

3 INDIVIDUAL-LEVEL PREDICATES AS INHERENT GENERICS

Gennaro Chierchia

3.1. INTRODUCTION

Carlson (1977b) noted that predicates can be classified as belonging to two natural classes, which he dubbed *individual-level* vs. *stage-level* (*i-level* and *s-level* henceforth), and proposed an account for this distinction. Among other things, Carlson showed that this distinction has important implications for our understanding of genericity. Recently Diesing (1992) and Kratzer (1988; cf. chapter 2, this volume) have developed an interesting alternative to Carlson's approach, based on the idea that while *s-level* predicates have an extra Davidsonian argument for space-time locations, *i-level* predicates lack such an argument. They have argued that the bulk of the properties of *i-level* predicates can be derived from this difference. In this chapter, I would like to explore an approach that, while preserving the spirit (and even some of the specific insights) of the aforementioned approaches, might arguably take us a little further in our understanding of the relevant contrast. In line with, for example, Parsons (1990) among many others, I will argue that all predicates have a Davidsonian argument ranging over occasions/eventualities, but that in *i-level* predicates this argument has to be bound by a generic operator. In this sense, *i-level* predicates are claimed to be inherently generic.¹

This chapter is organized as follows. In the remainder of this introduction, I will review the bulk of the properties that make *i-level* predicates into a natural class. In section 2, I will sketch some background assumptions. In section 3, I will discuss genericity. In section 4, I will articulate my proposal; in section 5, I will discuss its consequences, and finally, in section 6, I will compare it with other approaches.

I-level predicates express properties of individuals that are permanent or tendentially stable. *S-level* predicates, per contrast, attribute to individuals transient, episodic properties. As Carlson argues, there are three basic types of *i-level* predicates, namely:

1. For a recent view different from both Diesing's and the one presented here, cf. Bowers 1993.

- (1) a. Stative verbs, like *know*, *love*, *hate*, etc. (vs. *hit*, *run*, etc.)
- b. All (predicative) NPs, like *be a man*, *be mammals*, etc.
- c. Adjectives like *intelligent*, *tall*, *blue*, etc. (vs. *drunk*, *available*, etc.)

In what follows I give a list of six key properties that have been identified in the literature as criterial for the characterization of *i-level* predicates.

1. *Stable stativity*. The first property is simple and self-evident. *I-level* predicates are all aspectually stative. They all have the characteristics typical of statives (like being ungrammatical in the progressive, having the subinterval property, and so forth; cf. Dowty 1979). The only statives that are *s-level* are adjectives which express "transient" or "episodic" qualities (like being drunk or being sick) and pure locatives (like being on the roof). Deciding whether a state is "transient" or "stable" is sometimes difficult, for the notions involved are vague. Nonetheless, we seem to be able to settle the issue in most cases. For example, normally, if one is intelligent or tall, one clearly tends to retain these properties. Of course, accidents capable of altering such tendentially permanent states can occur. But this does not affect their being tendentially stable. Per contrast, a single state of, say, drunkenness lasts relative little. If it doesn't pass, you are not just drunk—you are an alcoholic. This difference manifests itself in the behavior of temporal adverbials. Consider (2):

- (2) a. John was drunk yesterday / last month / a year ago.
- b. ??John was tall yesterday / last month / a year ago.

While (2a) is wholly normal, the interpretation of (2b) calls for special scenarios (e.g., an accident capable of affecting John's height).

There is also another factor that needs to be taken into consideration. Sometimes one and the same state can be viewed as either stable or transient. For example, in saying "John is sick," we may mean that he is chronically sick, or that he just has an occasional ailment. So *sick* can perhaps be classified as belonging to both classes. Moreover, a verb that is normally classified as stable can in certain cases be reclassified as transient. Again, this will generally involve setting up a special context of some kind. Consider (3), for example:

- (3) a. John was intelligent on Tuesday, but a vegetable on Wednesday.
- b. A friend of mine likes DRT on Mondays and Thursdays and hates it on Tuesdays and Fridays.

Be intelligent, be a vegetable, like all express stable states; that is, they are i-level. However, in (3) they are being used as s-level predicates. For example, in (3a) we either must interpret the VP as "behave intelligently" or else we must imagine that John has a double personality which involves switching his mental capacities on and off in an abnormal manner. If we all were like him, *intelligent* would be s-level. It is intuitively clear that a shift from i-level to s-level (akin to the well-known shifts from one aspectual class to another or, for nouns, from mass to count) is taking place in these examples.

Modulo these caveats, the first feature that makes i-level predicates into a natural class is the fact that they express stable states, which manifests itself linguistically in the oddity of sentences with temporal modifiers such as (2b).

2. *Locatives*. Not only are there restrictions on the cooccurrence of temporal modifiers with i-level predicates. There also are even tighter restrictions on their cooccurrence with locative modifiers. In fact, as Carlson (1982) noticed, modification of an i-level predicate by a locative is quite generally impossible. This can be seen by the following kind of contrast:

- (4) a. ??John is a linguist in his car.
 b. ??John is intelligent in France.
 c. ??John knows Latin in his office.
 (5) a. John is always sick in France.
 b. John works in his office.

Intuitively, it is as if i-level predicates were, so to speak, unlocated. If one is intelligent, one is intelligent nowhere in particular. S-level predicates, on the other hand, are located in space.²

3. *Perception sentences*. A third property of i-level predicates is that they do not occur felicitously within the 'small clause' complements of perception verbs:

- (6) a. *I saw John a linguist.
 b. *I saw John tall.
 c. *I heard John like Mary.
 (7) a. I saw John drunk.
 b. I heard Mary beat John.

2. Locatives become more acceptable if the sentence contains an indefinite or bare plural;

(i) In Italy, five-year-olds know how to play soccer.

I believe that in these cases the locative is understood as modifying the noun. For instance (i) is interpreted as (ii):

(ii) [Five-year-olds in Italy] know how to play soccer.

It is unclear why this should be so. Notice that one cannot get away with saying that certain states cannot be seen or otherwise perceived. Height, for example, is prominently perceivable. One can certainly see that John is tall (or that he is not). Yet one cannot describe this perception using (6b). Moreover, the ungrammaticality of (6a-c) cannot just be due to a ban against having states in the complement of perception reports, for *drunk* in (7a) is a state. Perceptual reports seem to exclude just i-level predicates, and it is not obvious why.

4. *There-sentences*. Another seemingly unrelated grammatical structure that appears to single out i-level predicates is the existential construction with *there*. In particular, the coda position of *there*-sentences does allow adjectives, as in (8a), but as it turns out, only s-level ones.

- (8) a. There are two men drunk/sick/available,
 b. ??There are two men intelligent/white/altruistic,

Again, this cannot be construed as a ban against stativity, for adjectives are all aspectually stative. Moreover, there is nothing patently wrong with the meaning of the sentences in (8b). It is quite clear what they should mean, if they were grammatical. They ought to mean something like:

- (9) There are two intelligent/white/altruistic men around.

Yet we cannot express what (9) does by means of (8b).

5. *Bare plurals*. I-level predicates also interact in an interesting way with bare plurals. A prominent property of i-level predicates is that they select the universal reading of bare plurals, in contrast with s-level predicates:

- (10) a. Humans are mammals.
 b. Firemen are altruistic.
 c. Dogs hate cats.
 (11) a. Firemen are available.
 b. Dogs are barking in the courtyard.

This observation played a central role in the theory of Carlson (1977b). The bare plural subjects in (10) must all be interpreted universally (or generically). The bare plurals in (11), on the other hand, are naturally interpreted existentially. They may also arguably have a universal reading. But the relevant point is that for the bare plurals in (10) an existential interpretation is just impossible.

The NPs we focused on in (10) and (11) are all subjects. For objects, we have a broader range of options. Consider the following examples:

- (12) a. Lions have manes.
b. Dogs hate cats.

The object in (12a) is interpreted existentially. Sentence (12a) says roughly that for every lion there is a mane that it has. The object in (12b) is instead interpreted universally. Sentence (12b) says that for every dog and every cat the former hates the latter.

A further interesting fact, noted by Kratzer (chapter 2, this volume), is that subjects of i-level unaccusatives (or passives) *can* be interpreted existentially. For example:

- (13) a. Ponds belong to this property.
b. Counterexamples to this claim are known to me.

Quite clearly, (13a)'s most natural interpretation is that there are ponds that belong to this property. Similarly for (13b).

These observations on the interaction of i-level predicates with bare plurals can be schematically summarized as follows:

- (14) a. The bare plural subject of non-unaccusative i-level predicates must be interpreted universally.
b. The bare plural subjects of i-level unaccusatives and passives, as well as other bare plural arguments of i-level predicates, can be interpreted existentially.

The distribution of universal readings of bare plurals seems to form a quite regular pattern, sensitive to the nature of the grammatical relations involved.

6. *Adverbs of quantification.* The following set of facts has also been noticed by Kratzer. It concerns the interaction of i-level predicates with adverbs of quantification. Consider the following contrast:

- (15) a. ??When John knows Latin, he always knows it well.
b. ??When John is intelligent, he is always pleasant.
(16) a. When John speaks Latin, he always speaks it well.
b. When John is drunk, he is always obnoxious.

The sentences in (15), which involve i-level predicates, sound strange, in contrast with the fully parallel s-level sentences in (16), which are quite natural. Kratzer notices further that if we replace one of the NPs in the *when*-clause of (15a) or (15b) with an indefinite or a bare plural, the sentence becomes grammatical:

- (17) a. When a Moroccan knows French, she knows it well.
b. When a student is intelligent, it is a pleasure to work with him or her.

A closely related pattern can be observed in the absence of a *when*-clause:

- (18) a. John always speaks French.
b. ??John always knows French.
c. A Moroccan always knows French.
d. Moroccans always know French.

Thus here, too, we find a pretty regular behavior. The generalization seems to be that sentences involving an adverb of quantification and an i-level predicate must for some reason have an indefinite or a bare plural as argument.

This cursory overview should suffice to illustrate that i-level predicates display a fairly systematic and interesting clustering of properties that calls for an explanation. A number of diverse grammatical constructions seem to single them out. The question is why. In order to formulate my hypothesis, I will first need to spell out a number of background assumptions.

3.2. BACKGROUND

In what follows I adopt a particular combination of syntactic and semantic assumptions, the one I feel is best suited to supplement my main hypothesis. These assumptions are widely shared and arguably independently needed. They do not, however, represent the only way in which the thesis I am exploring can be cast.

3.2.1. The Syntax-Semantics Map

I will adopt a run-of-the-mill version of the Principles and Parameters framework. In this framework, S(urface)-structures are mapped into L(ogical) F(orms) by Move α . One of the effects of this operation is the adjunction of NPs to S, which fixes their scope (Quantifier Raising). LF is the syntactic level that feeds into semantic interpretation, which takes the form of a recursive mapping of LF-structures into Intensional Logic. Each lexical entry is associated with a restricted range of logical types that determine its semantic makeup. For example, NPs come in (at least) two types: the type *e* of basic individuals and the type *gq* ($= \langle \langle e, t \rangle, t \rangle$) of generalized quantifiers.³ Verbs also come in different basic types, depending on how many arguments they take and whether they are extensional or intensional. I will adopt Montague's theory of intensional verbs. I also assume that all verbs take an extra argument ranging over situations, in the spirit of Davidson (1967) and Parsons (1990), among many others. I will use *e_s* for the type of situations. (19) gives a list of some common categories:

3. I am ignoring predicative NPs for the moment. See below (sec. 3.4.3) for some discussion.

(19)	Category	Type	Example	Name
	S	t	John runs	sentence
	V	$\langle e_s, \langle e, t \rangle \rangle$	walk, run	intransitive extensional verbs
	V	$\langle e_s, \langle \langle s, gq \rangle, t \rangle \rangle$	be missing	intransitive intensional verbs
	V	$\langle e_s, \langle e, \langle e, t \rangle \rangle \rangle$	hit, love	transitive extensional verbs
	V	$\langle e_s, \langle \langle s, gq \rangle, \langle e, t \rangle \rangle \rangle$	seek, need	transitive intensional verbs
	V	$\langle e_s, \langle \langle s, t \rangle, \langle e, t \rangle \rangle \rangle$	know, believe	proposition taking verbs
	NP	e	John, he	e -level NPs
	NP	gq	a man, every man	gq -level NPs

The situation argument is automatically filled by an appropriate variable, which is then bound by tense operators and modified by adverbs. The core rule of semantic interpretation is functional application. In a configuration of the form $[_{XP} A B]$ one constituent is going to be a function and the other the argument to which the function is applied. Which of the constituents is interpreted as function depends on the types of A and B. For example:

- (20) $[_{VP} \text{ kiss John}] \Rightarrow \text{tr}(\text{kiss})(\text{tr}(\text{john})) = [\text{kiss}(s)](j)$
 where $\text{tr}(\alpha)$ is the translation of α in IL

In (20) the type of the verb (after the situation argument has been saturated) is going to be $\langle e, \langle e, t \rangle \rangle$ and the type of the NP is going to be e , so the interpretation of V' will be derived by applying the verb meaning to the noun meaning.

When the types of functions and arguments do not match, one can resort to a limited set of type-shifting principles. These include, for example, intensional abstraction and type promotion:

- (21) a. *Intensional Abstraction*
 $\hat{\alpha} \rightarrow \langle s, \alpha \rangle$
 $\alpha \mapsto \hat{\alpha}$
 b. *Type Promotion*
 Lift: $a \rightarrow \langle \langle a, b \rangle, b \rangle$
 $\alpha \mapsto \lambda \beta \beta(\alpha)$

Here are some examples of where these type-shifting principles would be used:

- (22) a. $[_{VP} \text{ believe that John is smart}] \Rightarrow \text{tr}(\text{believe})(\text{tr}(\text{that John is smart}))$
 $= \text{believe}(s)(\hat{\text{smart}}(j))$
 b. $[_{VP} \text{ seek Bill}] \Rightarrow \text{tr}(\text{seek})(\text{lift}(\text{tr}(\text{Bill}))) = \text{seek}(\lambda \text{APP}(\mathbf{b}))$

In (22a) 'believe' is looking for a proposition, but the complement denotes, under the present assumptions, a truth value. This mismatch is fixed by using

intensional abstraction. Similarly, in (22b) 'seek' is looking for a $\langle s, gq \rangle$, while 'b' is of type e ; however, by applying 'Lift' and intensional abstraction to it we obtain an object of the right kind. Quantifier raising (QR) is interpreted as Montague's 'quantifying in', as illustrated in (23):⁴

- (23) a. $[_{NP_i} S] \Rightarrow \text{tr}(\text{NP})(\lambda x_i \text{tr}(S))$
 b. $[\text{every cat}_i [\text{John likes } t_i]] \Rightarrow \lambda \text{PV}x[\text{man}(x) \rightarrow P(x)](\lambda x_i \text{like}(j, x_i))$
 $= \forall x[\text{man}(x) \rightarrow \text{like}(j, x)]$

Following many current proposals, I assume that QR can adjoin NPs to other categories besides S, such as, in particular, VP and NP. The semantics for such structures is a pointwise extension of the basic quantifying-in rule. I refer to, for example, Rooth 1985 for details.

I do not assume that QR is, in general, obligatory (although there may be constructions that force it). Quantified NPs can be interpreted in situ when the types allow for it. So for example, a sentence like (24a) can have either the LF in (24b) or the one in (24c). The corresponding interpretations are indicated:

- (24) a. Every man walks.
 b. $[_S \text{ every man}_{VP} \text{ walks}] \Rightarrow \lambda \text{PV}x[\text{man}(x) \rightarrow P(x)](\text{walk})$
 c. $[_S \text{ every man}_i [t_i \text{ walks}]] \Rightarrow \lambda \text{PV}x[\text{man}(x) \rightarrow P(x)](\lambda x_i \text{walk}(x_i))$

Quantified NPs can also be interpreted in situ within the VP by means of a type-shifting operation such as Partee and Rooth's (1983) 'argument raising'. This operation turns an e -taking function into a gq -taking one. In (25a) I give a simplified definition (for the case of two-place relations) which I exemplify in (25b). See Partee & Rooth 1983 for extensions and motivation.

- (25) a. $[_Q R] = \lambda \mathcal{P} \lambda y [\mathcal{P}(\lambda x [\mathbf{R}(x)(y)])]$ where $\mathcal{P}$ is of type gq
 b. $[_Q \text{ love}](a \text{ man}) = \lambda y \exists x [\text{man}(x) \wedge \text{love}(x)(y)]$

To assume that QR is obligatory would be inconsistent with Montague's theory of intensional verbs.

