NP-INTERPRETATION AND THE STRUCTURE OF PREDICATES

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Two classes of intensional transitive verbs affect the interpretation of an indefinite object in the same way that stage- and individual-level predicates affect an indefinite subject. The contrast for objects is instantiated inside the scope of intensionality, that is, VP-internally. I claim that the differentiation of subject positions said to underlie the interpretational contrast for subjects recurs in the VP for objects, inside the domain of intensionality. The internal domain of a transitive verb is therefore somewhat syntactically articulated, containing at least two positions for indefinite objects. Quantified objects, however, are VP-external.*

1. INTRODUCTION. My claim in this article is that the contrast between the *a*- and *b*-examples below in the interpretation of *a couple of sharks* has the same syntactic underpinning in both 1 and 2, where *a couple of sharks* is the subject in 1 and the object in 2.

(1) a. A couple of sharks are visible.
    b. A couple of sharks are intelligent.
(2) a. The researchers are looking for a couple of sharks.
    b. The researchers fear a couple of sharks.

In both 1 and 2, *a couple of sharks* is interpreted more 'specifically' in the *b*-examples than in the *a*-examples, as clarified in §2.1. It has been observed that the interpretational distinction in 1a,b is related to the grammaticality distinction in 3a,b. Predicates like *intelligent* that impose a specific reading on an indefinite subject may not occur in the existential-*there* construction.

(3) a. There are a couple of sharks visible.
    b. *There are a couple of sharks intelligent.

Diesing (1992), in work in the vein of Heim 1982 and Kratzer 1988, 1995, proposes that the nonspecific interpretation of *a couple of sharks* is syntactically localized to the post-auxiliary position that the subject occupies in 3a. *A couple of sharks* in 1a receives a nonspecific interpretation because it is transformationally related to the post-auxiliary position. The predicate *intelligent* makes no such position available to its subject (hence the ungrammaticality of 3b), which then receives only the specific interpretation associated with the pre-auxiliary position. In short, 1a is interpreted differently from 1b because its subject is interpreted lower in the structure than the subject of 1b.

Verbs like *look for* are intensional; that is, they are not accompanied by a commitment to the existence of a referent for an indefinite object. The same is true of verbs like *fear*, even though the indefinite object is specific: some intensional verbs allow indefinite objects to have the reading associated with the subject in 1b (the 'high' reading), while still evading an existence commitment. *Mary fears a unicorn*, for example, makes reference to a particular unicorn that populates Mary's belief world but not necessarily the speaker's, as discussed in detail in §3 (as opposed to *Mary met a unicorn*, which commits the speaker to the existence of the relevant unicorn). This means that specific readings for indefinite objects are available within the scope of intensionality, that is,

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VP-internally, and the availability of such an interpretation depends, as for subjects, on the choice of predicate (*fear* vs. *look for*).

These considerations suggest that verb phrases have some internal complexity, harboring at least two positions for objects, namely for specific and nonspecific indefinites—both distinct from a VP-external position for definite objects, as discussed in §4—all in turn distinct from a similar repertoire of subject positions. Given their multiplicity, the relative scopal ordering of the various subject and object positions is of some interest and is discussed in §4.1. The discussion there both supports and elaborates on recent literature that seeks to reduce quantifier scope interactions (quantifier raising) to case assignment and/or other feature-licensing transformations.

2. PRELIMINARY REMARKS. The existential-*there* construction, which has the form in 4a, plays a central role in this study. Generally, if a sentence of the form in 4a is grammatical, a sentence of the form in 4b is grammatical with the same values for DET, NP, and PREDICATE, though not vice versa.[1] I refer to this counterpart of the existential-*there* construction as the CORRESPONDING NON EXISTENTIAL-*there* CONSTRUCTION.

(4) a. There be DET NP PREDICATE
b. DET NP be PREDICATE

Milsark (1974) notes that not every lexical item that can fill the DET slot in 4b can fill the DET slot in 4a. He terms the determiners that can appear in the existential-*there* construction the WEAK determiners, including *a*, *three*, *several*, and others.[2] DET

[1] The discussion of existential-*there* in this article is primarily concerned with English examples with adjectival predicates, though a variety of categories may occupy the PREDICATE slot, such as prepositional phrases (*There is a letter on the table*) and active and passive verb participles (*There is a truck coming down the road*, *There was a bike stolen here last night*). These display counterparts of the form in 4b, though not all sentences of the form in 4a do. Exceptions include cases where the predicate function is fulfilled by a relative clause, and cases where the predicate function is fulfilled by an argument of the NP.

(i) a. There is at least one person who can solve this problem.
b. *At least one person is who can solve this problem.
(ii) a. There is at least one solution to this problem.
b. *At least one solution is to this problem.

The inseparability of the subject and predicate in (i) and (ii) suggests that they are a single (inseparable) constituent occupying the NP slot and (i) and (ii) are nonrelational existence assertions with no predicate at all, therefore not of the form schematized in 4a. Other exceptions include cases where DET or NP includes an element requiring surface c-command by AUX, for example, *any* in negative contexts.

(iii) a. There aren't any firemen available.
b. *Any firemen aren't available.

The contrast in (iii) does not impact the analysis of Diesing (1992) discussed in §2.2 because the contrast perseveres in bona fide cases of raising, which Diesing claims is at work in the alternation in (iv).

(iv) a. There don't seem to be any unicorns in the garden.
b. *Any unicorns don't seem to be in the garden.

That is, *any* must be c-commanded by negation in its surface position regardless of how it got there.

[2] Additional basic weak determiners include *no*, *many*, and *few*. I do not treat *no* here, because of the plausibility of the proposal that *no* is simply predicate negation plus *a* (or other existential quantifier), as in Klima 1964, Kayne 1998, and others, including Kratzer 1995 for German. If this is true, then *no* does not strictly belong to the class of basic determiners, having aspects of meaning not present in the other determiners. In order to avoid conclusions mistakenly drawn from a nonunified phenomenon, and since I believe the determiners I review here suffice to pin down the interpretive patterns that are the focus of the present study, I ignore *no*. And I ignore *few*, also because of the possibility that predicate negation is involved. I ignore *many* in §§2 and 3, simply because the judgments about its interpretation are particularly fragile, and therefore of limited use in establishing an interpretational pattern. In §4, however, the particular kind of ambiguity that *many* displays becomes fruitful in disambiguating certain scope interactions, and I discuss *many* there in detail.

may also be altogether absent if the subject is plural—that is, both schemas in 4 admit BARE PLURAL subjects. Those determiners that cannot occur in the existential-*there* construction Milsark terms STRONG determiners, including *the*, *every*, *both*, *most*, and pronouns and proper names.

(5) a. There is a fireman available.
b. There are three firemen available.
c. There are several firemen available.
d. There are firemen available.

(6) a. *There is the fireman available.
b. *There is every fireman available.
c. *There are both firemen available.
d. *There are most firemen available.
e. *There is her available.
f. *There is Sheila available.

I use the terms WEAK and STRONG to refer to NPs sorted by the distributional test in 7. This is a purely distributional criterion and not a semantic one. The relevant semantic distinction is discussed in more detail below.

(7) A determiner is weak if it can grammatically fill the DET slot in 4a. It is strong otherwise.

Recall that DET may be unfilled in 4a. Bare plurals are weak by this criterion.

Keenan and Stavi (1986) point out that the weak determiners are semantically characterized by intersectivity. Determiners denote second-order relations, relations between sets of entities (Barwise & Cooper 1981). The basic determiners mentioned above are defined below, either cited from or constructed on the model of Keenan (1996). *A* and *B* are metavariables for sets (the subject NP and predicate respectively).

(8) Weak determiners
a. $\forall A,B\ [\![a(A, B)]\!] = T$ iff $A \cap B \neq \emptyset$
b. $\forall A,B\ [\![three(A, B)]\!] = T$ iff $|A \cap B| \geq 3$
c. $\forall A,B\ [\![several(A, B)]\!] = T$ iff $3 \leq |A \cap B| \leq n$[3]

Ex. 8a says that two sets *A* and *B* stand in the '*a*' relation if and only if their intersection is nonempty. For example, where *fireman* denotes the set of firemen and *available* the set of available things, the denotation of *a(fireman, available)* (the logical form of *A fireman is available*) is 'true' if and only if there is at least one thing in both sets, that is, something that is both a fireman and is available. *Three(fireman, available)* is true if and only if the cardinality of the intersection of *fireman* and *available* is at least three, and so on.

(9) Strong determiners
a. $\forall A,B\ [\![the(A, B)]\!] = T$ iff $|A| = 1$ and $A \subseteq B$
b. $\forall A,B\ [\![every(A, B)]\!] = T$ iff $A \subseteq B$
c. $\forall A,B\ [\![both(A, B)]\!] = T$ iff $|A| = 2$ and $A \subseteq B$
d. $\forall A,B\ [\![most(A, B)]\!] = T$ iff $|A \cap B| > |A\text{-}B|$

Every as defined in 9b is a relation that holds of two sets if the first is a subset of the second. For example, *every(fireman, available)* is true if and only if each thing that is in the *fireman* set is also in the *available* set. *The* is defined similarly except for the

[3] In my opinion, one or two can never be 'several'. The upper bound for 'several' is more vague; I have labeled it *n*—some relatively small number determined by context.

additional requirement that the first set have a cardinality of one (the UNIQUENESS requirement of the English definite article).

Keenan (1996:56) defines intersectivity as follows.

(10) D is intersective iff for all A, A′, B, B′ ⊆ E, if A∩B = A′∩B′ then D(A, B) = D(A′, B′)

This definition says that a determiner (D) is intersective if only the intersection of its two arguments is involved in determining the truth value of the proposition it heads. If two pairs of sets (*A* and *B*, *A′* and *B′*, subsets of a universe *E*) have the same intersection, but are otherwise different, the difference is not visible to an intersective determiner. For example, firemen who are not available and available things that are not firemen have no impact on the truth value of, for example, *Three firemen are available*, making *three* intersective, and similarly for the other weak determiners.

The strong determiners are not intersective. *Every*, for example, requires that the firemen be a subset of the available things in *Every fireman is available*. *Every* therefore asserts something about the nonintersection in *A*, namely that it is null, that there are no firemen other than the ones who are available. This requirement on the complement of *B* in *A* (the set *A*-*B*) makes the determiner *every* nonintersective, and similarly for the other strong determiners. The definition in 10 predicts the outcome of the diagnostic for strength in 7. Determiners that conform to 10 are weak by the test in 7; those that do not are strong.

Milsark also notes that not every predicate is licit in the PREDICATE slot in 4a. Carlson (1977) terms those that are licit STAGE-LEVEL PREDICATES, which include *available*, *visible*, *present*, prepositional phrases quite generally, and others. Those that are not licit he terms INDIVIDUAL-LEVEL PREDICATES, which include *intelligent*, *altruistic*, *fierce*, *lazy*, and so forth. The criterion for the stage/individual-level distinction is therefore also distributional, like the criterion for the weak/strong distinction.

(11) A predicate is stage-level if it can grammatically fill the PREDICATE slot in 4b. It is individual-level otherwise.

The semantic underpinnings of the stage/individual-level contrast are less well understood than those underlying the weak/strong distinction, and I use the terms STAGE-LEVEL and INDIVIDUAL-LEVEL in this descriptive distributional sense. However, broad correlations between the stage/individual-level contrast and eventiveness reported in Kratzer 1995 play a role in the present study and are described in §3.2.

In nonexistential-*there* constructions (that follow the pattern in 4b), the choice of predicate (stage- vs. individual-level) influences the interpretation of a weak subject. I refer to a clause headed by an individual-level predicate as an INDIVIDUAL-LEVEL CONTEXT, and one headed by a stage-level predicate as a STAGE-LEVEL CONTEXT. The interpretation of strong NPs (NPs with strong determiners) is not sensitive to context. But the interpretation of weak NPs (NPs with weak determiners) is sensitive to context in ways that vary slightly from determiner to determiner. The following section surveys the effect of context on the interpretation of the three weak determiners listed in 8 and the bare plural. Two interpretational patterns emerge, one associated with stage-level contexts and one associated with individual-level contexts.

2.1. SUBJECT INTERPRETATIONS. In this section I survey the interpretation of the three weak determiners and the bare plural in stage- and individual-level contexts. The survey is not exhaustive for the weak determiners. The point of making this survey is to establish the interpretational patterns for stage- and individual-level contexts in order in turn to show that weak objects of transitive verbs fall into the same two patterns,

the distinction being affected by the choice of verb. The behavior of these four weak NPs suffices to establish an interpretational pattern for each of the two contexts. This section concerns itself with the way predicate choice determines the interpretation of the subject and therefore limits itself to contexts in which both predicate classes are licit, namely nonexistential-*there* constructions of the form in 4b. And, again, it limits itself to weak subjects because strong subjects are not semantically affected by choice of predicate. I look first at the interpretation of bare plurals in stage- and individual-level contexts, then at the other weak NPs.

BARE PLURALS. Example 12a, a stage-level context, asserts that some firemen are available. Example 12b, an individual-level context, asserts of all typical firemen that they are altruistic; it is a generic assertion.[4]

(12) a. Firemen are available.
b. Firemen are altruistic.

Wilkinson (1986) and Gerstner and Krifka (1987) posit a covert generic quantifier at work in deriving the generic readings for sentences like 12b. This quantifier means roughly what the adverb *generally* means and applies to a sentence, unselectively binding free variables in its syntactic scope (it is an unselective adverbial quantifier of the type described by Lewis 1975). The logical form of 12b is represented as in 13.

(13) Gen_x [firemen(x)] are altruistic(x)

Even without the benefit of an explicit procedure for verifying generic assertions, it is clear that checking the truth of a generic statement involves looking at more than just the intersection of two properties, meaning that *Gen* is a nonintersective quantifier in some way that a formalization of its truth conditions ought to make precise. Since it was observed that nonintersective determiners do not occur grammatically in existential-*there* constructions, the nonintersectiveness of *Gen* excludes it from those contexts, explaining the unavailability of a generic reading for 14.

(14) There are firemen available. ($\neq$ all typical firemen are available)

In 14 and the analogous reading of 12a the subject and predicate properties are in a relation similar to the relation denoted by the determiner *a* defined in 8a. Example 12a asserts that the intersection of the subject and predicate properties is not empty; 12a seems to additionally imply that the cardinality of the intersection is greater than one, though Carlson (1977) and others do not deem this effect truth conditional. They claim that 12a is true if only one fireman is available, though a singular subject is preferred in that case to avoid the (pragmatic) implication of plurality. I term the relation that *firemen* bears to *be available* in 12a *R*. The meaning of *R* is identical to the singular weak determiner *a* (though it carries the syntactic requirement that its restriction *A* must be morphologically plural, with the corresponding semantic implication mentioned above).

(15) $[\![R(A,B)]\!] = \text{T iff } A \cap B \neq \emptyset$

Carlson (1977) argues against the existence of a null plural determiner in cases where a bare plural stands in the relation to its predicate defined above. I define *R* above to concretize the discussion of the meaning of assertions like 12a, and make no commit-

[4] Many English speakers have no trouble construing the predicate in 12a as meaning something like 'generally available', in which case the bare plural subject receives a generic interpretation. The discussion that follows treats the existential interpretation of the subject in 12a, that is, the interpretation that contrasts with 12b.

ment about the syntactic reality of *R*, that is, whether *R* is a relation *A* and *B* stand in just by virtue of their syntactic juxtaposition or whether *R* is an actual (hidden) lexical item. What 15 reveals is that *R* is intersective by 10. That is, the relation that *firemen* and *be available* stand in in 12a classifies with the weak determiners.

