Possessive Weak Definites

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1. Introduction: possessive weak definites

Typically, when a definite description is used to refer to an object, that object must either be familiar or unique in a certain way. Let us begin with the following approximation:

(1) A use of a definite description is felicitous if and only if there is exactly one object in the context that satisfies the content of the description.

As far as I know, the 'if' portion of the biconditional is entirely reliable: whenever an object is unique in a context, it is possible to use a definite description to refer to it (at least as far as the felicity conditions due specifically to the use of the definite determiner are concerned).

(2) The speaker addressed the man.

For instance, the definite description *the speaker* can be used in any context in which there is a unique object that qualifies as a speaker.

What is less clear, and what will be the central issue addressed in this paper, is the status of the 'only if' portion of the biconditional in (1). Certainly, if there is more than one man in the audience, the second definite description in (2) (*the man*) is distinctly less appropriate, especially in comparison with the corresponding indefinite *a man*.

But not all definite descriptions satisfy the condition in (1). I will provide evidence below in support of Poesio's (1994) claim that there is a productive, systematic class of definite descriptions whose use does not appear to require either familiarity or uniqueness. Following Poesio, I will call the expressions in question WEAK DEFINITES:

(3) I hope the cafe is located on **the corner of a busy intersection**. (Poesio 1994)
(4) That's the one where Superman crashes spectacularly into **the side of a Marlboro-emblazoned truck**. (Google)

Clearly, (3) can be used in a situation in which neither the speaker nor the listener has any previous acquaintance with a specific intersection or corner, nor is there an implication that the intersection in question has only one corner. Similarly, (4) can be used without knowing or caring which of the side of the truck Superman smashes into.

Perhaps the definite determiner is ambiguous, and at least one of its senses does not give rise to a uniqueness implication. One consideration that weighs

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against an ambiguity approach, as we will see, is that these weak definites require the presence of a relational head noun and an overt genitive prepositional phrase argument. For instance, in (3), *corner* is syntactically and semantically relational, and *of a busy intersection* is a genitive *of*-phrase. In the presence of a different preposition, the weak use disappears:

(5) I hope the cafe is located on the corner **near** a busy intersection.

Changing the preposition from the genitive *of* to the locative *near* (or *at* or *beside*) changes the descriptive content very little: the cafe must still be located on a corner, and the corner must still be sufficiently close to a busy intersection. Nevertheless, native speakers report that in contrast with (3), a use of (5) is felicitous only if the speaker has a specific corner in mind. The difference between (3) and (5), I will argue, comes from the fact that the genitive *of* phrase in (3) constitutes a proper syntactic argument of the relational head noun *corner*. In contrast, locative prepositional phrases are not arguments, and function as modifiers of a syntactically non-relational use of *corner*.

So if weak interpretations arise only in a well-defined syntactic environment, we must consider seeking an explanation in the nature of the special syntactic environment. In pursuit of this possibility, I will propose a single meaning for *the* on which it uniformly triggers uniqueness presuppositions on all of its (productive) uses. The key to understanding weak definiteness will depend on identifying what exactly must be required to be unique in each case: for normal, non-relational examples, what must be unique is the referent of the entire description. For relational examples, it is the relation itself that must be unique. (What it means for a relation to be unique will be discussed below.)

I will suggest that the crucial variability in construal comes from independently motivated flexibility in the order of semantic composition. On some linguistic theories, notably combinatory categorial grammars of the sort proposed by, e.g., Jacobson (1999) and Steedman (2000), even if an expression has only one relevant syntactic structure with only one semantic value, there may still be more than one way in which that value can be computed. Several linguistic phenomena arguably are sensitive to this variation in the order of semantic composition. I will show how this type of computational flexibility can allow the relational head nominal to combine with the definite determiner before combining with its genitive argument. If the uniqueness presupposition associated with the definite determiner applies to the first element it combines with semantically, rather than with the first element it would normally combine with syntactically, we correctly predict that weak interpretations emerge only in the presence of a relational nominal.

Given the importance in the linguistics literature of definiteness in general and the definite determiner in particular, weak definites would be well worth studying if they merely motivated a refinement in the analysis of the definite determiner. But in fact there is more at stake: in order to exploit the mismatch between syntactic constituency and semantic composition, we must consider a new kind of interaction at the interfaces of syntax, semantics, and pragmatics.

2. Theoretical Preliminaries: the definite determiner requires uniqueness

In anticipation of more detailed discussions below, it will be helpful to give some working definitions up front. For present purposes, a DEFINITE DESCRIPTION is (conservatively) an NP with non-trivial descriptive content whose determiner is *the*: *the man, the corner of a busy intersection*, but not *John, her*, *every man*, or *John's dog*. A POSSESSIVE definite description is one whose head nominal occurs in construction with a genitive *of* prepositional phrase argument: *the corner of a busy intersection, the brother of a friend* but not *the corner near a busy intersection.* (See section 9 below for more discussion of relational versus non-relational nominals.) The claim under investigation is that possessive definite descriptions systematically can be used in contexts in which more than one object satisfies the content of the description; such a use qualifies as a WEAK use of a definite description, and a definite description that can be used in such a context is a WEAK DEFINITE.

Given that possessive weak definites don't seem to behave like definites at all, it may seem problematic to even call them definites. However, there are several reasons to continue to call them definites: first, *the* occurs in the main specifier position, the hallmark of a definite; they can be used in any situation in which a normal definite could be used (i.e., whenever the 'if' portion of (1) is satisfied), so calling them indefinites is hardly any better; and I will propose an analysis on which the definite determiner continues to impose a uniqueness restriction even in the weak uses.

But nothing crucial hangs on this choice of terminology. On the analysis below, the behavior of normal definite descriptions as well as weak definites depends only on the meaning of the definite determiner and how that meaning interacts with other meaningful elements in its linguistic context.

2.1. The semantic correlate of definiteness: is there one? As surveyed in Abbott (1999, 2001a), there is a continuing debate about the semantic nature of definiteness. Abbott classifies most semantic theories as falling into the familiarity camp or the uniqueness camp. Roughly, familiarity theories say that the object referred to by a definite must be familiar in the discourse, and uniqueness theories (such as the preliminary rule given in (1)) say that the object must be the only object in the discourse model that satisfies the content of the description.

Part of the difficulty of resolving the debate comes from the desire to provide a unified theory for all of the expression types classified as definite. Familiarity turns out to be a fairly good theory for explaining the behavior of pronouns, but does not do so well for definite descriptions; uniqueness, as we will see, does well for definite descriptions, but requires heroic efforts when applied to pronouns.

Since we are interested exclusively in the behavior of NPs determined by *the*, we can concentrate on the conditions for use of that type of NP, without worrying whether the condition we come up with applies to other expressions alleged to be definite. I will conclude below that as far as definite descriptions are concerned, familiarity is neither sufficient nor necessary, and that uniqueness is both sufficient and necessary (at least for productive uses of *the*, and of course, setting aside the correct treatment of the problematic cases under investigation). Any reader who already

agrees with these claims is welcome to skip ahead to section 3 below; however, because there is no clear consensus on these issues, I have provided some justification for my conclusions in the next two sections.

