), it follows that the speaker has certain beliefs about how many *F*s there are within the contextually given domain of quantification:

Uniqueness	*Non-uniqueness*

Suppose that A and B are engaged in a conversation. At some point A utters a sentence which contains

the definite description 'the *F*'	the indefinite description 'an *F*'

in a referentially transparent position not in the scope of any quantifier. Suppose further that at the moment of utterance there is no public *F* card in B's file and that B thinks that A has no specific reason to believe anything about her private *F* cards. Then B can reason thus:

(i) Suppose I had two private *F* cards with incompatible conditions. Then I could not have filed A's utterance in accordance with (I): either Familiarity or Non-arbitrariness would have been violated.

(i) Suppose I had a private *F* card with conditions that cannot be satisfied by more than one individual. Then I could not have filed A's utterance in accordance with (I): either Novelty or Non-redundancy would have been violated.

So, since I can assume that A did not violate (I), it must be true that A may assume that this supposition is false. That is:

(ii) A may assume that I don't have two private *F* cards with incompatible conditions.

(ii) A may assume that I have no private *F*-card with conditions that cannot be satisfied by more than one individual.

But A does not have any specific reason to believe that about my private *F* cards. So, since I can assume that A did not violate (II), it must be true that A may assume this because he thinks that otherwise the relevant part of my file would be false. But then

(iii) A believes that there is at most one *F*.

(iii) A believes that there are at least two *F*s.

Two comments are necessary concerning these derivations. First, I am not claiming that the only cases when uniqueness or non-uniqueness implications arise are those when the conditions stated in these derivations obtain, only that these conditions obtain in the *simplest* instances of uniqueness and non-uniqueness implications.[14] Explaining more is not my ambition in this paper. Second, I am not saying that we must run through such an argument every time we conclude that in using a description the speaker has implied uniqueness or non-uniqueness. Having observed a pattern, we can generalize that under the condition specified, uttering 'the *F*' signals the speaker's belief that there is only one *F* and uttering 'an *F*' signals the speaker's belief that there are at least two *F*s.

Let me summarize the results of section 2. I started with a discussion of Heim's theory which clarifies the intuition behind the traditional familiarity account of definiteness. Then I raised the problem that the rules of update (Novelty and Familiarity)

introduced by Heim can be overridden when they are in conflict with certain constraints of update (Non-redundancy and Non-arbitrariness). This was the reason to reject Heim's theory as a *semantic* account of descriptions; my proposal was to refashion it as a *pragmatic* account of how we manage our mental files. This raises the question how we are to think about the private file cards of our conversational partner. I proposed two general principles which regulate our reasoning about such matters. These principles (together with the rules and constraints of update) are sufficient to provide pragmatic derivations for the uniqueness and non-uniqueness implications associated with certain occurrences of definite and indefinite descriptions, respectively.

3. The arguments

The case for the theory of descriptions I am advocating is an argument by elimination. I accept the standard Russellian objections to the main alternative views in the literature and I have three arguments against the Russellian position. The strength of the Russellian theory lies in the fact that it is a pure quantificational view, but as pure quantificational theories go, the one I am proposing fares better.

3.1. Why are pure quantificational theories better than the rest?

If we set the difficult cases of plurals, mass nouns and generics aside, there is broad agreement that all occurrences of descriptions can be analyzed as either referring phrases or quantifying phrases.[15] Consider a simple subject-predicate sentence of the form '*Det F*

is *G*', where *Det* stands for a determiner[16] and where *F* and *G* contain no further referring or quantifying expressions. Whether the occurrence of '*Det F*' within this sentence is referential or quantificational determines whether the truth-conditions of the sentence are *object-dependent* or *object-neutral*. If the occurrence is referential, the truth or falsity of the sentence depends exclusively on how things are with a particular object; if the occurrence is quantificational, the truth or falsity of the sentence is independent of the identity of any particular object within the universe of discourse.