Another construction that will be relevant to some of our concerns is NP-raising. I assume that its interpretation involves λ -conversion in the manner illustrated in the following example:⁵

- (26) a. A unicorn seems to be approaching.
 b. $[_S \text{ a unicorn}_i [_{VP} \text{ seems } [t_i \text{ be approaching}]]]$
 i. $\Rightarrow \lambda \mathcal{P} \text{ seem}(\mathcal{P}(\text{approach}))(\mathbf{a-unicorn})$
 $= \text{seem}((\mathbf{a-unicorn}(\text{approach})))$
 ii. $\Rightarrow \text{a unicorn } (\lambda x_i \text{ seem}(\text{approach}(x_i)))$

4. As usual, $\text{like}(x, y)$ is taken as an abbreviation for $\text{like}(y)(x)$.

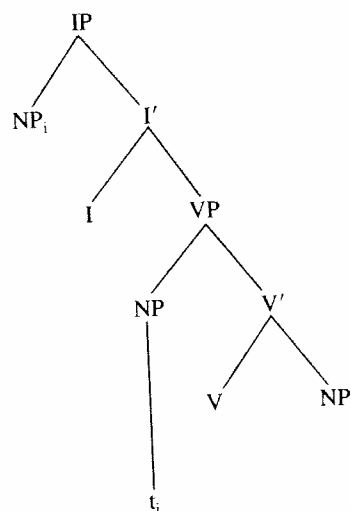
5. In fact, I think that raising is best construed as a case of function composition (cf. Jacobson 1990 and Williams 1987).

- c. $a \text{ unicorn}_i [{}_S t_i [{}_{VP} \text{ seems } [t_i \text{ be approaching}]]]$
 $\Rightarrow a \text{ unicorn } (\lambda x_i [\text{seem}(\text{approach}(x_i))])$

Since NPs come in two types, it is plausible to maintain that NP traces do too. If an NP trace is assigned the type gq , then the raised NP will be “ λ -ed in” back into its original position and interpreted as if it was in its D-structure site, as (26b.i) illustrates. If we assume instead that a particular instance of NP movement leaves an e -level variable behind, then the raised NP ends up having scope over *seem*; cf. (26b.ii). Although not strictly speaking necessary, one can assume that the traces left behind by QR are always e -level (for if QR were to leave behind gq -level traces, it would have no semantic effect). Under this assumption, (26c), where the subject has undergone QR, unambiguously represents the wide scope reading of (26a) (type coherence forces the type of the two occurrences of t_i to match). In interpreting traces of NP movement at the gq -level we achieve the effects of the downgrading movement transformation proposed by May (1977) to deal with the narrow scope reading of *a unicorn* in (26a), but the operation is recast now as a purely interpretive phenomenon, without an actual LF movement. Downward movement has always been problematic for movement theory, which makes its elimination arguably desirable.

Following much recent work, I take the basic structure of the clause to be as follows:

(27)



As the reader can see, I adopt the view that *S* is the maximal projection of *I*, as well as the ‘Internal Subject Hypothesis’, that is, the hypothesis that subjects are base-generated in Spec VP.⁶ I am going to ignore the inner articulation of *I* into further functional heads, except when relevant. The interpretation of VPs is also going to play an important role in what follows. Since it is a somewhat unclear and controversial issue, it is worth discussing with some care; to this the following subsection is devoted.

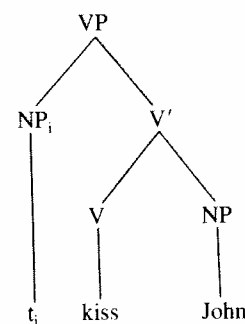
3.2.2. Internal Subjects

In the spirit of Kitagawa (1989), I will regard VPs as predicates and traces in Spec VP as a sort of predication operator, represented here by the λ -abstractor. The general schema, in two parts, is as follows:

- (28) $[{}_{VP} t_i V'] \Rightarrow$
 a. $\lambda v_i \text{tr}(V')$, if V' is of type t
 b. $\lambda v_i \text{tr}(V')(v_i)$, otherwise

Case (28a) is meant to deal with derived subjects (like, e.g., the subjects of unaccusatives), while (28b) deals with underived ones. Consider first an example of the latter:

- (29) a. kiss John
 b. Tree



Translation
 $\lambda x_i [\text{love}(s)(j)(x_i)]$

Type
 $\langle e, t \rangle$

$\text{love}(s)(j)$

$\langle e, t \rangle$

Here basically nothing happens. The type and meaning of the V' is not changed (with the possible exception of the binding of embedded pronouns carrying the index i within the V'). The property thus obtained is then predicated of

6. Cf., e.g., Kuroda 1988 or Koopman & Sportiche 1988, among many others. See Bowers 1991 for an alternative that would also fit well with the present approach.

the external subject (i.e., Spec IP). Consider now what happens in the case of, say, an unaccusative:

- (30) a. John arrived.
 b. Tree
- | | | |
|---|---|--|
| <pre> IP / \ NP I' / \ I VP / \ NP V' / \ V NP John t_i arrived t_i </pre> | <p>Translation
 $\lambda x_i [\text{arrive}(s)(x_i)](j)$</p> <p>$\lambda x_i [\text{arrive}(s)(x_i)]$</p> <p>$\text{arrive}(s)(x_i)$</p> | <p>Type
 t</p> <p>$\langle e, t \rangle$</p> <p>t</p> |
|---|---|--|

Here the subject position is nonthematic. This means that the lexical verb combines first with a variable in object position, resulting in something of type t (i.e., we are dealing with a propositional structure already at the V' -level). The trace in Spec VP, being in a nonthematic position, presumably makes no contribution to the VP meaning. At the VP-level, then, we have to “reopen” the structure, forming a property that can be predicated of the lexical subject in Spec IP. The semantics of raising and passive is essentially the same.

This semantics can be viewed as a plausible way of compositionally interpreting the process of “externalization” of the subject (or, in the case of unaccusatives/passives, the object) as embodied in the Internal Subject Hypothesis. Let us call traces in Spec VP ‘predication phrases’, while reserving ‘NP traces’ for other kinds of traces left behind by NP movement. Under this view, the role of predication phrases vs. NP traces is quite distinct. NP traces relate to their antecedent by binding. Predication phrases, on the other hand, relate to their antecedent by predication; that is, they form a complex predicate which is then predicated of the external subject.⁷

7. In languages where the subject can remain in Spec VP at S-structure, such as German or Japanese (cf., e.g., Diesing 1992, Kuroda 1988), the default rule of functional application will apply of course.

This interpretation of VPs has as a consequence that it is not possible, in general, to “reconstruct” an NP in Spec VP (contrary to what, e.g., Kratzer and Diesing maintain). This is so because reconstruction means putting back an NP meaning into its original site via λ -conversion; cf. (26). But the schema in (28b) assumes that, in general, predication traces will not be NP-level (at least for active transitive and unergative verbs, if they are extensional), for the type of the variable being introduced in (28), namely v_i , will depend on the type of V' . The absence of reconstruction into predication traces, besides being technically simpler, is also empirically justified by the following considerations, involving VP deletion. Assume that predication phrases could freely be interpreted at the higher NP type in examples like the following:

- (31) a. some student _{t_i} [t_i loves every professor]
 b. [t_i loves every professor] $\Rightarrow \lambda \mathcal{P} [\mathcal{P}$ loves every professor]

Now a quantified NP in object position can be assigned VP scope. So the structure of (31b) can actually be this:

- (32) $[_{VP}$ every professor _{t_j} [t_j loves t_i]]
 $\Rightarrow \lambda \mathcal{P} [\forall x [\text{professor}(x) \rightarrow \mathcal{P}(\lambda y \text{ love}(y, x))]]$

If (32) is predicated of *some student*, the latter ends up having narrow scope relative to *every professor*. There is nothing wrong with that, since (31a) can have this interpretation. The problem comes from the fact that if (32) is an admissible interpretation for the VP in (31a), what is to stop it from being used in VP anaphora cases? Nothing, it would seem. But then the following ought to be possible:

- (33) Some student loves every professor and some secretary does too.

Here it should be possible to interpret *every professor* as having wide scope over both *some student* and *some secretary*. But as has long been noticed (Williams 1977, Sag 1976), this reading is impossible. Its impossibility follows straightforwardly from our interpretation of VP shells, which bans predication phrases from having the higher gq type.

It is also well known that there are “exceptions” to this generalization. Hirschbühler (1982) discusses cases of the following sort:

- (34) A Canadian flag was hanging in front of every window and an American flag was too.

Here it seems possible for the VP-internal quantified NP *every window* to have scope over the subject in both clauses. I believe that this is so because the

verb in (34) is unaccusative (as can be seen from the way in which its Italian counterpart *pendere* behaves; Italian is a language that marks unaccusativity overtly). Accordingly the structure of the VP is as follows:

- (35) [_{t_i} was hanging _{t_i} in front of every window]

Here we have a genuine NP trace in object position, which according to our hypothesis *can* be interpreted at the *gq*-level. The schematic interpretation of the VP will be as follows:

- (36) $\lambda P[\text{in-front-of-every-window}(P(\text{hang}))]$

This interpretation makes the reading observed in (34) possible.

So our semantics for VPs predicts that across-the-board wide scope for VP-internal NPs is only possible with unaccusatives or passives, but not with plain active or unergative verbs. As far as I can tell, this prediction is borne out. I am not aware of any other solution to this problem (none, that is, that can account for the facts with fewer stipulations).

This concludes our overview of the basic background assumptions adopted for the purposes of subsequent discussion.

3.3. THE GENERIC OPERATOR

My goal in this section is to give an idea of the line I will be taking on generics and to suggest how my proposals fit with (and, when appropriate, differ from) current research on the topic. As much work has highlighted, there are several key properties that the generic operator shares with *adverbs of quantification* (*Q-adverbs*), a circumstance that has led many to conclude that such operator itself is just a Q-adverb with a special, modal character. I believe this insight to be basically correct. Accordingly, my strategy will be the following. First, I will review the main properties that Q-adverbs and the generic operator share and lay out my assumptions concerning how Q-adverbs in general work. Having done that, I will indicate the way in which I think the generic operator fits into this picture.

3.3.1. Some Properties of Adverbs of Quantification

The interpretation of a Q-adverb requires establishing a relation between a restriction (or, restrictor) and a scope.⁸ The clause has to be “split” into two parts, and the task is to determine what options are available. In trying to do so, the following properties of Q-adverbs should be borne in mind.

PROPERTY A: Q-adverbs can bind eventualities.

8. See, e.g., Carlson 1989 or Gerstner & Krifka 1987.

This property is exemplified by sentences of the following kind:

- (37) a. Fred always smokes.
 b. $\forall s [C(f,s)] [\text{smoke}(f,s)]$
 c. $\exists s \forall s' [\text{Overlap}(s,s') \wedge C(f,s')] \exists s'' [\text{Overlap}(s',s'') \wedge \text{smoke}(f,s'')]$
-

A sentence like (37a) is typically understood as quantifying over a set of contextually specified occasions involving Fred (e.g., after meals, during every break, etc.). For example, suppose that Fred has the habit of spending his frequent breaks in my office, where he knows he can smoke. Bill, witnessing one of these scenes, utters (37a). Relative to a context of this kind, the truth conditions that (37a) ends up having can be roughly paraphrased as follows: “Every situation in which Fred is in Gennaro’s office is a situation in which Fred smokes.” This is what (37b) would express in such a context. *Always* is translated as ‘ $\forall$ ’; the material in the left pair of brackets forms the restriction of ‘ $\forall$ ’ and the material in the right pair its scope. The formula in (37c) is a more explicit rendering of (37a). Formula (37c) says that there is a situation *s* in the actual world such that every situation *s'* that temporally overlaps with it in which Fred is in Gennaro’s office overlaps with a situation *s''* of Fred’s smoking. I will call *s* the *external* situation, *s'* the *internal* one (or the *restriction* situation), and *s''* the *scope* situation. Normally, I will be representing truth conditions of sentences like (37a) using simpler formulas like the one in (37b), which I take to be abbreviations for formulas like (37c). I will, however, switch to (37c) when appropriate.⁹

A second general property of Q-adverbs is the following:

PROPERTY B: Q-adverbs can bind variables provided by indefinites.

For example, consider (38):

- (38) a. An Italian is usually short.
 b. $\text{Most } x [\text{Italian}(x)] [\text{short}(x)]$

Sentence (38a) is naturally understood as saying that most Italians are short, which is what (38b) expresses. The variable that the Q-adverb binds is provided by the indefinite *an Italian*. Within Discourse Representation Theory, it is assumed that indefinites are generally interpreted as free variables, which,

9. The nature of the context variable is affected by focus. For discussion, see, e.g., Rooth 1985, Kadmon 1990, Krifka 1992b, among many others. A theory that would fit well with the general line I am taking is Rooth’s. I do not believe, however, that the restriction of Q-adverbs is wholly determined by focus as, e.g., Krifka 1992b claims. But this is not something I can get into within the limits of the present discussion.

where appropriate, get existential force by rules of existential closure. Within Dynamic Intensional Logic, indefinites are treated as existentially quantified terms and their variable-like behavior is captured by a rule of "existential disclosure" (the term is due to Paul Dekker), which reopens existential terms within the restriction of Q-adverbs.¹⁰ Our main thesis is compatible with both approaches. Accordingly, I will remain neutral on this issue here. However, for the sake of explicitness, I will assume that indefinites are treated as generalized quantifiers, and I will posit a type-shifting function ' $!_y$ ' that turns them into open formulas. This type-shifting operation is a simple modification of Montague's meaning for BE, namely:

- (39) $!_y NP = \lambda P \mathcal{P}(\lambda x[y = x])$, if $\mathcal{P}$ is indefinite, else undefined.¹¹
 Example: $!_y \text{a man}' = !_y \lambda P \exists x[\text{man}(x) \wedge P(x)] = \exists x[\text{man}(x) \wedge y = x] = \text{man}(y)$

This operation will be used in setting up the restriction in cases like (39). Let me give an illustration of what I have in mind.

- (40) [an Italian_i usually [_i is short]]
 $\Rightarrow \text{Most}_{y_i} [!_{y_i} \lambda P \exists x[\text{man}(x) \wedge P(x)]] [\text{short}(y_i)]$
 $= \text{Most}_{y_i} [\text{Italian}(y_i)] [\text{short}(y_i)]$

We will arrive at a more precise formulation of the splitting algorithm shortly, after we have identified the other major properties that must be taken into account.

It is apparent that there are certain definites that can provide variables for Q-adverbs to bind:

PROPERTY C: Q-adverbs can bind variables provided by kind-denoting definites.¹²

For example:

- (41) a. This dog is usually easy to train. (pointing at a dog in a pet shop)
 b. **Most** $x[x \leq d]$ [easy-to-train(x)]
 c. $x \leq y = x$ is an instance of y

The definite *this dog* in (41a) can be understood as referring to a kind of dog salient in the context. The Q-adverb is used to quantify over instances of *such* a kind. The term **d** in (41b) is taken to refer to the contextually specified kind

10. See, e.g., Groenendijk & Stokhof 1990, Dekker 1990, or Chierchia 1992.

11. The notion 'indefinite' can be defined explicitly along the lines of, e.g., Barwise & Cooper 1981.

12. I believe that Property C is actually more general. All definites that have instances, in an intuitive sense, can provide variables for Q-adverbs to bind. A case in point is represented by free relatives, which are arguably definites and can provide a restriction for Q-adverbs. See Jacobson 1990 and Berman 1990 for relevant discussion.

that the definite *this dog* picks out. The formula ' $x \leq d$ ' is interpreted as saying that x is an instance of **d**. There are various ways in which one can imagine that ' $x \leq d$ ' is accommodated in the restriction. Within the present set-up this can be done by a straightforward generalization of the type-shifting operation defined in (39), namely:

- (42) a. $!_y NP = \lambda P \mathcal{P}(\lambda x[y \leq x])$ if $\mathcal{P}$ is indefinite or definite, else undefined
 Examples:
 b. $!_y \lambda P[P(d)] = y \leq d$
 c. $!_y \lambda P \exists x[\text{man}(x) \wedge P(x)] = \exists x[\text{man}(x) \wedge y \leq x] = \text{man}(y)$

I assume that every individual is an instance of itself. So when ' $!$ ' applies to a non-kind-denoting indefinite we will get the same results as before, as (42c) illustrates.

Other NPs (i.e., NPs that aren't either definites or indefinites) do not provide variables that Q-adverbs can bind. So, for example, a sentence like (43) has only the interpretation where the Q-adverb binds situations.

- (43) Every man usually smokes.
 a. $\forall x[\text{man}(x)] [\text{most } s[C(x,s)][\text{smoke}(x,s)]]$
 (= every man smokes on most occasions)
 b. **Most** $s[C(s)][\forall x[\text{man}(x)] [\text{smoke}(x,s)]]$
 (= on most occasions, every man smokes)

These NPs are usually referred to as 'quantificational' within the DRT literature, a term I will stick with for the purposes of this chapter.¹³ Since quantificational NPs do not provide variables that adverbs of quantification can bind, the type-shifting operation ' $!$ ' will be undefined for them.