Incidentally, since Poesio (1994) is the only account I am aware of that assumes that the behavior of weak definites is systematic, his account is the only previous analysis I know of for weak definites. (Christophersen (1939:140) mentions some weak definites, but dismisses them as "illogical".) Poesio's explanation relies heavily on Heim's (1982) familiarity approach to definiteness. For reasons given below, I do not believe that familiarity offers a viable account of the behavior of definite descriptions, let alone for weak definites. As a result, I do not address Poesio's specific proposals beyond giving some general arguments against familiarity in the next section.

2.2. Definite descriptions need not be familiar. The familiarity approach is usually attributed to Christophersen (1939).

(6) Christophersen (1939:72): The article *the* brings it about that to the [noun] is attached a certain association with previously acquired knowledge, by which it can be inferred that only one definite individual is meant. This is what is understood by *familiarity*. [italics as in original]

The most influential modern advocate of familiarity is Heim (1982). In her implementation, in order for a use of a definite to be felicitous, the discourse participants must already be aware of the described object, or be willing to retroactively accommodate the existence of such an object.

Most familiarity theories are remarkably flexible concerning how an object can come to qualify as familiar. The prototypical way is by being explicitly introduced via an indefinite, as in the familiar mini-discourse ***A man***$_i$ *came in. Then* ***the man***$_i$ *sat down*, in which the indefinite *a man* renders a discourse referent corresponding to some man sufficiently salient to license the subsequent definite. An object can also count as familiar by being manifestly salient in the non-linguistic context *[A goat*$_i$ *walks into the room.]* ***The goat***$_i$ *stinks!*; and through background knowledge, in which case the object will be permanently familiar, as in ***The moon***$_i$ *shone.*

More controversially, sometimes an object can be familiar through a bridging inference (Prince's 1979, 1981 'inferables') from some other already familiar object.

(7) [talking of a certain book] **The author** is unknown.

Christophersen remarks that in (7), "the relation between the book and author is sufficiently common and unambiguous to serve as a transmitter of the reference contained in *the*." The idea is that as long as there is a readily recoverable function mapping books to their authors, the familiarity of the book in question renders the author familiar for purposes of reference with a definite description.

As a result of these extensions and elaborations, familiarity becomes a fairly technical notion with only a tenuous connection to the intuitive concept of

familiarity. As Lyons (1999) points out, if two doctors enter an empty operating room, and one says *I wonder who the anesthetist will be today*, it may be possible to claim that this is an instance of bridging from the non-linguistic context—but it is difficult to describe the hypothetical anesthetist as "familiar" in any intuitive sense.

But even setting aside the issue of abstractness, there are a number of compelling counterexamples that suggest that familiarity, even when extended via bridging, is not a condition for the felicitous use of a definite description.

(8) a. I bought a truck. **The hood** was scratched.
b. I bought a truck. #**The hubcap** was scratched.

The same logic that explains (8a) as an instance of bridging predicts that (8b) ought to be equally good: there is no obvious reason to suppose that a hood is any more familiar than a hubcap. Yet there is a marked difference in acceptability. Furthermore, that difference seems to be connected to the fact that trucks typically have only one hood, but four hubcaps, i.e., a failure of uniqueness.

(9) A man$_i$ walked into a room.
Then a woman walked into the room.
The man$_i$ began to speak.

(10) A man$_i$ walked into a room.
Then a second man walked into the room.
#The man$_i$ began to speak.

Similarly, the same logic that explains (9) as an instance of an indefinite rendering a discourse referent familiar ought to predict that the definite in (10) is acceptable, since the intended referent of the definite description presumably remains sufficiently familiar. The key difference, of course, is that in (9) there is a unique man, whereas in (10), there are two effectively indistinguishable men. Once again, uniqueness plays an important role.

Thus familiarity is not a sufficient condition for the use of a definite description.

In addition, familiarity is not even a necessary condition for the felicitous use of a definite.

(11) Please go into my bedroom and bring me the bag of chips that is lying on the bed.

Birner and Ward (1994, 1998) note that there is no plausible bridging inference that can be accommodated here, since beds do not regularly have bags of chips on them. Yet (11) can be perfectly acceptable even if there is no presumption that the listener has any previous acquaintance with the bag of chips. The best that can be said for a familiarity story is that (11) presupposes that if the addressee were to first obey the request to go into the bedroom, then there would be a bag of chips that would be familiar by virtue of being manifestly salient in the non-linguistic context.

Finally, superlatives provide a highly productive expression type that is obligatorily definite but that does not require the slightest degree of familiarity:

we can confidently speak of *the second smartest person in the US* without having any idea of who that might be. Some care is necessary here, since there is still an existence presupposition; as a result, a suitable referent must be accommodated if one is not already present in the discourse model. But existence is quite different from any intuitive notion of familiarity.

In view of these facts, I will assume that no obvious extension of familiarity is either necessary or sufficient for licensing of the definite determiner.

2.3. Normal (i.e., non-relational) definite descriptions have a uniqueness presupposition. Uniqueness is usually associated with Russell (1905), though it was not until Strawson (1950) that it was generally recognized that the uniqueness implications must be presuppositions rather than at-issue entailments. I follow Kadmon (1987, 1990, 2001), Roberts (2003), and Abbott (1999, 2001b), among others, in assuming that definite descriptions have a uniqueness presupposition. Unlike those authors, however, I do not claim that all definites have a uniqueness presupposition; in particular, pronouns are not required to satisfy uniqueness, at least, not in the sense developed below.

On uniqueness accounts, a use of a definite description is felicitous only if there is a unique object that satisfies the descriptive content of the NP. For instance, uniqueness does not care whether the listener was previously acquainted with the bag of chips in (11) (i.e., familiarity is not crucial), but does require that there be at most one easily discernible bag of chips resting on the bed. Thus if there were two bags of chips side by side lying on the bed, the utterance would have been infelicitous.

Now, whether a description picks out a unique object or not depends on how wide a range of objects it is compared to. Kadmon (Kadmon 1987; 1990; 2001, chapter 4) argues that definites must be unique in an absolute sense, i.e., unique (in effect) in the world. The fact that it is possible to use a definite description such as *the man* in a world with millions of men seems to be a glaring counterexample, but Kadmon permits accommodation of silent material at the level of logical form that renders the description absolutely unique.

The more common solution, and the one I will adopt here, relativizes uniqueness to the discourse situation. Gundel et al. (1993:277) provide an influential version, which they call 'identifiability': a description is UNIQUELY IDENTIFIABLE if "the addressee can identify the speaker's intended referent on the basis of the nominal alone".

Identifiability is the notion that Birner and Ward favor for explaining (11): (11) will be felicitous just in case the listener would be able to reliably determine the identity of the exact bag of chips the speaker had in mind based only on the information present in the description. If there had been more than one bag of chips lying on the bed, this requirement would not be met, since nothing in the description allows the listener to chose between multiple bags. Thus under certain circumstances, identifiability entails uniqueness.

Well-known examples show that identifiability must not be construed as *practical* identifiability .

(12) I wonder who **the spy** is?

Clearly, (12) can be felicitously uttered in a context in which we have evidence that a spy exists, without there being any way of telling which of several suspects is the actual spy. Nevertheless, it is possible to argue that the identifiability criterion has been met, as long as exactly one of the relevant candidates satisfies the criteria of applicability of the noun *spy*. This is a peculiar situation, though: the descriptive content provides enough information to identify the intended referent, but provides no practical way to use that information to pick out a referent in the situation at hand.