There are plenty of cases when sentences of the form 'An *F* is *G*' and 'The *F* is *G*' have object-neutral truth-conditions.[17] The remaining question is whether all occurrences of descriptions are quantificational or some are referential. I will call the former the *pure quantificational view*, the latter the *either-or view*. Prominent among either-or theorists are those who attach semantic significance to Donnellan's referential/attributive distinction and argue that some occurrences of definite descriptions refer.[18] Somewhat less popular, but still significant in number are those who follow Fodor and Sag in attaching semantic significance to the specific/non-specific distinction and say that certain occurrences of indefinite descriptions refer.[19]

Russellian replies to either-or theories follow a three step strategy. First, the Russellian acknowledges that the truth-conditions of some uses of sentences containing descriptions don't appear to be Russellian, but maintains that the appearance is deceptive. Second, he offers a pragmatic explanation for the illusion of non-Russellian truth-conditions, based on the distinction between semantic reference and speaker's reference: a speaker may refer to something using words that do not refer to that thing if her audience is able to identify the individual the speaker intends to talk about. Finally, the

Russellian presents broadly methodological considerations that tell in favor of this explanation.[20]

The best methodological reason the Russellian has in favor of his pragmatic explanation is parsimony.[21] Here is how Kripke (1977) presents it. Suppose a speaker from a distance mistakes Smith for Jones and utters the sentence 'Jones is raking the leaves.' What she meant is that Smith is raking the leaves, but her sentence is about Jones nonetheless. She referred to the person she saw, i.e. to Smith, but the name 'Jones' in her mouth certainly did not. Furthermore, if the hearer realizes that the speaker mistook Smith for Jones, she will also realize that the speaker probably intended to express a proposition different from what she in fact expressed. Now, it is extremely plausible that *whatever* pragmatic principles the either-or theorist believes can explain this case involving proper names, could also be carried over to explain referential uses of indefinite or definite descriptions.[22]

I am not saying that such considerations trump everything else. Perhaps the lack of parsimony is compensated by other nice features of the either-or view. One obvious nice feature is that either-or theories take certain pre-theoretical intuitions concerning the truth-conditions of sentences containing definite descriptions at face-value, while the Russellian alternative provides a story according to which these intuitions are mistaken. But since we are not particularly good at pre-theoretically separating what we say from what we merely suggest, I am inclined to think that this is not enough to tilt the balance back towards the either-or view.

3.2. Troubles with uniqueness

Nothing in the Russellian parsimony argument against the either-or view depends on specifically *Russellian* truth-conditions. All we need is that all occurrences of an article express the same quantifier; *which* quantifier it is makes no difference. Against either-or views all versions of the pure quantificational view fare equally well. I will now argue that among pure quantificational theories, the Russellian is not the best.

3.2.1. A methodological argument

The Russellian victory over the defenders of the either-or view is Pyrrhic; theoretical parsimony can easily be turned against the Russellians themselves. Kripke claims that since independently supported pragmatic principles can explain implications of referentiality occasionally associated with uses of definite descriptions, we should not ascribe semantic significance to the referential/attributive distinction. I claim that since independently supported pragmatic principles can explain implications of uniqueness occasionally associated with uses of definite descriptions, we should not ascribe semantic significance to the indefinite/definite distinction. I showed in section 2.3. how such a pragmatic explanation would go.

Of course, since I used principles related to the filing of sentences, Russellians who don't believe in mental files may say that they have no need for such principles. I find this implausible: those who wish to explain the pragmatic behavior of descriptions can hardly avoid them. As far as Familiarity is concerned, there is even a Kripke-style argument that some such principle is indispensable. If the speaker and the hearer know

two people named 'Jones', it is inappropriate for the speaker to say, out of the blue "I met Jones yesterday." Once, however, the confusion is eliminated, the speaker can keep using the name 'Jones' to refer to the same person unambiguously: "You know Jones the pianist? I met Jones yesterday. Jones is always great to talk to. …" It is easy to account for these facts by appealing to Familiarity and it is hard to see how to account for them without some such a principle. It seems that Russellians must help themselves to a principle *much like* Familiarity, and hence to representations *much like* files anyway. So, they are subject to criticism on parsimony grounds.

3.2.2. An empirical argument

Are there sentences containing definite descriptions which carry no uniqueness implications? Many have suggested that there are. Russellians have typically responded to these suggestions by saying that the apparent lack of uniqueness implications is due to the fact that the relevant descriptions are *incomplete*, i.e. that they quantify over contextually restricted domains. If the sentence 'The table is covered with books' is true there must be a unique table – if not in the universe at least in some relevant set provided by the context of utterance.[23] But this answer does not work in all cases:[24]

(14) The dog got in a fight with another dog.