Bare plurals, by contrast, are another type of NP that can provide variables for adverbs of quantification. Consider (44):

- (44) a. Dogs are usually easy to train.
 b. **Most** $x[x \leq d]$ [easy-to-train(x)]

The interpretation of a sentence like (44a) seems to be essentially the same as that of (41a), namely (44b). This is uncontroversial. However, the way this interpretation is to be obtained is the object of discussions. Some, e.g., Gerstner and Krifka (1987), argue that this interpretation comes about because bare plurals, at least on one reading, are indefinites. The bare plural in (44a) would

13. Within the theory I subscribe to, indefinites, being treated in the standard Frege-Russell way as existentially quantified terms, are also 'quantificational'. But in this text I will stick with DRT terminology and reserve the term 'quantificational' for quantificational NPs other than definites and indefinites.

have roughly the same interpretation as *sm dogs* (where “*sm*” is the unstressed *some*). This would make sentences like (44a) similar to sentences with overt indefinites, like (38a). The variable in (44b) would come about by whatever mechanism enables indefinites to act like variables in certain contexts. Carlson (1977b), however, argues against the view that bare plurals are indefinites. He gives a list of many properties (seven, by my count) that differentiate bare plurals from plural indefinites, and argues that bare plurals unambiguously name kinds. While I am inclined to believe that Carlson is more on the right track than his critics on this issue, it is clear that given the way we have set things up we can stay neutral on this as well. The type-shifting operation in (39), which is what we will use to obtain the free variables we need, will work equally well however bare plurals are treated. Again, for explicitness’ sake, I will assume that they denote kinds.

Let us turn now to another relevant property of Q-adverbs. So far we have only considered cases involving intransitive VPs. If there are more arguments around, however, it turns out that there is a fair amount of variability as to which arguments provide the variables that a Q-adverb can bind. Below, I give some examples, along with what I perceive their most natural interpretations to be.

- (45) a. A cat usually chases a mouse.
 b. **Most** x, y, s [**cat**(x) $\wedge$ **mouse**(y) $\wedge$ **C**(x, y, s)] [**chase**(x, y, s)]
 (46) a. A cowboy usually carries a gun.
 b. **Most** x [**cowboy**(x)] $\exists y$ [**gun**(y) $\wedge$ **carry**(x, y)]
 (47) a. A computer usually routes a modern plane.
 b. **Most** y [**modern-plane**(y)] $\exists x$ [**computer**(x) $\wedge$ **route**(x, y)]

In (45) the Q-adverb seems to bind symmetrically all the variables that are around (namely, the one provided by the subject, the one provided by the object, and the situation variable). Sentence (46), on the other hand, seems to be most naturally construed as quantifying over cowboys (i.e., the subject), and sentence (47) as quantifying over modern planes (i.e., the object). In fact, the interpretation of one and the same sentence can vary depending on factors like what the context (i.e., common ground) is and what is focused. These observations can be summarized in the following terms:

PROPERTY D: Q-adverbs can bind more than one variable.

PROPERTY E: Q-adverbs can (by and large) freely select the arguments they bind.

These are the main properties of Q-adverbs that are going to be relevant for the following discussion. Before turning to generics, I will sketch how I think these properties are to be accounted for.

3.3.2 The Splitting Algorithm

Our main task is to establish how the partition of the clause into restriction and scope is to be accomplished. My proposal on this score is a modification of Diesing’s. Diesing proposes that the scope of a Q-adverb is set quite rigidly: it is the VP. This raises an issue concerning subjects. As is clear from the above considerations, subjects can be part of the scope (cf., e.g., (47a)). However, in languages like English, subjects must always appear outside of the VP (for case-theoretic reasons, it is generally maintained). So how can they be incorporated in the scope, if the scope is rigidly set to be the VP? Diesing suggests that there is always the option of reconstructing subjects back into their D-structure position, viz. Spec VP. However, this alternative is not open to us, as we have argued that for independent reasons subjects cannot in general be interpreted as if they were in Spec VP. So we have to look for a different way to partition the clause. I would like to propose that adverbs of quantification can freely choose any semantically compatible maximal projection as their scope. Q-adverbs are propositional operators; so any category that denotes a proposition (or a propositional function) will, in principle, constitute an admissible scope for a Q-adverb.¹⁴ This subsumes the scope proposed by Diesing as a special case. We can implement this idea very simply by assuming that wherever Q-adverbs are at S-structure, they remain free to select their scope via LF adjunction. This operation (an instance of Move α) provides us with a scoping mechanism fully analogous to QR. The restriction is then drawn from the material which is external to the scope and locally c-commands the Q-adverb.¹⁵ The net result will be LF configurations of the following type:

- (48) $[\underbrace{_{XP} NP_1, \dots, NP_n}_{\text{restriction}} \text{ ADV } \underbrace{_{XP_s}}_{\text{scope}}]$, where XP_s is a clausal constituent

The NPs (and possibly other constituents) in the restriction get there either by overt (S-structure) movement or by covert (LF) movement. I assume that clauses bear the index of the situation variable which is an argument of their main predicate. In this way, the situation variable will always be locally available for the adverb of quantification to bind.

14. Actually, in a generalized quantifier framework, the type of both restriction and scope would be that of an n -place relation. See the appendix to this chapter for details.

15. I adopt May’s (1985) definition of ‘domination’. According to May, a constituent A is dominated by XP iff it is dominated by every segment of XP. Moreover, following Chomsky’s (1993) terminology, if only some segment of a multisegmental category XP dominates (in the traditional sense) a node, then that node is ‘contained’ within (but not dominated by) XP. Containment is thus weaker than domination. Finally, we say that a constituent is in the ‘checking domain’ of a head X iff it is contained within XP.

To see these ideas at work in some concrete examples, let us consider what LFs would correspond to the preferred interpretations of the examples in (45)–(47). They would be, respectively, as follows (in general, there will be more than one option available):

- (49) a. $[_{IP} \text{ a cat}_i \text{ a mouse}_j \text{ usually } [_{VP} t_i \text{ chases } t_j]]$
 a'. **Most** $x, y, s[\text{cat}(x) \wedge \text{mouse}(y) \wedge C(x, y, s)] [\text{chase}(x, y, s)] (= 45b)$
 b. $[_{IP} \text{ a cowboy}_i [_{VP} \text{ usually } [t_j \text{ carries a gun}_i]]]$
 b'. **Most** $x[\text{cowboy}(x)] \exists y[\text{gun}(y) \wedge \text{carry}(x, y)] (= 46b)$
 c. $[_{IP} \text{ a modern plane}_i \text{ usually } [_{VP} \text{ a computer}_j \text{ routes } t_i]]$
 c'. **Most** $y[\text{modern plane}(y)] \exists x[\text{computer}(x) \wedge \text{route}(x, y)] (= 47b)$

The primed versions of the formulas in (49) do not constitute a further linguistic level. They merely represent the intended interpretation of the LFs in the unprimed versions of (49).

Using the ideas outlined in section 3.3.1., it is rather straightforward to provide explicit truth conditions for LFs of the form in (49). Informally, the type of each NP that locally¹⁶ c-commands the Q-adverb gets suitably shifted to that of a proposition with a free variable. These propositions jointly form the interpretation of the restriction. Each free variable thus introduced is then bound by the Q-adverb. The c-command domain of the Q-adverb constitutes its scope. All this can be schematically summarized as follows (see appendix for details):

- (50) $[_{XP} NP_1, \dots, NP_n \text{ ADV } XP_s] \Rightarrow$
 $\text{ADV } x_1, \dots, x_n[!x_1 NP_1 \wedge \dots \wedge !x_n NP_n \wedge C(x_1, \dots, x_n, s)][XP]$

This approach directly accommodates Properties A–E. For one thing, quantification over situations is always an option (Property A). Quantification over indefinites and definites is accomplished by shifting their type to that of a formula containing a variable (Properties B and C). The fact that Q-adverbs can bind more than one variable is captured by allowing more than one NP in the restriction (Property D). Finally, which NPs can end up in the restriction is left open, modulo standard assumptions on movement (Property E). This simple splitting algorithm appears to yield the necessary flexibility as to what is incorporated in the restriction and what in the scope.

It should be noted that this approach uses a relatively modest apparatus. In setting up the relevant LFs, we use no construction-specific rule (merely Move α). In interpreting them, we use the standard procedures for interpreting quanti-

16. “Locally” essentially means that the material in the restriction and the Q-adverb have to m-command each other (or alternatively, using the terminology of footn. 15, that they have to be in the same checking domain).

fication structures, plus a type shift which “discloses” indefinites (and kind-level definites). In any framework, the interpretation of Q-adverbs is going to require a partitioning of clausal structures into a restriction and a scope. And the basic ideas outlined here should carry over in a fairly direct manner.¹⁷

3.3.3. The Gen-Operator

Turning now to the generic operator, it is easy to observe that it shares with overt Q-adverbs all of Properties A–E. This can be most simply illustrated by dropping the Q-adverb throughout from the above examples. As a result, we will obtain typical generic sentences whose interpretation is fairly close to that of the corresponding sentence with an *always*-like Q-adverb. This is the basis for concluding that the generic operator **Gen** must essentially be a phonologically null Q-adverb. What is specific to **Gen** relative to other Q-adverbs is the nature of its modal dimension. To spell this out is a very hard task. Rather than trying to do so, which well exceeds what can be done at this point, I will illustrate the general line I would like to take with a couple of simple cases. Consider (51):

- (51) a. Fred smokes.
 b. $[_{IP} \text{ Fred } [\text{Gen } [_{VP} t_i \text{ smokes}]]]$
 c. **Gen** $s[C(f, s)] [\text{smoke}(f, s)]$

I assume that sentence (51a) has roughly the LF in (51b), which is interpreted as in (51c). In this example, no indefinite (or kind-denoting definite) is present; thus, **Gen** can just bind the situation variable. To understand the intended modal force of **Gen**, we must bear in mind that each activity or state comes with a set of “felicity” conditions.¹⁸ For example, in order for Fred to engage in smoking, he must feel like it; that is, he must intend, or perhaps feel compelled, to do it; he also must be in a place where there is enough oxygen, he must not be asleep or disabled, and so on. So in evaluating (51a), we have to look at worlds similar to ours where the felicity conditions for smoking are met. These felicity conditions are what provides a value for the variable C in the restriction. (51a) is true iff in all the worlds maximally similar to ours where the felicity conditions for Fred’s smoking are met, he does smoke. The similarity of this analysis with the (Lewis/Stalnaker) semantics of conditionals

17. For example, in a Montague-style categorial grammar, this could be done by a rule of quantifying-in that employs the same type-shifting operation.

18. Searle’s (1969) analysis of performatives is relevant in this connection. Searle argues that performatives are subject to a set of ‘felicity conditions’ and provides some examples of how these can be spelled out. But of course performative verbs are just a special kind of activity verb (viz., activities that crucially involve verbal behavior), and thus Searle’s insight extends to activities in general.

is obvious.¹⁹ Being more explicit than this is a titanic task that I cannot possibly undertake here.

Let us consider another typical case, involving an indefinite:

- (52) a. A bird flies.
 b. $[_{IP} \text{ a bird}_i [_{VP} \text{ Gen } [t_i \text{ flies}]]]$
 c. $\text{Gen } s [\text{bird}(x) \wedge C(x,s)] [\text{fly}(x,s)]$

The expression in (52c) says: Take any bird and any situation in any world maximally similar to ours where the felicity conditions for flying (such as, e.g., presence of the right triggers) are satisfied and assume, furthermore, that inhibiting factors (such as birth defects, diseases, etc.) are absent. Any bird will fly in such a situation. In considering the felicity conditions for the relevant activity, an extra dimension is brought in by the common noun. For example, penguins are birds that fail to have the structural characteristics necessary for flying and are thus excluded from consideration. I assume that this is somehow done via the context variable C .²⁰

Another feature of generics is that they tend to last. When someone has a habit or a disposition, we expect it to occupy a significant portion of his lifespan. In reality, some habits or dispositions can be very shortlived. I may become a smoker and then stay one for only a day. But this forces us to imagine a somewhat unusual set of circumstances. Laws, routines, habits, and the like are without doubt tendentially stable in time. This fact should somehow be built into the semantics of **Gen**. For example, we might require that whenever a property holds generically of an individual, in all the stereotypical cases (i.e., cases where nothing unexpected takes place) that property holds for a substantial part of the existence of that individual (where what counts as "substantial" must remain somewhat vague). I will assume that some axiom to this effect suitably constrains **Gen**, without trying to be more explicit about it.²¹

One way of implementing these ideas, consistent with the framework we are

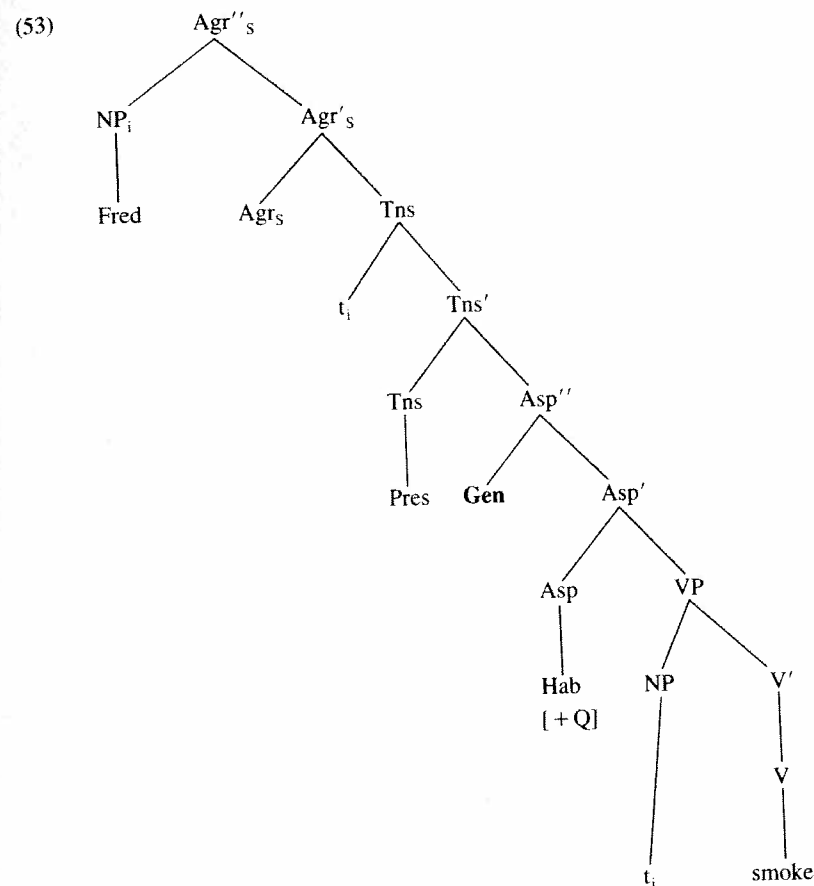
19. See, e.g., Lewis 1973, Stalnaker 1968, or Kratzer 1989b.

20. Actually, it seems intuitively that there are two kinds of contextual restrictions. One comes, as it were, from the verb; it determines what conditions have to be met for an individual to undertake an action. The other comes from the noun; it determines what features of the species are relevant for the action. This intuition could be accommodated by employing more than one context variable. However, I will not pursue this here.

21. The notion of 'stereotypical state of affair' is taken from Kratzer 1981. Dowty's (1979) 'inertia worlds' and Landman's (1992) 'continuation branches' are another possible way of thinking about this issue. As a very rough first approximation toward a formalization of what is informally discussed in the text, we might adopt the following definition of **Gen**:

(i) $\text{Gen } s' [\text{Overlap}(s,s') \wedge \Phi] [\Psi] =_{\text{df}} \forall s' [\text{Overlap}(s,s') \wedge \Phi] \Rightarrow \Psi \wedge \Box_{st} \text{long}(s)$
 where ' $\Rightarrow$ ' is a Lewis-style conditional, $\Box_{st}$ is to be read as 'in every stereotypical world,' and **long** is to be treated along the lines of Kamp 1975.

assuming, might be along the following lines. Genericity manifests itself overtly in the aspectual system of a language. In English the simple present (which is aspectually imperfective) has a predominant habitual interpretation. The simple past and the future also have natural generic interpretations. In other languages, genericity is marked by explicit aspectual morphemes. Accordingly, we can assume that all languages have a distinctive habitual morpheme (say, **Hab**) which can take diverse overt realizations. In the spirit of much recent work on the structure of inflection, this morpheme can be taken to be a functional head in an aspectual projection. The semantically relevant characteristic of this morpheme is that of carrying an agreement feature requiring the presence of the **Gen**-operator in its Spec. On the basis of this hypothesis, the structure of, say, (51a) can be spelled out as follows (irrelevant details aside):



The lexical verb *smoke* undergoes head raising, picking up the habitual aspectual marker, the present tense, and agreement. The habitual aspectual marker, we may assume, has an agreement feature (call it '+Q', for quantificational) requiring a suitable adverb (the null **Gen** or, possibly, some other quantificational adverb) in its Spec. This adverb can then, if necessary, be scoped out at LF. Obviously, this is no more than a rough sketch, and not a particularly original one at that. Many similar proposals can be found in the literature. My goal here is merely to identify the properties of generics that are going to be relevant for the following discussion and to place my proposal within a more general approach to the semantics and syntax of generics.