One popular way to resolve this puzzle is to suppose that the discourse participants construct a new discourse referent corresponding to the spy, and if later information reveals that the spy is identical to some other individual under discussion, the two discourse referents are merged. Since we have seen that definite descriptions do not in general require familiarity, it is unproblematic for a use of a definite description to create a new discourse referent; if so, then (contra Heim (1982)) definite descriptions (especially superlatives) can be used to introduce novel entities into the discourse.

At this point, we are ready to state a working approximation of the relevant felicity condition for the use of a definite description.

(13) **Discourse uniqueness**: for normal, productive uses of the definite determiner, there must be at most one entity in the discourse model that satisfies the descriptive content of its nominal complement.

This is very close in spirit to Gundel et al.'s and Birner and Ward's notion of uniquely identifiable, as well as Roberts' (2003) notion of informational uniqueness. Obviously, whether or not a description satisfies discourse uniqueness depends strongly on how fluidly discourse models are allowed to vary from moment to moment. We will have occasion below to consider this question in more detail, and though we will make some progress in constraining it, it will remain a major point of mushiness in the theory.

For now, I will make two brief comments. First, I will assume the usual elaboration with respect to singular versus plural nominals: a singular definite description must refer to a unique atomic entity (or in the case of a mass predicate, a unique aggregate), and a plural definite description must refer to a unique collective entity. Thus *the men* must refer to the mereological sum of all of the men present in the discourse model (what Hawkins (1978) calls *inclusiveness*, and what various other authors call *maximality*).

Second, Gundel et al. explicitly claim that their version of uniqueness (uniquely identifiable) is a necessary condition not only on definite descriptions, but also on demonstratives and pronouns. This is puzzling, since pronouns certainly do not satisfy discourse uniqueness. True, circumstances may render an intended referent uniquely identifiable, as when the speaker points at an individual at the very moment that she utters the pronoun in the sentence ***She*** *is the murderer!*. But even in such cases the intended referent is by no means identifiable, to use Gundel et al.'s own phrase, "on the basis of of the nominal alone", i.e., by virtue of satisfying the

descriptive content of the NP—after all, a feminine pronoun can be felicitously used in a room full of women, all of whom satisfy the descriptive content of *she*.

Thus I will assume that discourse uniqueness is a necessary and sufficient condition for all productive uses of the definite determiner (temporarily suspending consideration of the construction under investigation, i.e., possessive definite descriptions).

3. Data: Possessive weak definites

Given that we expect definite descriptions in general to satisfy a uniqueness requirement, we are now in a position to ask the following empirical question:

(14) Must possessive definite descriptions satisfy uniqueness?

The methodological problem with addressing this question is that it depends on identifying what must have been in the discourse model of the interlocutors. If discourse participants have sufficiently impoverished discourse models that contain referents for only a very few entities, then a uniqueness requirement becomes trivially easy to satisfy. Unfortunately, it is not always easy to determine empirically what objects are present in a discourse representation.

Nevertheless, it may be possible to come by some more or less persuasive indirect evidence. For instance, if the speaker (author) mentions an entity immediately before or immediately after the utterance in question, that can constitute evidence that those other entities must have been part of the speaker's discourse model. Less persuasive, but still worth considering, are occasions on which the pragmatics strongly suggest the presence of several indistinguishable entities that satisfy the content of the description in question.

3.1. Singular possessive head nouns. The most persuasive examples are those in which the discourse itself mentions or entails the existence of multiple entities satisfying the descriptive content of the definite.

(15) The baby's fully-developed hand wrapped itself around **the finger of the surgeon**.

The caption in (15) described the photograph displayed here. The index finger occupies the largest portion of the image, yet other fingers belonging to the surgeon are clearly visible and presumably part of any natural discourse model for this situation.

(16) Take scissors and cut **the finger of the latex glove** off at the base of the finger. The finger you cut depends on the size of the glove…

In this example, the continuation explicitly recognizes that the glove will have more than one finger. The fingers have properties that allow them to be distinguished (namely, size), but size is not mentioned in the original description.

(17) Did students notice anything about the categories on **the side and the top of the chart**?

This question appears under a chart whose left and right side are equally visible, though there are category labels along only the top and the left side. Based on the fact that the chart clearly has two sides, it is difficult to avoid concluding that more than one side must be present in the discourse model.

(18) In the center of the room is a large stone cube, about 10 feet on a side. Engraved on **the side of the cube** is some lettering. – Zork 2.

The fact that cubes have six sides initially evokes an image of a cube resting on the floor. Mentioning the fact that the sides all have the same dimension emphasizes the initial indistinguishability of the four sides. Nevertheless, this does not prevent the writer from using the weak definite *the side of the cube.*

(19) Tie one end of a piece of string to **the corner of the cardboard with the picture**. Tie the other end to the same corner of the other piece of cardboard with the label.

Given the second sentence, the picture distinguishes one piece of cardboard from the one that has the label on it. The use of *same* emphasizes that the four corners of the first piece of cardboard were indistinguishable (and equally suitable) until the piece of string is attached. Presumably the initial discourse model provides four initially indistinguishable corners.

(20) As you know, I didn't expect to be **the parent of a hyperactive child**.

Since this sentence is spoken by a husband to his wife, there is no escaping the fact that there must be discourse referents for two distinct individuals who satisfy the content of the description.

Not quite so compelling, but still worth mentioning, are examples that involve situations in which we can naturally suppose there are several entities satisfying the descriptive content of the description.

(21) People were saying that a plane had hit **the side of the other tower**.
(22) The Round Tower: Located at **the corner of the cathedral**.
(23) Remove all the objects to discover the really cool artifact that the archaeologists found buried in **the corner of the Pharaoh's tomb**!
(24) Moon skinned him and threw the body in **the corner of the smokehouse**.
(25) Look for the huge Whale on **the side of the building**,
(26) Alexander the Great was crossing the desert on his donkey. Suddenly **the leg of the donkey** buckled and it fell.

Based on these and other similar examples, I conclude that possessive definites can be weak.

3.2. Plural head nouns. If the nominal property is plural, discourse uniqueness normally requires that the description as a whole must refer to the sum of all entities that satisfy the property denoted by the nominal. Thus a normal plural definite description such as *the men* can only be used in a context in which it clearly refers to the maximal set of men. A use of a plural possessive definite description counts as weak, then, if it is used in a context in which it refers to a proper subset of the objects that satisfy its content.

Once again, I begin with examples in which the discourse explicitly entails the failure of discourse uniqueness.

(27) The term double crush describes… A type of fracture or other injury resulting from being driven over by **the two wheels of a car or other vehicle**.

It is reasonably clear from context that the situation the speaker has in mind is when a person lying on the ground is hit either by the right front wheel followed by the right rear wheel, or by the left front wheel followed by the left rear wheel. In either case, the vehicle in question has at least four wheels, but the plural definite refers to only two of them.

(28) But, **the two fingers of a woman's hand** quickly stuck in the eyes of the offender are more effective than …

There is no suggestion that the women in question have any less than the normal complement of fingers. The intention, presumably, is to encourage the listener to imagine two fingers (in fact, specifically the index and the middle finger) extended in an eye-wide V-shape with the rest of the fingers curled under–but these details are certainly not included in the description.