This sentence seems perfectly fine, but according to a straightforward application of the domain restriction view, it is a contradiction. The domain of quantification associated with 'the dog' must contain a unique dog, if the sentence is true. But the sentence also says that there was a second dog in the domain who got in a fight with this first one.

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The contradiction disappears if we assume that there is no unique domain for both descriptions in (14). One might suggest, quite plausibly, that domains of quantification must be associated with quantifying noun phrases, not entire sentences and that the domains can shift mid-sentence. So, (14) says something that can be paraphrased as (14′):

(14′) The dog which is *F* got in a fight with another dog which is *F′*

where *F* and *F′* are predicative expressions such that the extension of *F* is a proper part of the extension of *F′*. The appearance of contradiction is gone.[25]

But what are *F* and *F′* ? It isn't enough to say that there is *some* contextually determined domain of quantification, and according to (14) there is a unique dog within that domain even though there is at least one other dog outside of that domain but within *some* broader domain. If we leave the question regarding the identity of these two domains open, we are not in the position to specify what (14) says. To see that Russellians are in real trouble here, consider a case when a larger discourse provides the context for the interpretation of (14):

> (15) A dog was limping in the park. The dog was limping because it got in a fight with another dog. They apparently bit each other: the other dog was also limping in the park.

(15) tells us the same things about two dogs, and there doesn't seem to be anything in the text (and hence, we might assume, in the context) that we could use to tell them apart. But if the Russellian theory is true, we should be able to associate a domain of quantification with the definite description appearing in the subject position of the second sentence which contains just one of these two dogs. What could be the basis for picking such a domain?

As far as I can see, there are three things Russellians could say here. The first is to suggest that in uttering the first sentence of (15), the speaker must have had some particular dog in mind and that the domain associated with 'the dog' in the second sentence contains only that dog.[26] This idea fails because (15) can be uttered by a speaker who has no specific dog in mind. Suppose it is asserted by someone who deduced it from circumstantial evidence. Then both what is meant and what is said by the speaker is a general proposition that is not about any particular dog. And this does not prevent (15) from being interpretable in such a case.[27]

The second option is event-based semantics: one can say that the second sentence of (15) quantifies over getting-into-fight events.[28] The getting-into-fight event as described in this sentence has an agent (the dog that got into the fight with the other) and a patient (the other dog). This seems to give us a way to distinguish the two dogs (15) talks about. But the distinction is illusory. There is a *grammatical* difference between the occurrence of 'the dog' within the subject NP and 'another dog' within the PP in the second sentence but it is by no means clear that this difference has a *metaphysical* reflection. To be able to specify the relevant domains of quantification, we must be committed to the thesis that the event of one dog getting into a fight with another is *distinct* from the event of the other dog getting into a fight with the first one. If we think that there is just one event with two dogs getting into a fight, as I suspect we should, the possibility of overcoming the difficulty disappears.

The final option is to bite the bullet and say that (15) is in fact a contradiction. This strikes me as a flat denial of an intuition we have, but advocating a revisionist proposal myself, I am hardly in a position to dismiss it on this ground alone. What I *can*

say is this: Russellians who believe (15) to be a contradiction owe us an explanation why it appears to be a perfectly consistent sequence of sentences.

3.2.3. A (somewhat) speculative argument

Is 'the' a single quantifier or a combination of many? Early Russellians thought the former, while their modern successors think the latter. There is a grain of truth in both answers: the definite article interpreted in a Russellian fashion does seem to be semantically complex but syntactically simple. I want to argue that this is a problem for Russellians of either stripe: if 'the' were the kind of expression Russellians think it is, it would violate a general principle about what sort of quantifiers there could be in a natural language.

Back in the old days most philosophers thought of Russell's theory of descriptions as the prime example of substantive analysis which reveals the *logical form* that underlies the misleading *grammatical form* of certain sentences. The grammatical form 'The *F* is *G*' is intrinsically misleading insofar as it suggests that 'the *F*' is a genuine semantic unit; this lures us into all sorts of philosophical mistakes concerning golden mountains and largest primes. The cure is to display the logical form of such sentences as, say, (16):

(16) $\exists x.Fx \land \forall x \forall y(Fx \land Fy \to x=y) \land \forall x(Fx \to Gx)$

At the level of logical form, descriptions no longer form a unit; they dissolve into a complex pattern of quantifiers and other logical constants. According to early Russellians, a definite description is not a single quantifier.