In summary, *Gen* is nonintersective and correspondingly ungrammatical in stage-level contexts, where only intersective determiners are allowed, as in 14, but grammatical in individual-level contexts like 12b. *R* is intersective, and therefore grammatical in stage-level contexts like 12a. The interpretation of a bare plural is therefore not the same in stage- and individual-level contexts. The subject stands in a different relation to the predicate in each case, *Gen* in individual-level and *R* in stage-level contexts.

OTHER WEAK DETERMINERS. This section surveys the interpretation of the weak NPs listed in 8 (other than the bare plural) in stage- and individual-level constructions. For these NPs, the difference in their interpretation in stage- and individual-level contexts is somewhat subtle.

(16) a. A fireman is available.
b. A fireman is altruistic.

Example 16b more readily gives the impression that the speaker has a specific fireman in mind than 16a does. Donnellan (1966), Ioup (1977), and others term this distinction SPECIFICITY, after the paraphrase. *A fireman* is specific in 16b and nonspecific in 16a (16b also has a generic reading, discussed below).

Enç (1991) analyzes specificity as essentially what Pesetsky (1987) calls 'D[iscourse]-linking', or reference to a previously mentioned set. Enç's discussion of English centers on the determiner *many*, whose meaning is affected by specificity in a relatively clear way. Context resolves a lexical ambiguity in the meaning of *many* that serves to identify *many* as specific or nonspecific intraclausally. But for the present purposes, *many* is not a useful tool for correlating specificity with certain syntactic positions for the following reason. The survey in this section of the interpretation of subjects in stage- and individual-level contexts is intended to define a pattern for the purposes of comparing subject and object interpretations across contexts in §3. *Many* does not provide a clear comparison between subjects and objects because in object position, the judgment of the interpretation of *many* is confounded by ambiguities in its scope with respect to the subject. I therefore do not bring *many* into the picture in defining subject and object interpretational patterns. *Many* does, however, play a role in defining subject interpretations modulo variation in the scope of the object in §4.1. The lexical ambiguity in the interpretation of *many* and its correlation to context is discussed there.

For the other weak determiners, specificity is challenging to diagnose or characterize for a particular context beyond the intuition that, for example, 16a and b are different. Since the aim of the present study is to pin down the syntactic locus of certain interpretational patterns, the semantic origins of the interpretational patterns are not its primary concern. What matters in pinning down the correlation between syntactic locus and interpretation is that the relevant interpretational distinctions are consistently identifiable in all the contexts treated. I use the term SPECIFICITY as a name for the nuance that distinguishes 16a and 16b, calling 16b specific and 16a nonspecific, and assume that native English speakers can consistently identify a contrast in the interpretation of an intersective determiner as being like that in 16 or not. Being able to make this judgment suffices for the purposes of identifying an interpretational pattern.

Note that the contribution of specificity in 16b makes the determiner *a* no longer intersective, since the truth value of 16b is no longer just a matter of checking the

intersection of *fireman* and *altruistic*, but of also checking whether the right fireman is being referred to. But 16b still asserts that the intersection of *fireman* and *altruistic* is nonempty, that is, there is an intersective component to *a* in 16b, as well as a referential component, though the specific NP *a fireman* as a whole is not intersective. I refer to the reading in 16b as a 'specific intersective' reading, meaning that it has an intersective component that is augmented by specificity, with the understanding that the term as a whole then is not intersective. I refer to the reading in 16a as a NONSPECIFIC INTERSECTIVE reading.

A referee remarks that not only is there a qualitative difference in the interpretation of the subject in 16, but that the sentence in 16b is quite a bit less natural than 16a, if not ungrammatical. Specific interpretations of singular indefinite subjects require the subject to be modified.

(17) Have you ever heard of a city employee who wasn't consumed by greed?
  a. *A fireman is altruistic.
  b. A fireman in the 3rd Brigade is altruistic.
  c. A couple of/some/three/many firemen are altruistic.

(18) Are there any city employees who come from Eastern Europe?
  a. *A fireman is Polish.
  b. A fireman in the 3rd Brigade is Polish.
  c. A couple of/some/three/many firemen are Polish.

This restriction applies only to singular indefinites, as 17c and 18c show. A correlation between the amount of modificational material associated with a singular indefinite and the degree of specificity it displays has been noted before in the literature (Fodor & Sag 1982:359, Lumsden 1988:95–96), though the data in 17 and 18 implicate a stronger relationship, to the effect that a specific singular indefinite MUST be modified. It is unclear why this should be, but the effect seen in 17 and 18 is surely a component of the interpretational contrast between 16a and 16b.

The contrast between 16a and 16b also holds for the other two weak determiners surveyed here.

(19) a. Three firemen are available. (nonspecific)
  b. Three firemen are altruistic. (specific)

(20) a. Several firemen are available. (nonspecific)
  b. Several firemen are altruistic. (specific)

The intuitive contrast in the interpretation of *three firemen* in 19a,b is the same as the intuitive contrast in the interpretation of *a fireman* in 16a,b. Example 20 similarly parallels 16.

Again, in the contrasts in 16–20, the specific reading has the intersectivity of the nonspecific counterpart as a component. The specific readings of the weak NPs in 16–20 are the intersective interpretations listed in 8 with an extra 'nuance'—specificity. This is not the case for bare plurals. Bare plurals do not have the specific intersective reading in individual-level contexts (as in 12b) that is expected assuming that *R* is a covert intersective determiner. Ex. 12b (repeated below as 22b) does not bear the relation to 12a (22a below) that 16b bears to 16a (21a and 21b below; the triple decker equals sign means 'is equivalent to in meaning').

(21) a. Three firemen are available. ≡ There are three firemen available.
  b. Three firemen are altruistic. ≡ Three SPECIFIC firemen are altruistic.

(22) a. Firemen are available. ≡ There are some firemen available.
  b. Firemen are altruistic. ≢ Some SPECIFIC firemen are altruistic.

We expect 22b to be the same as 22a with the additional intuition of specificity, parallel to 21a,b. But the contrast in 22a,b is not like that in 21a,b, meaning that no intersective reading is available for bare plurals in individual-level contexts. That is, while the bona fide weak determiners may occur in either stage- or individual-level contexts, the relation *R* is barred from individual-level contexts. *R* differs from the weak determiners in this respect, though it classifies together with them by the intersectivity diagnostic in 10. Since *R* is barred from individual-level contexts, the only determiner we can construe as a quantifier for a bare plural in individual-level contexts like 22b is covert *Gen*, forcing a generic reading there. Again, *Gen* is excluded from stage-level contexts because it is not intersective. This difference between *R* and the other weak determiners has generated a sizeable subliterature in linguistics, and I do not venture to attempt to explain it in this study.[5] My aim here is to identify the relative scope relations of the different syntactic loci that correlate with different readings for the weak NPs. What those readings are I take at face value. The point of reviewing these readings is to have a benchmark for labeling attested interpretations in contexts other than the canonical subject-of-stage-level-predicate-adjective and subject-of-individual-level-predicate-adjective that the present discussion is based on. Bare plurals are related by *R* to their predicate in stage-level contexts and by *Gen* in individual-level contexts. Other weak NPs bear the same relation (*a*, *three*, *several*) to their predicate in stage- and individual-level contexts, but are nonspecific in stage-level contexts and specific in individual-level contexts.

Though bare plurals have only a generic reading and no intersective reading in individual-level contexts, some other weak NPs that have a (specific) intersective reading in individual-level contexts also have a generic reading.

(23) a. A macaw is hard to keep quiet.
b. Macaws are hard to keep quiet.

Example 23a may be construed as making an assertion about a single specific macaw or about macaws as a kind. The latter is a generic reading, essentially synonymous with the only available reading for 23b.

Krifka and colleagues (1995:35–36) point out that the same ambiguity holds for the cardinal determiners (*three*, etc.). The generic reading of cardinal determiners is pragmatically militated against in most contexts, since the world is such that if a property holds of a typical group of, say, three objects, then it usually holds of the entire class of such objects, and making a generic claim about 'typical subgroups' is not being maximally general, in violation of pragmatic directives regarding information quantity. But there are cases where a typical subgroup may have a property that typical members of the class may not, the plausibility of the reading depending on the meaning of the predicate. Even so, such examples are easier to construct for bare numeral NPs (24a) and modified numeral NPs (24b) than for *several* (24c), for which I have no explanation, though the contrast between 24a,b and 24c plays a role in §3.

(24) a. Three macaws are hard to keep quiet.
b. More than three macaws are impossible to keep quiet.
c. *Several macaws are impossible to keep quiet. (on the generic reading)

[5] For example, Carlson (1977) argues against the existence of a generic determiner, while Wilkinson (1986) and Heim (1982) argue in favor of one. See also McNally 1998 and Jäger 1999.

Sentence 24a has a reading asserting that it is typical of groups of three macaws that they are hard to keep quiet, while allowing that any given macaw is not necessarily hard to keep quiet. Sentence 24b is analogous, but 24c does not have a generic reading. It has only a specific intersective reading.[6]

SUMMARY. Tables 1 and 2 summarize the readings of the basic intersective determiners discussed above according to the distinctions intersective vs. generic and specific vs. nonspecific. The tables represent my judgments for the data presented so far on the basis of my perception of specificity and the other criteria. It is the pattern of contrasts that forms the empirical basis of the remainder of this paper, not the individual judgments. The reader may feel differently about some of the judgments shown below, but will in any case perceive that there are two patterns that differ from each other in how weak NPs behave according to the three criteria in question. The tables present an orthodoxy for the stage- and individual-level patterns for the purposes of comparison across constructions. These patterns reappear in §3, and however the reader's judgments differ from those below now, they should be consistent for the data discussed there. A checkmark indicates when a certain reading is possible, an asterisk when it is impossible. If more than one checkmark appears in a given row, that lexical item is ambiguous in that context. The cells are indexed with the relevant examples, though recall that in most cases the relevant judgment resides in the contrast between corresponding cells in Table 1 and Table 2.[7]

	NONSPECIFIC INTERSECTIVE	SPECIFIC INTERSECTIVE	GENERIC
bare plural	√ 12a, 22a	* 12a, 22a	*12a, 14
a	√ 16a	* 16a	*16a
three	√ 19a, 21a	* 19a, 21a	*19a, 21a
several	√ 20a	* 20a	*20a

TABLE 1. Interpretational pattern for weak subjects in stage-level contexts.

	NONSPECIFIC INTERSECTIVE	SPECIFIC INTERSECTIVE	GENERIC
bare plural	* 12b, 22b	* 12b, 22b, 23b	√ 12b, 23b
a	* 16b	√ 16b, 23a	√ 16b, 23a
three	* 19b, 21b	√ 19b, 21b	√ 24a
several	* 20b	√ 20b	* 24c

TABLE 2. Interpretational pattern for weak subjects in individual-level contexts.

2.2 SYNTACTIC LOCI FOR SUBJECTS AND THE RELATIONSHIP BETWEEN STAGE- AND INDIVIDUAL-LEVEL CONTEXTS. Example 12a, repeated with bracketing as 25a, is synonymous with its existential-*there* counterpart in 26a. Tellingly, the existential-*there* counterpart

[6] I have encountered some speakers of Canadian English who accept a generic reading for *several*. They continue to accept the generic reading for *several* in object position in the examples discussed in §3.1, so the parallel in the interpretation of subjects and objects that I am seeking to establish here applies to those speakers as well.

[7] For the starred specific intersective readings for stage-level contexts, note that one may perfectly well have, for example, a specific book in view when saying *There's a book on the table*. The criterion for specificity here is not familiarity with a potential referent, precisely because such a test fails to make any distinctions. It is rather the contrast in the interpretation of the indefinite between the two context types. In such a contrasting pair, an indefinite parallel in interpretation to 16b is specific and one parallel to 16a is nonspecific.

of 12b, repeated in 25b, is ungrammatical, since, again, individual-level predicates are not allowed in the existential-*there* construction.

(25) a. [$_{IP}$ Firemen are [$_{VP}$ available]].
b. [$_{IP}$ Firemen are [$_{VP}$ altruistic]].
(26) a. [$_{IP}$ There are [$_{VP}$ firemen available]].
b. *[$_{IP}$ There are [$_{VP}$ firemen altruistic]].

Diesing (1992) claims that the interpretational distinction in 25 is attributable to the grammaticality distinction in 26. She follows McCawley 1970, Jenkins 1975, Stowell 1978, and others in treating 25a as a transform of 26a. A subject may move from post-auxiliary position (the specifier of VP, a predicate-internal position) to pre-auxiliary position (the specifier of IP, a predicate-external position). If this subject fronting does not obtain, the expletive *there* is inserted in the pre-auxiliary position, deriving 26a. The sentence in 25b, however, is not derived from 26b, the putative base being ungrammatical. The subject of 25b is base-generated directly in the pre-auxiliary position.[8] Diesing observes that the fact that the subject of 25b is interpreted by the individual-level pattern correlates with the fact that the subject is blocked from occurring in the post-auxiliary position, as 26b shows. Where the subject is licit in post-auxiliary position, as in 26a, it is interpreted by the stage-level pattern. It is interpreted by the stage-level pattern in the transform 25a as well, meaning that the interpretation of the base is preserved in the transform, a phenomenon that goes generally under the rubric 'reconstruction'. These facts lead Diesing to conclude that the post-auxiliary position is the 'locus' for stage-level readings of subject NPs. A fronted subject is reconstructed, or lowered, into the post-auxiliary position at LF (logical form), and receives a stage-level reading there. The pre-auxiliary position is the locus of individual-level readings of subject NPs. Individual-level predicates bar a subject from occurring in post-auxiliary position, as 26b shows. These subjects cannot be construed as occupying the barred position at any level of representation, and must be interpreted in pre-auxiliary position at LF, where they receive the individual-level interpretation associated with that syntactic locus. In short, Diesing claims that

(27) The interpretational pattern an NP is interpreted by is determined by its syntactic position at LF.

Diesing proposes a specific form for the relationship between syntax and semantics summarized in 27. The proposal builds on the tripartite structural analysis of logical form put forward by Heim (1982). Heim claims that a subject-predicate construction is split three ways at LF, the subject's quantifier (Q) constituting the first part, the quantifier's restriction (R) the second part, and the residue, or NUCLEAR SCOPE (NS), the third. The logical form of 25b is seen in 28, where the quantifier is the null generic determiner *Gen*.

(28) [$_{Q}$ Gen] [$_{R}$ firemen] [$_{NS}$ are altruistic]

A clause carries an existence presupposition for everything contained in the restriction, meaning the existence of a denotation for this material is a precondition for the valuation of the sentence one way or the other. Hence, firemen must exist for the sentence in 28 to be judged either true or false. If no firemen exist the sentence is a PRESUPPOSITION

[8] It binds a PRO in the subject theta position and thereby observes the PREDICATE-INTERNAL SUBJECT HYPOTHESIS put forth by Koopman and Sportiche (1991) and others.

FAILURE (on which see Strawson 1952:177–78). Diesing relates the pattern in 25 and 26 to Heim's proposal by what she calls the MAPPING HYPOTHESIS.

(29) MAPPING HYPOTHESIS
Material from VP is mapped into the nuclear scope.
Material from IP is mapped into a restrictive clause.

According to the mapping hypothesis, predicate-external material is presuppositional. This material includes individual-level weak NPs, which necessarily appear in IP. What is presupposed is effectively a store of facts shared by participants in a discourse (the 'context' of Karttunen 1974), hence the 'air of familiarity' that accompanies the denotations of individual-level weak NPs, to which the term specificity lends itself so naturally.

The approach sketched above is a highly STRUCTURALIZED approach to NP interpretation–an NP's interpretation is contingent on its position in the structure. Such a correlation is observed directly in some languages with scrambling, such as German. Quantificational adverbs may function as quantifiers in Heim's schema, and here a positional effect is observed in German. Indefinites that follow an adverb (as in 30a) are interpreted in its nuclear scope, in which case the adverb is restricted to times, or situations (illustrated in 30b). Indefinites that precede an adverb (as in 31a) themselves form the adverb's restriction (shown in 31b; Diesing 1992:107–8).