3.4. INHERENT GENERICITY

As noted at the outset, the main characteristic of i-level predicates is that they ascribe tendentially permanent properties to their arguments. It seems that one can say of an argument with an i-level property P, "Once a P, tendentially always a P." This is, of course, a prominent property of generics. It is therefore very tempting to take this intuition at face value. Perhaps, i-level predicates are simply predicates that *must* cooccur with a **Gen**-like quantificational adverb. In contrast, s-level predicates are free to occur or not occur with **Gen**. In other words, i-level predicates have no natural nongeneric uses.

If i-level predicates are generic, they must have the following form:

- (54) a. John knows Latin $\Rightarrow$ **Gen** s [C(j,s)] [**know**(j,L,s)]
 b. John is a smoker $\Rightarrow$ **Gen** s [C(j,s)] [**smoker**(j,s)]
 c. John is intelligent $\Rightarrow$ **Gen** s [C(j,s)] [**intelligent**(j,s)]

In order to test this claim we should try to give some content to the restriction expressed by the variable C in these formulas. In the informal discussion of **Gen** above, we said that C ought to be filled by the felicity conditions for the relevant activities (and by the absence of inhibiting factors). What could these be in the case of states like knowing, being a smoker, or being intelligent? It is very hard to tell. For example, smoking does require that one feels like it, is not asleep, and so on. But being a smoker does not. If, say, Fred is a smoker, he is also a smoker when he sleeps. The same goes for being intelligent. It is very hard to find felicity conditions for these states other than those very conditions that are constitutive of the state itself. If one is intelligent, one remains such even when acting silly.

The upshot of these considerations is that the restrictions on i-level predicates appear to be rather meager in content, if contentful at all. Perhaps, the only restriction we want to impose on s in (54) is that John be part of it. This means

that the content of C in (54) might be set to a maximally general locative relation **in**. Accordingly, (54a–c) wind up saying that whenever John is or might be located, he knows Latin, is a smoker, and is intelligent, respectively.²²

On the basis of this hypothesis, one might be led to conclude that the meaning of i-level lexical entries is as follows:

- (55) a. $\alpha = \lambda x_1, \dots, \lambda x_n \text{ Gen } s [\text{in}(x_1, \dots, x_n, s)] [\alpha^+(x_1, \dots, x_n, s)]$
Examples:
 b. $\text{know} \Rightarrow \lambda x_1 \lambda x_2 \text{ Gen } s [\text{in}(x_1, x_2, s)] [\text{know}(x_1, x_2, s)]$
 c. $\text{smoker} \Rightarrow \lambda x_1 \text{ Gen } s [\text{in}(x_1, s)] [\text{smoker}(x_1, s)]$
 d. $\text{intelligent} \Rightarrow \lambda x_1 \text{ Gen } s [\text{in}(x_1, s)] [\text{intelligent}(x_1, s)]$

This is a way of giving content to the idea that i-level predicates are inherently generic. They have **Gen** built into their lexical entry. The restriction on the **Gen**-operator is taken to be the property of being at an arbitrary location. In a sense, this amounts to saying that in the case of i-level predicates, the restriction on **Gen** is fairly trivial: being located anywhere. This, right off the bat, seems to capture the fact that one carries i-level predicates along as one changes location and that they are tendentially stable through time.

In order for this approach to be really viable, we must see how it accounts for other properties of i-level predicates. It is this issue that the remainder of this section is devoted to. We will start by further exploring the lexicalist approach outlined above. We will see that while it can be made to work for a number of cases, there are also difficulties with it that will lead us to modify it somewhat.

3.4.1. The Lexicalist Approach

It is *prima facie* not clear how defining i-level predicates as in (55) would account for their behavior with indefinites and bare plurals. If, for example, the lexical entry for *intelligent* is as in (55d), where only individual variables are used, why should, say, *Dogs are intelligent* select the universal reading?

22. These considerations apply only to generic predications of singular individuals. For example:

- (i) Italians know Latin.

When we say (i), we do not mean to say that any Italian, wherever he is, knows Latin. We are presumably talking about Italians of normal intelligence, average upbringing, and so on. These restrictions would be part of C and would be triggered by the common noun. However, those instances of the Italian population that support the truth of (i) do know Latin wherever they may be. To make this explicit, one could assume that the following is a presupposition of i-level predicates:

- (ii) $\forall x \forall y \forall R [(\text{Ind}(x) \wedge \text{locative}(R) \wedge \text{Gen } s [\text{in}(x, s)] [\text{know}^+(x, y, s)] \rightarrow R = \text{in}]$

This sets the value of the context variable C only vis-à-vis locative restrictions, and only with respect to singular individuals.

Perhaps this difficulty stems from the fact that we haven't really used the full-blown version of the **Gen**-operator in the definitions we have considered so far. On the basis of the discussion in section 3.3.3, we are assuming that the general form of the generic operator (cf. (50)) is roughly the following:

$$(56) \quad \text{Gen } x_{i_1} \dots x_{i_n} s [!x_{i_1}NP_{i_1} \wedge \dots \wedge !x_{i_n}NP_{i_n} \wedge C(x_{i_1}, \dots, x_{i_n}, s)] [XP_s]$$

So this is, presumably, what we want to use. We should restate the definitions of (55) along the following lines:

$$(57) \quad \begin{array}{ll} \text{a. } \text{know} = \lambda \mathcal{P} \lambda \mathcal{P}' \text{ Gen } x_i x_j s [!x_i \mathcal{P} \wedge !x_j \mathcal{P}' \wedge \text{in}(x_i, x_j, s)] [\text{know}(x_i, x_j, s)] \\ \text{b. } \text{smoker} = \lambda \mathcal{P} \text{ Gen } x_i s [!x_i \mathcal{P} \wedge \text{in}(x_i, s)] [\text{smoker}(x_i, s)] \\ \text{etc.} \end{array}$$

This amounts to lifting the type of i-level predicates so that they can take *gq*-type arguments, by using the independently motivated definition of **Gen**. As a consequence, a sentence with bare plurals, for example, such as (58a), ends up being interpreted as in (58b):

$$(58) \quad \begin{array}{ll} \text{a. } \text{Italians know pasta recipes.} \\ \text{b. } \text{Gen } x_i x_j s [x_i \leq \text{Italians} \wedge x_j \leq \text{pasta recipes} \wedge \text{in}(x_i, x_j, s)] \\ \quad [\text{know}(x_i, x_j, s)] \end{array}$$

Similarly for indefinites. For example:

$$(59) \quad \begin{array}{ll} \text{a. } \text{An Italian knows Latin.} \\ \text{b. } \text{Gen } x_i s [\text{Italian}(x_i) \wedge \text{in}(x_i, L, s)] [\text{know}(x_i, L, s)]^{23} \end{array}$$

So the **Gen**-operator induces universal readings of bare plurals and indefinites just as it does in the generic forms of s-level predicates. But while s-level predicates can of course be nongeneric (and in the nongeneric mode, will select existential readings of bare plurals), for i-level predicates there is no choice. The **Gen**-operator has to be there. This is why i-level predicates only allow for universal readings of bare plurals.

These considerations suggest that the lexicalist approach we have sketched might indeed be on the right track. However, there are certain difficulties that stem from the assumption that the argument structures of i-level predicates are actually created in the lexicon. I'll illustrate these difficulties by means of two

23. In sentence (59a), the indefinite could also be quantified in. This would give rise to the 'specific indefinite' reading, namely, 'Some Italian (I have in mind) knows Latin'. Notice that given the definition of **Gen**, the function **know** as defined cannot directly apply to quantificational NPs. However, quantificational NPs can be interpreted as arguments of i-level predicates if they are scoped out. In other words, our definition of i-level predicates requires quantificational NPs in their argument structure to undergo QR.

examples. Consider first the following, pointed out by Schubert and Pelletier (1987):

$$(60) \quad \text{Sheep are black or white.}$$

Black and *white* are i-level predicates. Now, this sentence clearly has a reading which can be paraphrased roughly as 'Every sheep is black or white'. This reading would be naturally represented as follows:

$$(61) \quad \text{Gen } x s [x \leq \text{sheep} \wedge \text{in}(x, s)] [\text{black}(x, s) \vee \text{white}(x, s)]$$

But how could (61) be obtained on our current approach? We would first need to form the complex predicate *black or white*. Then we would have to generically attribute this predicate of the sheep-kind. The generic operator would then induce the quasi-universal quantification over sheep. However, on the lexicalist hypothesis each i-level predicate comes out of the lexicon with its own **Gen**-operator attached. So there is no way of creating the complex predicate *black or white* without each disjunct carrying along this attached **Gen**-operator. Consequently, the only reading for (60) one should get could be paraphrased roughly as:

$$(62) \quad \text{Sheep are black or sheep are white.}$$

While this is arguably a possible reading for (60), it clearly isn't the only one.

A similar problem arises in connection with the following kind of sentence, discussed in Carlson 1977b:

$$(63) \quad \text{Cats like themselves.}$$

A natural reading for this sentence is: Every instance of the cat-kind in the appropriate circumstances bears the 'like'-relation to itself. In our formalism this reading is expressed as follows:

$$(64) \quad \text{Gen } x, o [x \leq \text{cats} \wedge C(x, o)] [\text{like}(x, x, o)]$$

To obtain (64), one should first form the reflexive predicate *like oneself* and then predicate it generically of the cat-kind. But it is not clear how to do that, if *like* comes out of the lexicon with its **Gen**-operator already built in.

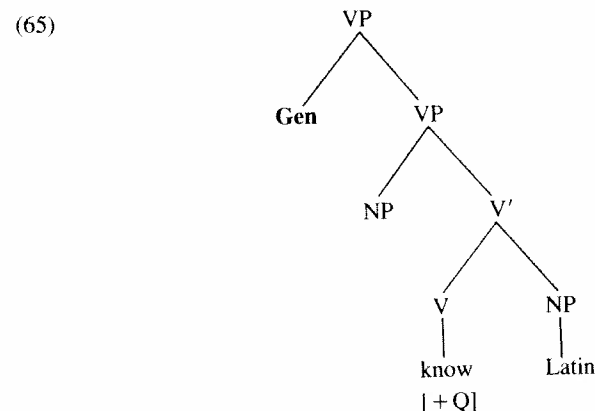
So the lexicalist approach to i-level predicates seems to face serious difficulties. In view of these difficulties, it appears to be impossible to handle i-level predicates simply by exploiting the **Gen**-operator as part of the word formation component of the grammar.

3.4.2. Local Licensing

If the idea that i-level predicates are somehow inherently generic cannot be straightforwardly implemented in strict lexicalist terms, we must find some other way to force i-level predicates to cooccur with a generic operator. The intuition we want to formalize is that i-level predicates (as delivered by the lexicon) are somehow incomplete. They cannot stand on their own and need to be operated on by **Gen**. In other words, they have a quantificational, “operator-like” character. The parallel that comes to mind is with negative polarity items. They too cannot stand by themselves and need to be licensed by negation under certain strict locality conditions.

Here is one way of capitalizing on this parallelism. We have assumed that the habitual morpheme *Hab* carries a feature [+Q] that induces the presence of **Gen** in its local environment. Suppose that i-level predicates have this morpheme inherently (i.e., in the lexicon). This entails that they will be directly associated with the feature [+Q], which requires the presence of **Gen**. Hence, unless they find the **Gen**-operator in their immediate environment (i.e., in their checking domain), ungrammaticality will result. In other words, by assuming *Hab* to be, as it were, lexicalized in the verbal head, we derive the fact that i-level predicates are subject to licensing by **Gen**. They are generic polarity items.

According to this hypothesis, the structure of a VP headed by an i-level predicate will be, schematically:²⁴



24. Since the Spec position is occupied by the subject, satisfaction of the [+Q] feature cannot take place via Spec-Head agreement. There are two possibilities that come to mind in this connection. Either (as assumed in the text) we maintain that having **Gen** in the checking domain of the head suffices to license [+Q]. Or we can assume that the verb moves into a higher empty functional head in whose Spec **Gen** is located. At present, I have no evidence that helps me choose between these two hypotheses.

We could go further by spelling out the semantics of [+Q] in appropriate ways. We could assume, for example, that what [+Q] does is turn the VP into a function that looks for **Gen**. So if the VP doesn't find a Q-adverb locally, the resulting structure will be uninterpretable. In this way the syntactic requirement of being licensed by a Q-adverb would be rooted in the semantics of i-level verbs.²⁵

I will refer to the approach I have just sketched as *local licensing* and contrast it with the strict lexicalist approach. It should be clear that the local-licensing approach doesn't run into the difficulties that the lexicalist view runs into. Let us consider the cases that were problematic for the lexicalist approach. The first one, repeated here, was of the following form:

- (66) Sheep are black or white.

For the sake of explicitness, let us adopt Stowell's (1978) analysis of copular sentences as small clauses (sc). According to such an analysis, the copula is a raising verb that takes a small clause as complement. So, for example, two possible syntactic structures for (66) would be these:

- (67) a. [sheep_i are [_{sc} t_i **Gen**[_{AP[+Q]} black or white]]]
 b. [sheep_i are [_{sc} [_{sc} t_i **Gen**[_{AP[+Q]} black]]] or [_{sc} t_i **Gen**[_{AP[+Q]} white]]]]

In (67a) we first form the complex AP *black or white* and then apply **Gen** to it, which will license [+Q] across the board, on both disjuncts. This will result in the interpretation according to which each (typical) individual sheep is either black or white. In (67b) we have a coordination of small clauses (each with its own occurrence of **Gen**) out of which the subject is extracted across the board. This yields the reading according to which every sheep is typically black or every sheep is typically white.

It should be noted that nothing hinges on the details of this particular analysis of copular sentences. The point is that in coordinate structures involving i-level predicates, we will in general have more than one way to satisfy the requirement that [+Q] be licensed by the **Gen**-operator. On the lexical approach, we had no such choice.

25. In a framework that uses Cooper-storage, this would amount to storing the operator **Gen** in the lexical entry of i-level predicates and have it retrieved out of store at the VP level. This is analogous to the way in which reflexives are treated in categorial grammar. Cf., e.g., Bach & Partee 1980.

Essentially the same considerations apply to the other kind of problem for the lexical approach, involving reflexives (cf. (63) above):

- (68) a. [cats **Gen**_[VP(+Q)] like themselves_i]
 b. **Gen** x o [x ≤ cats ∧ C(x,o)] [λy like(y,y,o)(x)]

The interpretation of reflexives requires an operation that identifies two argument slots in a relation. Such an operation, which is represented by the λ-abtractor in (68b), must clearly be allowed to apply at the VP-level. This is shown, for example, by well-known VP anaphora facts. In sentences like *Norman likes himself* and *Templeton does too*, the missing VP must be interpreted as the property of loving oneself. The right interpretation will arise only if the reflexivization operation is construed as having VP scope. Consequently, nothing can prevent **Gen** from taking scope over the reflexivized VP. Moreover, if reflexivization is syntactically instantiated in the form of an operator binding the reflexive pronoun, the operator will presumably be in an adjunction structure, which would not create a barrier for the **Gen**-operator.

It thus seems that the idea that i-level predicates are inherently generic can be successfully worked out. Inherent genericity cannot simply be equated to lexical genericity. Rather, it is to be thought of in terms of local licensing. I-level predicates must be licensed by a (modalized) quantifier in their local environment. This is what makes them ‘operator-like.’

3.4.3. Nouns

So far I have been assuming that predicate NPs are treated just like other i-level predicates, without paying much attention to their internal structure. Before moving on, it might be appropriate to be more explicit about this internal structure, even though I will certainly not be able to solve all the problems that it poses.

A basic assumption I am making is that every VP, whatever its internal structure and aspectual characteristics, has an extra argument position for eventualities, in the spirit of Davidson’s proposal. It is through the Davidsonian argument that temporal and adverbial modification is realized. That is to say, adverbs and tense are construed as properties of eventualities. In a way, having this extra argument slot is part of what makes something a VP, whatever its inner structure. Predicate NPs, I would like to maintain, are no exception to this. Accordingly, I assume that their basic structure is roughly as follows:

- (69) a. Mary is a doctor.
 b.
- c. **Gen** s [in(m,s)] [doctor(m,s)]

The meaning of the lexical item *doctor* in (69) is that of a predicate marked [+Q]. The Davidsonian slot is filled by a variable ranging over states. The determiner *a* in predicative NPs is interpreted as a cardinality predicate, in the sense of, e.g., Milsark (1974). So the type of the whole predicative NP is that of a propositional function. All this is summarized in (70):

- (70)
- λx [one(x) ∧ doctor(x,s)]
- λx [doctor(x,s)]
- doctor

Predicative NPs can, therefore, be operated on by the **Gen**-operator in the manner indicated in (69). I am assuming that determiners that do not have a natural adjectival interpretation are not felicitous within predicative

NPs.²⁶ The details of this analysis are not so important for my purposes as the claim that the type of a predicate NP is that of a predicate which, like other VPs, has a Davidsonian argument.