(29) In contrast, for $ThCl_4$ (i) two tetragonal crystal structures have been reported, in which each Th atom shares with its neighbors eight chlorine atoms on **the corners of a dodecahedron**.

The regular dodecahedron is the Platonic solid composed of 20 vertices, 30 edges, and 12 pentagonal faces, so the eight chlorine atoms, with or without the thorine atom, occupy only some of the corners.

In the following set, pragmatics strongly suggests that the plural possessive definite description refers to a proper subset of the entities satisfying the description.

(30) PROCEDURE B: 1. Place the edge of a piece of paper between **the pages of a book**.
(31) This magnifier is extremely thin, and it slips easily between **the pages of a book**.
(32) Dry the slide by putting it between **the pages of a book of Bibulous paper**.

These examples suggest that even with plural head nominals, possessive definite descriptions can refer to a proper subset of the entities that satisfy the descriptive content of the NP.

3.3. Definite possessors. Most, though not all, of the examples of weak definites above, as well as those in Poesio (1994), contain an indefinite as the object of the genitive *of*. However, it is not difficult to find examples in which the possessor NP is definite:

(33) About a mile up the road I could see a group of people chipping away at a rock formation along **the side of the road**.
(34) There was **the side of the mountain** on one side of me and plenty of trees and a creek on the other.
(35) … whom human eyes could not see raised himself on crutches in **the corner of the room**;
(36) …and experience his glory without those stupid freakin' ads in **the corner of the page**!!
(37) …and it took him several minutes to reach the refrigerator nestled in **the corner of the kitchen**.
(38) …simply placing it in the hopper provided for the purpose at **the side of the Clerk's desk** in the House Chamber.
(39) … the archaeologists provided a pleasant surprise for tourists and went through **the side of the hill**.
(40) Then one of them accidentally breaks a small hole through **the side of the box** and some light comes through.
(41) It is safer to mount and dismount towards **the side of the road**, rather than in the middle of traffic.

Note that (41) is carefully stated so as to apply equally in the case when the bicycle rider happens to be riding on either the right side of the road or on the left side (as when riding on a one-way street). If so, then the author was consciously aware that roads have two sides, in which case the use of the possessive definite is weak.

Apparently a use of a possessive definite description can be weak whether the object of the genitive *of* is indefinite or not.

3.4. Are weak readings restricted to possessive definite descriptions? This section has two purposes: to elaborate on the structure of possessive definite descriptions, and to support the conjecture that only descriptions involving the genuine genitive *of* systematically give rise to weak uses.

Following, e.g., Barker (1995) and Partee (1997), I assume that just as verbs have intransitive and transitive uses, so too do nouns have non-relational and relational uses. Conceptually, dining, eating, and devouring all entail the existence of an object that gets consumed. Yet even assuming the statements in (42) describe the same event, the presence of an overt direct object can be prohibited, optional, or required, depending on the specific lexical item involved.

(42)

	INTRANSITIVE	TRANSITIVE
a.	We dined.	*We dined the pizza.
b.	We ate.	We ate the pizza.
c.	*We devoured.	We devoured the pizza.

In the nominal domain, whether or not a noun is used relationally is at least partly a syntactic matter, and can even be idiosyncratically determined on a per-predicate basis, just as for verbal transitivity. Obligatorily transitive verbs such as *devour* are rare, and obligatorily relational nouns are at least as rare; however, Quine mentions *sake* as a nominal predicate that cannot occur without an overt possessor:

(43)		NON-RELATIONAL	RELATIONAL	PRENOMINAL POSSESSIVE
	a.	the stranger	*the stranger of John	*John's stranger
	b.	the enemy	the enemy of John	John's enemy
	c.	*the sake	the sake of John	John's sake

At the conceptual level, qualifying as a stranger, an enemy, or a sake requires the existence of some object that stands in a certain relation to the described object. After all, someone who is a stranger to John may be well known to me, likewise for an enemy, and doing something for John's sake very different than doing it for my sake. Nevertheless, despite the fact that a possessor argument is conceptually obligatory for all three predicates, it is not possible to express the relatum for *stranger* overtly, either by means of a genitive *of* phrase or even by means of a prenominal possessive; overt expression of the relational argument is optional for *enemy*, and obligatory for *sake*.

It will be important in what follows to distinguish the genitive *of* from other uses, which can be tricky:

(44)			
	a.	a student of Mary	TRUE GENITIVE *OF*
	b.	a student of Mary's	"DOUBLE GENITIVE"

The genitive phrase in (44a) and the so-called double-genitive in (44b) are usually considered minor variants, and in some analyses one is derived from the other syntactically. But Barker (1998) argues that these are actually quite different constructions; to give just one argument, the true genitive *of* requires a relational head noun, and is incompatible with an inherently non-relational concept such as *stick*. The double-genitive construction, however, is fine:

(45) a. *a stick of Mary
b. a stick of Mary's

In fact, in Barker (1998), I argue the *of* in (44b) and (45b) is actually a partitive *of*. Since I claim here that only the true genitive *of* systematically gives rise to weak interpretations, the prediction is that the double-genitive cannot receive a weak interpretation, and that prediction is borne out:

(46) a. I met the student of a famous linguist last night at a restaurant.
b. *I met the student of a famous linguist's last night at a restaurant.

It is difficult to assess the status of (46b) with respect to uniqueness, since according to my 1998 analysis, the indefinite possessor phrase *a famous linguist* also violates the Partitive Constraint, and hence is infelicitous in any situation. But even using

an example with a definite possessor (which would at least satisfy the Partitive Constraint), the double-genitive construction still cannot receive a weak reading:

(47) a. The baby's fully-developed hand wrapped itself around **the finger of the surgeon**. (= (15))
b. *The baby's fully-developed hand wrapped itself around **the finger of the surgeon's**

The data suggests that possessive definites systematically have weak uses, and other definites involving prepositional phrases—even other senses of *of*—in general do not.

3.5. A morphosyntactic test: existential there *and 'conceptual generics'.* The idea that the existential *there* construction is sensitive to definiteness—or even that the class of NPs allowed in the construction constitute a natural class—has remained controversial ever since Milsark (1977). Nevertheless, most definites resist occurring in the construction under normal circumstances (e.g., *There is* {*a man*}/{**the man*} *standing in the garden*). Therefore it is interesting to note that possessive weak definites seem to occur in the construction rather easily, supporting the claim that they have weak interpretations. These examples are from Woisetschlaeger (1983):

(48) There is **the outline of a human face** hidden in this puzzle.
(49) There was **the wedding picture of a young black couple** among his papers.
(50) Suddenly, there were **the words of a madman** tumbling out of his mouth.

Poesio (1994) and McNally (1998) also observe that possessive weak definites occur as pivot NPs in the existential *there* construction. Furthermore, it is easy to find additional naturally-occurring examples. Here are a few:

(51) There was **the side of a bear** attached to a wooden spit over a fire.
(52) There was **the corner of a Strat card** barely sticking out of her mouth…
(53) …and then there was **the corner of a table** jabbing me in the leg before we hit my bed and collapsed …
(54) He discovered that there was **the point of a new tooth** sticking out.
(55) Almost instantly there was **the barrel of a twelve-gauge shotgun** in my stomach.
(56) There was **the wife of a clergyman** my mother used to tell of…
(57) Beneath his fragile form, there was **the soul of a lion**, and his lips, when compressed, revealed an iron determination.