Postulating logical form contrary to grammatical evidence is not an appealing move. Especially not since all we need for the 'philosophical cure' is the assignment of Russellian truth-conditions; once we have that, we will see that 'The F is G' is not about any particular object. In the light of this, the complexity of (16) seems like an artifact of the first-order notation. Modern Russellians want Russellian truth-conditions without Russellian logical forms.

Since 'the' is a determiner which combines with a nominal expression to form a noun phrase, which in turn combines with a verb phrase to form a sentence, '$[_{NP}$the$[_N F]][_{VP}$ is $G]$' is a plausible logical form for 'The F is G'. When '$Det\ F$' is a quantifier phrase, the truth or falsity of '$Det\ F$ is G' depends only on how many things there are within the universe of discourse that are both F and G, neither F nor G, F but not G, and G but not F, and so, all such sentences have uniform truth-clauses.[29] Here are some examples. ($\mathbf{F}$ is the set of Fs and $\mathbf{G}$ is the set of Gs within the universe of discourse.)

(17a) '$[_{NP}$an$[_N F]][_{VP}$ is $G]$'   is true iff $|\mathbf{F} \cap \mathbf{G}| \geq 1$
(17b) '$[_{NP}$every$[_N F]][_{VP}$ is $G]$'   is true iff $|\mathbf{F} - \mathbf{G}| = 0$
(17c) '$[_{NP}$no$[_N F]][_{VP}$ is $G]$'   is true iff $|\mathbf{F} \cap \mathbf{G}| = 0$
(17d) '$[_{Np}$exactly one$[_N F]][_{VP}$ is $G]$'   is true iff $|\mathbf{F} \cap \mathbf{G}| = 1$
(17e) '$[_{NP}$most$[_N F$s$]][_{VP}$ are Gs$]$'   is true iff $|\mathbf{F} - \mathbf{G}| < |\mathbf{F} \cap \mathbf{G}|$

The Russellian truth-clause for 'The F is G' can be presented analogously:

(18) '$[_{NP}$the$[_N F]][_{VP}$ is $G]$'   is true iff $|\mathbf{F} - \mathbf{G}| = 0$ and $|\mathbf{F} \cap \mathbf{G}| = 1$

So, it seems that there is no need to think that 'the' is not a single quantifier: the logical form of the sentence contains a constituent exactly corresponding to the word 'the' in the sentence itself.

But this is too quick. Using the same method, one could argue that 'some but not every' is also a single quantifier, for one can state the truth-clause of sentences containing this expression in their subjects thus:

(19) '[$_{Np}$ some but not every [$_N F$]][$_{VP}$ is G]' is true iff $|\mathbf{F} \cap \mathbf{G}| \geq 1$ and $|\mathbf{F} - \mathbf{G}| \neq 0$

This is absurd; 'some but not every' is clearly a Boolean combination of 'some' and 'every'. A good semantic theory would have to derive (19) from (17a) and (17b).

But if we think that (19) shows the semantically complex character of 'some but not every', it seems that we should say that (18) shows the same about 'the'. While the clauses for 'an', 'every', 'no' and 'most' involve a single cardinality condition, the clause for 'the' resembles the clause of 'some but not every' in specifying a conjunction of two. 'The F is G' can regarded as making two claims: that every F is G and that there is exactly one F that is G. Should we then expect from a good semantic theory a derivation of (18) from (17b) and (17d)? Should we think of 'the' as a shorthand for (the awkward or perhaps ungrammatical) 'every and exactly one'?

We have two notions of complexity at hand. A quantifier is *syntactically complex* just in case it is not a lexical item; it is *semantically complex* just in case its truth-clause involves more than one cardinality condition. By and large, syntactically simple quantifiers seem to be also semantically simple. The peculiar thing about the Russellian 'the' is that it violates this principle. This is at least a *prima facie* evidence that there is something wrong with the Russellian truth-conditions of 'The F is G'.