The assumptions I am making raise the issue, of course, of the other main role of common nouns, namely that of being restrictors of quantifiers in quantificational NPs like *every man*. Clearly, we do not want to say that nouns in their role as quantifier restrictors have a Davidsonian argument. The purpose of having a Davidsonian argument is that tense and adverbs can operate on it. But nouns, qua quantifier restrictions, do not take adverbs or tense. To the extent that nouns in argument position enter into temporal relations, they do so in a radically different manner than VPs (cf., e.g., Enç 1981). We can account for this by assuming that every noun, besides having the type of a two-place relation α between individuals and situations, also has a predictable variant of the type of (sortal) one-place predicates (which we will denote as α^*). The relation between α and α^* is roughly as follows.

- (71) $\alpha^* = \lambda x \text{ Gen } s [\text{in}(x,s)][\alpha(x,s)]$
Example: doctor = $\lambda x \text{ Gen } s [\text{in}(x,s)][\text{doctor}(x,s)]$*

Viewed as an operation, (71) can be regarded as an ‘‘internalization’’ of the Davidsonian argument. I assume that nouns are freely assigned either type. However, if a noun without Davidsonian argument wound up in predicate position, tense and adverbials would have nothing to operate on and hence the derivation would be ruled out. Conversely, if a noun with the Davidsonian variable were to occur in argument position, the Davidsonian argument would remain unbound and hence, one can argue, the resulting structure would be uninterpretable.

In a sense the analysis I just sketched amounts to saying that the inherent genericity of i-level predicates can be satisfied in two ways: in the lexicon for (nonpredicative) nouns, and locally in the syntax (via the Q-feature) for predicative nouns, verbs, and adjectives.²⁷ That it couldn’t be the other way around follows from general principles concerning the way tense is instantiated and how adverbial modification works.

26. It is well known that definites like *the president* can also occur after the copula, as in *John is the president*. For our present purposes, I assume that these are equational sentences, to be treated on a par with *John is him*. A classical reference on this and related topics is Higgins 1973.

27. I-level adjectives can also, of course, be used as noun modifiers, as in *yellow car*. The simplest way of accounting for this that I can think of is to assume that i-level adjectives, like nouns, exist in two forms, and that these forms are related to each other in just the way nouns are.

3.5. CONSEQUENCES

It is now time to reconsider the properties of i-level predicates listed at the beginning of this chapter. We will argue that they follow naturally if we adopt the hypothesis that i-level predicates are inherent generics (as articulated in the previous section) and other independently plausible assumptions.

1. *Stable stativity*. Some of the observed properties are immediately obvious now and hardly deserve any comment. Generics express tendentially stable properties, and hence i-level predicates will too. Consequently, a temporal modifier that is somehow incompatible with this presumption of stability (like *yesterday*, *an hour ago*, etc.) will be odd when it applies to an i-level predicate. Moreover, generics are known to be aspectually stative. Hence i-level predicates will be stative as well. The stativity of generics follows in turn from the fact that their semantics is based on the semantics of conditionals, also generally taken to express states. Notice that the stativity of i-level predicates is expected no matter what aspectual class the (abstract) underlying predicate—*know*, *intelligent*, etc.—might belong to. These predicates never surface as such. They only occur within the scope of **Gen** (i.e., as conditionals).

2. *Locatives*. Consider next the oddity of i-level predicates with locative modifiers. Some relevant examples from (4) are repeated in (72).

- (72) a. ??John is a linguist in his car.
 b. ??John is intelligent in France.
 c. ??John knows Latin in his office.

We have argued that the generic quantifier present in the argument structure of i-level predicates ranges over situations that are *arbitrarily* located. The introduction of a locative modifier clearly clashes with the fact that the location of i-level predicates is arbitrary, that is, unrestricted. This is, in a nutshell, the source of the ungrammaticality of sentences like (72).

It is worth pursuing a bit further how this incompatibility of i-level predicates and locative modification actually comes out on our formalization. The full-blown representation of something like *John knows Latin* is as follows:

- (73) $\exists s' [\text{Overlap}(s', \text{now}) \wedge \text{Gen } s [\text{Overlap}(s, s') \wedge \text{in}(j, s)] \exists s''$
 $[\text{Overlap}(s, s'') \wedge \text{know}^+(j, L, s)]]$

There are three possible targets for a locative modifier in formula (73). Such a modifier could in principle restrict the external situation s' , the internal one

s, or the scope situation s'' . Modification of the internal situation, however, is ruled out by the fact that the restriction already contains a locative. The contextual variable C is set to **in** and there is no room for further locative modification in the restriction. Modification of the scope situation would yield the following expression:

- (74) SCOPE MODIFICATION
 $\exists s' [\text{Overlap}(s', \text{now}) \wedge \text{Gen } s [\text{Overlap}(s, s') \wedge \text{in}(j, s)] \exists s''$
 $[\text{Overlap}(s, s'') \wedge \text{know}^+(j, L, s'') \wedge \text{in-}j\text{'s-office}(s'')]]$

But this is clearly logically false. Formula (74) says: Any situation s where John is or might be located (including, that is, situations where he is not in his office) is a situation in which he is in his office.

Finally, modification of the external situation would result in something like (75):

- (75) EXTERNAL SITUATION MODIFICATION
 $\exists s' [\text{Overlap}(s', \text{now}) \wedge \text{in-}j\text{'s-office}(s') \wedge \text{Gen } s [\text{Overlap}(s, s') \wedge \text{in}(j, s)]$
 $\exists s'' [\text{Overlap}(s, s'') \wedge \text{know}^+(j, L, s)]]$

But formula (75) is trivially equivalent to the logical form of the unmodified sentence *John knows Latin*, namely (73). To see this, assume that there is a situation s' such that

$$[[[\text{Overlap}(s', \text{now}) \wedge \text{in-}j\text{'s-office}(s') \wedge \text{Gen } s [\text{Overlap}(s, s') \wedge \text{in}(j, s)] \exists s'' [\text{Overlap}(s, s'') \wedge \text{know}^+(j, L, s)]]]]^{g[s'/s']} = 1.$$

For this to hold, any situation temporally overlapping with s' must satisfy a certain condition. But if this is the case, then an *arbitrary* situation s^* temporally overlapping with s' , no matter what its spatial location, cannot fail to also verify (73) when assigned as a value to the variable s' . In other words, if we can find any situation at all in the actual world that constitutes a verifying assignment for s' in (73), then any actual situation temporally overlapping with it will. And among such situations, there will also be some whose spatial location is John's office.

Kratzer (1989b) makes exactly this point. She argues that if the truth of a generic statement is supported by one situation in a world, it must be supported by all. Generic statements, as it were, distribute through every part of a world.²⁸

28. Kratzer formulates her claim within a situation-based semantics. Our semantics is compatible with hers as well as with more traditional approaches.

So if the locative modifier were taken to modify the external situation, it would add nothing to the meaning of what it modifies—not an efficient way to communicate.

Having exhausted all possible targets for locative modification, we can conclude that our semantics for i-level predicates actually predicts that there is just no way that they can be meaningfully modified by locative adverbials.

3. *Perception sentences.* The next property of i-level predicates to be considered involves perception sentences. Why are i-level predicates bad as complements of perception verbs? Here are some relevant examples again:

- (76) a. I could see that John was tall.
 b. I could see John on the roof.
 c. *I could see John tall.

The explanation for this unexpected restriction is parallel to the one offered for the impossibility of locative modification. Following Higginbotham (1983), Parsons (1990), and many others, I assume that verbs of perception can either express relations between individuals and propositions, as in (76a), or relations between individuals and eventualities, as in (76b). Naked infinitive complements are, I assume, small clauses of some kind (cf. (77a)) that in the complement of perception verbs are interpreted roughly as in (77b).

- (77) a. I could see [_{sc} John on the roof]
 b. $\exists s [\text{could-see}(I, s) \wedge \text{on-the-roof}(j, s)]$

Formula (77b) says that there is a state I saw which is a state of John's being on the roof. The contribution of the meaning of the small clause to the meaning of (77b) is that of determining the type of the eventuality which is taken as an argument of the verb. Now why are sentences like (76c) ungrammatical? As mentioned in the introductory section, this cannot have anything to do with the relevant state being perceivable or not. The state of being tall is uncontroversially perceivable. I think that what gets in the way in sentences like (76c) is the **Gen**-operator. Given our hypothesis on the nature of i-level predicates, the LF of (76c) must be as in (78a), which is then interpreted as in (78b):

- (78) a. I saw [_{sc} John **Gen**_[AP_{1+Q}] tall]
 b. $\exists s' [\text{saw}(I, s') \wedge \text{Gen } s [\text{Overlap}(s, s') \wedge \text{in}(j, s)] [\text{tall}(j, s)]]$

The problem is that the situation that can be taken as argument by *see* must be the external one (for the internal one, being bound by **Gen**, is not accessible). But since we are dealing with a generic sentence, if the right conjunct is

true of some s' in the actual world, it will be true of every s' , for the reasons discussed in connection with locatives above. Consequently, (78b) says nothing more than 'John is tall and I saw something (possibly totally unrelated to John's tallness)'. The complement of a perception verb, if it is an inherent generic, will be incapable of specifying or in any way narrowing down the nature of the observed situation, which, I submit, is sufficient cause for ungrammaticality.

4. *There-sentences*. Another peculiarity of i-level predicates we observed is that they are not good in *there-sentences*. To my knowledge, this phenomenon has not received a satisfactory account as of yet. I believe that a plausible one is at hand, if one adopts the perspective developed in the present paper. *There-sentences* state the existence of entities of a certain kind and are known to give rise to a 'definiteness effect': the NPs that can occur in *there-sentences* have to be indefinite (the *weak* NPs of Milsark 1974). There are two main lines on the definiteness effect, namely, Milsark 1974 and Barwise & Cooper (1981). Depending on which line one adopts, the explanation for the ban against i-level predicates takes a slightly different form. In what follows, I briefly go over both approaches.

According to Milsark, weak NPs are constituted by determiners which can be analyzed as cardinality predicates, while strong NPs cannot. The determiners within strong NPs are quantificational. 'There-be' is an existential quantifier and looks for a variable to bind (i.e., for an open sentence). Weak NPs provide just that. Strong NPs, being already quantified, do not. Hence the definiteness effect is essentially a case of vacuous quantification.²⁹ Now, according to our hypothesis, i-level predicates require a **Gen**-operator in their local environment, which is a (modalized) universal quantifier. This operator will bind the indefinite NP, making the quantifier associated with 'there-be' vacuous. It is exactly as if there was a strong determiner. In fact, that is just what **Gen** is: a phonologically null strong determiner. Schematically, we are dealing with a structure of this form:

- (79) a. ??There is [_{sc} a man **Gen** tall]
 b. $\exists \text{ Gen}_{x,s} [\text{a man}_x \text{ tall}_s]$

By definition, the subject of the small clause in (79a) is the restrictor of **Gen** and hence gets bound by it. The existential quantifier in (79b), therefore, has

29. The main difficulty with this line of explanation concerns NPs like *no man*, whose determiner cannot be analyzed as a cardinality predicate and yet is acceptable in *there-sentences*.

nothing to bind. Notice that this also explains, right off the bat, why predicative NPs are disallowed in the coda of *there-sentences*, as in (80):

- (80) *There is [a woman a doctor]

Predicative NPs are of course all i-level predicates.

As mentioned, the second main line on *there-sentences* stems from Barwise and Cooper (1981).³⁰ Details aside, the basis of their proposal is that strong NPs are tautologous or contradictory in the context 'NP exists', while weak NPs in that same environment give rise to contingent statements. *There-sentences* are of course interpreted just as 'NP exists', and the deviance of strong NPs in that environment is thus attributed to the uninformativeness of the resulting structure.³¹ This second account presupposes that the semantic type of what follows 'there-be' is that of generalized quantifiers. If we adopt (some version of) Stowell's analysis of *there-sentences*, according to which what follows the copula is a small clause, we must, therefore, assume an interpretive procedure of the following kind:

- (81) a. There is [_{sc} a man in the garden]
 b. [_{sc} a man in the garden] $\Rightarrow \lambda P \exists x [\text{man}(x) \wedge \text{in-the-garden}(x) \wedge P(x)]$ ³²
 c. There be _{sc} $\Rightarrow \text{sc}(\text{exist})$
 (where **exist** = $\lambda x [x = x]$; cf. Barwise & Cooper 1981)
 d. There is [_{sc} a man in the garden] $\Rightarrow$
 $\lambda P \exists x [\text{man}(x) \wedge \text{in-the-garden}(x) \wedge P(x)] (\text{exist})$
 $= \exists x [\text{man}(x) \wedge \text{in-the-garden}(x) \wedge \text{exist}(x)]$
 $= \exists x [\text{man}(x) \wedge \text{in-the-garden}(x)]$

In (81b), the small clause gets an NP meaning (i.e., its type is that of a generalized quantifier). In (81c) the contribution of 'there-be' is taken to be

30. See also Keenan 1987.

31. The weak point in this explanation is that uninformativeness might not be sufficient ground for ungrammaticality. In particular, as Heim (1987b) points out, there are pairs of equivalent sentences that pattern differently in *there-sentences*, like *There is no perfect relationship* vs. **No perfect relationship is such that there is it*.

32. There are a variety of ways in which this interpretation may be obtained. For example, in order to treat relative clauses, one arguably needs an interpretation for NPs of the following kind:

(i) a man $\Rightarrow \lambda P \exists x [\text{man}(x) \wedge R(x) \wedge P(x)]$
 (ii) a man + that I met $\Rightarrow \lambda R \lambda P \exists x [\text{man}(x) \wedge R(x) \wedge P(x)] (\lambda x \text{met}(I, x))$
 $= \lambda P \exists x [\text{man}(x) \wedge \text{met}(I, x) \wedge P(x)]$

'R' is a variable that is going to be filled by a relative clause, roughly in the manner indicated in (ii) (if no relative clause comes along, its value is simply going to be some property salient in the context; see Bach & Cooper 1978, Jacobson 1990, and Srivastav 1991 for relevant discussion). We can use the same type of procedure to interpret small clauses when they occur in *there-sentences*.

that of saying, essentially, 'NPs are in the universe of discourse'. And in (81d), it is shown how this reduces to a statement of existence.

Suppose now we have an i-level predicate. The structure of the sentence will be:

(82) There is **Gen** [_{sc} a man tall]

At this point we have two options. Either we first apply **Gen** to the small clause and then go through the steps in (81) or the other way around. Suppose we follow the latter route and first apply to the small clause in (82) the interpretive procedure outlined in (81), where the coda is "absorbed" within the NP. Then the result will be an NP meaning—and this will be the only thing left for **Gen** to operate on. But **Gen** needs two arguments: an NP (or a set of NPs) and a clause. Thus, in this case, there will be a type mismatch, which will make the sentence uninterpretable.

Suppose, on the other hand, we first apply **Gen** to the small clause, so that the small clause winds up being interpreted roughly as follows:

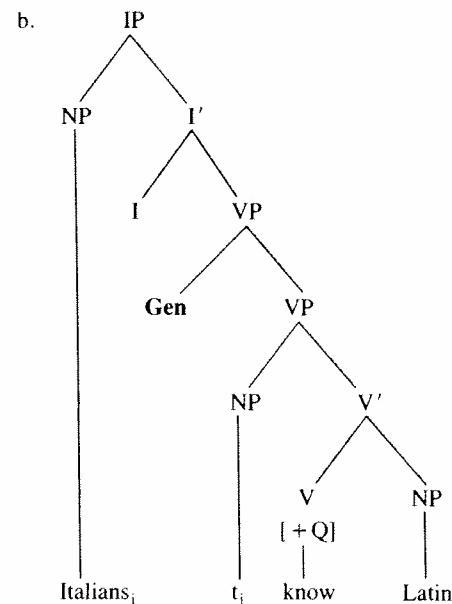
(83) **Gen**_{xs} [**man**(x) ∧ **in**(s,x)] [**tall**(x,s)]

Then the interpretation of 'there-be' structures as outlined in (81) (which requires an NP meaning) will be unable to operate (again because of a type mismatch) and the structure will be uninterpretable.