(30) a. . . . daß Otto immer Bücher über Wombats liest.
that Otto always books about wombats reads
' . . . that Otto always reads books about wombats.'
b. $[_{Q}$ Always$_{t}$ $]$ $[_{R}$ t is a time $]$ $[_{NS}$ Otto reads a book about wombats at $t]$

(31) a. . . . daß Otto Bücher über Wombats immer liest.
that Otto books about wombats always reads
' . . . that Otto always reads books about wombats.'
b. $[_{Q}$ Always$_{x}]$ $[_{R}$ x is a book about wombats $]$ $[_{NS}$ Otto reads x $]$

With the choice of predicate held constant, the interpretation of the object NP depends on its position with respect to the adverb, indicating that position and interpretation are linked.

Interpretation and position are linked in German even in the absence of semantic operators like quantificational adverbs. The interpretation of a subject varies with its position with respect to modal particles like *ja doch* ('indeed'), again with the choice of predicate held constant (Diesing 1992:36–37).

(32) a. . . . weil ja doch Kinder auf der Straße spielen.
since 'indeed' children on the street play
' . . . since there are children playing in the street.'
b. . . . weil Kinder ja doch auf der Straße spielen.
since children 'indeed' on the street play
' . . . since (in general) children play in the street.'

In 32b, *Kinder* ('children') is interpreted as the restriction of a hidden generic quantifier (32b is a generalization about children, whose existence is presupposed). Sentence 32a is a simple state-of-affairs description rather than an assertion about something presupposed. In a model where no children exist, 32b is a presupposition failure, while 32a is simply false.

This difference in judgment is parallel to the difference between THETIC and CATEGORIAL truth judgments described by Brentano (1874), whose relevance to the stage/individual-level contrast is discussed by Ladusaw (1994), building on Kuroda's (1972) popularization of Brentano's distinction. A thetic judgment consists in the acceptance or rejection of a state of affairs. A categorial judgment consists in, first, the acceptance of a thing, and second, the attribution of a property to that thing (a categorial judgment is also termed a DOUBLE JUDGMENT by Brentano). Ladusaw remarks that the latter act is essentially a thetic judgment, the acceptance or rejection of the state of affairs of the thing in question having the property in question.[9] The difference between thetic and categorial judgments, then, has to do with a difference in the conceptual structure of the two kinds of assertions, that is, their logical form, in particular the position of an NP with respect to a thetic judgment—internal in the case of the simple thetic judgment or external in the case of the double categorial judgment. Brentano's notion of judgments as structured objects again correlates an NP's interpretation with its syntactic position.

In summary, the correspondence between the grammaticality distinction in 26 that conditions NP interpretation in 25, the word-order effects that condition NP interpretation in 30–32, and the difference in structural complexity between categorial and thetic judgments, all lend credence to Diesing's hypothesis. They suggest that different interpretational patterns are associated with different syntactic loci. Some predicates influence the interpretation of their arguments by blocking certain syntactic loci as landing sites. Putting aside the matter of what exactly about individual-level predicates blocks a subject from occurring in post-auxiliary position, Diesing's hypothesis captures a generalization: a subject is interpreted according to the individual-level pattern if the corresponding existential-*there* construction is ungrammatical (for whatever reason).

A component of this structural view of NP interpretation is that indefinites undergo movement. Fodor and Sag (1982) argue against the notion that specificity can be construed as an incidental pragmatic consequence of an indefinite having moved to a very wide-scope position. They argue that this is unlikely because the putative wide-scope readings are available in contexts where lower intermediate scope readings are not, as shown in 33.

(33) Each teacher overheard the rumor that a student of mine had been called before the dean.
   a. (each teacher: x)[(a student of mine: y) [x overheard the rumor that [y had been called before the dean]]]
   b. (a student of mine: y)[(each teacher: x) [x overheard the rumor that [y had been called before the dean]]]

The logical form in 33a asserts that for each teacher, there is a student such that that teacher overheard the rumor that that student was called before the dean; here the content of the rumor differs from teacher to teacher. This reading is not available as an interpretation for 33, so something blocks the logical form in 33a from being formed. The candidate that suggests itself is the complex NP constraint, which prohibits movement out of an NP-CP complex (see Ross 1967). But this same constraint should block the derivation of 33b as well, which IS a possible reading of 33 (it asserts that there is a particular student such that each teacher overheard the rumor that that student was

[9] Brentano's writings leave me unsure about whether he thought of a categorial judgment as containing a thetic judgment, but in a truth-functional framework this view seems unavoidable.

called before the dean; here the content of the rumor is the same from teacher to teacher). So, Fodor and Sag conclude, movement must not be at work deriving the specific reading (the one just described) of 33. They attribute specificity to a lexical ambiguity in the indefinite, available regardless of the indefinite's scope with respect to other quantifiers.

The present study does not identify specificity with widest scope. It identifies specificity (for subjects) with the pre-auxiliary position within the indefinite's clause, and does not invoke extraclausal movement. On the contrary, the discussion in §3 shows that for objects, specific readings are available even within the scope of an intensional verb, that is, VP-internally. The analysis proposed here is like Fodor and Sag's in that specific readings are not derived by movement to a WIDEST scope position. It differs from it, however, in that (1) it maintains that the different readings of indefinites are nonetheless linked to different positions in the structure, so that whatever ambiguity there is in the interpretation of an indefinite, it is resolved by its local syntactic context; and (2) specific indefinites interact scopally with that context. Note that syntactic context refers to an indefinite's LF position; surface structures may be ambiguous.

In what follows, I show that, though 27 is a correct generalization, Diesing's single-partition analysis is not rich enough to accommodate some interpretational effects for objects that are similar to those for subjects. In the following discussion, I have occasion to refer to syntactic loci that are associated with certain interpretational patterns and what the relative scope relations of these loci are, while remaining noncommittal about what predicative or functional architecture they are lexically related to, that is, what heads project these positions. I therefore avoid terms like specifier of VP or specifier of IP. A syntactic NP position associated with the stage-level interpretational pattern I label ∂. A position associated with the individual-level pattern I label *d*. I assume these are specifier positions in a functional syntax that NPs move into, but the hierarchy I ultimately arrive at is compatible with other views of clause structure. For example, Diesing's proposal that stage-level readings arise internal to VP and individual-level readings in IP is notated as in 34. The locus for stage-level readings ∂ is internal to VP, while the locus of individual-level readings *d* is outside VP in IP. Any other labeling for the brackets in 34 preserves the hypothesis that the locus of the individual-level pattern is hierarchically superior to the locus of the stage-level pattern.

(34) $[_{IP}$ d . . . $[_{VP}$ ∂ . . .]]

The determiners distribute as in 35 at LF. The overt intersective determiners may occur in either syntactic locus but are interpreted specifically in *d* and nonspecifically in ∂.

(35) [d . . . [∂ . . .]]

Gen	*R*
a	a
three	three
several	several

3. THE STAGE/INDIVIDUAL-LEVEL CONTRAST PREDICATE-INTERNALLY. The previous section describes Diesing's claim that two interpretational loci for subjects are separated by the VP-boundary. In this section I argue that such a partition recurs internal to the predicate, concluding that there are two syntactic loci for objects, both predicate-internal. This conclusion means that predicates themselves are syntactically complex enough to accommodate more than one object position, supporting VP-shell analyses of the lexical structure of transitive verbs such as that proposed by Chomsky (1995).

In particular, I discuss the interpretation of objects of intensional transitive verbs. Weak objects may display an individual-level interpretation within the scope of an intensional verb, though weak subjects never fall into the scope of intensionality induced by the verb, even when interpreted according to the (syntactically low) stage-level pattern. This observation indicates that a locus for individual-level weak objects is available syntactically subordinate to the locus for stage-level weak subjects. This fact conflicts with the predictions of Diesing's single-partition analysis.

Carlson (1977) mentions that the distinction between the stage- and individual-level interpretations of subjects manifests itself in object position. A weak object of a verb like *look for* displays a reading parallel to the interpretational pattern for weak subjects of stage-level predicates. A weak object of a verb like *hate* displays a reading parallel to that for subjects of individual-level predicates.

(36) a. Bill is looking for a couple of novels.
b. Bill hates a couple of novels.

Example 36b implies that there are several specific novels that Bill hates; 36a, however, does not imply that Bill is looking for any specific novels. He may be going on a trip and looking for anything that will occupy him. The contrast in the interpretation of *a couple of novels* between 36a and 36b parallels that in the interpretation of the weak subject in 12a and 12b: 36a is nonspecific, 36b specific.

The behavior of *hate* and *look for* exemplify two classes of intensional transitive verbs distinguished by the interpretational pattern the object follows. The two classes are transitive subject-experiencer verbs (SEVs) and a class of intensional verbs discussed by Montague (1973) that I term ACCUSATIVE INTENSIONAL VERBS (AIVs).

(37) a. SEVs: fear, hate, love, respect, loathe, admire, etc.
b. AIVs: seek, look for, advertise for, owe, hunt, conceive, discuss, etc.

I take a verb to be intensional in a given argument position if that argument does not validate the existential generalization, that is, uttering the sentence does not commit the speaker to the existence of things that have the relevant property (the object property in these cases). One may truthfully assert 38a or 38b while knowing that no sorcerers exist. There does seem to be a difference between 38a and 38b in the SUBJECT's commitment to the existence of members of the object property, a point to which I return below. But one who utters 38a or 38b is not committed to the existence of sorcerers. SEVs and AIVs are intensional in object position when the object is weak.[10] Additional evidence for this assessment is provided in connection with the discussion of object interpretations below.

(38) a. John is looking for sorcerers $\not\rightarrow \exists x$ Sorcerer(x)
b. John fears sorcerers $\not\rightarrow \exists x$ Sorcerer(x)

The following survey, which parallels the remarks for subjects in §2.1, shows that quite generally weak objects of SEVs are interpreted according to the individual-level pattern and weak objects of AIVs are interpreted according to the stage-level pattern. It is known that different verb classes affect the behavior of their objects differently, not only with respect to their interpretation (Carlson 1977, Diesing 1992) but also their order with respect to adverbs (Diesing 1992, Kratzer 1995) and the possibility of extraction (Horn 1974). The present study investigates the behavior of two classes of verbs that are alike in imposing intensionality on their object. This focus sets the stage for a conclusion about the internal structure of predicates that to my knowledge has

[10] Strong objects are another matter that I treat in §4.

not previously emerged in the literature. Diesing's structural analysis does not treat the interpretation of the object differently from the interpretation of the subject. It invokes a single partition that divides the portion of the clause that houses individual-level readings from the portion that houses stage-level readings, regardless of the grammatical function of the NP in question. So, like subjects, individual-level objects are VP-external, and stage-level objects are VP-internal. The data discussed below indicate that this picture is insufficient.

Example 38b describes an attitude that John has toward all typical sorcerers. The bare-plural object *sorcerers* is interpreted generically in 38b, and I assume generic readings arise here as before through the presence of the covert determiner *Gen*. The sentence in 38a, however, describes a scene in which John is looking for some sorcerers, where any sorcerers will be suitable. That is, 38a asserts that some subset of the sorcerers (in those worlds where they exist) have that property that a sorcerer acquires by virtue of being looked for (but not the actual property of being looked for by John—see below). It is irrelevant to the valuation of 38a whether there are any sorcerers that do not have this property, or, if so, what their quantitative relationship is to the sorcerers that do. This observation indicates that the relevant relationship is intersective (only sorcerers that have the property matter). The lack of commitment that 38a makes to the exact number of sorcerers that have this property is characteristic of the assertions of existence made by the relations *a* and *R* defined in 8 and 15 respectively, and here we would seem to be dealing with *R*, the unmarked relation that occurs with plural nouns. *R* asserts that there are some sorcerers that have the relevant property, though in this case, to ascribe the relevant property to a subset of the sorcerers does not suffice to assert their existence in the real world, 38a,b being intensional contexts.

The lack of an existence entailment indicates then that the property that *R* relates *sorcerers* to in 38a itself occurs in an intensional context. The intensionality in 38a is in the object position of *look for*. This observation rules out *look for* as a candidate for the second relatum of *R* there, since placing *sorcerers* in a relation with *look for* would situate *sorcerers* outside the predicate that induces intensionality there, leading to the expectation of an obligatory de re, or extensional, reading for *sorcerers*. This is in brief the argument I give in favor of the syntactic complexity of transitive verbs in §3.1. Section 3.1 is dedicated to demonstrating that the scope of a weak object is very narrow in contexts like both 38a and 38b. Such NPs never leave the predicate, and therefore cannot enter into a semantic relationship with the predicate as a whole. I return to this issue there, concluding for now based on the remarks above that *sorcerers* is an argument of the relation *R* in 38a, and of *Gen* in 38b (where the same issue arises regarding the second argument of *Gen*, since 38b is also an intensional context). *Sorcerers* is therefore in an intersective relation in 38a and in a nonintersective relation in 38b. Again, the truth of neither sentence is contingent on the existence of sorcerers.

Consider next the determiner *a*.

(39) a. John is looking for a sorcerer.
b. John fears a sorcerer.

The determiner *a* denotes an intersective relation, that defined in 8a, though in this case, as with the bare plural, there are complications in determining what the second relatum of the determiner is in object position of an intensional verb. But the denotation of the determiner itself does not appear to vary in 39a,b. There is a contrast between 39a and 39b, however, and what distinguishes the interpretation of the object in 39a,b is the same nuance that distinguishes the interpretation of the subject in 16a,b, where

the subject is nonspecific in 16a and specific in 16b. By analogy with 16, *a sorcerer* is nonspecific in 39a and specific in 39b.[11]

Note that though 39a and 39b are parallel to 16a and 16b in the interpretation of the singular indefinite, singular indefinites in object position are grammatical without additional modification. Whatever subtle disparity there might be in the felicity of 40a and 40b as answers to 40, or between 41a and 41b as answers to 41, it is categorically weaker than the disparity reported for subjects in 17 and 18.

(40) Have you ever heard of anyone finding a Lord of the Rings character intimidating?
  a. John fears a sorcerer.
  b. John fears a sorcerer from Mordor.

(41) Can friendships develop between humans and amphibians?
  a. John loves a mermaid.
  b. John loves a mermaid from the Great Barrier Reef.

So there is one respect in which the interpretational pattern for indefinite objects differs from that for subjects. No requirement to the effect that a specific singular indefinite must be modified plays a role in the interpretational distinction in 39. Subjects and objects are otherwise parallel, as the discussion in this section seeks to demonstrate, resuming below with remarks about the relationship between specificity and presuppositionality.

Some authors have construed the specificity of the object in 39b as undermining the assumption that *fear* and its like are intensional verbs, since it seems unreasonable to expect specific reference to an entity to fail to be accompanied by a commitment to the existence of that entity. The view articulated in Diesing 1992 and Kratzer 1995, for example, is that specific objects behave exactly like subjects of individual-level predicates—the existence of the individuals they refer to is presupposed. This is in contrast to the view expressed above, that indefinite objects of SEVs are specific (like subjects) but not presuppositional (unlike subjects). In light of this complication, I argue in some detail below first that *fear* is indeed an intensional verb, and second that there is a rationale behind how a sorcerer can be both specific and nonexistent at the same time.

Moltmann (1997) presents a number of diagnostics that characterize intensional verbs. One of them is the lack of an existence entailment for the object, though it is just that characteristic of 39b that is in question. Another is failure of substitutivity of coreferential terms. The fact that leprechauns also do not exist (are extensionally equiva-

[11] A referee finds *fear* awkward when the lack of existence commitment for the object is made explicit, though not *love*.