The ease of finding this data and its naturalness suggests that the potential for possessive weak definites to occur in the existential *there* construction is systematic. What this shows depends on what you think the existential *there* construction is sensitive to: either it shows that possessive definite descriptions may not be definite after all, or, as I assume here, that the existential *there* construction is compatible with at least some definite descriptions (namely, the weak ones!). In any case, possessive

weak definites do not pattern like typical definites with respect to this construction.

Woisetschlaeger claims that a possessive definite description must be a 'conceptual generic' in order to receive a weak interpretation, and Ward and Birner (1995) endorse this generalization, connecting it with Prince's (1981) notion of a containing inferable. Ward and Birner explicitly predict that if the word *wedding* is removed from (49), the result will be infelicitous, on the theory that (49) depends on there being a conventional relationship between couples and their official wedding picture. However, it is easy to find counterexamples to Ward and Birner's specific claim:

(58) And there was **the picture of a boy I had known slightly in high school**
(59) There was **the picture of a pseudosphere**…
(60) Histologically there was **the picture of a necrotizing granulomatous bronchopneumonia**.

Surely we do not generically expect boys that the speaker had known slightly in high school to be associated with some particular type of picture. I take it that although generic associations may promote the use of a possessive weak definite, they are not a requirement.

3.6. Other sporadic exceptions to uniqueness: a productivity criterion. Ward and Birner (1995) argue that uniqueness is not a necessary condition for the use of a definite description.

(61) [To a spouse, in a room with three equally salient windows.]
It's hot. Could you please open **the window**? (Birner and Ward)

Birner and Ward remark that when uniqueness fails, as in (61), the referent must not be "relevantly differentiable in context", i.e., the speaker must be indifferent as to which window is opened. If definite descriptions are generally excused from uniqueness just in cases of speaker indifference, this could potentially explain possessive weak definites, if it turns out that they uniformly display indifference.

But it is not clear that Birner and Ward's indifference principle generalizes. (See also Birner and Ward's (1994) discussion of examples like *take the elevator*, *take the bus*; Abbott (2001a) includes them in a "small group of problematic cases" for uniqueness.)

(62) [To a guest, offering a bowl of apples] #Please eat **the apple**.

Even if the host is completely indifferent as to which apple gets eaten, (62) cannot be used to mean 'please eat an apple'. Another clue that uses like (61) are idiosyncratic is that they do not easily tolerate modification. If there are four windows, two short and two tall, it is infelicitous to say #*Could you please open* ***the tall window****?*, even if the speaker is indifferent as to which tall window is opened.

In contrast, possessive weak definites are highly productive, and easily allow modifiers:

(63) …as much as a doctor who repairs **the broken finger of a killer**.

(64) We are told by the photographer that this is **the rear wheel of a 1959 Ford Fairlane**.

Note that whether examples like (61) are truly exceptional or systematic does not affect the main empirical claim of this paper, namely, that possessive definite descriptions are productively and systematically capable of weak interpretations; nor does the proper treatment of these examples have any obvious implications for whether the proposed treatment of the possessive examples is correct.

3.7. Summary of the data. Possessive definite descriptions allow weak interpretations with a wide range of lexical items, both singular and plural, as long as the nominal predicate is relational and the preposition involved is the true genitive *of*. They take modification without giving up their ability to give rise to weak readings, suggesting a high degree of productivity. They often but not always occur with an indefinite possessor (object of the genitive *of*), and they often but not always have a generic flavor.

In sum, unlike other sporadic semi-productive exceptions to uniqueness, weak interpretations for possessive definite descriptions are systematic, productive, natural, and common enough to pose a challenge to every theory of definiteness I am aware of. In any case, the phenomenon certainly seems to be systematic enough to deserve an explanation.

4. Analysis: the uniqueness presupposition tracks function composition

4.1. Degenerate models and hypoindividuation. One way to reconcile discourse uniqueness with the behavior of possessive weak definites involves making somewhat radical assumptions about the nature of the discourse models against which expressions are evaluated. If the model somehow contains only one entity satisfying the descriptive content of the expression in question, then discourse uniqueness will be satisfied after all. The opportunity for considering this type of approach comes from the slipperiness inherent in the notion of a discourse model. However, we shall see that a purely ontological approach makes predictions that are too strong. In particular, such a solution does not explain why possessive definite descriptions behave differently than other types of definite NPs.

The specific theory I will discuss here is due to Nunberg (1984), which I call HYPOINDIVIDUATION: the idea is to include in the discourse model only as many individuals as required for conversational purposes.

(65) I drive a Ford Falcon, and Tom drives the same car. (Nunberg)

In the real world, the car that Tom drives and the car that I drive are different: they have different locations, different owners, etc. But if our conversational purpose is to compare different makes and models of car, the properties that distinguish my car from Tom's are irrelevant, and Nunberg supposes that the discourse model will contain exactly one Ford Falcon in it. That is why it is possible to use the word *same* above in (65).

(66) #I was driving down 101 when my Ford Falcon smashed into the same car.

In contrast, when describing a car crash, previously irrelevant properties such as ownership or the direction of travel become highly relevant, and I cannot use (66) to report hitting another Ford Falcon.

The potential explanation for possessive weak definites, then, is that the properties that distinguish between the four corners of an intersection are irrelevant: all that matters is whether they are corners on a busy intersection. Then by the hypoindividuation principle, there will be just one corner in the model, and the possessive weak definite satisfies discourse uniqueness.

There is something disturbingly radical, yet seductively appealing about hypoindividuation. However, hypoindividuation has a number of serious problems if we try to use it to predict the distribution of the definite determiner.

(67) I drive a Ford Falcon, and Tom drives **the Ford Falcon** too.

To the extent that the definite determiner in (67) is acceptable, it is a generic use, and not referential. But if there is exactly one Ford Falcon in the discourse model, and discourse uniqueness is relative to the entities in the discourse model, we would expect the definite in (67) to be perfectly fine with a normal referential reading, contrary to fact.

Second, we should expect uses of *same* in possessive weak definites in parallel with Nunberg's example in (65). Imagine a conference at which I am introduced to Ray Jackendoff. All I know about him is that he is a student of Chomsky's. I report the event by stating that *I met* ***the student of a famous linguist***. There is no implication that the famous linguist in question has only one student, so this is a weak definite. On the hypoindividuation hypothesis, the explanation is that the properties that distinguish among Chomsky's students are irrelevant for conversational purposes, and therefore there is exactly one Chomsky student in the discourse model.

Now imagine that I learn that my friend Tom met Barbara Partee, who also was a student of Chomsky's.

(68) I met the student of a famous linguist, and Tom met the same student.

This sentence certainly does not have the same kind of interpretation as (65), contrary to what we should expect if there is somehow only one student in the discourse model.

Furthermore, imagine that I am explaining why I ran out of handouts at my talk.

(69) The speaker before me and the speaker after me were both the student of a certain famous linguist.

I take it that this is an acceptable description. But the presence of *both* requires the presence of exactly two entities in the discourse model, each of which has the property of being the student of a famous linguist. If so, then the definiteness of *the student of a famous linguist* cannot be explained by hypoindividuation.