So on either one of the two main interpretive hypotheses for *there*-sentences (i.e., Milsark's and Barwise and Cooper's) there is a quite natural account of the ungrammaticality of i-level predicates, under the assumption that they are inherent generics. The point is basically this: the semantics for *there*-sentences and the **Gen**-operator compete for the same structure (i.e., they must operate on the same structure) and it is quite plain that they pull in different directions. Their respective semantics cannot be smoothly integrated. And it seems very reasonable to blame this semantic incompatibility for the ungrammaticality of the relevant sentences.

5. *Bare plurals*. Let us now turn to the distribution of readings of bare plurals with i-level predicates. The first basic fact in this connection, as mentioned in the Introduction, is that i-level predicates select universal readings of bare plural subjects. On the present theory this follows from the locality requirement on the licensing of i-level predicates. Consider the following example:

(84) a. Italians know Latin



The [+Q] feature on *know* has to be locally licensed on the lexical head by the presence of **Gen** within the head's checking domain. If **Gen** were to select IP scope (as it would be necessary for the subject to be incorporated in the scope), it wouldn't be in the checking domain of the lexical head and hence be too far to license [+Q] on the verb. The guiding principle of our splitting algorithm is that once the scope of **Gen** is fixed, what is external to it is part of the restriction. We assume that in general no "reconstruction" of the material in Spec IP into Spec VP is possible (not even as a purely interpretive phenomenon). Since **Gen** has to be VP-adjoined for it to be able to license [+Q], it follows that the subject of i-level predicates will generally be forced to be part of the restriction (and thus pick up universal force). Singular indefinites work in the same way (modulo the fact that with them, 'specific' readings are always possible).

It is conceivable that **Gen** is generated first in VP-adjoined position, where it licenses the Q-feature on the verb, and then scoped out. This possibility must be ruled out, perhaps by insisting that a trace is too weak to license [+Q].

Note that something of exactly this sort is needed for negative polarity items

(NPIs). To see this, recall the fact often noticed in the literature that negation can have scope over the subject position, as (85) illustrates.

- (85) a. Did every student come to the party?
b. No, every student didn't come to the party. ($\Rightarrow \neg\forall$)

While for some, (85b) on the intended reading is less than perfect, most people do get it. Now, in contrast with (85b), it seems that when negation licenses a NPI, it cannot be scoped out. This is attested by two facts. First, in languages like English a NPI cannot be licensed by negation in subject position.

- (86) *Anyone didn't come.

This fact would be unexpected if negation could be scoped out to a level where it locally c-commands the subject position, while it follows under the assumption that negation is a proper NPI-licensor only from its base position. Second, and independently of this fact, when negation is an NPI-licensor it cannot take scope over the subject in any case. Contrast (85) with (87):

- (87) Every student didn't do anything. ($\Rightarrow \forall\neg\exists$)

Sentence (87) lacks the reading 'Not every student did anything', in sharp contrast with sentence (85b). Again, we assume that whatever mechanism allows negation to have wide scope in (85b) is blocked when it acts as NPI-licensor. I suggest that what happens with i-level predicates is fully parallel. The licensor of a polarity trigger (an NPI or an i-level predicate) can act only under conditions of strict locality.

As far as objects are concerned, whether they are part of the restriction or not will depend, as is generally the case, on whether they are scoped out of the VP or not. In (88) I give two examples with a schematic representation of their LFs:

- (88) a. Mice hate cats.
a'. $[_{IP} \text{ mice}_j [_{VP} \text{ cats}_i \text{ Gen } [_{VP} t_i \text{ hate } t_j]]]$
b. Lions have manes.
b'. $[_{IP} \text{ lions}_i [_{VP} t_i \text{ have manes}]]$

In (88a') the object is scoped out and thus gets universal force, since it is part of the restriction of **Gen**. In (88b'), on the other hand, the object remains in situ and thus is interpreted existentially. As is clear from these examples (and well known from the literature), certain verbs strongly prefer a reading where the object is scoped out, others the one where it stays within the VP. I have nothing to say about this (see Diesing 1992 for interesting considerations).

Things are different with unaccusatives (or, for that matter, passives). NP traces can be interpreted as *gq*-level variables, and the antecedents of NP traces can be interpreted as if they were in the trace position. Which means that the subjects of i-level unaccusatives will be able to escape from the restriction and be interpreted as part of the scope. Below I provide a simple example, taken from Kratzer 1989b (for more details, see the appendix to this chapter).

- (89) a. A pond belongs to this property.
b. LF: $[a \text{ pond}_i [_{VP} \text{ this property}_j \text{ Gen } [_{VP} t_i \text{ belong } t_j]]]$
c. $\lambda\mathcal{P} [\text{Gen } x,s [x = \text{this-property} \wedge \text{in}(x,s)] [\mathcal{P} (\text{belong}^+(s)(x))]]$
(a-pond)
= $\text{GEN } x,s [x = \text{this-property} \wedge \text{in}(x,s)] [\text{a-pond}(\text{belong}^+(s)(x))]$
= $\text{Gen } x,s [x = \text{this-property} \wedge \text{in}(x,s)] [\exists y[\text{pond}(y) \wedge \text{belong}^+(y,x,s)]]$

The subject in (89a) is most naturally interpreted existentially. Yet the sentence involves an i-level predicate which carries **Gen** with itself. However, since the predicate is unaccusative, the subject can be λ -ed in back into the position of the object trace. As we know, this option is not available with predication traces, which is why subjects of unergative i-level predicates must be caught in the restriction.

6. *Adverbs of quantification.* Let us now turn to Kratzer's generalizations which concerns contrasts of the following type:

- (90) a. ??When John knows Latin, he usually knows it well.
b. When an Italian knows Latin, he usually knows it well.

As it turns out, this kind of behavior is not restricted to i-level predicates (cf. De Hoop and De Swart 1989 and Chierchia 1992:

- (91) a. ??When John kills Fido, he kills him cruelly.
b. When John kills a dog, he kills it cruelly.
c. ??When John wins the 1991 Boston marathon, he wins it by a wide margin.
d. When John wins a marathon, he wins it by a wide margin.

The predicates in (91) are all s-level, and yet they pattern just like i-level predicates with respect to this phenomenon. What seems to be playing a role here is the fact that the events described in (91) are not naturally iterable. Not being naturally iterable means that two instances of the same event (with the same protagonists) cannot naturally occur (e.g., two killings of John by Bill

cannot naturally occur). In the deviant sentences in (91), the only thing that the Q-adverb can quantify over is the situation variable (since there are no indefinites or kind-level NPs). But we know that in any given world there is going to be at most one situation in which, e.g., John kills Fido. This makes the Q-adverb useless. Thus the ungrammaticality of the sentences in (91) does not stem from a formal ban against vacuous quantification (as Kratzer proposes), for there is in (91a–d) a variable over which to quantify. Instead, it seems plausible to maintain that not only do variables have to be there but also that they must in principle be satisfiable by more than one entity. Let's call this the "*nonvacuity presupposition*." It is the nonvacuity presupposition that appears to be violated in the examples in (91).

The question that arises is, however, why should i-level predicates not be principally naturally iterable? This seems to be a straightforward consequence of their tendential stability. Their duration tendentially occupies a significant portion of an individual's lifespan. To imagine a situation where there can be two distinct knowings of Latin by John, we have to imagine an unusual scenario. So on the present approach, we can relate the deviance of (90a) to the deviance of (91a,c) on principled grounds. The tendential stability of i-level predicates triggers a presupposition that there is going to be at most one state of the relevant sort, which clashes with the nonvacuity presupposition of Q-adverbs.

7. *I-level predicates and counterfactuals*. There is a further interesting property of i-level predicates that follows from this analysis, mentioned in Kratzer 1989b, fn. 7, which we haven't considered in the Introduction. It involves the way they behave in counterfactual reasoning. The example that follows is taken from Kratzer's work. Imagine a situation where five people are in this room, including Otto and Paula. It so happens that Otto and Paula are the only two people in the room that are bored. In such a situation, we would be inclined to regard (92a) as true, but (92b) as false:

- (92) a. If Otto and Paula weren't in the room, nobody in the room would be bored.
b. If nobody in the room were bored, Otto and Paula wouldn't be in the room.

Kratzer argues quite forcefully that her analysis of counterfactuals predicts exactly these judgments. In order to sketch why this is so, I will now present some key ingredients of Kratzer's analysis. I will do so in a completely infor-

mal way and without any pretense of doing justice to the richness of her analysis.

The basic semantics for *would*-conditionals is as follows:

- (93) A *would*-counterfactual is true in a world *w* if and only if every way of adding propositions which are true in *w* to the antecedent while preserving consistency reaches a point where the resulting set of propositions logically implies the consequent. (Kratzer 1989b, 626)

For this statement to work, it has to be qualified in a crucial way. In adding a true proposition *p* to the antecedent of a counterfactual, we must also add the propositions that *p* 'lumps'. The notion 'lumping' is defined as follows:

- (94) *p* lumps *q* in *w* iff:
i. *p* is true in *w*
ii. For any situation *s* which is a part of *w*, if *p* is true in *s*, then *q* is true in *s*.

The intuitive idea behind this definition can be put in the following terms. Facts come structured in blocks, or 'lumps'. Reasoning about a certain fact involves considering all that comes with it. This includes not just what the fact in question entails, but the various aspects that are inherent to the situation it characterizes. For example, in the state of affairs just considered, (95a) lumps (95b):

- (95) a. Exactly two people in this room are bored.
b. Otto and Paula are in this room.

In the world as we have described it, any situation that supports the truth of (95a) will support the truth of (95b). This is obviously not a matter of entailment. Now consider (92a) in light of definitions (93) and (94). For (92a) to be true, every consistent way of adding true propositions and what they lump to 'Paula and Otto are not in this room' reaches a point where the result entails 'Nobody in this room is bored'. Now, obviously (95b) cannot be added consistently to the antecedent of (92a). And since (95a) lumps (95b), (95a) cannot be added consistently either. But if we leave (95a,b) out and add the rest of the facts to the antecedent, we reach a point where the result entails the consequent. Hence (92a) is true in the state of affairs in question. Consider now (92b). (95a) is incompatible with its antecedent, so it cannot be added to it. But (95b) is compatible with 'Nobody in this room is bored' and can be

added to it. Moreover, as Kratzer puts it, "[95b] doesn't lump any dangerous proposition like [95a)]" (p. 633). So there is a way of adding facts to the antecedent of (92b) that do not entail the consequent (in fact, they entail its negation). Hence (92b) is not true in the relevant state of affairs.

The counterfactuals under discussion so far involve an s-level predicate, like *be bored*. What is interesting from our point of view is that if we use i-level predicates instead, judgments are reversed. Suppose that Otto and Paula are the only tall people in this room, then consider the following sentences:

- (96) a. If Otto and Paula weren't in the room, nobody in the room would be tall.
b. If nobody in the room were tall, Otto and Paula wouldn't be in the room.

We would still be inclined to regard (96a) as true in the relevant state of affairs. But contrary to what happens with (92b), we would also be inclined to regard (96b) as true. In observing this asymmetry, Kratzer remarks that it would be explained if i-level predicates could be taken to express "nonaccidental generalizations" (i.e., generics). This is so because nonaccidental generalizations, if true in a world, are true in any situation of that world. Consequently, they will be lumped by any true proposition whatsoever. So the fact that Otto and Paula are tall is lumped by any true proposition, which means that however we add facts to the antecedent of (96b), the result will be something that is incompatible with them being in this room; whence the truth of (96b). This is a reflection of the general fact that in counterfactual reasoning nonaccidental facts always take precedence over accidental ones.

On the approach presented here, i-level predicates are generics. Hence, by adopting Kratzer's approach to counterfactuals and lumping, the contrast between (92) and (96) is predicted. From our perspective, it would be surprising and problematic if i-level predicates didn't pattern as "nonaccidental generalizations."

3.6. SOME COMPARISONS

I will indicate now what I think the main differences are between the approaches of Kratzer and Diesing, on the one hand, and the one I have developed here, on the other. I will only focus on what I understand to be the central aspects of their proposals, whose scope goes well beyond what I was able to cover here. Also, I will not comment directly on the differences between their approaches.

The main assumptions of the two theories (Kratzer and Diesing's vs. my own) can be summarized as follows:

(97) THE KRATZER-DIESING HYPOTHESIS

- S-level predicates have a Davidsonian argument ranging over occasions or eventualities (or perhaps space-time locations). I-level predicates do not.
- The subject of i-level predicates is base-generated in Spec IP, the one of s-level predicates is generated in Spec VP.
- VP is the scope of existential closure (for indefinites) and gets mapped into the scope of a Q-adverb.
- Reconstruction of a raised NP into its base position is always possible (on a language-particular basis).³³

These assumptions account for most of the empirical generalizations discussed in the preceding section. For example, the fact that i-level predicates cannot be smoothly modified by locatives follows from the fact that they lack a Davidsonian argument that the locative could modify. Moreover, an indefinite (which Kratzer and Diesing interpret as a free variable) in the subject position of a sentence involving i-level predicates will not be able to undergo existential closure. Hence, either it gets quantificational force from somewhere (like a generic operator) or else the sentence will contain a free variable floating around, which can arguably be regarded as the source of the ungrammaticality of the sentences in question (on the existential reading).

(98) THE INHERENT GENERICITY HYPOTHESIS

- Every verb has a Davidsonian argument. Uniformly, the subject of a verb is generated in Spec VP.
- I-level predicates must be licensed locally by a **Gen**-operator.
- The scope of a Q-adverb is free.
- Interpretive reconstruction is only possible into NP traces (not into predication phrases).

Of these assumptions, those in (98a) are in no way specific to my theory. Assumption (98b) is really the plank of the whole approach. As for (98c), I think it is fair to say that it should constitute the null hypothesis, assuming that scoping is an instance of Move α . Finally, (98d) is, as I have suggested, independently needed.

From the point of view of genericity, one way of looking at these two approaches is as follows. Kratzer and Diesing stipulate that the function-argument structure of i-level predicates is special in certain ways and try to derive their inherent genericity (and their other properties) from these assump-

33. This restriction is necessary on Diesing's approach to handle certain contrasts between English and German; see Diesing 1992.

tions on function-argument structure. My approach stipulates that what is special about the function-argument structure of i-level predicates is just the fact that they need a generic operator. I then try to derive their properties from this assumption. Kratzer and Diesing's hypothesis in effect almost succeeds in deriving the fact that i-level predicates need a **Gen**-operator (which I take as basic), but only when indefinites are involved. According to their hypothesis, something like *John is tall* is not in any obvious way "generic." We have seen reasons for wanting to regard even sentences of this form as generic. In so far as English is concerned, the present theory covers all the facts addressed by Kratzer and Diesing.³⁴ Moreover, it enables us to derive the predicate restriction on *there*-sentences and the behavior of i-level predicates in counterfactuals. It is not obvious how a theory based solely on (97) would derive these generalizations.

On the syntactic side, the approach I have developed here is consistent with a strong version of the Internal Subject Hypothesis, whereby the subject of every verb is uniformly generated in the same place. Various arguments have been put forth in the literature in favor of this view. For example, one is based on the conjunction of passive and active VPs illustrated in (99):

- (99) a. John loves Mary and is loved by her.
b. John [_{VP} *t_i* loves Mary] and [_{VP} *t_i* is loved *t_i* by her]

If there was no trace within the active VP in (99a), this sentence ought to constitute a violation of the Across-the-Board constraint on extraction. The problem disappears if we assume that there is a trace in Spec VP of *love*. But this appears to be inconsistent with the claim that subjects of i-level predicates originate outside the VP. The same point can be made in connection with the conjunction of i- and s-level predicates:

- (100) a. Sue married John thirty years ago and still loves him very much.
b. Sue [[*t_i* married John thirty years ago] and [PRO still loves him very much]]

The analysis of (100a) according to the Kratzer-Diesing hypothesis would be (100b), which should be ruled out by constraints on Across-the-Board movement. A possible way out might be to assume that the conjunction in (100a) involves a functional category higher than VP, such as, say, TP. Under the assumption that the subjects of i-level predicates are actually generated in Spec TP and then move up, the coordinated structures would both contain a trace.

34. Kratzer and Diesing also discuss many facts from German. I address them in Chierchia (1994), where I argue that they too follow naturally from the inherent genericity hypothesis.

However, this way out is rather implausible in view of facts such as the following:

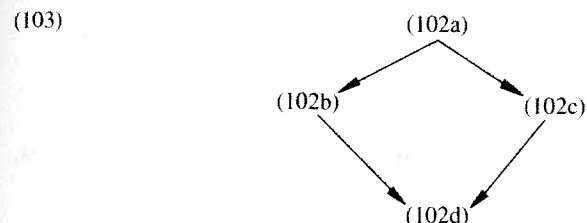
- (101) a. Which of your colleagues married her husband thirty years ago and always loved him like the first day?
b. Sue did ____.

Here the antecedent for the VP anaphor in (101b) is the coordinated structure in (101a). Yet, the tense (and aspectual) features appear on *did* in (101b). Hence it is implausible to maintain that the missing predicate is a coordinated Tense Phrase or Aspect Phrase.