(i) a. ?John fears a ghost, but it doesn't exist.
  b. John loves a mermaid, but she doesn't exist.

My judgments are closer to the opposite, I think because it requires more pragmatic work to imagine John being in an intimate romantic relationship with a figment of his imagination than to imagine him fearing a figment of his imagination, since *fear* is a pure attitude, and less prototypically implies any interaction with the feared thing than *love* does with the loved thing. *Love* is nonetheless an SEV, as the felicity of (ib) shows, in particular the specific interpretation of *a mermaid* there. The variation across speakers in evidence here demonstrates an important proviso—and this is the referee's point—there may be idiolectal differences among English speakers in which verbs belong to the SEV class, and among those verbs, which are the most prototypical. It is crucial for the present purposes that there is such a class, that is, that at least *love* is an SEV if *fear* is not. Further justification for the SEV status of *fear* follows.

lent to *sorcerers*) does not allow us to conclude 42 from 39, making *fear* intensional by this diagnostic.

(42) John fears a leprechaun.

A third diagnostic is a difference in the acceptability of personal vs. impersonal pronouns. Intensional contexts, as in 43, disallow personal *someone*, requiring instead impersonal *something*. Extensional contexts as in 44 show the opposite pattern. An asterisk before the intensional locutions below signifies the ungrammaticality of the intensional (de dicto) reading of the object.

(43) a. John is looking for something, namely a secretary.
b. *John is looking for someone, namely a secretary.
(44) a. *John met something, namely a secretary.
b. John met someone, namely a secretary.

Fear patterns with intensional *look for* against extensional *meet* in this respect. Again, the ungrammaticality of 45b is limited to the intensional reading, where the speaker does not wish to commit to the existence of the relevant sorcerer.

(45) a. John fears something, namely a sorcerer.
b. *John fears someone, namely a sorcerer.
(46) a. *John met something, namely a sorcerer.
b. John met someone, namely a sorcerer.

A fourth diagnostic is the conditions for the use of the phrase *the same person/thing*, where again, *thing* is felicitous only in intensional contexts, as in 47.

(47) a. John is looking for the same thing as Mary, namely a new assistant.
b. *John is looking for the same person as Mary, namely a new assistant.
(48) a. *John met the same thing as Mary, namely a new assistant.
b. *John met the same person as Mary, namely a new assistant.

Fear patterns with *look for* here also.

(49) a. John fears the same thing as Mary, namely a sorcerer.
b. *John fears the same person as Mary, namely a sorcerer.
(50) a. *John met the same thing as Mary, namely a sorcerer.
b. *John met the same person as Mary, namely a sorcerer.

Fear does pattern differently from *look for* with respect to the fifth and last diagnostic, namely lack of anaphora support. Intensional contexts do not support cross-sentential anaphora. Example 51a is ungrammatical on the intensional reading (in particular the nonspecific intensional reading—see below). *Fear* patterns with extensional 51b against intensional 51a.

(51) a. *John is looking for a sorcerer. Mary is looking for him too.
b. John met a sorcerer. Mary met him too.
(52) John fears a sorcerer. Mary fears him too.

At the outset of this discussion I claimed that 39b requires no commitment to the existence of sorcerers. One who utters 39b asserts that John harbors an attitude toward a sorcerer, for example the one he believes lives in the castle next door, but does not thereby verify his or her own commitment to there being any sorcerers living in that castle. The lack of an existence entailment does not distinguish 39a and 39b, and most of the diagnostics presented above indeed classify *fear* together with *look for* in this respect. There does seem to be a difference, however, between 39a and 39b in the level of commitment that the subject of the expression harbors toward the existence of sorcerers. If John fears a sorcerer, it is natural to assume that John believes that the

sorcerer he fears exists. But John may be looking for a sorcerer without knowing whether any sorcerers exist, that is, he may not be sure he will ever find any. So if John is looking for a sorcerer, we are not at liberty to assume that he believes that sorcerers exist, but if he fears a sorcerer, we can take this liberty. The discussion of 39 began with the observation that the nuance that distinguishes 39a and 39b is exactly the same as that that distinguishes 16a and 16b, the distinction I refer to as specificity. That is, *a sorcerer* is specific in object position of *fear*, but nonspecific in object position of *look for*. The fact that 39b commits John to belief in sorcerers but not 39a and that neither commits the speaker to belief in sorcerers suggests that the notion of specificity might be fruitfully qualified with an indication of 'specific for WHOM'.

That the notion of specificity is somehow relative is natural in light of Diesing's identification of specificity with presuppositionality and remarks by Karttunen (1974) and Moltmann (1994) on presuppositions in the environment of propositional attitudes. Kartunnen claims that presuppositions of sentences embedded under a propositional attitude verb are relativized to the subject of the attitude verb. 'To satisfy the presuppositions of [53], a context must ascribe to John a set of beliefs that satisfy the presuppositions of *Nixon will stop protecting his aides*' (1974:189), in this case the presupposition that Nixon has been protecting his aides.

(53) John fears that Nixon will stop protecting his aides.

Moltmann reiterates this position, claiming that 'the presupposition of factive verbs is not a presupposition of the truth of the complement clause with respect to the actual world, . . . but rather a presupposition of the truth of the complement clause in the belief model of some agent', namely 'the agent that is next higher to the subject referent of the embedding attitude verb in the sentence', which in a simple factive attitude report is by default the speaker (Moltmann 1994:37). Suppose, for example, that John is transporting a valuable painting, he trips and the painting flies over a balcony. John leaves the scene in horror. But coincidentally the painting lands on a passing truckload of bubble wrap, is undamaged, and is rehung on the wall. Later, a thief runs off with the painting, he too trips, the painting goes flying over the balcony, and this time it is destroyed. The thief is caught and confesses, and the case is closed. But John later sees the headline: 'Valuable Painting Destroyed in Fall from Balcony', and worries that the police must have figured out by then that he was responsible. Knowing the whole story, we report John's state of mind as in 54.

(54) John thinks the police know that he destroyed the painting.

While John is committed to the truth of the factive complement of *know*, the individual who utters this sentence is not. Stacking an additional subject on this sentence reveals that any subject higher than the next higher subject from the subject of the factive verb is not committed to the truth of the factive complement, including, again, the speaker, though the judgments get more delicate the longer such sentences become. Here, neither Mary nor the speaker must believe that John destroyed the painting (though, again, John must).

(55) Mary thinks that John believes that the police know that he destroyed the painting.

The general point to draw from Kartunnen's and Moltmann's observations is that presuppositionality is not a requirement of truth with respect to the real world but truth with respect to the belief model of some agent, the relevant agent being configurationally determined. In light of Kartunnen's and Moltmann's observations about the behavior of presuppositionality and Diesing's identification of presuppositionality and specific-

ity, the compatibility of specificity with nonexistence in the real world, as observed in 39b, is not as surprising as it appears at first glance. The existence of sorcerers, given 39b, is a presupposition of John's belief model but not of the speaker's. The existence of sorcerers is a presupposition of neither the speaker's nor the subject's belief model in 39a. Exploring how the examples in 39 are configurationally related to examples such as 53 and 54 is an undertaking that would take the present study well beyond its intended scope, but the analogy does lend some initial circumstantial support to the claim I make in §3.1 that simple transitives are internally syntactically complex. It is perhaps worth clarifying at this point that my analysis as such does not rely on Diesing's mapping hypothesis that predicate-external material is mapped into a quantifier restriction and predicate-internal material into the scope of existential closure; it borrows only the conjecture that different NP positions are correlated with different interpretations of the NP. It would not be obvious how the mapping hypothesis carries over to intensional objects, unless simple transitive constructions are actually on some level biclausal, objects being subjects of an intransitive predicate embedded in the intensional argument of the main predicate. But the analogy between 39b and 54 hints that that might be the case, and in fact that is precisely the conclusion I draw in §3.1 on the basis of distributional evidence. So while there are aspects of Diesing's proposal that I do not make use of here, the analysis proposed here seems to be compatible with the substance of the mapping hypothesis, though a great deal more could be said about the relationship between the two analyses than I have space here to say.

It is clear then that 39a,b are different in a way that ascribes a presupposition to the subject's belief model in 39b but not 39a. Therefore, in spite of the fact that *look for* and *fear* pattern together in most respects (they are both intensional), it is not surprising to find that they do not pattern together in all respects. Further, since the relevant difference is in the object's specificity, even if relegated to the subject's belief model, anaphora support is the least surprising respect in which to find that they differ. The first sentence in 52 registers a particular sorcerer in John's belief model, and the pronoun in the second sentence refers back to it, perhaps simultaneously asserting that John and Mary's belief models overlap at this particular sorcerer. In 51a, the relevant sorcerer need not exist even in John's belief model, but if it does not, there is no referent for the pronoun.

As mentioned above, some authors have taken the disparity between 39a,b in the interpretation of the object as an indication that verbs like *fear* do validate the existential generalization, that is, they are not really intensional. Kratzer (1995:151–54) terms objects of SEVs 'ill-behaved objects' because, she claims, they obligatorily scope outside the domain of existential closure, as opposed to objects of other transitives, whence the difference in interpretation between 39a,b. Given Diesing's single-partition analysis, we then expect specific objects of intensional verbs like *fear* to pattern like individual-level subjects. In particular, we expect an existence presupposition for the object to arise. But, again, there is a disparity between existence presuppositions for subjects and those for objects of SEVs, the latter registering only in the belief model of the subject, not in that of the speaker, contra existence presuppositions for subjects, which hold for the speaker. The speaker is not committed to the existence of a referent for the object of an SEV (or an AIV), meaning *fear* does not qualify as extensional. I take the discussion above to support the claim that both SEVs and AIVs are intensional (in object position) and resume below the discussion of how the interpretation of the object differs between them.

In addition to its specific intersective reading, 39b may have a reading essentially identical to that of 38b, which describes an attitude John has toward a kind. This ambiguity of the indefinite article *a* between an intersective and generic reading is also typical of subjects of individual-level predicates as in 16b. Example 39a may not have the generic reading of 39b.

Consider cardinal *three*.

(56) a. John is looking for three sorcerers.
b. John fears three sorcerers.

The contrast in 56a,b is parallel to the contrast between 19a,b, making *three sorcerers* nonspecific in 56a and specific in 56b.[12] Here again, neither sentence entails the existence of sorcerers.

Now consider *several*.

(57) a. John is looking for several sorcerers.
b. John fears several sorcerers.

The contrast in 57a,b parallels the contrast in 20a,b, making *several sorcerers* nonspecific in 57a and specific in 57b.[13] Neither sentence entails the existence of sorcerers.

Further, SEVs display a difference in the interpretation of *several* vs. the cardinal determiners like *three* that is similar to the behavior of these elements in individual-level contexts discussed in §2.1. Like *a*, numerals like *three* may have a generic reading in individual-level contexts, while *several* may not, as example 24 shows. The same pattern shows up in object position of SEVs.[14]

(58) a. John fears three sorcerers.
b. John fears several sorcerers.

Sentence 58a may mean that John is afraid of any typical group of three sorcerers, that is, one or two sorcerers aren't enough to frighten him, but when he encounters three sorcerers he is afraid. Example 58b does not have an analogous reading (a generic characterization of groups of several sorcerers). The interpretation of *three* and *several* in object position of SEVs therefore displays the same disparity that their interpretation as subjects in individual-level contexts does. *Three* is ambiguous with a generic reading and *several* is not. No generic readings are available for objects of AIVs, just like subjects of stage-level predicates.

The data discussed in 38–39 and 56–58 show that there is a parallelism between the object position of SEVs and the subject position of individual-level predicates and between the object position of AIVs and the subject position of stage-level predicates. Weak objects of SEVs and AIVs are interpreted according to the patterns in Table 3 and Table 4 below. These tables are identical to those describing the behavior of these determiners in stage- and individual-level contexts in §2.1. Like weak subjects in stage-level contexts, weak objects of AIVs are interpreted intersectively and nonspecifically. Like weak subjects in individual-level contexts, weak objects of SEVs are interpreted

[12] Ex. 56b implies that there are three specific sorcerers in John's belief model, and he fears these three particular sorcerers, but not necessarily any others, while 56a does not imply that John knows of any particular three sorcerers that he hopes to find—he may have made a bet that he could find three sorcerers and now is looking for any three.

[13] John fears several specific sorcerers that inhabit his belief model in 57b, while in 57a, John is looking for a certain number of sorcerers that he has not had any 'epistemological contact' with, and any sorcerer-exemplars will do.

[14] Here again, the availability of such a reading varies from predicate to predicate based on plausibility.

	NONSPECIFIC INTERSECTIVE	SPECIFIC INTERSECTIVE	GENERIC
bare plural	√ 38a	* 38a	* 38a
a	√ 39a	* 39a	* 39a
three	√ 56a	* 56a	* 56a
several	√ 57a	* 57a	* 57a

TABLE 3. Interpretational pattern for weak objects of AIVs.

	NONSPECIFIC INTERSECTIVE	SPECIFIC INTERSECTIVE	GENERIC
bare plural	* 38b	* 38b	√ 38b
a	* 39b	√ 39b	√ 39b
three	* 56b	√ 56b	√ 56b, 58a
several	* 57b	√ 57b	* 57b, 58b

TABLE 4. Interpretational pattern for weak objects of SEVs.

specifically except for the bare plural determiner, which must be interpreted generically, and the cardinal determiners including *a* and *three*, which may be interpreted generically in addition to their specific intersective reading.

3.1. SYNTACTIC LOCI FOR OBJECTS. This section compares the relative scope of weak subjects and objects with respect to the scope of intensionality, and concludes that the syntactic separation of loci for stage- and individual-level interpretations of weak subjects reiterates predicate-internally for objects. I conclude that transitive verbs are structurally complex, housing more than one object position. The domain in which the object is interpreted is essentially a reiteration of the domain in which the subject is interpreted, suggesting that syntactic structures are constructed out of reiterations of quantifier-argument-predicate sequences.

Diesing claims that individual-level readings for weak subjects arise when the subject is external to the predicate at LF. Stage-level readings arise when the subject is internal to the predicate at LF. The discussion in the previous section indicates that the object position of SEVs is an individual-level context, and the object position of AIVs is a stage-level context. But there is no existence entailment for weak objects of either SEVs or AIVs. Whether a verb is intensional or nonintensional in object position depends on the verb, and so is a lexical property of the verb. Weak subjects however never fall into the scope of intensionality induced by verbs of the lexical classes treated here, as Montague (1973) points out: 'The INTENSIONAL (or nonextensional) transitive verbs *seek* and *conceive*, as well as the verbs *believe that*, *assert that*, *try to*, *wish to* of other categories, are nevertheless EXTENSIONAL WITH RESPECT TO SUBJECT POSITION' (1973:236; emphasis in original). The intensionality of a weak subject is not dictated by the verb.[15]

(59) a. A leprechaun is looking for sorcerers.
b. Leprechauns are looking for sorcerers.
c. Three leprechauns are looking for sorcerers.
d. Several leprechauns are looking for sorcerers.

[15] Subjects may nonetheless be intensional, especially generics, as Strawson (1952) discusses. Kratzer (1986) claims that such sentences occur with a covert modal operator embedding the entire sentence. In these cases therefore, the lack of an existence entailment for the subject is not induced by the verb, as it is for the object in 59 and 60.

(60) a. A leprechaun fears sorcerers.
b. Leprechauns fear sorcerers.
c. Three leprechauns fear sorcerers.
d. Several leprechauns fear sorcerers.

The truth of each of these examples entails the existence of leprechauns, though not sorcerers. Intensionality is confined to object position. In neither SEVs nor AIVs do weak subjects fall into the scope of intensionality.