Thus even assuming that hypoindividuation is the right explanation for (65)

and (68) (though see Lasersohn (2000) for an alternative and discussion), applying hypoindividuation to possessive weak definites is highly problematic, and I will not consider it further here.

4.2. Motivating function composition. Since the proposal below relies on a novel use of function composition, it is necessary to say what function composition is and motivate its relevance for natural language analysis. The composition of two functions f and g, written as $f \bullet g$, is defined as in (70):

(70) Function composition: $f \bullet g \equiv \lambda x.f(gx)$

This definition gives rise to the simple theorem given in (8).

(71) Theorem: $(f \bullet g)h = (\lambda x.f(gx))h = f(gh)$

For instance, $(\log \bullet \text{sqrt})(10000) = (\lambda x.\log(\text{sqrt}(x)))(10000) = \log(\text{sqrt}(10000)) = \log(86) = 2$.

In other words, function composition allows the order in which functional application is performed to be rearranged without disturbing the final outcome. For instance, given Montague's generalized-quantifier treatment of quantificational NPs, a sentence like *Everyone saw Mary* would normally have the functional structure **everyone**(**saw**(**mary**)), in which the transitive verb and its direct object form a constituent both syntactically and semantically. When computing the semantic value, the denotation of the verb is first applied to the denotation of the direct object, and then the denotation of the subject is applied to the previously computed denotation of the verb phrase.

But if we allow functional composition, we can compose the subject with the verb first: (**everyone**•**saw**)(**mary**) = (λx.**everyone**(**saw**(x)))(**mary**) = **everyone**(**saw**(**mary**)). In other words, with function composition, we have the option of combining the subject with the transitive verb first if we have some reason to do so. The final denotation is the same, only the order of semantic combination has been changed.

Function composition has been proposed as an explanation for a number of linguistic phenomena, including non-constituent coordination (Steedman (1985), Dowty (1988, 1997)), Antecedent-Contained Deletion (Jacobson (1992)), functional questions (Jacobson (1999)), quantifier scope alternations (Steedman (2000)), and more. I will concentrate here on non-constituent coordination, for two reasons: unlike the other phenomena just mentioned, I am unaware of any viable alternative explanation besides function composition; and we shall see below in section 4.4 that non-constituent coordination provides an empirical argument in favor of the analysis proposed here for possessive weak definites.

Coordination traditionally is one of the more robust tests for constituency: if an expression can be coordinated, then it is presumed to be a constituent. However, coordination can sometimes give highly counter-intuitive results with respect to constituency:

(72) a. John ate [rice yesterday] and [beans today].
b. Mary gave [a book to John] and [a record to Bill].
c. [John read] and [Mary criticized] an article by Bill.

The perfectly natural examples in (72) challenge the commonly held assumption that coordination requires each conjunct to at least be a constituent. But given a suitably constrained theory of function composition (see Steedman (1985) and Dowty (1988, 1997) for details), we can understand the sense in which the conjuncts are in fact perfectly coherent constituents: not in terms of syntactic function/argument structure, but in terms of composed functions. For instance, in the right node raising example in (72c), the denotation of *John read* and *Mary criticized* will be **j•read** and **m•criticized**, respectively. On these analyses, then, the phenomenon ought to be called 'non-syntactic-constituent coordination'.

4.3. Function composition in possessive definite descriptions. Once we allow function composition, we have two possible analyses for possessive definites. Choosing $f = [\![\textit{the}]\!]$, $g = [\![\textit{corner}]\!]$ and $h = [\![\textit{of the intersection}]\!]$, we have

(73) $f(g(h)) = (f \bullet g)(h) =$ **the(corner(of-the-intersection))**
$=$ **(the • corner)(of-the-intersection)**

Thus in the presence of function composition there are two distinct ways of composing the meaning of a possessive definite description.

(74) a. the [corner [of a busy intersection]] NORMAL UNIQUENESS
b. [the • corner] [of a busy intersection] POSSESSIVE WEAK DEFINITE

I propose that the first analysis, the one without functional composition, gives rise to normal uniqueness presuppositions, as when (74) is the answer to a question like *Which site shall we choose, the corner near the subway stop or the corner on the quiet side street?* The rule in (13) correctly predicts there must be a unique corner in (74a).

On the second analysis, the determiner combines first with the relational noun *corner*, and then with the prepositional phrase. According to discourse uniqueness (as given in (13)), then, the requirement is that the relation named by the noun *corner* must be unique in comparison with the set of relations relevant for intersections: the corner, not the middle or the edge. Since the uniqueness presupposition is attached to the relational noun, the NP as a whole is not required to have a unique referent, and a weak interpretation ensues.

The remainder of this section provides some additional technical details concerning one concrete implementation of this approach in the style of a combinatory categorial grammar. A discussion of how the uniqueness presupposition fits into the picture is delayed until section 4.5.

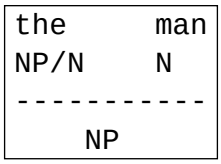
To begin with, we have the truth-conditional content of the definite determiner in normal uses:

(75) Normal *the*:

Syntax	Semantics
NP/N	f (a choice function)

Assume that *the* denotes a choice function f. (That is, f maps any set of entities P to an individual $x \in P$; see the papers in Egli and von Heusinger (1995) for motivation for treating determiners as choice functions.) Here is how this interpretation works:

(76) Simple, normal, non-possessive definite description:

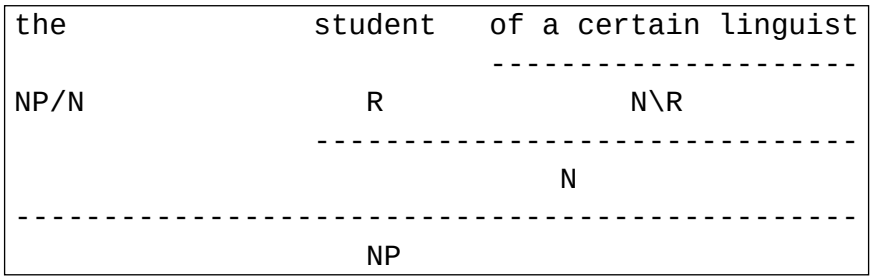


Denotation: f(**man**) = some specific man

The description picks out a specific man.

Now we can consider an example involving a postnominal genitive (i.e., a possessive definite description):

(77) Normal possessive definite:



Denotation: f(**student**(**a-certain-linguist**))
= some specific student of the relevant linguist

The relational noun *student* combines with the genitive *of*-phrase resulting in a property corresponding to the set of individuals who are the student of a certain linguist. The determiner combines with this set to select one individual from this set.