On the semantic side, the present theory is consistent with the view that temporal and adverbial modification is done uniformly through the Davidsonian situation argument. And there may be reasons for viewing this uniformity as a positive feature. For example, we can borrow from Parsons (1990) the following argument. Consider the following set of sentences:

- (102) a. John loved Mary with great passion in his youth.
b. John loved Mary with great passion.
c. John loved Mary in his youth.
d. John loved Mary.

These sentences give rise to the following entailment pattern:



Each sentence in this diagram entails the ones below it but is not entailed by them. As Parsons argues, this fact follows in a rather direct fashion under the assumption that adverbs apply to the eventuality argument of verbs. If i-level predicates lack such an argument, this behavior (which is fully parallel to that of s-level predicates) would appear to be hard to explain.³⁵

35. The logical form of (102a) on our approach would have to be:

(i) $\exists s$ [**in-John-youth** (*s*) $\wedge$ **Gen** *s'* [**Overlap**(*s, s'*) $\wedge$ **in**(*j, s'*)]]
 $\exists s''$ [**Overlap**(*s', s''*) $\wedge$ **love**(*j, m, s''*) $\wedge$ **with-great-passion** (*s''*)]]

I leave it to the reader to verify that the desired entailment pattern does follow from (i).

3.7. CONCLUSIONS

The idea that i-level predicates are inherent generics can be implemented in a fairly elegant way. Polarity phenomena are rooted in the lexicon but have effects on whole phrases. My main contention is that i-level predicates give rise to a kind of polarity phenomenon (namely, inherent genericity). By assuming that i-level predicates must be licensed by **Gen**, under a strict form of locality we can derive all of their observable properties in an arguably principled manner. This hypothesis also sheds some light on genericity in general and exposes interesting aspects of the syntax/semantics interface.

APPENDIX

Here I will make more explicit the 'splitting algorithm' developed in the text and give some detailed examples. I will begin by considering cases where IP is selected as scope. Then I will turn to cases of VP scope.

- (104) $[NP_{i_1}, \dots, NP_{i_n} \text{ Gen } IP_s] \Rightarrow$
 $\text{Gen } x_{i_1}, \dots, x_{i_n} [!x_{i_1} NP_{i_1} \wedge \dots \wedge !x_{i_n} NP_{i_n} \wedge C(x_{i_1}, \dots, x_{i_n}, s)] [IP_2]$

Example:

- (105) a. A cat chases a mouse.
 b. $[a \text{ cat}_i \text{ a mouse}_j \text{ Gen } [IP_s \text{ } t_i \text{ chase } t_j]]$
 c. $\text{Gen } x_i x_j [!x_i \text{ a-cat}_i \wedge !x_j \text{ a-mouse}_j \wedge C(x_i, x_j, s)] [\text{chase}(x_i, x_j, s)]$
 Reductions of (c):
 i) $\text{Gen } x_i x_j [!x_i \lambda P \exists x [\text{cat}(x) \wedge P(x)] \wedge !x_j \lambda P \exists y [\text{mouse}(y) \wedge P(y)] \wedge C(x_i, x_j, s)] [\text{chase}(x_i, x_j, s)]$
 ii) $\text{Gen } x_i x_j [\text{cat}(x_i) \wedge \text{mouse}(x_j) \wedge C(x_i, x_j, s)] [\text{chase}(x_i, x_j, s)]$

Let us consider now the case of VP scope. This divides into two subcases, depending on whether the VP is of type $\langle e, t \rangle$ or $\langle gq, t \rangle$

- (106) Case (a): the VP is of type $\langle e, t \rangle$
 $[_{VP} NP_{i_1}, \dots, NP_{i_n} \text{ Gen } VP_s] \Rightarrow$
 $\lambda \mathcal{P} [\text{Gen } x_k, x_{i_1}, \dots, x_{i_n}, s [!x_k \mathcal{P} \wedge !x_{i_1} NP_{i_1} \wedge \dots \wedge !x_{i_n} NP_{i_n} \wedge C(x_k, x_{i_1}, \dots, x_{i_n}, s)] [VP_s(x_k)]]$
 where k is the predication index (i.e., the index of the trace in Spec VP)

Example:

- (107) a. A lion has a mane.
 b. $[_{IP} a \text{ lion}_i [_{VP} \text{ Gen } [_{VP_s} \text{ has a mane}]]]$
 c. Interpretation of the components:
 i) $[_{VP_s} \text{ has a mane}] \Rightarrow \lambda x \exists y [\text{mane}(y) \wedge \text{has}(x, y, s)]$

- ii) $[_{VP} \text{ Gen } [_{VP_s} \text{ has a mane}]] \Rightarrow$
 $\lambda \mathcal{P} \text{ Gen } x_i, s [!x_i \mathcal{P} \wedge C(x_i, s)] [\lambda x \exists y [\text{mane}(y) \wedge \text{has}(x, y, s)](x_i)]$
 $= \lambda \mathcal{P} \text{ Gen } x_i, s [!x_i \mathcal{P} \wedge C(x_i, s)] [\exists y [\text{mane}(y) \wedge \text{has}(x_i, y, s)]]$
 iii) $[_{IP} a \text{ lion}_i [_{VP} \text{ Gen } [_{VP_s} \text{ has a mane}]]] \Rightarrow$
 $\lambda \mathcal{P} \text{ Gen } x_i, s [!x_i \mathcal{P} \wedge c(x_i, s)] [\exists y [\text{mane}(y) \wedge \text{have}(x_i, y, s)]] (\lambda P \exists x [\text{lion}(x) \wedge P(x)])$

Reduction of (iii):

- iv) $\text{Gen } x_i, s [!x_i \lambda P \exists x [\text{lion}(x) \wedge P(x)] \wedge C(x_i, s)] [\exists y [\text{mane}(y) \wedge \text{has}(x_i, y, s)]]$
 v) $\text{Gen } x_i, s [\text{lion}(x_i) \wedge C(x_i, s)] [\exists y [\text{mane}(y) \wedge \text{have}(x_i, y, s)]]$
 (108) Case (b): the VP is of type $\langle gq, t \rangle$
 $[_{VP} NP_{i_1}, \dots, NP_{i_n} \text{ Gen } VP_s] \Rightarrow$
 $\lambda \mathcal{P} [\text{Gen } x_{i_1}, \dots, x_{i_n}, s [!x_{i_1} NP_{i_1} \wedge \dots \wedge !x_{i_n} NP_{i_n} \wedge C(x_{i_1}, \dots, x_{i_n}, s)] [VP_s(\mathcal{P})]]$

Example:

- (109) a. A pond belongs to Morrill Hall.
 b. $[a \text{ pond}_i [_{VP} \text{ Morrill Hall}_j \text{ Gen } [_{VP_s} t_i \text{ belongs } t_j \text{ to } t_j]]]$
 c. Interpretation of the components:
 i) $[_{VP_s} t_i \text{ belongs } t_j \text{ to } t_j] \Rightarrow \lambda \mathcal{P} [\mathcal{P}(\text{belong-to}(x_j, s))]$
 This interpretation is licensed by the fact that the NP trace t_i can be interpreted at the gq -level.
 ii) $[_{VP} \text{ Morrill Hall}_j \text{ Gen } [_{VP_s} t_i \text{ belongs } t_j \text{ to } t_j]] \Rightarrow$
 $\lambda \mathcal{P}' \text{ Gen } x_j, s [!x_j \text{ Morrill-Hall}_j \wedge C(x_j, s)] [\lambda \mathcal{P} [\mathcal{P}(\text{belong-to}(x_j, s))](\mathcal{P}')]]$
 $\lambda \mathcal{P}' \text{ Gen } x_j, s [!x_j \text{ Morrill-Hall}_j \wedge C(x_j, s)] [\mathcal{P}'(\text{belong-to}(x_j, s))]$
 $= \lambda \mathcal{P}' \text{ Gen } x_j, s [!x_j \lambda PP(\text{mh}) \wedge C(x_j, s)] [\mathcal{P}'(\text{belong-to}(x_j, s))]$
 $= \lambda \mathcal{P}' \text{ Gen } x_j, s [x_j = \text{mh} \wedge C(x_j, s)] [\delta'(\text{belong-to}(x_j, s))]$
 $= \lambda \mathcal{P}' \text{ Gen } s [C(\text{mh}, s)] [\mathcal{P}'(\text{belong-to}(\text{mh}, s))]$
 iii) $[a \text{ pond}_i [_{VP} \text{ Morrill Hall}_j \text{ Gen } [_{VP_s} t_i \text{ belongs } t_j \text{ to } t_j]]] \Rightarrow$
 $\lambda \mathcal{P}' \text{ Gen } s [C(\text{mh}, s)] [\mathcal{P}'(\text{belong-to}(\text{mh}, s))] (\lambda P \exists x [\text{pond}(x) \wedge P(x)])$
 $= \text{Gen } s [C(\text{mh}, s)] [\lambda P \exists x [\text{pond}(x) \wedge P(x)] (\text{belong-to}(\text{mh}, s))]$
 $= \text{Gen } s [C(\text{mh}, s)] [\exists x [\text{pond}(x) \wedge \text{belong-to}(\text{mh}, s)(x)]]$

ACKNOWLEDGMENTS

I wish to thank Andrea Bonomi, Paolo Casalegno, Polly Jacobson, and the participants of the 1992 "Movement, Partition and Definiteness" seminar at Cornell for helpful discussion. Special thanks are due to John Bowers and Molly Diesing, my co-teachers at that seminar. It was great fun.

BIBLIOGRAPHY OF RECENT WORK ON GENERICITY

Manfred Krifka and Francis Jeffry Pelletier

This bibliography is an up-to-date (1993) account of work on genericity in the linguistic literature (with some input from the philosophical and artificial intelligence literature), especially work done after 1985. For a bibliography up to 1985, see M. Galmiche and G. Kleiber, *Langages* 79:118–126 (1985). The present bibliography is also a comprehensive reference list for all the chapters in this anthology.

- Abbott, Barbara. 1989. "Nondescriptionality and Natural Kind Terms." *Linguistics and Philosophy* 12:269–291.
- Abney, Steve. 1987. *The English Noun Phrase in Its Sentential Aspect*. Ph.D. dissertation, MIT.
- Alho, Irja H. 1990. "Distinguishing Kind and Set in Finnish." Ms., University of Illinois at Urbana.
- Allerton, D. J., and Alan Cruttenden. 1979. "Three Reasons for Accenting a Definite Subject." *Journal of Linguistics* 15:49–53.
- Anderson, John M. 1973a. "The Ghost of Times Past." *Foundations of Language* 9:481–491.
- Anderson, John M. 1973b. "Universal Quantifiers." *Lingua* 31:125–176.
- Arnauld, Antoine. 1662. "La Logique ou L'Art de Penser." In J. Dickoff and P. James, translators and eds., *The Art of Thinking: Port-Royal Logic*. Indianapolis: Bobbs-Merrill Co.
- Asher, Nicholas. 1993. "Extensions for Commonsense Entailment." Paper presented at the IJCAI-93 Workshop on Conditionals, Chambéry, France.
- Asher, Nicholas, and Michael Morreau. 1991. "Commonsense Entailment: A Modal Theory of Nonmonotonic Reasoning." *Proceedings of the 12th IJCAI*, 387–392. San Mateo, Cal.: Morgan Kaufmann.
- Auger, J. 1993. "Syntax, Semantics and 'Ca': On Genericity in Colloquial French." *The Penn Review of Linguistics* 17:1–12.
- Authier, Jean-Marc P. 1989. "Arbitrary Null Objects and Unselective Binding." In O. Jaeggli and K. Safir, eds., *The Null Subject Parameter*, 45–67. Dordrecht: Kluwer.
- Åqvist, Lennart, Jaap Hoepelman, and Christian Rohrer. 1980. "Adverbs of Frequency." In C. Rohrer, ed., *Time, Tense, and Quantifiers*, 1–17. Tübingen: Niemeyer.
- Babby, Leonard. 1980. *Existential Sentences and Negation in Russian*. Ann Arbor: Karoma.
- Bach, Emmon. 1981. "On Time, Tense, and Aspect: An Essay in English Meta-

- physics." In P. Cole, ed., *Radical Pragmatics*, 63–81. New York: Academic Press.
- Bach, Emmon. 1986. "The Algebra of Events." *Linguistics and Philosophy* 9:5–16.
- Bach, Emmon, and Robin Cooper. 1978. "The NP-S Analysis of Relative Clauses and Compositional Semantics." *Linguistics and Philosophy* 2:145–150.
- Bach, Emmon, and Barbara Partee. 1980. "Anaphora and Semantic Structure." In K. J. Kreiman and A. E. Ojeda, eds., *Papers from the Parasession on Pronouns and Anaphora*, 1–28. Chicago: Chicago Linguistic Society.
- Bacon, John. 1973a. "The Semantics of Generic 'The'." *Journal of Philosophical Logic* 2:323–339.
- Bacon, John. 1973b. "Do Generic Descriptions Denote?" *Mind* 82:331–347.
- Bacon, John. 1974. "The Untenability of Genera." *Logique et Analyse* 17:199–208.
- Baker, Carl Lee. 1973. "Definiteness and Indefiniteness in English." Distributed by Indiana University Linguistics Club.
- Baker, Mark. 1988. *Incorporation: A Theory of Grammatical Function Changing*. Chicago: University of Chicago Press.
- Barwise, Jon. 1986. "Conditionals and Conditional Information." In E. Traugott, A. ter Meulen, J. Snitzer-Reilly, and C. Ferguson, eds., *On Conditionals*, 21–54. Cambridge: Cambridge University Press.
- Barwise, Jon. 1987. "Noun-phrases, Generalized Quantifiers and Anaphora." In P. Gärdenfors, ed., *Generalized Quantifiers*, 1–29. Dordrecht: Kluwer.
- Barwise, Jon, and Robin Cooper. 1981. "Generalized Quantifiers and Natural Language." *Linguistics and Philosophy* 4:159–219.
- Barwise, Jon, and John Etchemendy. 1987. *The Liar: An Essay in Truth and Circularity*. New York: Oxford University Press.
- Barwise, Jon, and John Perry. 1983. *Situations and Attitudes*. Cambridge, Mass.: MIT Press.
- Bäuerle, Rainer. 1988. "Ereignisse und Repräsentationen." Lilog-Report 43, IBM-Deutschland GmbH, Stuttgart.
- Bäuerle, Rainer, and U. Egli. 1985. "Anapher, Nominalphrase und Eselsätze." Arbeitspapier 105 des SFB 99, University of Konstanz.
- Bäuerle, Rainer, Christoph Schwarze, and Arnim von Stechow, eds. 1983. *Meaning, Use, and Interpretation of Language*. Berlin: de Gruyter.
- Bealer, George. 1975. "Predication and Matter." *Synthese* 31:493–508. Reprinted in F. J. Pelletier, ed., 1979, *Mass Terms: Some Philosophical Problems*, 279–294. Reidel: Dordrecht.
- Bealer, George, and Uwe Mönnich. 1989. "Property Theories." In D. Gabbay and F. Guenther, eds., *Handbook of Philosophical Logic*, vol. 4, 133–251. Dordrecht: Reidel.
- Bech, G. 1955/1957. "Studien über das deutsche Verbum infinitum." *Historisk-filologiske Meddelelser* 35, no. 2, 1955; 36, no. 6, 1957. Copenhagen: Det Kangelige Danske Videnskabernes Selskabs.
- Beck-Busse, Gabriele. 1990. "La généralité 'aspectuelle': les states." *Revue de l'institut supérieur de traducteurs et interprètes des Bruxelles* 17/18:19–30.
- Berlin, Brent, Dennis E. Breedlove, and Peter H. Raven. 1973. "General Principles

- of Classification and Nomenclature in Folk Biology." *American Anthropologist* 75:214–242.
- Berman, Steve. 1987. "Situation-Based Semantics for Adverbs of Quantification." *Proceedings of WCCFL 6*, 17–31. Stanford, Cal.: Stanford Linguistics Association, Stanford University.
- Berman, Steve. 1990. "Towards the Semantics of Open Sentences: WH-phrase and Indefinites." In M. Stokhof and L. Torenvliet, eds., *Proceedings of the 7th Amsterdam Colloquium*, 53–78. Amsterdam: ITLI, University of Amsterdam.
- Bierwisch, Manfred. 1987. "Semantik der Graduierung." In M. Bierwisch and E. Lang, eds., *Grammatische und konzeptuelle Aspekte von Dimensionsadjektiven*, 91–286. Berlin: Akademie Verlag.
- Biggs, Colin. 1978. "Generic Generalizations." *Akten des XII Kongresses für Linguistik*, Vienna, 169–172. Innsbruck: Innsbrucker Beiträge zur Sprachwissenschaft.
- Blutner, Reinhard. 1985. "Prototyp-Theorien und strukturelle Prinzipien der mentalen Kategorisierung." *Linguistische Studien* 125:86–135.
- Blutner, Reinhard. 1988. "Defaults and the Meaning of Generic Sentences." In M. Krifka, ed., *Genericity in Natural Language*, 3–30. SNS-Bericht 88-42, University of Tübingen.
- Bolinger, Dwight. 1980. "Syntactic Diffusion and the Indefinite Article." Distributed by Indiana University Linguistics Club.
- Bowers, John. 1993a. "The Syntax of Predication." *Linguistic Inquiry* 24:591–656.
- Bowers, John. 1993b. "The Syntax and Semantics of Individual and Stage Level Predicates." Paper presented at SALT 3, UC Irvine.
- Bresnan, Joan. 1971. "Sentence Stress and Syntactic Transformations." *Language* 47:257–280.
- Brockett, Chris. 1990. "The Syntax of Generics: Japanese Evidence for the Quantificational Model." *Proceedings of WCCFL9*, 59–74. Stanford, Cal.: Stanford Linguistics Association, Stanford University.
- Bunt, Harry. 1985. *Mass Terms and Model-Theoretic Semantics*. Cambridge: Cambridge University Press.
- Burton-Roberts, Noel. 1976. "On the Generic Indefinite Article." *Language* 52:427–448.
- Burton-Roberts, Noel. 1977. "Generic Sentences and Analyticity." *Studies in Language* 1:155–196.
- Burton-Roberts, Noel. 1981. "Review of Hawkins (1978)." *Language* 57:191–196.
- Bybee, Joan. 1985. *Morphology: A Study of the Relation between Meaning and Form*. Amsterdam: John Benjamins.
- Bybee, Joan, and Östen Dahl. 1989. "The Creation of Tense and Aspect Systems in the Languages of the World." *Studies in Language* 13:51–103.
- Campbell, Richard. 1989. *The Grammatical Structure of Verbal Predicates*. Ph.D. dissertation, UCLA.
- Carlson, Gregory N. 1977a. "A Unified Analysis of the English Bare Plural." *Linguistics and Philosophy* 1:413–456.
- Carlson, Gregory N. 1977b. *Reference to Kinds in English*. Ph.D. dissertation, University of Massachusetts, Amherst. Published 1980 by Garland Press, New York.