How good this *prima facie* evidence is depends on how good is the generalization the Russellian 'the' violates. Now, it seems to me that the generalization that syntactically simple quantifiers are semantically simple is *very* good. The only candidates

for an exception in English besides the Russellian 'the' appear to be 'both' and 'neither'.[30] Usually sentences where they appear in subject position are assigned the following truth-conditions:

(20) '[$_{NP}$both[$_N$$F$s]][$_{VP}$ are Gs]'   is true iff $|\mathbf{F} - \mathbf{G}| = 0$ and $|\mathbf{F} \cap \mathbf{G}| = 2$
(21) '[$_{NP}$neither[$_N$$F$]][$_{VP}$ is G]'   is true iff $|\mathbf{F} - \mathbf{G}| = 2$ and $|\mathbf{F} \cap \mathbf{G}| = 0$

The only difference between (20) and (19) is that instead of uniqueness implications in (19), we find "duality implications" in (20). One who suspects that uniqueness is a matter of pragmatics, should suspect the same of duality. I suggest that (20) gives incorrect truth-conditions; 'Both Fs are Gs' has the same truth-conditions as 'At least two Fs are Gs'.[31] Since 'Neither F is G' is logically equivalent to 'Both Fs are not Gs', this forces me to reject (21) as well. So, I propose (20′) and (21′):

(20′)'[$_{NP}$both[$_N$$F$s]][$_{VP}$ are Gs]'   is true iff $|\mathbf{F} \cap \mathbf{G}| \geq 2$
(21′)'[$_{NP}$neither[$_N$$F$]][$_{VP}$ is G]'   is true iff $|\mathbf{F} - \mathbf{G}| \geq 2$

I know of no English determiner besides 'the', 'both' and 'neither' that is even a candidate for being a syntactically simple but semantically complex quantifier. Since I know of no plausible candidates from other natural languages either, I think that the claim that there are none is a worthy empirical hypothesis. We already have semantic universals in good standing that are formulated in terms of cardinality conditions.[32] It wouldn't be surprising to find further ones.

4. Conclusion

Traditionally, singular proper names, definite descriptions, demonstratives and certain pronouns are grouped together and called *singular terms*. The primary justification for

this classification is the idea that the main function of all these expressions is to indicate to the audience a particular object about which the speaker then says something. Although these expressions quite frequently play very different roles in speech, the classification seems natural. Is there good reason to believe that it captures some important underlying unity?

The suspicion that singular terms may not form a "linguistic natural kind" has been growing for some time. It has long be recognized that grammatically the unity of this class of expressions is problematic: many quantified noun phrases can occupy the exact same syntactic positions as the singular terms. After the work of Russell, Kripke, Kaplan and others, we also understand more about the robust differences in the way the expressions interact with quantifiers, modal operators, propositional attitude verbs, and so on. What is largely responsible for the survival of this classification to the present day is the belief that singular terms share a fundamental *logical* feature: if *t* is a singular term, then '*t* is *F*' and '*t* is *G*' logically entails '*t* is *F* and *G*'. However, if I am correct, this is *not* a logically valid inference – not if definite descriptions are supposed to be singular terms.

So, I advocate that we give up on the category of singular terms. What connects singular proper names, definite descriptions, demonstratives and certain pronouns is not a single grammatical, semantic, or logical function, only a loose similarity.[*]

Endnotes

[1] My theory owes much to a particular version of the familiarity theory of definiteness proposed in Heim (1982) and Heim (1983). Still, as I will explain in section 2, there are fundamental differences. While writing the final draft of this paper, I received a manuscript from Peter Ludlow and Gabriel Segal who argue for the same semantic proposal I am about to present. We differ in our pragmatics considerably, and while some of our arguments for the semantic proposal overlap, although Ludlow and Segal do not draw the connection between uniqueness and non-uniqueness implications which I take to be central to my project.

[2] Chomsky (1975) argues that since according to the Russellian theory definite descriptions introduce universal quantification into the logical form, Russellians can explain the relationship betweeen singular and plural descriptions. Chomsky assumes that 'The Fs are Gs' should be understood roughly as 'All (contextually relevant) Fs are Gs'; I think 'The Fs are Gs' is semantically closer to 'Some (contextually relevant) Fs are Gs'. If I am right, the universal character of the Russellian analysis is a handicap, not an advantage in explaing the link between the singular and the plural cases.