The subjects in 59 are interpreted according to the stage-level pattern. The domain of intensionality does not include this position, since these subjects induce an existence entailment. Diesing claims that weak NPs receive a stage-level reading when they are predicate-internal, and an individual-level reading when they are predicate-external, which uniformly situates individual-level NPs hierarchically above stage-level NPs, regardless of grammatical function, as schematized in 34. If indeed the same partition that dictates the interpretation of subjects dictates the interpretation of objects, it is expected that objects that display the individual-level pattern scope above subjects that display the stage-level pattern. Since the scope of intensionality does not subsume the locus of stage-level readings for weak subjects, it is not expected to subsume any position higher than that, assuming that the effect of an operator cannot skip a position in its scope. The individual-level reading for the object in 59 is then predicted to induce an existence entailment for *sorcerers*, being hierarchically above the stage-level weak subject, which itself is external to the domain of intensionality. The distribution of existence entailments falsifies this expectation. What we find is that individual-level readings for weak objects are available inside the domain of intensionality, which the subject is external to, and therefore UNDER the subject.

These data suggest that the partition that Diesing proposes recurs in object position. We find both stage- and individual-level objects in the scope of intensionality, under stage-level subjects, illustrated, again schematically, in 61. To differentiate the different loci for subjects and objects, I subscript the relevant positions with SUBJ for subject and OBJ for object. These designations are clarificational and are not intended to be visible to the syntactic combinators involved. I return in §3.2 to what defines the domain of intensionality.

(61) $[_{IP}\, d_{SUBJ} \ldots [_{VP}\, \partial_{SUBJ} \ldots \underbrace{[\ d_{OBJ} \ldots [\ \partial_{OBJ} \ldots]]]]}_{\text{Domain of intensionality}}$

The syntactic separation between the loci for weak objects shown in 61 is informed by the observed parallelisms in the interpretational patterns for weak objects and weak subjects and the observation that loci for the interpretational patterns for weak subjects are structurally distinguished (they are separated by the auxiliary). The idea that Diesing's partition for subjects recurs in the predicate implies that the predicate is syntactically complex, accommodating two distinct object positions. The following section investigates this proposal in more detail and clarifies what property distinguishes SEVs and AIVs that conditions the interpretation of the object.

3.2. INTERNAL AND EXTERNAL EVENTS AND THE STRUCTURE OF PREDICATES. Diesing (1992) claims that the locus for stage-level readings for weak subjects is not available in individual-level contexts, forcing subjects into the locus for individual-level readings. Kratzer (1995) proposes that what determines the availability of the locus for stage-

level weak subjects is eventiveness. Stage-level predicates are eventive and individual-level predicates are noneventive. In this section, I claim that the interpretation of objects of SEVs and AIVs has a similar structural underpinning and the availability of loci for objects is also conditioned by eventiveness.

Kratzer (1995) points out that subjects of eventive predicates are interpreted following the stage-level pattern and subjects of noneventive predicates are interpreted following the individual-level pattern. She uses a test for eventiveness derived from Lewis's observation (1975) that some adverbs are quantificational and unselective—they bind any free variable in their scope. In 62a, *when* marks the restriction of a silent quantificational adverb that unselectively binds the indefinite *an actress*, yielding the interpretation *every actress who is famous gives lots of interviews*. The unselective binder cannot bind the definite *Mary*, so 62b is ungrammatical due to vacuous quantification. The grammaticality of 62c, which also has a definite subject, indicates that 62c contains a hidden variable that 62b does not.

(62) a. When an actress is famous, she gives lots of interviews.
b. *When Mary is famous, she gives lots of interviews.
c. When Mary is available, she gives lots of interviews.

Since *be available* is, according to Carlson (1977), true of an individual at an interval of time, and *be famous* is true of an individual (which is unique), a natural candidate for the bindee of the unselective binder in the context of *available* is a variable that ranges over intervals where availability holds of its argument, that is, availability-eventualities, and indeed the interpretation of 62c is one in which instances of Mary being available are quantified universally.

Available licenses a stage-level subject, but *famous* does not, and quite typically, as illustrated below, when a predicate is eventive (by the test above), it can occur in the existential-*there* construction (it is stage-level), and whenever a predicate is non-eventive, it cannot (it is individual-level). Compare 63 and 65, 64 and 66.

(63) a. When Mary is available, she gives lots of interviews. (stage-level)
b. When Flipper is visible, he's usually doing tricks.
c. When Sandy is present, she always picks up the phone.
(64) a. *When Sandy is female, she wears high heels. (individual-level)
c. *When Sandy is famous, she gives lots of interviews.
d. *When Fido is intelligent, he chases raccoons.
(65) a. There are firemen available. (stage-level)
b. There are dolphins visible.
c. There are journalists present.
(66) a. *There are firemen female. (individual-level)
b. *There are journalists famous.
c. *There are dogs intelligent.

The availability of stage-level readings for subjects is tied to eventiveness. In view of the present proposal, these facts indicate that the locus for stage-level readings is intimately syntactically associated with whatever configuration underlies eventiveness. The position ∂ is found adjacent to an eventive constituent, and is not found elsewhere,[16] so ∂ is licit preceding *available*, but in a predicate headed by *famous* it is either not projected

[16] As described in §2.2, stage-level subjects may be fronted to pre-auxiliary position, but reconstruct at LF, and are interpreted in the post-auxiliary position I am calling ∂_{SUBJ}.

or the subject is prevented from moving there. The subject moves instead to the only other landing site available, the locus for the individual-level pattern *d*.

(67) a. $[_{IP} \ldots [_{VP} \partial_{SUBJ}$ available$_{+EV}]]$
b. $[_{IP}$ d$_{SUBJ} \ldots [_{VP}$ famous$_{-EV}]]$

The following discussion indicates that the correlation Kratzer points out between eventiveness and stage-level-ness carries over to object position. Eventiveness licenses stage-level readings of weak objects. The data reviewed below, however, indicate that the eventiveness that plays a role in the interpretation of objects is localized internal to the predicate. I argue below that the presence or absence of 'internal' eventiveness distinguishes AIVs from SEVs.

Dowty (1979) points out that in accomplishments (verbs denoting telic eventualities), the prefix *re-* has an 'internal' reading, according to which the resultant state is asserted to have been brought about for a second time, while no such assertion is made about the event of bringing about. That is, *re-* separates the PROCESS part of the meaning of the verb from the RESULT part. *Re-* affects the interpretation of the result part (asserting that this is not the first time this result was brought about), but not the process part (it could be the first time this particular process took place). Von Stechow (1996) calls this reading of *re-* a 'restitutive' reading, since it asserts the reinstatement of a previous state.

(68) Mary re-wrote Agatha's paper.

Example 68 presupposes that Agatha's paper was written before Mary wrote Agatha's paper. But it does not entail that Mary ever wrote Agatha's paper before (in fact it implies that Agatha was the original writer). The restitutive reading is one in which the event is separated from the resultant state by adverbial material meaning *again*. *Re-* therefore has internal scope, applying to the resultant state but not affecting the rest of the lexical content of the verb. The resultant state in 68 is the state of being written. For concreteness's sake, let the process-denoting part of the verb be represented as *cause*, which I think is a plausible assessment of what is present in *write* that is lacking in the state *written*. The relative scope of *re-* with respect to the other lexical parts of the verb is schematized in 69.

(69) [cause [re [written]]]^{17}

Re- occurs in deverbal adjectives (*re-covered*, *re-organized*, *re-assessed*, *re-installed*, etc.) but it does not occur in lexical adjectives (**re-tall*, **re-flat*, **re-satisfactory*, **re-intelligent*, etc.). The fact that *re-* is blocked in lexical adjectives but not in derived adjectives indicates that what blocks *re-* is that semantic quality that Wasow (1977) claims distinguishes lexical from verbal adjectives, namely eventiveness. Lexical adjectives are noneventive ('stative' in his terminology). If Kratzer is right in claiming that the stage-level adjectives are eventive, then it cannot be the case that eventiveness is a sufficient criterion for the occurrence of *re-*, since the (lexical) stage-level adjectives do not occur with *re-* (**re-available*, **re-visible*, **re-present*, etc.). It appears, though, that noneventiveness is a contra-indication for *re-*, presumably because *re-* requires a change of state (*re-X* entails that X came about, a change of state), and every change of state is an event (though not every event is a change of state—cf. *be available*).

[17] *Written* is my way of notating what is presumably not literally the passive participle but a defective unaccusative head. See Marantz 1997 on the function of *-en* and Pesetsky 1995 on the notion of 'defectiveness'.

Re-, then, functions as an indication of eventiveness at the level at which it applies, which is predicate-internal, as schematized in 69.

Among the transitive verbs, *re-* distributes idiosyncratically. We have *re-write*, *re-open*, *re-distribute*, and so on, but constructs such as ??*re-hit*, ??*re-buy*, ??*re-find*, and so on are for some reason awkward. *Re-* distributes among the AIVs similarly idiosyncratically: it occurs felicitously with some verbs but is awkward with others (*re-advertise for*, *re-conceive*, *re-discuss*, ??*re-seek*, ??*re-hunt*, ??*re-owe*, etc.).[18] But *re-* does not occur with any SEVs at all (**re-fear*, **re-hate*, **re-love*, **re-respect*, **re-loathe*, **re-admire*, etc.).[19] It is as ungrammatical there as it is among lexical adjectives.

So SEVs, which strictly exclude the stage-level interpretation for their object, also strictly exclude *re-*. Assuming that I am correct in claiming that *re-* is an indication of internal eventiveness, this correlation is as Kratzer's findings predict. What *re-* and the stage-level NP position ∂_{OBJ} have in common is that both require eventiveness in the relevant portion of the predicate. *Re-* requires eventiveness by virtue of requiring a change of state. It is unclear why ∂ is restricted to eventive environments, though some analyses have been promulgated in the literature, including in Kratzer 1995 and Diesing 1992. I sidestep this issue here, since this study concerns itself with establishing relative hierarchical relations between the loci for NP interpretations, and, to that end, establishing relations between the availability of these loci and localizable properties of the syntactic context. Of significance to the line of reasoning being pursued in this section is the conclusion that the exclusion of both *re-* and ∂ from SEVs derives from the incompatibility of the relevant portion of the predicate with eventiveness.

That transitive verbs are lexically split into process and result is transparent for those verbs that allow *re-*, since *re-* semantically separates the components of the verb. For the SEVs, the separation of the verb into two parts is not empirically observable, since *re-* is ungrammatical in those verbs, but it is inferable on the basis of the relationship of the interpretation of subjects and objects to eventiveness, and the scope of *re-*. For subjects of predicate adjectives (e.g. 63–66), the theta-licensor of the subject (the adjective) determines the subject's interpretational pattern (by dictating its LF landing site). The deciding property of the predicate is eventiveness. The distribution of *re-* indicates that the stage-level interpretation for objects of AIVs is licensed by an eventive

[18] The interpretation of *re-* in AIVs is the predicted one. *Re-* entails that the result obtained previously, but does not entail that the agent named ever undertook the relevant process before, nor does it entail the existence of a referent for a weak object, because of the intensionality of AIVs, for example:

(i) President Adams conceived a law against bounding nodes, though it never made it through the Senate. Only two administrations later, though, President Van Buren re-conceived a law against bounding nodes.

(ii) Someone here advertised for a bilingual badger for the new Woodland Animal Relations Department. But the ad only ran a week, since no one renewed it, so today I re-advertised for a bilingual badger myself.

[19] These examples, like the ill-formed examples of *re-* in lexical adjectives, are accompanied by the strong sensation that the ill-formedness here is not accidental. That is, *re-* is ungrammatical in SEVs, not merely coincidentally unattested, as the following comparison indicates:

(i) Nonce coining (AIV)
I had given John one of my recent paintings in exchange for his help fixing my car, but the other day he had to rush over and change a broken hose just as I was leaving for the airport, so now I re-owe him a painting.

(ii) Impossible word (SEV)
#I had finally gotten over my longtime fear of snakes when one of John's pet boas surprised me in the shower, and now I re-fear snakes.

underlying subpart of the predicate that also theta-licenses the object (*the paper* has the property *written* in 68). In each of these three cases (subjects of stage- and individual-level adjectives and objects of AIVs), two complementary interpretational patterns for the relevant NP correlate with two complementary values for eventiveness (eventive or noneventive) of the local lexical selector of the NP—a predicate-internal head for objects of AIVs.

Objects of SEVs have their LF locus in the same syntactic domain as that of objects of AIVs—the domain of intensionality. The fact that the stage- and individual-level patterns for objects are complementary within the same syntactic domain indicates that like for subjects, the two patterns have the same binary valued source. The source, again, is eventiveness, indicating that what is eventive in the AIVs is noneventive in the SEVs. Therefore, what eventiveness is attributable to in the AIVs exists in the SEVs (but is noneventive there). Eventiveness in AIVs is attributable to the lexical subpart of the verb that theta-licenses the object. These remarks point to the conclusion that such a theta-licensing lexical subpart exists in the SEVs as well. In general, eventiveness licenses ∂; ∂ is generated in the scope of intensionality when its generator (an eventive subpredicate) is in the scope of intensionality, that is, internal to an intensional predicate.

There are, then, two structural components to a transitive verb, as argued recently in Travis 1991, Noonan 1992, Chomsky 1995, Kratzer 1996, Collins & Thráinsson 1996, Sportiche 1996, Kural 1996, Marantz 1997, Harley & Noyer 1998, Nash 1999, Arad 1999, and Marantz 2000.[20] In intensional constructions, the lower, object theta-licensing component is within the scope of intensionality, as are the two distinct loci for objects that correlate with stage- and individual-level object readings (∂_{OBJ} and d_{OBJ}) (which object loci are available in a given context depends on the eventiveness of the lower component). The upper, subject theta-licensing component of the predicate is not within the scope of intensionality (intensional readings for the subject are never a lexical component of the predicate). These remarks reconcile the apparent contradiction that resides in the fact that weak objects may display an individual-level reading (Diesing's predicate-external reading) yet fall under the scope of intensionality (a lexical, predicate-internal property). There are two predicates involved; an object may be external to one (therefore individual-level) but internal to the other (therefore intensional nevertheless). Following Chomsky's (1995) notation for decomposed predicates, where the upper subject-licensing portion is labeled *v* (little-*v*) and the lower object-licensing portion *V* (big-*V*), the picture that emerges for the structure of transitive verbs is that in 70.

(70) $[_{v'}\ v\ [\ d_{OBJ}\ [_{VP}\ \partial_{OBJ}\ V\ ]]]$

The scope of intensionality in 70 is limited to the c-command domain of little-*v*, implicating little-*v* in the introduction of intensionality. That is, the component of the meaning of the predicate that has the force of an intensional operator (that relates the object to the belief world of the subject, as I put it earlier) is expressed by little-*v* (perhaps in addition to other semantic properties of little-*v*).[21] The locus for individual-level read-

[20] Larson's (1988) VP-shell analysis of double object constructions is credited with spawning a revitalization of the VP-shell analysis of transitive constructions, though I am not sure this was his intention. This is a revitalization of course of the generative semantic perspective detailed in Lees 1960, Lakoff 1970, Ross 1972, Dowty 1979, and elsewhere.

[21] Beyond these remarks I do not venture, even for concreteness's sake, to identify the lexical content of the two portions of the intensional transitive verbs, since it is not the lexical content of the heads *v* and *V* that determines the interpretation of subjects but rather the eventiveness property and their relative scope. Presumably the AIVs are in some sense causative with an unrealized result. Noonan (1992) analyzes subject-experiencer verbs as consisting of the predicate *have* plus an embedded nominal. For example, *fear* has the structure $[_{VP}$ have $[_{NP}$ fear (of something)]].

ings of objects is external to VP, but still internal to vP, within the scope of intensionality. Again, which object locus is available depends on the eventiveness of the lower lexical component of the predicate, big-*V*.