At this point we are ready to derive the weak use of a possessive definite. In a combinatory categorial grammar, since expressions combine with one argument at a time, it is convenient to use a curried version of function composition. Jacobson (1999:130) provides a suitable operator that she calls the Geach rule. Simplifying slightly, this operator shifts an expression of syntactic category A/B into an expression of category (A/(B\C))/C. Semantically, it shifts a denotation f to $\lambda gh.f(gh)$. Starting with the syntax and semantics in (75), and instantiating A = NP, B = N, and C = R, we have the following version of *the* ready to combine with a relational nominal:

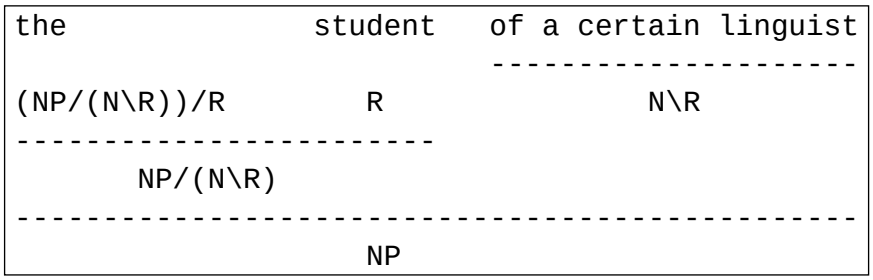
(78) Geach(*the*):

Syntax	Semantics
(NP/(N\R))/R	$\lambda gh.f(gh)$

Although I have given the result of applying the Geach rule as if produced a second sense for *the*, in fact, the Geach rule applies freely, in order, e.g., to build function-composed structures for non-constituent coordination. Thus the expression in (78) is just one instantiation, and should not be interpreted as claiming that *the* has two lexically specified distinct meanings in the way that, say, *of* has a genitive use and a partitive use.

The Geached *the* enters into derivations such as the following:

(79) Possessive definite description:



Denotation: (f •**student**)(**a-certain-linguist**)
= f(**student**(**a-certain-linguist**))
= some specific student of the relevant linguist

Once again, we arrive at a specific individual who has the property of being the student of a particular linguist. As far as the contribution to (non-presupposed) truth conditions is concerned, this order of combination gives the same result as in (77), as desired.

4.4. Non-constituent coordination of determiners plus relational predicates. If one strong motivation for positing function composition in linguistic analysis is that it enables non-constituent coordination, and if possessive weak definites arise through function composition, then we should expect that it is possible to coordinate conjuncts consisting of a sequence of *the* followed by a relational nominal, even though they do not form a constituent in terms of syntactic function/argument structure. This prediction is borne out:

(80) The anterior branches run forward to **the side and the forepart of the chest**, supplying the skin and the mamma.
(81) Turn the lights off and observe the light beam from **the side and the end of the container**.
(82) A new method to join **the side and the bottom of the drum** is to make a round fold, see fig. 1.1.
(83) Ixia was able to support our testing on both **the edge and the core of the network**.
(84) This leather shield stands between **the side and the top of the slide**
(85) … that the initial breaking point was at the connection between **the side and the top of our bridge**.
(86) There was about a four foot wide space between **the side and the top** so the children could see out across Disneyland.

(87) … the 90 degree edge between **the side and the top of the base**.

It is possible, of course, that the constituency for, e.g., (87) is [*the side*] *and* [*the top of the base*], in which case two complete NPs have been coordinated and there is no non-constituent coordination. However, the fact that the context forces *the side* to be interpreted as *the side of the base* favors the non-constituent coordination analysis. In any case, these data are exactly as expected on the function composition analysis.

4.5. Explaining weak uses: separating presuppositions from syntactic structure. In broad strokes, what function composition does is allow a certain discrepancy between constituency as determined by syntactic and semantic function/argument structure (i.e., the traditional notion of constituency) versus constituency as determined by the order in which meaningful elements combine during the computation of the final result (what I will call "compositional constituency").

The new idea suggested here is the possibility that presuppositions might apply based on the compositional constituency rather than on the underlying function/argument structure.

Typically, lexical presuppositions apply to that lexical item's syntactic argument. For instance, the predicate *realize* presupposes the truth of its sentential complement (*I realized that I was right*). But suppose that the presupposition triggered by a use of the definite determiner applies to the first semantic object it combines with:

(88) **Presupposition of *the*** (uniform across all productive uses): the descriptive content of the first argument of *the* must pick out no more than one object in the discourse model.

What turns out to be the "first argument" depends on whether function composition has applied or not. When *the* remains unshifted, as in (77), the first argument will be the complete nominal, and the uniqueness presupposition will require that the NP as a whole describes a unique object in the discourse model.

When *the* shifts via function composition, its first argument will be the relational nominal, as diagramed in (79). As a result, there is no presupposition associated with the property corresponding to *student of a certain linguist*, since this string isn't even a compositional constituent in (79). Therefore, on this derivation, *the student of a certain linguist* is compatible with a discourse model in which the linguist in question has more than one student, yielding a weak use of the definite.

But there is (by hypothesis) still a uniqueness presupposition: specifically ,the content of the relational noun must pick out no more than one object in the domain of discourse. At this point it is necessary to say more about what it means for a relation to satisfy the discourse uniqueness requirement.

It is tempting to say that a relation will count as satisfying uniqueness just in case it maps each individual onto a single relatum, i.e., just in case the relation corresponds to a function over individuals. This can't be the right analysis, however, for several reasons already given above: first, in an example like *the corner of a busy*

intersection, I have argued above that all four of the intersection's corners are equally salient, so there is no suitable function over individuals available; furthermore, appealing to a principle of indifference is not adequate in general. Second, even when the head noun is plural, the description as a whole can describe a proper subset of the class of described individuals, as when the expression *between the pages of a book* is used in a situation in which books have more than two pages.

Therefore I will assume that relational nouns denote exactly the sort of object that their syntax suggests: functions from individuals to nominal meanings, i.e., functions from individuals to sets of individuals (semantic type $\langle e, \langle e, t\rangle\rangle$). For instance, the relational noun *corner* maps each intersection onto a property that is true of that intersection's four corners. So somehow it is this sort of function that we must evaluate with respect to the discourse uniqueness requirement.

One possibility is that it simply doesn't make sense to ask whether a relation is unique, so that a relational noun like *corner* or *student* satisfies uniqueness merely by failing to violate it. If so, then the explanation for what is special about NPs headed by relational nouns is that they are exempt from uniqueness by virtue of their semantic type.

But we should look for a deeper, more satisfying explanation. What could it mean for a relation to satisfy uniqueness? Well, in the case of a non-relational definite description, e.g., *the man*, a successful use is one that guides the attention of the listener to reliably pick out the intended individual: it's the man I'm talking about, not the woman, not the dog.

Analogously, in the relational case, e.g., *the corner of a busy intersection*, the relational predicate *corner* describes the connection between the referent of the NP as a whole (the corner) and the object it stands in relation to (the busy intersection). Now, there are many different kinds of relations that could connect an object with its possessor: ownership, part-whole, familial relations, physical proximity, etc. A successful use of a possessive definite description, then, is one that provides enough information for the listener to reliably pick out the intended kind of object: it's the side of the box I'm talking about, not the bottom, not the top. In other words, what the speaker has in mind is a unique, specific relation, and that specificity is what the definite determiner is marking.

Unfortunately, I am not aware of any technically satisfying way of expressing this intuition formally by means of a definition that applies both to simple nominals to give normal NP-level uniqueness and also to relational nouns to give relation-level uniqueness. Therefore, with some reluctance, I must assume that the reason possessive weak definites don't violate uniqueness is because the uniqueness requirement simply can't apply to relations. This is somewhat disappointing. Nevertheless, the analysis still provides an economical explanation for why it is possessive definite descriptions (rather than some other type of definite description) that systematically have weak interpretations: first, it is the semantic type of the relational head noun that allows function composition to bring it into contact with the determiner in the first place (since function composition requires a predicate that is still waiting for an argument, and a relational noun that has not yet combined with its genitive *of* phrase is exactly that, namely, a function waiting for its argument). Second, having com-

posed with the definite determiner, the reason relational predicates are excused from uniqueness requirements is that the semantic type of a relational predicate is simply not the kind of thing that is capable of being unique or not relative to a discourse model.