[3] For those who think that it is equally obvious that the uniqueness implication must be semantic, I quote Mark Richard: "We do not come equipped with a meter that reliably distinguishes between semantic and pragmatic implications. […] what seems for all the world like a truth-conditional implication may turn out not to be one." (Richard (1990), p. 123)

[4] Here is an analogous case. An utterance of '*Some* students came to the party' suggests quite strongly that not all students came to the party. No one would conclude from this that 'some' carries a semantic non-uniqueness implication.

[5] There is a problem about how to characterize the awkwardness of (3b). The sentence is not strictly ungrammatical; it can be used, for example, as a partial ellipical answer to the question 'What do you have to repair today?' Still, it is clear that an utterance of (3b) is acceptable in a much more restricted range of contexts than an utterance of (3a) and this conatrast certainly requires linguistic explanation.

[6] Purely semantic explanations of the definiteness effect have two components: a truth-conditional characterization of definite noun phrases, and an account of the definiteness effect in terms of this characterization. The second task is particularly difficult. Milsark (1977) claims that sentences like 'There is the hole in the bucket' involve vacuous quantification, while sentences like 'There is a hole in the bucket' don't. The explanation assumes a non-quantificational analysis of indefinite noun phrases which is controversial. Barwise and Cooper (1981) claim that sentences exhibiting the definiteness effect are tautological or contradictory, but they have no explanation why other tautologies and contradictions do not strike us as awkward in the way (3b) does. The first task is somewhat easier; there are many (non-equivalent) truth-conditional characterizations of definite noun phrases. In my judgment these characterizations tend to be wrong, since they assume Russellian truth-conditions for 'the'. For example, Keenan (1987) claims that the quantifier phrase '$Q F$' is indefinite just in case the sentences '$Q F$ is G' and '$Q F$ who is G exists' are logically equivalent. Keenan thinks that according to his characterization, 'the F' is not an indefinite noun phrase. However, according to my

intuitions, 'The *F* is *G*' and 'The *F* who is *G* exists' *are* logically equivalent. In the end, I would not lay much weight on this: my intuitions go with my semantics, Keenan's go with his.

[7] Strawson (1959) p. 18.

[8] *Webster's New World Dictionary*: "*a* connotes a thing not previously noted or recognized, in contrast with *the*, which connotes a thing previously noted or recognized."

[9] The theory presented in Heim (1983) is a slightly modified version of that put forth in Chapter III of Heim (1982). A similar theory was suggested in Kamp (1981) for the treatment of indefinite descriptions and anaphoric pronouns. In its original version, Kamp's Discourse Representation Theory did not deal with definite descriptions. For later developments and extensions of this type of semantic theory, see Kamp and Reyle (1993) and Asher (1993). These versions of Discourse Representation Theory accept Heim's analysis for some, but not all occurrences of definite descriptions (Cf. Kamp and Reyle (1993), pp. 248 - 56, Asher (1993), pp. 82 - 4). There are also versions of DRT that explicitly try to accommodate semantic uniqueness implications for all occurrences of definite descriptions. (Cf. Kadmon (1987), pp. 193 - 242).

[10] For details of how this type of theory can deal with to the interpretation of sentences containing generalized quantifiers, plurals, tense markers and anaphora, see Kamp and Reyle (1993) and Van Eijck and Kamp (1997).

[11] Mental files are associated with entire discourses, not with individual sentences. Of course, if a discourse consists of a single sentence one can speak about the mental file of the sentence as well. Since mental files are representations generated and interpreted partly on the basis of pragmatic principles, they are not to be confused with semantic representations of the conjunction (or set) of sentences within a discourse.

[12] 'Conversation' is understood in a rather broad sense here. Reading books or newspaper articles counts as being engaged in a (one-sided) conversation with the author.

[13] The presumption of truth relates only to the relevant part of the file: there is no chance that someone's entire mental file is true. Also, I am concentrating on factual conversations: in a conversation where the participants are engaged in a game of make-believe they obviously cannot assume that the relevant parts of their mental files are true. They can, however, assume that the relevant parts are true in the fiction.

[14] Cases when the speker has specific reasons to believe various things about the hearer's private file are complicated. Situations when it is common ground between A and B that B has a private *F*-card are rather similar to situations when the use of an indefinite descriptions in the previous conversation has led to the introduction of an *F*-card. I will argue in section 3.2.2. that in some of these cases the use of a definite description 'the *F*' carries *no* uniqueness implication.