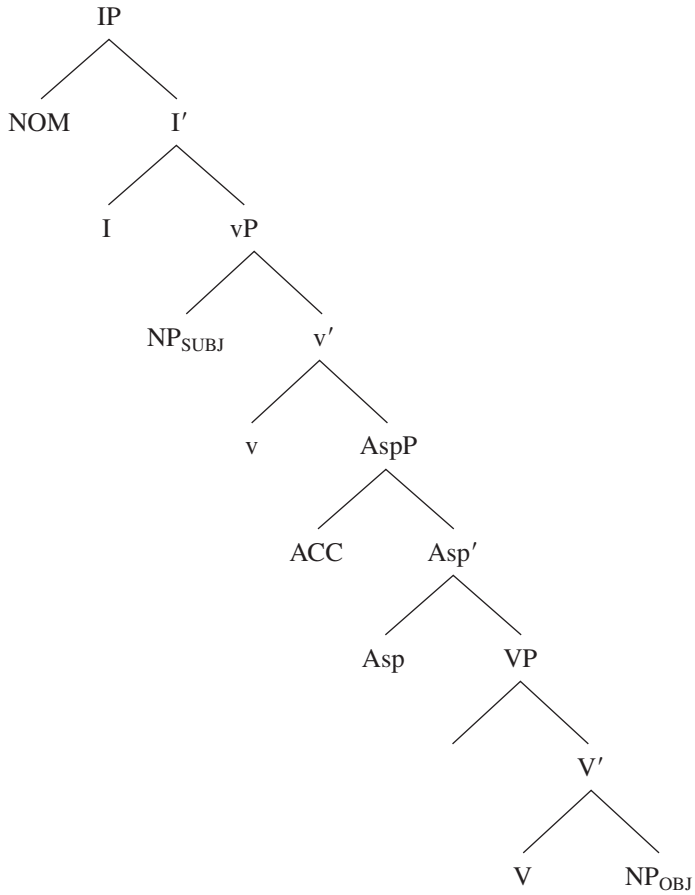
(71) a. AIVs: $[_{v'}\ v\ [\qquad [_{VP}\ \partial_{OBJ}\ V_{[+EV]}\ ]]]$
b. SEVs: $[_{v'}\ v\ [\ d_{OBJ}\ [_{VP}\qquad V_{[-EV]}\ ]]]$

The overall schema for subject- and object-licensing sites with respect to each other and the subparts of the predicate is illustrated in 72. The ∂ position requires eventiveness of the adjacent predicate, and is not available or not projected otherwise.

(72) $[_{IP}\ d_{SUBJ}\ [_{vP}\ \partial_{SUBJ}\ v\ [\ d_{OBJ}\ [_{VP}\ \partial_{OBJ}\ V\ ]]]]$

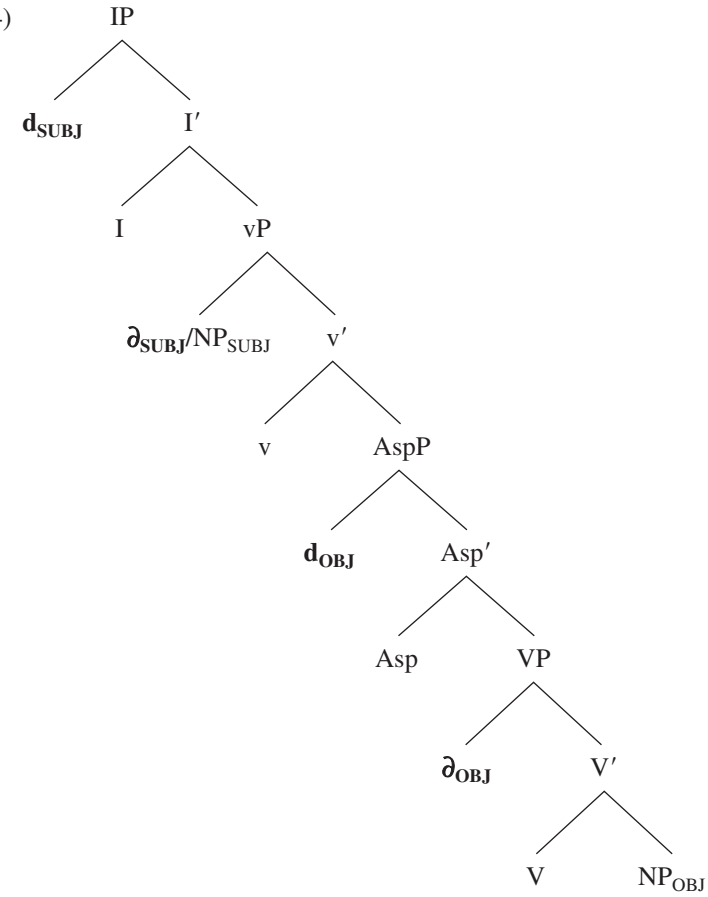
The constituent that is the sister of little-*v* is unlabeled in the above diagrams, and nothing in the preceding discussion indicates what categorial label should be ascribed to it. Assuming that this constituent is analogous to IP (which houses analogous readings for subjects) and is associated with temporal, or more broadly, aspectual, information, the picture that emerges is quite similar to that proposed by Travis (1991), Collins and Thráinsson (1996), and Sportiche (1996), who posit a VP-internal projection responsible for object case checking (an aspect-related projection, according to Travis, hence the label AspP; the symbols NP_{SUBJ} and NP_{OBJ} mark the respective theta-positions of the subject and object).

(73)



This functional scaffolding accommodates the interpretational loci for subjects and objects argued for here.[22]

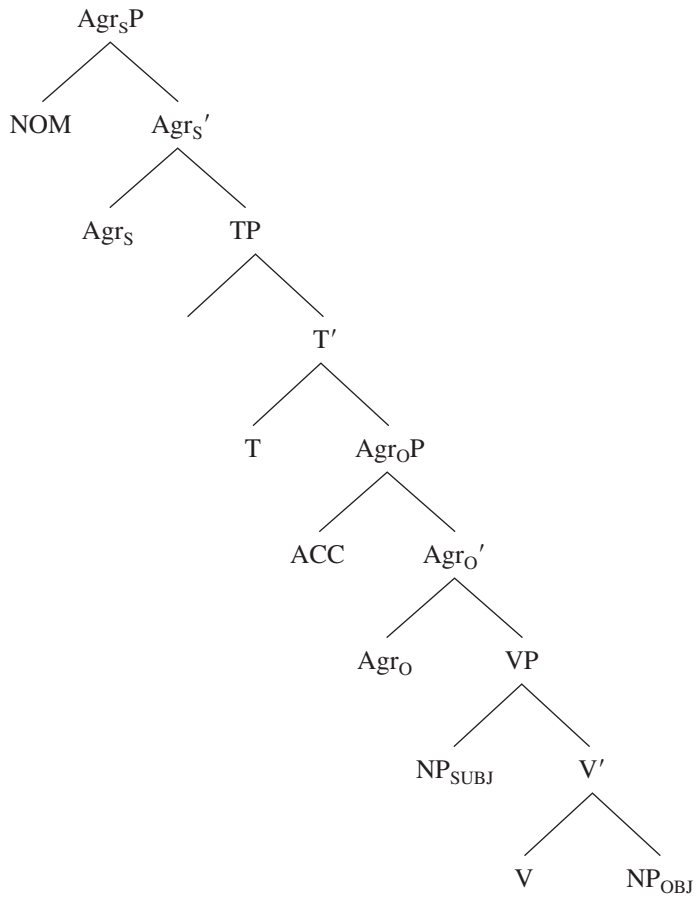
(74)



This picture is somewhat different from that presented in Chomsky 1991 and Koopman 1992 in that the case-licensing site for objects, labeled Agr_OP there, is predicate-external. Hornstein (1999) claims that the structure in 75 provides the quantifier licensing sites in evidence in English, that is, there is no quantifier-raising operation beyond A-movement. An object scopes over a subject if the object moves to Agr_OP and the subject reconstructs to VP, so the object c-commands the subject. Diesing reasons that reconstruction is possible only for weak NPs (see 5–6)—which then are interpreted

[22] Notice that in 74, the d_{SUBJ} and the base position of the subject are one and the same, unlike the corresponding object positions. But only tradition inspired me to make the object's theta position the sister of V. It could well be [spec,VP], since the subject is not generated there (but rather in [spec,vP]). Or perhaps both ∂_{SUBJ} and ∂_{OBJ} are uniformly external to the predicates they are respectively related to, vP and VP being thematic domains not containing any determiner-licensing sites. This would require additional functional structure in the extended projections of both little-*v* and big-*V*. It is not clear to me if one of these perspectives has any advantage over the other.

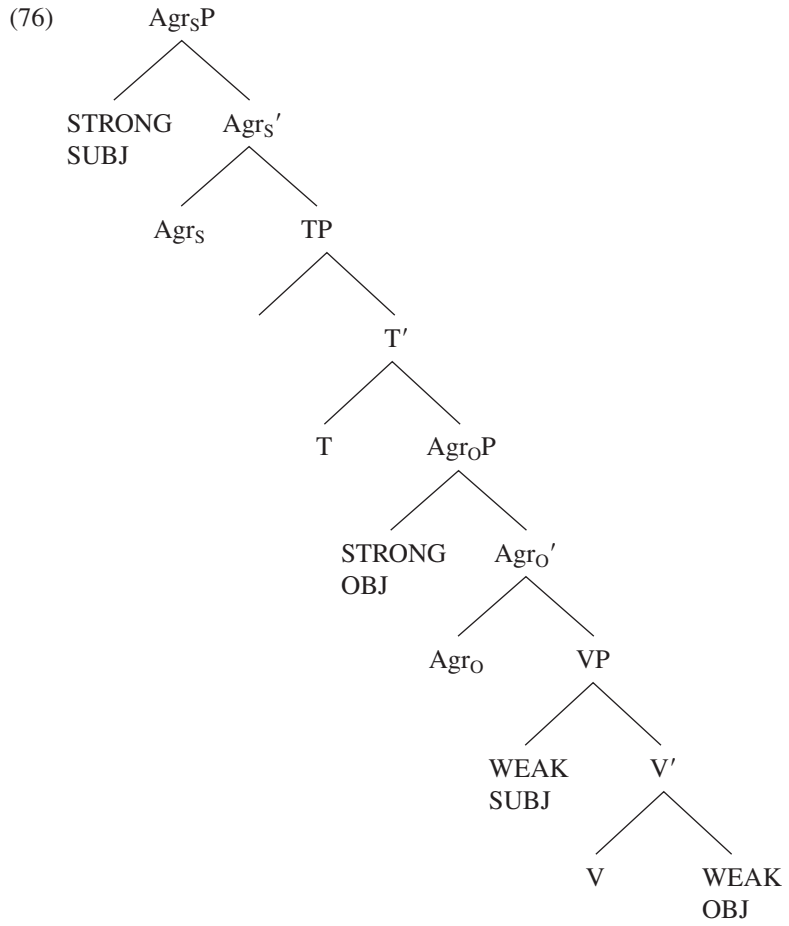
(75)



as stage-level. Strong NPs are predicate-external, like individual-level weak NPs. Example 75, then, is a syntactic reification of Diesing's and Kratzer's claims. Like subjects, objects are predicate-external when strong, predicate-internal when weak, as 76 illustrates. This perspective places strong objects outside the predicate, and therefore outside the scope of lexical components of the predicate like intensionality. But individual-level readings of weak objects are available predicate-internally, which is that interpretational pattern associated with predicate-external subjects, and this has led me to conclude that transitive predicates are structurally complex. It seems, however, that the Diesing/Kratzer/Hornstein proposal about STRONG NPs is not wrong. There is a differentiation between weak NPs with an individual-level interpretation and strong NPs, the latter obligatorily occurring outside the scope of intensionality, as discussed below.

4. STRONG OBJECTS. The analysis outlined above follows Diesing's conjecture that individual-level predicates force their arguments out of the domain associated with stage-level interpretations, which, per Kratzer, correlates with lack of eventiveness. In object position, the 'push' effect that the relevant predicate has (the underlying VP) does not suffice to remove its argument from the matrix predicate altogether, since weak objects of SEVs still fall into the scope of intensionality. On the one hand, this stands to reason, since objects of transitives start out structurally lower than subjects, so the push effect that subordinate VPs have is not necessarily expected to take the

(76)



argument as far as the push effect that superordinate vPs have. On the other hand, actual strong objects of both AIVs and SEVs are not caught in the intensionality of the predicate (Zimmermann 1993). They carry an existence entailment.[23]

(77) a. John fears the sorcerer → ∃x Sorcerer(x)
b. John fears every sorcerer → ∃x Sorcerer(x)
c. John fears both sorcerers → ∃x Sorcerer(x)
d. John fears most sorcerers → ∃x Sorcerer(x)

(78) a. John is looking for the sorcerer → ∃x Sorcerer(x)
b. John is looking for every sorcerer → ∃x Sorcerer(x)
c. John is looking for both sorcerers → ∃x Sorcerer(x)
d. John is looking for most sorcerers → ∃x Sorcerer(x)

This fact indicates that the position associated with the individual-level interpretation for weak objects is not one and the same as the position that strong objects occupy. The scope of intensionality does not extend higher than *v*, since subjects (D-structure

[23] An existence presupposition, actually, as Diesing (1992) points out. The negations of the sentences in 77 and 78 also entail the existence of sorcerers, which validates the criterion Strawson (1952) advances for presuppositionality.

theta dependents of *v*) do not fall into the scope of intensionality, as remarked in §3.1. Weak objects that follow the individual-level pattern are predicate-internal (they do not induce an existence entailment when the verb is intensional), but strong objects are predicate-external, outside the scope of *v*.[24] That is, there is a third locus for objects, one in which NPs with strong determiners occur. I label this position D_{OBJ}. These observations implicate a three-way syntactic partition separating the NP types, contra Diesing's two-way partition.

(79) a. ∂: Weak NPs on the stage-level interpretation
b. d: Weak NPs on the individual-level interpretation
c. D: Strong NPs

Since strong objects scope outside the domain of intensionality, they might be expected to interact scopally with subjects, which are also nonintensional. The next section therefore investigates the relative scope of the locus of strong objects with respect to the loci for subjects, with the aim of pinning down the exact position of D_{OBJ}, beyond its being predicate-external.

4.1. INTERLEAVING DOMAINS. Strong objects scope above *v*, which marks the edge of the scope of intensionality, since strong objects induce an existence entailment. Strong objects also may scope above stage-level weak subjects. Example 80 may mean that most neighborhoods are such that some police officers are patrolling them, possibly different sets of police officers for each neighborhood.

(80) Police officers are patrolling most neighborhoods.

Example 80 is true in a situation in which most neighborhoods are being patrolled by one or more police officers, but no individual police officer is patrolling most neighborhoods. The linear scope of subject and object (S > O) does not generate a true interpretation in this situation, indicating that an object wide-scope LF for 80 is grammatical. The bare plural subject is interpreted intersectively here, not generically, meaning that an LF is available for 80 in which the strong object scopes over the stage-level weak subject. This observation situates D_{OBJ} above ∂_{SUBJ}. The following discussion concerns whether a wide-scope reading is also available for a stage-level weak subject with respect to a strong object, that is, whether an LF that situates ∂_{SUBJ} above D_{OBJ} is grammatical.