5. Conclusions

I have provided naturally-occurring data to support the following claim: when a NP with a definite determiner has a relational head nominal followed by a genitive *of*-phrase argument, the NP as a whole need not exhibit discourse uniqueness. That is, a definite such as *the fingerof the surgeon* can be used even in a discourse situation in which there are discourse referents for several of the surgeon's fingers. Unlike many examples that have been discussed as potential counterexamples to a uniqueness requirement for definite descriptions, I have argued at length in support of Poesio's (1994) claim that possessive weak definites are a productive, robust, systematic class of counterexamples that require a rule-based explanation.

The explanation offered here depends on separating functional/argument structure from the superficial order of semantic composition. If we associate the uniqueness presupposition triggered by *the* with the first semantic object it combines with, then possessive weak definites are excused from uniqueness because of the semantic nature of the relational nominal.

From the point of view of language use, there is abundant psycholinguistic evidence that people process language immediately and incrementally. Function composition allows people to process words in the order in which they hear them: using function composition, there is no need to wait to combine *the* with *corner* until *corner* has combined with its genitive argument—using function composition, we can combine *the* with *corner* right away, yet still incorporate the contribution of the genitive argument in the appropriate way. Given that people process language from left to right (at least as a strong default), it is no wonder that some grammatical phenomenon seem to be sensitive to order of composition rather than exclusively to function/argument structure.

The core of the phenomenon of weak definiteness is a special relationship between the definite determiner and the relational head nominal. Function composition provides just the right opportunity for the determiner to interact with the relational nominal. If so, then possessive weak definites show that presupposition can depend on compositional constituency rather than exclusively on function/argument constituency.

References

Abbott B. 1999. Support for a unique theory of definite descriptions. In *Proceedings from Semantics and Linguistic Theory IX*, Tanya MatthewsDevon Strolovitch, eds., 1-15. Ithaca: Cornell University.

Abbott, B. 2001a. Definiteness and indefiniteness. To appear in *Handbook of Pragmatics*, Laurence R. HornGregory Ward., eds., Oxford: Blackwell.

Abbott, B. 2001b. Definiteness and identification in English. In *Pragmatics in 2000: Selected papers from the 7th International Pragmatics Conference, Vol. 2*, Németh T. Enikö, eds., 1-15. Antwerp: International Pragmatics Association.

Barker, C. 1995. *Possessive Descriptions.* Stanford: CSLI.

Barker, C. 1998. Partitives, Double Genitives, and Anti-uniqueness. *Natural Language and Linguistic Theory* **16**:679–717.

Birner, Betty and Gregory Ward. 1994. Uniqueness, Familiarity, and the Definite Article in English. *BLS* 20, 93–102.

Birner, Betty and Gregory Ward. 1998. *Information Status and Noncanonical Word Order*. Philadelphia: John Benjamins.

Christophersen, Paul. 1939. *The Articles.* London: Munksgaard, Copenhagen and Oxford University Press.

Dowty, David. 1988. Type raising, functional composition, and non-constituent coordination. In *Categorial Grammar and Natural Language structures*, Emmon Bach, Richard Oehrle, and Deirdre Wheeler, eds., 153–198. Dordrecht: Kluwer.

Dowty, David. 1997. Non-Constituent Coordination, Wrapping,and Multimodal Categorial Grammars. In *Structures and Norms in Science, Volume Two of the Tenth International Congress of Logic, Methodology and Philosophy of Science, Florence, August 1995*, Maria Luisa Dalla Chiara, Kees Doets, Daniele Mundici, and Johan van Benthem, eds., 347–368. Dordrecht: Kluwer.

Egli, Urs and Klaus Heusinger, eds. 1995. *Choice functions in Natural Language Semantics.* Arbeitspapier Nr. 71. Fachgruppe Sprachwisenschaft, Universität Konstanz.

Gundel, Jeanette, Nancy Hedberg, and Ron Zacharski. 1993. Cognitive status and the form of referring expressions. *Language* **69.2**: 274–307.

Hawkins, John A. 1978. *Definiteness and Indefiniteness.* Atlantic Highland, NJ: Humanities Press.

Heim, Irene. 1982. The Semantics of Definite and Indefinite Noun Phrases. Dissertation, University of Massachusetts, Amherst.

Jacobson, Pauline. 1992. Antecedent Contained Deletion in a Variable-Free Semantics. *Proceedings of SALT II*, Chris Barker and David Dowty, eds. Columbus: Ohio State University.

Jacobson, Pauline. 1999. Towards a Variable-Free Semantics. *Linguistics and Philosophy* **22.2**:117–184.

Kadmon, Nirit. 1987. On Unique and Non-unique Reference and Asymmetric Quantification. PhD dissertation, University of Massachusetts, Amherst.

Kadmon, Nirit. 1990. Uniqueness. *Linguistics and Philosophy* **13.3**: 273–324.

Kadmon, Nirit. 2001. *Formal Pragmatics.* Blackwell.
Lasersohn, Peter. 2000. 'Same', models and representation. SALT X, Cornell, Ithaca.
Lyons, C. 1999. *Definiteness.* London: Cambridge University Press.
McNally, Louise. 1998. Existential sentences without existential quantification. *Linguistics and Philosophy.*
Milsark, Gary. 1977. Toward an explanation of certain peculiarities of the existential construction in English. *Linguistic Analysis* **3**: 1–29.
Nunberg, Geoffrey. 1984. Individuation in Context. *WCCFL* **2**: 203–217.
Partee, Barbara Hall. 1997. Uniformity vs. versatility: the genitive, a case study. In *The Handbook of Logic and Language*, J. van Benthem and A. ter Meulen (eds), 464–470.
Poesio, Massimo. 1994. Weak Definites. *SALT IV*. Ithaca: Cornell.
Prince, E. 1979. On the given/new distinction, in *CLS 15*, W. Hanks, C. Hofbauer, and P. Clyne, eds., 267–278. Chicago: Department of Linguistics, University of Chicago.
Prince, E. 1981. Toward a Taxonomy of Given-New Information, in *Radical Pragmatics*, Peter Cole, ed., 223–255. New York: Academic Press.
Roberts, Craige 2003. Uniqueness in Definite Noun Phrases. *Linguistics and Philosophy* **26**: 287-350
Russell, Bertrand. 1905. On Denoting. *Mind* **14** 479–493.
Steedman, Mark. 1985. Dependency and coordination in the grammar of Dutch and English. *Language* **61.3**: 523–568.
Steedman, Mark. 2000. *The Syntactic Process.* Cambridge, MA: MIT Press.
Strawson, P.F. 1950. On referring. *Mind* **59**: 320–344.
Ward, Gregory and Betty Birner. 1995. Definiteness and the English Existential. *Language* **71.4**: 722–42.
Woisetschlaeger, Erich. 1983. On the question of definiteness in 'an old man's book'. *Linguistic Inquiry* **14.1**:137–154.