[15] Those who think that anaphoric occurrences of descriptions are neither referring nor quantifying tend to favor semantic theories that resemble Heim's file-change semantics. Since I argued that files should be regarded as non-semantic represntations, I will disregard this option here.

[16] Grammatically, the articles, along with demonstratives, quantifiers, possessives are determiners.

[17] Two of the standard arguments for this claim (the ones concerning propositional expression and ambiguity) derive from Russell. The third, related to the non-rigidity of descriptions, is due to Kripke.

[18] For the distinction cf. Donellan (1966). For recent defense, cf. Wettstein (1981), Wettstein (1983), Recanati (1993), and Reimer (1998a).

[19] Cf. Fodor and Sag (1982). Cf. also Chastain (1975) and Barwise and Perry (1983).

[20] Arguments which more or less fit this schema can be found in Kripke (1977), Bach (1987), Neale (1990), Heim (1991), Ludlow and Neale (1991), and Salmon (1991).

[21] There are two other standard methodological considerations but I fear they are not particularly strong. The first is that if the definite article is ambiguous in English, we should expect − contrary to fact − that there are other languages where the different senses are associated with different lexical items. The second is that we can see how referential use of definite descriptions would emerge even in a language where the definite article is postulated to be Russellian, and so, believing in semantic ambiguity seems gratuitous. The first argument assumes that semantic ambiguities must be accidental features of particular languages. The second argument neglects the fact that multiplicity of standard usage is an excellent *prima facie* reason for accepting multiplicity of meaning. (This latter point was emphasized by Reimer (1998b).)

[22] Kripke's original argument concerns only definite descriptions but it can be used more generally.

[23] The example is from Strawson (1950) who first argued against the Russellian view on such grounds.

[24] Cf. McCawley (1979), p. 378. Another example frequently used to illustrate the same point (due, I think, to Hans Kamp) is 'If a bishop meets another bishop, the bishop blesses the other bishop.'

[25] Cf. Stanley and Williamson (1995).

[26] Cf. Evans (1982) and Neale (1990).

[27] Couldn't one say that although the speaker may not have any particular dog in mind, the first sentence *mentions* a dog and it is only that dog that is contained in the domain associated with 'the dog' in the second sentence? Not really. Although there is a sense in which we can say that the first sentence of (15) mentions a dog (in interpreting it the hearer introduces a new file-card with the condition *is a dog*), this does not mean that there is a particular dog mentioned. So, this proposal cannot get off the ground.

[28] Cf. Heim (1990) and Ludlow (1994).

[29] This characterization of determiners expressing binary quantification is fairly standard; cf. Keenan E. and D. Westerstahl (1997). It is equivalent to the following permutation-invariance condition. Let $\mathbf{F}$ be the set of Fs and $\mathbf{G}$ the set of Gs within the universe of discourse and let $\mathbf{Det}$ be the binary relation between subsets of the universe such that '*Det F* is *G*' is true iff $\mathbf{Det}(\mathbf{F})(\mathbf{G})$. Furthermore, let π be a permutation of the universe, let $\pi\mathbf{F}=\{\pi(x):x\in\mathbf{F}\}$ and $\pi\mathbf{G}=\{\pi(x):x\in\mathbf{G}\}$. Then '*Det F* is *G*' is true iff $\mathbf{Det}(\pi\mathbf{F})(\pi\mathbf{G})$.

[30] According to the Aristotelian reading, 'Every *F* is *G*' is true if and only if $|\mathbf{F} - \mathbf{G}| = 0$ and $|\mathbf{F} \cap \mathbf{G}| > 0$. I believe that universal quantification in natural languages does not have existential implication, so I don't consider this as a counterexample.

[31] There is, of course, a pragmatic implication that there are exactly two Fs.

[32] It is generally agreed, for example, that natural language quantifiers satisfy three conditions: Isomorphism, Conservativity and Extension. It is provable that if a binary quantifier Q satisfies these three conditions then the truth-conditions of 'Q F is G' are determined by $|\mathbf{F} - \mathbf{G}|$ and $|\mathbf{F} \cap \mathbf{G}|$. For definitions of Isomorphism, Conservativity and Extension and for the proof of the relevant theorem see Keenan and Westerstahl (1997), pp. 847-58.

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