Example 80 is also true in a situation in which there is one group of police officers who are each patrolling most neighborhoods, a reading corresponding to a subject wide-scope interpretation. But the object wide-scope interpretation is true in this situation also. If some police officers are such that they are patrolling most neighborhoods (S > O), then it is still the case that for each of most of the neighborhoods, some police

[24] This conclusion is based on the assumption that the distribution of existence entailments is governed only by a determiner's scope with respect to an intensional operator and is never a lexical property of the determiner itself, though of course the determiner's syntactic distribution, and therefore its scope, is a lexical property of the determiner. Strong determiners indeed lose their presuppositions in modal contexts (Kratzer 1986).

(i) The police are prepared to follow up on every lead.
(ii) The police know from experience that some leads aren't worth following up on, but they're prepared to follow up on most leads.

Both examples above can be uttered in a situation in which no leads (yet) exist.

officers are patrolling it (O > S). It is therefore unclear whether the subject wide-scope reading has a structural source different from the object wide-scope LF.

Though the wide-scope reading of the bare plural in 80 does not implicate a subject wide-scope LF, weak subjects other than the bare plural serve to clarify whether the ambiguity in 80 is a genuine structural ambiguity or simply vagueness in the range of contexts that the object wide-scope configuration is true in. There is a complication in judging the scope of an object relative to other intersective subjects, however, which is that the bare plural is the only intersective NP whose scope is limited to ∂. The other intersective NPs may also occur in *d*. Therefore, in judging the scope of the object with respect to an intersective subject, it is necessary to take the interpretation of the subject into account, to clarify whether the observed scope of the object is relative to ∂_{SUBJ} or d_{SUBJ}. Recall that the property that distinguishes intersective NPs in ∂ and *d* is specificity (associated with *d* but not ∂). I have framed specificity as the judgment of similarity to the benchmark for the contrast in 16. The data being considered here, however, involve the specificity of the subject modulo variation in the scope of the object, configurations that are dissimilar enough to the data in 16 to make an already delicate comparative judgment unsound as a basis for empirical inference.

There is, however, as Enç (1991) discusses, one English quantifier that 'wears its specificity on its sleeve', namely *many*. The truth conditions for *many* are different in stage- and individual-level contexts, making the interpretation of *many* robust enough to pin down the position of the subject in the subject and object wide-scope readings of sentences involving weak subjects and strong objects. I follow Westerståhl's (1985) formulation of the distinction,[25] which relates the distinction to the semantic order of the arguments of *many*. Westerståhl gives a proportional definition for *many*, as follows, where *k* is some number determined by context.[26] It says *Many As are Bs* is true if and only if the *A*s that are *B*s are larger in number than some contextually determined proportion of the *A*s.

(81) $\forall A,B\ [\![\text{many}(A,B)]\!] = T \text{ iff } |A \cap B| > k|A|$

But he points out that in some contexts, *many* displays what Cohen (2001) refers to as the 'reverse' interpretation. Consider 82.

(82) Many Scandinavians have won the Nobel Prize in literature.
  a. Many Scandinavians are Nobel Prize winners.
  b. Many Nobel Prize winners are Scandinavian.

Given eighty-one Nobel Prize winners of which fourteen are Scandinavian, Westerståhl claims that 82 is true, but only on the reading in 82b, where the Scandinavian Nobel Prize winners are many with respect to Nobel Prize winners, not with respect to Scandinavians. Both readings of 82 are proportional. The ambiguity involves the order of the arguments of *many*. In 82b, the two arguments of *many* are reversed vis-à-vis their

[25] As opposed to Milsark's quantificational vs. cardinal distinction (1977) and Cohen's absolute vs. relative proportional distinction (2001). See also Herburger 1997 and de Hoop 1992. I am using the availability of reverse readings as a diagnostic for the relevant interpretational pattern, so I make no commitment here about which of these analyses represents the empirically most adequate analysis of how these readings arise. I make use of Westerståhl's formulation because of its ease of exposition.

[26] This is one of four definitions that *many* is lexically ambiguous between according to Westerståhl. I have adapted his notation to match the format of the definitions given in 8 and 9.

syntactic order. The syntactic complement of *many* (*Scandinavians*) is its second argument. The predicate is its first argument.[27]

The reverse reading is available only in stage-level contexts, as the following data show. Examples 83 and 84 show that *be communist* is an individual-level predicate and *be in the audience* is stage level (by the diagnostic discussed in §2).

(83) a. Many Russians are communist.
b. *There are many Russians communist.
(84) a. Many Russians are in the audience.
b. There are many Russians in the audience.

Now consider the dialogues in 85 and 86.

(85) A: Communism is quite out of fashion these days. There are hardly any communists left and most of them are Russian.
B: *A* claims that many Russians are communist.
(86) A: Performances of Shostakovich's eighth symphony are always well attended by Russians. In fact at today's performance most audience members are Russian.
B: *A* claims that many Russians are in the audience.

B's assertion in 85 is false. A did not claim that among the Russians as a whole, many of them are communist, but rather that among the communists as a whole, many of them are Russian. That is, *many* in B's assertion in 85 can have only its syntactic sister *Russians* as its semantic restriction. In 86, though, B's assessment is true, even though it is unlikely that among the Russians as a whole, many of them are in the audience. B's assessment means that many audience members are Russian, which is what A claimed. Here, the arguments of *many* are reversed vis-à-vis their syntactic order. Again, the difference between B's assertion in 85 and in 86 is that *many* occurs in an individual-level context in 85 (subject of *be communist*) and a stage-level context in 86 (subject of *be in the audience*). Stage-level contexts therefore support reverse readings of *many* and individual-level contexts do not.

Let us now return to 80. With *many* in subject position, each potential scope configuration (S $>$ O and O $>$ S) is potentially ambiguous between a linear reading and a reverse reading of *many*. The availability of a reverse reading indicates that the subject is interpreted by the stage-level pattern, that associated with stage-level contexts, and the unavailability of such a reading indicates that it is interpreted by the individual-level pattern, that associated with individual-level contexts. Consider the subject wide-scope configuration first. Suppose some FBI agents as well as police officers are patrolling neighborhoods. A few of the police officers are each patrolling most of the neighborhoods, not just one or two neighborhoods. Only one of the FBI agents is patrolling most of the neighborhoods, as represented in Table 5.

Wide scope of *many* over *most* does not give rise to an interpretation that makes 87 (which is 80 with *many* instead of the bare plural) true in this context.

(87) Many police officers are patrolling most neighborhoods.

[27] Westerståhl formulates this reading not as an argument reversing procedure but as one of the four lexical entries for *many*.

(i) $\forall A,B\ [\![\text{many}(A,B)]\!] = \text{iff } |A \cap B| > k|B|$

		NEIGHBORHOODS									
		1	2	3	4	5	6	7	8	9	10
FBI AGENTS	A	√									
	B		√								
	C			√							
	D				√						
	E	√	√	√	√	√	√	√	√		
POLICE OFFICERS	F	√									
	G		√								
	H			√							
	I				√						
	J					√					
	K						√				
	L							√			
	M								√		
	N									√	
	O										√
	P									√	
	Q	√	√	√	√	√	√	√	√		
	R	√	√	√	√	√	√	√	√		
	S	√	√	√	√	√	√	√	√		
	T	√	√	√	√	√	√	√	√		

TABLE 5. The *patrol* relation.

(88) [many police officers$_x$ [most neighborhoods$_y$ [x is patrolling y]]] S > O
   a. Many of the individuals who are police officers are patrolling most neighborhoods.
   b. Many of the individuals who are patrolling most neighborhoods are police officers.

Again, for the subject wide-scope LF of 87, a linear reading 88a and a reverse reading 88b are logical possibilities. Compared to the totality of police officers in Table 5, rela-

tively few of them are patrolling most neighborhoods (only officers Q, R, S, and T), so the linear reading in 88a does not correctly describe the situation in Table 5. However, compared to the totality of individuals patrolling most neighborhoods (E, Q, R, S, and T), relatively many of them are police officers, so the reverse reading in 88b correctly describes the situation in Table 5. Again, however, the subject wide-scope reading of 87 is false in the situation depicted in Table 5, meaning that the LF in 88 does not make a reverse reading available. The only possible reading is the false linear reading in 88a. The fact that *many* cannot have a reverse reading here indicates, vis-à-vis the contrast in 85 and 86, that *many* receives an individual-level interpretation in the logical form in 88.

Now consider the object wide-scope reading of 87.

(89) [most neighborhoods$_y$ [many police officers$_x$ [x is patrolling y]]] O > S
  a. Most neighborhoods are such that many of the individuals who are police officers are patrolling them.
  b. Most neighborhoods are such that many of the individuals who are patrolling them are police officers.

In the context in Table 5, the object wide-scope LF in 89 is true. The reverse interpretation in 89b correctly describes the situation in Table 5. For most of the neighborhoods, the majority of the individuals patrolling it are police officers. The linear reading paraphrased in 89a does not describe the situation in Table 5. It is not the case that for most of the neighborhoods, the police officers patrolling it are many with respect to the total number of police officers. Since only the reverse reading correctly describes the situation in Table 5, the fact that 89 is perceived as true in the situation in Table 5 indicates that the reverse reading is licit here. That fact that *many* admits a reverse reading here indicates, again vis-à-vis 85 and 86, that *many* receives a stage-level interpretation in the logical form in 89.

It was observed at the outset that a strong object may scope over a weak subject. The discussion above shows that when object *most* has scope under subject *many*, the reverse interpretation for *many* is blocked, showing that the subject follows the individual-level pattern when it has a strong object in its scope. This means that there is no position available for strong objects under ∂_{SUBJ}, the locus of stage-level weak subjects. The only position available for a weak subject that has the locus of strong objects in its scope is d_{SUBJ}, the locus of individual-level interpretations for weak subjects. These considerations indicate that D_{OBJ} occurs above ∂_{SUBJ} but below d_{SUBJ}.[28]

(90) [$_{IP}$ d_{SUBJ} . . . [D_{OBJ} . . . [$_{vP}$ ∂_{SUBJ} v [d_{OBJ} . . . [$_{VP}$ ∂_{OBJ} V]]]]]

Strong subjects occur at least as high as d_{SUBJ}, since strong determiners are in principle blocked from ∂ positions (see §2). Since strong objects are below d_{SUBJ}, they are predicted to be unable to scope over a strong subject, a prediction borne out by 91. Suppose at a film festival, each of five film critics likes four out of a set of five movies, but dislikes one of the five, as represented in Table 6. We cannot describe this situation as in 91.

(91) Most critics liked every film.
  a. Most critics$_x$ [every film$_y$ [x liked y]]
  b. Every film$_y$ [Most critics$_x$ [x liked y]]

[28] From the perspective of the present analysis, especially in light of the fact that subject and object domains overlap in the way illustrated in 90, the interpretation of indirect objects of ditransitive verbs and their scopal interactions with direct objects is a potentially fruitful area of inquiry. See Basilico 1998 for a discussion of the relationship between dative object shift and the stage/individual-level contrast similar to the proposal made here for direct objects.

		FILMS				
		1	2	3	4	5
CRITICS	A	√	√	√	√	
	B	√	√	√		√
	C	√	√		√	√
	D	√		√	√	√
	E		√	√	√	√

TABLE 6. The *like* relation.

Both 91a and 91b are logically possible LFs for 91, the S > O and O > S readings respectively. The O > S LF shown in 91b is true in the situation represented in Table 6. It asserts that every film is such that most of the critics liked it, which is the situation represented in Table 6. Yet the sentence in 91 is false in this situation, meaning that 91b is not a possible LF for 91, as predicted if strong objects may not scope over strong subjects.

The conclusion that D_{OBJ} and d_{OBJ} are positionally distinct raises the question of whether a position D_{SUBJ} exists independently of d_{SUBJ}. I am not aware of evidence for such a distinction, and since an answer to this question does not bear on the issue of the structure of predicates, which is the focus of this article, I do not attempt to resolve the issue here. An analyst with a predisposition to assume uniformity wherever counterevidence is lacking (and the generative program has gotten a lot of mileage out of this predisposition) will wonder why the positions for strong and individual-level weak objects should be distinct but not the positions for strong and individual-level weak subjects. I, in fact, harbor this predisposition and assume that there is a position D_{SUBJ} distinct from and superior to d_{SUBJ}, but the reader may choose to reject this assumption; it does not affect the veracity of the other claims I have made here, in particular my conclusions about predicate structure. These considerations finalize the picture constructed here of the relative scope of loci for subjects and objects:

(92) $[\ D_{SUBJ} \ldots [\ d_{SUBJ} \ldots [\ D_{OBJ} \ldots [_{vP}\ \partial_{SUBJ}\ v\ [\ d_{OBJ} \ldots [_{VP}\ \partial_{OBJ}\ V\ ]]]]]$

5. SUMMARY AND CONCLUSION. This study is a survey of scope positions for NPs modulo (i) grammatical function (for subject and object), (ii) NP type (strong, weak individual-level, weak stage-level), and (iii) intensionality (as a lexical property of a transitive verb). I seek to demonstrate that:

I. Diesing's strong/weak bifurcation of the clause is not rich enough to accommodate the variety of scope facts surveyed here.
II. The traditional notion that transitive verbs are syntactically atomic is not rich enough to accommodate the variety of licensing sites for objects surveyed here.

Rather, the data surveyed here indicate that transitive clauses are partitioned into two argument domains, each of which is headed by a distinct piece of the predicate and subdivided into three NP-positions. In abstraction:

(93) [D . . . [d . . . [∂ *predicate*]]]

where:

(94) ∂ is the locus of the stage-level interpretation for weak NPs (that in Table 1),
d is the locus of the individual-level interpretation for weak NPs (that in Table 2), and
D is the locus of strong NPs,

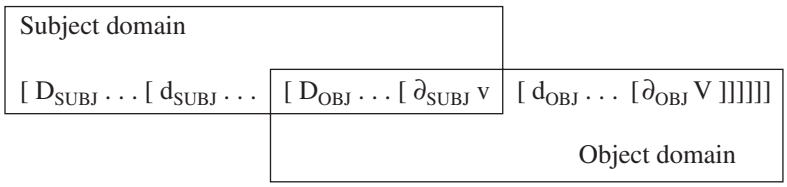
and the determiners distribute as follows (though recall the status of *R* as a determiner is not established):

(95)

[D . . .	[d . . .	[∂ . . .]]]
a	*Gen*	*R*
three	a	a
several	three	three
the	several	several
most		
every		
both		

In situ, the schema in 93 displays a 'twist' in that the domain for objects overlaps the domain for subjects. D_{OBJ} is superior to ∂_{SUBJ}.

(96)



For intensional transitive verbs (SEVs and AIVs), the domain of intensionality is the substructure:

(97) $[d_{OBJ} \ldots [\ \partial_{OBJ}\ V\ ]]$

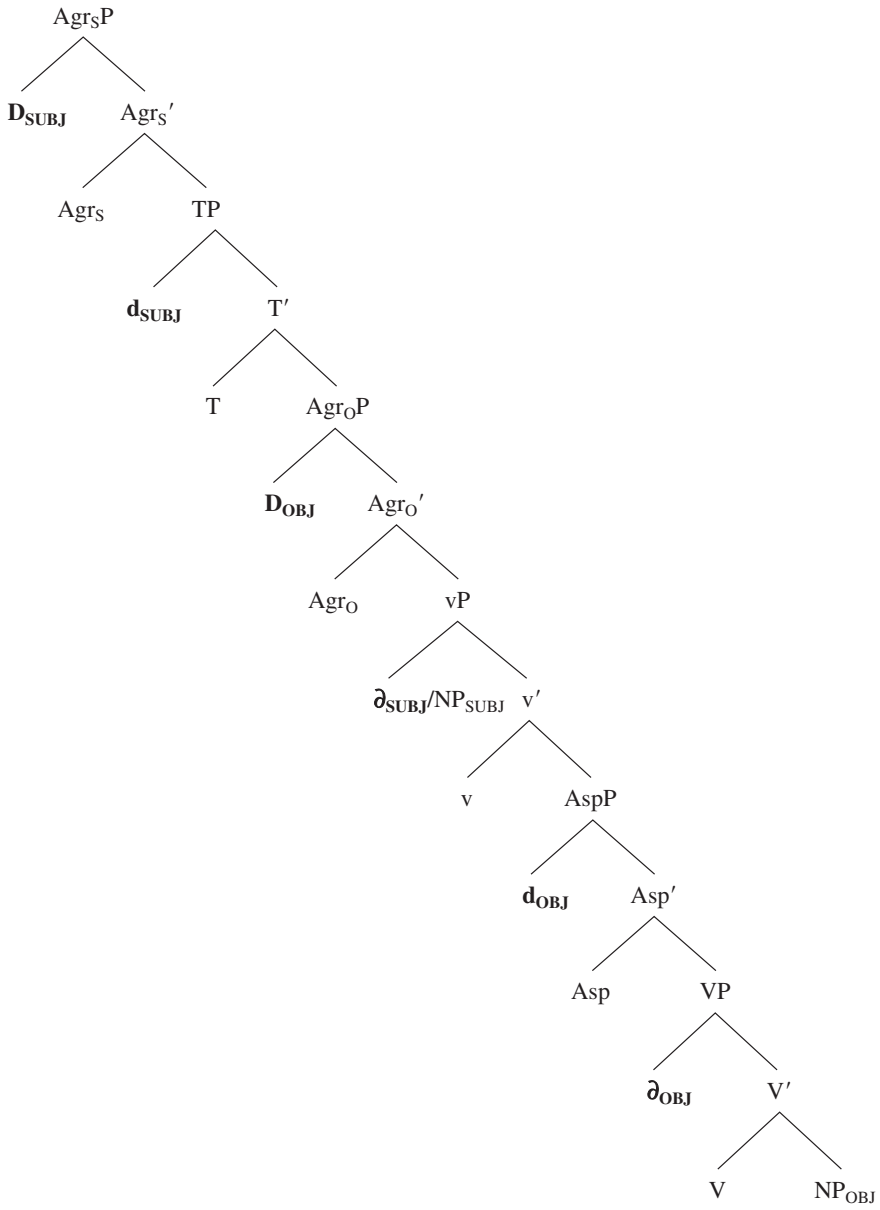
or, the complement of the subject domain in the object domain.

The data I have reviewed in this article implicate the relative scopal relations shown in 96 for the various loci for subjects and objects that interpretational qualities are associated with. This hierarchy is compatible with various perspectives on clause structure, and projecting any specific claims about clause structure onto this analysis would require additional motivation. The proposed analysis is however remarkably congruous with recent claims about the distribution of agreement and case-licensing positions and aspectual structure, and in fact seems to reconcile an apparent incompatibility between the claims of Chomsky 1995 and Hornstein 1999 on the one hand and those of Collins & Thráinsson 1996 and Sportiche 1996 on the other. There is a predicate-external position and two predicate-internal licensing positions for objects. The former corresponds to what is traditionally labeled Agr_OP.[29] The fact that the availability of stage-level object readings depends on what I term INTERNAL EVENTIVENESS suggests that the predicate-internal locus for individual-level readings for weak objects is related to (projected by) an element associated with INNER ASPECT, Asp^0, while the position for stage-level readings is internal to the object's theta-licensor VP. It is something of a parallel, then, that

[29] Agr projections have recently been reconstrued as outer specifiers of lexical projections. See Chomsky 2000, 2001. The present analysis is compatible with this view also, for reasons discussed by Hornstein (1999: 61–64) in connection with his own analysis.

the position for individual-level readings for weak subjects is associated with the pre-auxiliary position IP, a.k.a. TP—the locus of tense, an element semantically related to aspect that Travis (1991) in fact terms OUTER ASPECT—while the position for stage-level readings for subjects is internal to its theta-licensor vP. The proposal that Agr_OP houses strong objects implicates by analogy that Agr_SP houses strong subjects, assuming the standard implementation of Pollock's (1989) split-INFL, where Agr_SP is superordinate to TP. Then, 74 expands to 98.

(98)



The empirical result of the present study is the hierarchy in 96 and the related conclusions about the structure of predicates. The structure in 98 is a fusion of the results of this study and other recent research on the clause structure of English and other languages. It

represents a likely relationship between this hierarchy and contemporary theories of clause structure.

A treatment of what underlies the connections between aspect and eventiveness and the availability of the various NP positions and what motivates movement of the NPs to their respective interpretational loci would take this study beyond its intended scope. Regardless of the credibility of a relationship between 96 and 98, the data reviewed here show that quantificational licensing positions for subjects and objects recur in the same hierarchical order (though they are slightly intertwined), and the same functional criteria determine the availability of the licensing positions for both subjects and objects (criteria relating to event structure). Transitive verbs are syntactically decomposed, each portion of the verb heading an argument domain. The conclusions here indicate that language builds larger structures from smaller ones, not only reiterating X-bar schemata and complete clauses but also on an intermediary level, re-using a functional scaffolding for the reiterative licensing of NPs for the purposes of expressing transitive relations.

REFERENCES

ARAD, MAYA. 1999. On 'little v'. *MIT Working Papers in Linguistics* 33.1–25.

BARWISE, JON, and ROBIN COOPER. 1981. Generalized quantifiers and natural language. *Linguistics and Philosophy* 4.159–218.

BASILICO, DAVID. 1998. Object position and predication forms. *Natural Language and Linguistic Theory* 16.541–95.

BRENTANO, FRANZ. 1874. *Psychologie vom empirischen standpunkt*. Leipzig: Duncke and Humbolt. [Reprinted in *Psychology from an empirical standpoint*, trans. by A. C. Rancurello, D. B. Terrell, and L. McAlister, London: Routledge, 1995.]

CARLSON, GREGORY. 1977. *Reference to kinds in English*. Amherst: University of Massachusetts, Amherst dissertation.

CHOMSKY, NOAM. 1991. Some notes on economy of derivation and representation. *Principles and parameters in comparative grammar*, ed. by Robert Freidin, 417–54. Cambridge, MA: MIT Press.

CHOMSKY, NOAM. 1995. *The minimalist program*. Cambridge, MA: MIT Press.

CHOMSKY, NOAM. 2000. Minimalist inquiries: The framework. *Step by step: Essays on minimalist syntax in honor of Howard Lasnik*, ed. by Roger Martin, David Michaels, and Juan Uriagereka, 89–155. Cambridge, MA: MIT Press.

CHOMSKY, NOAM. 2001. Derivation by phase. *Ken Hale: A life in language*, ed. by Michael Kenstowicz, 1–52. Cambridge, MA: MIT Press.

COHEN, ARIEL. 2001. Relative readings of *many*, *often*, and generics. *Natural Language Semantics* 9.41–67.

COLLINS, CHRIS, and HÖSKULDUR THRÁINSSON. 1996. VP-internal structure and object shift in Icelandic. *Linguistic Inquiry* 27.291–444.

DE HOOP, HELEN. 1992. *Case configuration and noun phrase interpretation*. Groningen: Rijksuniversiteit Groningen dissertation.

DIESING, MOLLY. 1992. *Indefinites*. Cambridge, MA: MIT Press.

DONNELLAN, KEITH. 1966. Reference and definite descriptions. *The Philosophical Review* 75.281–304.

DOWTY, DAVID. 1979. *Word meaning and Montague grammar: The semantics of verbs and times in generative semantics and in Montague's PTQ*. Dordrecht: D. Reidel.

ENÇ, MÜRVET. 1991. The semantics of specificity. *Linguistic Inquiry* 22.1–25.

FODOR, JANET D., and IVAN SAG. 1982. Referential and quantificational indefinites. *Linguistics and Philosophy* 5.355–98.

GERSTNER, CLAUDIA, and MANFRED KRIFKA. 1987. Genericity. Tübingen: Universität Tübingen, MS.

HARLEY, HEIDI, and ROLF NOYER. 1998. Licensing in the non-lexicalist lexicon: Nominalizations, vocabulary items and the encyclopaedia. *MIT Working Papers in Linguistics* 32.119–37.

HEIM, IRENE. 1982. *The semantics of definite and indefinite noun phrases*. Amherst: University of Massachusetts, Amherst dissertation.
HERBURGER, ELENA. 1997. *In the event of focus*. Los Angeles: University of Southern California dissertation.
HORN, GEORGE. 1974. *The noun phrase constraint*. Amherst: University of Massachussetts, Amherst dissertation.
HORNSTEIN, NORBERT. 1999. Minimalism and quantifier raising. *Working minimalism*, ed. by Samuel Epstein and Norbert Hornstein, 45–75. Cambridge, MA: MIT Press.
IOUP, GEORGETTE. 1977. Specificity and the interpretation of quantifiers. *Linguistics and Philosophy* 1.233–45.
JÄGER, GERHARD. 1999. Stage levels, states, and the semantics of the copula. *ZAS papers in linguistics* 14.65–94.
JENKINS, LYLE. 1975. *The English existential*. Tübingen: Max Niemeyer.
KARTTUNEN, LAURI. 1974. Presupposition and linguistic context. *Theoretical Linguistics* 1.181–94.
KAYNE, RICHARD. 1998. Overt vs. covert movement. *Syntax* 1.128–91.
KEENAN, EDWARD. 1996. The semantics of determiners. *The handbook of contemporary semantic theory*, ed. by Shalom Lappin, 41–63. Oxford: Blackwell.
KEENAN, EDWARD, and JONATHAN STAVI. 1986. A semantic characterization of natural language determiners. *Linguistics and Philosophy* 9.253–326.
KLIMA, EDWARD. 1964. Negation in English. *The structure of language: Readings in the philosophy of language*, ed. by Jerry Fodor and Jerrold Katz, 246–323. Englewood Cliffs, NJ: Prentice Hall.
KOOPMAN, HILDA. 1992. On the absence of case chains in Bambara. *Natural Language and Linguistic Theory* 10.555–94.
KOOPMAN, HILDA, and DOMINIQUE SPORTICHE. 1991. The position of subjects. *Lingua* 85.211–58.
KRATZER, ANGELIKA. 1986. Conditionals. *Chicago Linguistic Society* 22.1–15.
KRATZER, ANGELIKA. 1988. Stage-level and individual-level predicates. *Genericity in natural language*, ed. by Manfred Krifka, 247–84. Tübingen: Universität Tübingen.
KRATZER, ANGELIKA. 1995. Stage-level and individual-level predicates. *The generic book*, ed. by Gregory Carlson and Francis Jeffry Pelletier, 125–75. Chicago: University of Chicago Press.
KRATZER, ANGELIKA. 1996. Severing the external argument from its verb. *Phrase structure and the lexicon*, ed. by Johan Rooryck and Laurie Zaring, 109–37. Dordrecht: Kluwer.
KRIFKA, MANFRED; FRANCIS PELLETIER; GREGORY CARLSON; ALICE TER MEULEN; GODEHARD LINK; and GENNARO CHIERCHIA. 1995. Genericity: An introduction. *The generic book*, ed. by Gregory Carlson and Francis Pelletier, 1–124. Chicago: University of Chicago Press.
KURAL, MURAT. 1996. *Verb incorporation and elementary predicates*. Los Angeles: University of California, Los Angeles dissertation.
KURODA, SIGE-YUKI. 1972. The categorical and the thetic judgment. *Foundations of Language* 9.153–85.
LADUSAW, WILLIAM. 1994. Thetic and categorial, stage and individual, weak and strong. *Proceedings of SALT IV*, ed. by Mandy Harvey and Lynn Santelmann, 220–29. Ithaca, NY: CLC Publications.
LAKOFF, GEORGE. 1970. *Irregularity in syntax*. New York: Holt, Rinehart and Winston.
LARSON, RICHARD. 1988. On the double object construction. *Linguistic Inquiry* 19.335–91.
LEES, ROBERT. 1960. *The grammar of English nominalizations*. The Hague: Mouton.
LEWIS, DAVID. 1975. Adverbs of quantification. *Formal semantics of natural language*, ed. by Edward Keenan, 3–15. Cambridge: Cambridge University Press.
LUMSDEN, MICHAEL. 1988. *Existential sentences: Their structure and meaning*. New York: Routledge.
MARANTZ, ALEC. 1997. No escape from syntax: Don't try morphological analysis in the privacy of your own lexicon. *University of Pennsylvania Working Papers in Linguistics* 4.201–25.
MARANTZ, ALEC. 2000. Reconstructing the lexical domain with a single generative engine. Cambridge, MA: MIT, MS.

McCawley, James. 1970. English as a *VSO* language. *Language* 46.286–99.
McNally, Louise. 1998. Stativity and theticity. *Events and grammar*, ed. by Susan Rothstein, 293–307. Dordrecht: Kluwer.
Milsark, Gary. 1974. *Existential sentences in English*. Cambridge, MA: MIT dissertation.
Milsark, Gary. 1977. Toward an explanation of certain peculiarities of the existential construction in English. *Linguistic Analysis* 3.1–29.
Moltmann, Friederike. 1994. Attitude reports, events and partial models. New York: CUNY Graduate Center, ms.
Moltmann, Friederike. 1997. Intensional verbs and quantifiers. *Natural Language Semantics* 5.1–52.
Montague, Richard. 1973. The proper treatment of quantification in ordinary English. *Approaches to natural language*, ed. by Jaakko Hintikka, J. M. E. Moravcsik, and Patrick Suppes, 221–42. Dordrecht: Reidel.
Nash, Léa. 1999. Georgian *i-* and Romance *se*: Reflexive-benefactive, mediopassive and unaccusative constructions. Paper presented at Table Ronde Franco-Hollandaise sur les Réfléchis, Paris.
Noonan, Maire. 1992. *Case and syntactic geometry*. Montreal: McGill University dissertation.
Pesetsky, David. 1987. Wh-in-situ: Movement and unselective binding. *The representation of (in)definiteness*, ed. by Eric Reuland and Alice ter Meulen, 98–129. Cambridge, MA: MIT Press.
Pesetsky, David. 1995. *Zero syntax: Experiencers and cascades*. Cambridge, MA: MIT Press.
Pollock, Jean-Yves. 1989. Verb movement, universal grammar, and the structure of IP. *Linguistic Inquiry* 20.365–424.
Ross, John Robert. 1967. *Constraints on variables in syntax*. Cambridge, MA: MIT dissertation.
Ross, John Robert. 1972. Act. *Semantics of natural language*, ed. by Gilbert Harman and Donald Davidson, 70–126. Boston: D. Reidel.
Sportiche, Dominique. 1996. A-reconstruction and constituent structure. Paper presented at University of California, Irvine, October 25th.
Stowell, Timothy. 1978. What was there before there was there. *Chicago Linguistic Society* 14.458–71.
Strawson, Peter. 1952. *Introduction to logical theory*. London: Methuen.
Travis, Lisa. 1991. Derived objects, inner aspect, and the structure of VP. Montreal: McGill University, ms.
von Stechow, Arnim. 1996. The different readings of *wieder* 'again': A structural account. *Journal of Semantics* 13.87–138.
Wasow, Thomas. 1977. Transformations and the lexicon. *Formal syntax: Papers from the MSSB-UC Irvine conference on the formal syntax of natural language*, *Newport Beach*, *CA*, *1976*, ed. by Peter W. Culicover, Thomas Wasow, and Adrian Akmajian, 327–60. New York: Academic Press.
Westerståhl, Dag. 1985. Logical constants in quantifier languages. *Linguistics and Philosophy* 8.387–413.
Wilkinson, Karina. 1986. Genericity and indefinite NPs. Amherst: University of Massachusetts, Amherst, ms.
Zimmermann, Thomas. 1993. On the proper treatment of opacity in certain verbs. *Natural Language Semantics* 1.149–79.

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