- Carlson, Gregory N. 1979. "Generics and Atemporal 'When'." *Linguistics and Philosophy* 3:49-98.
- Carlson, Gregory N. 1982. "Generic Terms and Generic Sentences." *Journal of Philosophical Logic* 11:145-181.
- Carlson, Gregory N. 1987. "Exceptions to Generic Generalizations." In A. Manaster-Ramer, ed., *Mathematics of Language*, 19-32. Philadelphia: John Benjamins.
- Carlson, Gregory N. 1988. "Truth-Conditions of Generic Sentences: Two Contrasting Views." In M. Krifka, ed., *Genericity in Natural Language*, 31-51. SNS-Bericht 88-42, University of Tübingen.
- Carlson, Gregory N. 1989. "The Semantic Composition of English Generic Sentences." In G. Chierchia, B. Partee, and R. Turner, eds., *Properties, Types, and Meaning*, vol. 2: *Semantic Issues*, 167-191. Dordrecht: Kluwer.
- Carlson, Lauri. 1981. "Aspect and Quantification." In P. Tedeschi and A. Zaenen, eds., *Syntax and Semantics 14: Tense and Aspect*, 31-64. New York: Academic Press.
- Carlstrom, I. F. 1975. "Truth and Entailment for a Vague Quantifier." *Synthese* 30:461-495.
- Cartwright, Nancy. 1989. *Nature's Capacities and Their Management*, esp. 198-202. Oxford: Clarendon Press.
- Casadio, Claudia. 1990. "Interpretazione generica e metafora." Ms., Lecce, Milella.
- Casadio, Claudia, and A. Orlandini. 1991. "On the Interpretation of Generic Statements in Latin." In R. Coleman, ed., *New Studies in Latin Linguistics: Selected Papers from the 4th International Colloquium on Latin Linguistics, Cambridge 1987*. Amsterdam: John Benjamins.
- Chafe, Wallace. 1967. *Seneca Morphology and Dictionary*. Washington, D.C.: The Smithsonian Press.
- Chafe, Wallace. 1970. *Meaning and the Structure of Language*. Chicago: University of Chicago Press.
- Chellas, Brian. 1980. *Model Logic: An Introduction*. Cambridge: Cambridge University Press.
- Chierchia, Gennaro. 1982a. "Nominalization and Montague Grammar: A Semantics without Types for Natural Languages." *Linguistics and Philosophy* 5:303-354.
- Chierchia, Gennaro. 1982b. "Bare Plurals, Mass Nouns, and Nominalization." *Proceedings of WCCFL 1*, 243-255. Stanford, Cal.: Stanford Linguistics Association, Stanford University.
- Chierchia, Gennaro. 1984. *Topics in the Syntax and Semantics of Infinitives and Gerunds*. Ph.D. dissertation, University of Massachusetts, Amherst.
- Chierchia, Gennaro. 1985. "Formal Semantics and the Grammar of Predication." *Linguistic Inquiry* 16:417-443.
- Chierchia, Gennaro. 1988. "Dynamic Generalized Quantifiers and Donkey Anaphora." In M. Krifka, ed., *Genericity in Natural Language*, 53-83. SNS-Bericht 88-42, University of Tübingen.
- Chierchia, Gennaro. 1990. "The Variability of Impersonal Subjects." Amsterdam: ITLI Prepublication Series, University of Amsterdam.

- Chierchia, Gennaro. 1992. "Anaphora and Dynamic Binding." *Linguistics and Philosophy* 15:111-183.
- Chierchia, Gennaro. 1994. "A Note on the Individual-Level vs. Stage-Level Contrast in German." Forthcoming in *Proceedings of the Cortona Meeting on Tense and Aspect*. Turin: Rosenberg & Sellier Publishers.
- Chierchia, Gennaro, and Raymond Turner. 1988. "Semantic and Property Theory." *Linguistics and Philosophy* 11:261-302.
- Chierchia, Gennaro, Barbara Partee, and Ray Turner, eds. 1989. *Properties, Types, and Meaning* (2 vols.). Dordrecht: Kluwer.
- Chomsky, Noam. 1975. "Questions of Form and Interpretation." *Linguistic Analysis* 1:75-109.
- Chomsky, Noam. 1982. *Some Concepts and Consequences of the Theory of Government and Binding*. Cambridge, Mass.: MIT Press.
- Chomsky, Noam. 1993. "A Minimalist Program for Linguistic Theory." In K. Hale and S. J. Keyser, eds., *The View from Building 20: Essays in Linguistics in Honor of Sylvain Bromberger*, 1-52. Cambridge, Mass.: MIT Press.
- Chomsky, Noam, and Howard Lasnik. 1977. "Filters and Control." *Linguistic Inquiry* 8:425-504.
- Christophersen, P. 1939. *The Articles: A History of Their Theory and Use in English*. Copenhagen: Mungaard.
- Churchland, Patricia. 1984. *Matter and Consciousness*. Cambridge, Mass.: MIT Press.
- Cinque, Giulio. 1988. "On Si Constructions and the Theory of Arb." *Linguistic Inquiry* 19:521-581.
- Clark, Romaine. 1973. "Prima facie Generalizations." In G. Pearce and P. Maynard, eds., *Conceptual Change*, 42-54. Dordrecht: Reidel.
- Code, Alan. 1985. "On the Origins of Some Aristotelean Theses about Predication." In J. Bogen and J. McGuire, eds., *How Things Are*, 101-131. Dordrecht: Reidel.
- Code, Alan. 1986. "Aristotle: Essence and Accident." In R. Grandy and R. Warner, eds., *Philosophical Grounds of Rationality: Intentions, Categories, Ends*, 411-439. New York: Oxford University Press.
- Combettes, Bernard. 1988. "Marqueurs de genericité et ordre des mots: article défini et déterminant zéro en moyen-français." In G. Kleiber, ed., *Rencontre(s) avec la Genericité*, 9-32. *Recherches linguistiques* 12, Université de Metz.
- Comrie, Bernard. 1976. *Aspect: An Introduction to the Study of Verbal Aspect and Related Problems*. Cambridge: Cambridge University Press.
- Comrie, Bernard. 1985. *Tense*. Cambridge: Cambridge University Press.
- Condoravdi, Cleo. 1989a. "Indefinite and Generic Pronouns." *Proceedings of WCCFL 8*, 71-84. Stanford, Calif.: Stanford Linguistics Association, Stanford University.
- Condoravdi, Cleo. 1989b. "The Middle: Where Semantics and Morphology Meet." MIT Working Papers in Linguistics 11, Department of Linguistics and Philosophy, MIT.
- Condoravdi, Cleo. 1992. "Strong and Weak Novelty and Familiarity." *Proceedings of SALT 2*, 17-37. Ohio State University Working Papers in Linguistics 10, Department of Linguistics, Ohio State University.

- Conrad, Bent. 1982. "Referring and Non-referring Phrases: A Study in the Use of the Gerund and the Infinitive." Publications in the Department of English, University of Copenhagen.
- Cooper, Robin. 1979. "The Interpretation of Pronouns." In F. Heny and H. Schnelle, eds., *Syntax and Semantics 10*, 61–92. New York: Academic Press.
- Corblin, F. 1987. *Indéfini, défini et démonstratif*. Genève-Paris: Droz.
- Croft, Bill. 1986. "Universal Quantifiers and Generic Expressions." Ms., Stanford University.
- Cruse, D. A. 1986. *Lexical Semantics*. Cambridge: Cambridge University Press.
- Dahl, Östen. 1970. "Some Notes on Indefinites." *Language* 46:33–41.
- Dahl, Östen. 1975. "On Generics." In E. Keenan, ed., *Formal Semantics of Natural Language*, 99–111. Cambridge: Cambridge University Press.
- Dahl, Östen. 1985. *Tense and Aspect Systems*. Oxford: Blackwell.
- Dahl, Östen. 1988a. "Inherited Genericity." in M. Krifka, ed., *Genericity in Natural Language*, 85–94. SNS-Bericht 88-42, University of Tübingen.
- Dahl, Östen. 1988b. "The Expression of the Episodic/Generic Distinction in Tense-Aspect Systems." In M. Krifka, ed., *Genericity in Natural Language*, 95–105. SNS-Bericht 88-42, University of Tübingen.
- Danon-Boileau, L. 1989. "La détermination du sujet." *Langages* 94:39–72.
- Davidson, Donald. 1967. "The Logical Form of Action Sentences." In N. Rescher, ed., *The Logic of Decision and Action*, 81–95. Pittsburgh: University of Pittsburgh Press.
- Declerck, Renaat. 1986. "The Manifold Interpretations of Generic Sentences." *Lingua* 68:149–188.
- Declerck, Renaat. 1987a. "A Puzzle About Generics." *Folia Linguistica* 21:143–153.
- Declerck, Renaat. 1987b. "Definiteness and Inclusive Reference." *Journal of Literary Semantics* 16:12–29.
- Declerck, Renaat. 1988. "Restrictive When-clauses." *Linguistics and Philosophy* 11:131–168.
- Declerck, Renaat. 1991. "The Origins of Genericity." *Linguistics* 29:79–102.
- de Groot, C., and H. Tammola, eds. 1984. *Aspect Bound. A Voyage into the Realm of Germanic, Slavonic and Finno-Ugrian Aspectology*. Dordrecht: Foris.
- De Hoop, Helen. 1992. *Case Configuration and Noun Phrase Interpretation*. Ph.D. dissertation, Rijksuniversiteit Groningen.
- De Hoop, Helen, and Henriette De Swart. 1989. "Over Indefinite Objecten en te Relatie tussen Syntaxis en Semantiek." *Glot* 12:19–35.
- Dekker, P. 1990. "Existential Disclosure." Paper presented at the Third Symposium on Logic and Language, Refvulop, Hungary.
- Delgrande, J. 1987. "A Semantics for Defaults Using Conditional Logic." *Artificial Intelligence* 33:105–130.
- Delgrande, J. 1988. "An Approach to Default Reasoning Based on First-Order Conditional Logic. Revised Report." *Artificial Intelligence* 36:63–90.
- de Mey, Sjaak. 1980. "Stages and Extensionality: The Carlson Problem." In S. Daalder and M. Gerritsen, eds., *Linguistics in the Netherlands*, 191–202. Amsterdam: North-Holland.
- de Mey, Sjaak. 1982. "Aspects of the Interpretation of Bare Plurals." In S. Daalder and M. Gerritsen, eds., *Linguistics in the Netherlands*, 115–126. Amsterdam: North-Holland.
- Desclés, J. P. 1987. "Implication entre concepts: la notion de typicalité." In M. Riegel and I. Tamba, eds., *L'implication dans les langues naturelles et dans les langues artificiels*, 179–202. Paris: Klincksieck.
- de Swart, Henriette. 1988. "Phrases habituelles et sémantique de situations." In G. Kleiber, ed., *Rencontre(s) avec la Généricité*, 261–279. Recherches linguistiques 12, Université de Metz.
- de Swart, Henriette. 1991. *Adverbs of Quantification: A Generalized Quantifiers Approach*. Ph.D. dissertation, Rijksuniversiteit Groningen.
- Diesing, Molly. 1988. "Bare Plural Subjects and the Stage/Individual Contrast." In M. Krifka, ed., *Genericity in Natural Language*, 107–154. SNS-Bericht 88-42, University of Tübingen.
- Diesing, Molly. 1990. "Verb Movement and the Subject Position in Yiddish." *Natural Language and Linguistic Theory* 8:41–81.
- Diesing, Molly. 1992. *Indefinites*. Cambridge, Mass.: MIT Press.
- Dixon, R. M. W. 1972. *The Dyirbal Language of North Queensland*. Cambridge: Cambridge University Press.
- Dixon, R. M. W. 1980. *The Languages of Australia*. Cambridge: Cambridge University Press.
- Dölling, J. 1992. "Flexible Interpretation durch Sortenverschiebung." In I. Zimmermann and A. Strigin, eds., *Fügungspotenzen*, 23–62. Berlin: Akademie Verlag.
- Donnellan, Keith S. 1966. "Reference and Definite Descriptions." *The Philosophical Review* 75:281–304.
- Donnellan, Keith S. 1972. "Proper Names and Identifying Descriptions." In D. Davidson and G. Harman, eds., *Semantics of Natural Language*, 356–379. Dordrecht: Reidel.
- Doron, E. 1988. "The Semantics of Predicate Nominals." *Linguistics* 26:281–301.
- Dowty, David. 1979. *World Meaning and Montague Grammar*. Dordrecht: Kluwer.
- Ducrot, O. 1970. "Les indéfinis et l'énonciation." *Langages* 17:91–111.
- Ebert, Karen. 1971a. "Referenz, Sprechsituation und die bestimmten Artikel in einem nordfriesischen Dialekt (Fering)." *Studien und Materialien* 4, Nordfrilris Institut, Bräist/Bredstedt.
- Ebert, Karen. 1971b. "Zwei Formen des bestimmten Artikels." In D. Wunderlich, ed., *Probleme und Fortschritte der Transformationsgrammatik*, 159–174. München: Hueber.
- Enç, Mürvet. 1981. *Tense without Scope*. Ph.D. dissertation, University of Wisconsin, Madison.
- Enç, Mürvet. 1991. "The Semantics of Specificity." *Linguistic Inquiry* 22:1–26.
- Evans, Gareth. 1977. "Pronouns, Quantifiers, and Relative Clauses. Parts 1 and 2." *Canadian Journal of Philosophy* 7:467–536, 777–797.
- Evans, Gareth. 1980. "Pronouns." *Linguistic Inquiry* 2:337–362.
- Farkas, Donka, and Yoko Sugioka. 1983. "Restrictive If/When Clauses." *Linguistics and Philosophy* 6:225–258.

- Féry, Catherine. 1991. "Prosodic and Tonal Structure of Standard German." *Arbeitspapier 9 der Fachgruppe Sprachwissenschaft*, University of Konstanz.
- Findler, Nicholas. 1979. *Associative Networks*. New York: Academic Press.
- Fine, Kit. 1985. *Reasoning with Arbitrary Objects*. Oxford: Blackwell.
- Fodor, Janet D., and Ivan A. Sag. 1982. "Referential and Quantificational Indefinites." *Linguistics and Philosophy* 5:355-398.
- Fodor, Jerry A. 1987. *Psychosemantics*. Cambridge, Mass.: MIT Press.
- Frege, Gottlob. 1892. "Über Begriff und Gegenstand." *Vierteljahrsschrift für wissenschaftliche Philosophie* 16:192-205. Translated as "On Concept and Object." In P. Geach and M. Black, eds., 1966, *Translations from the Philosophical Writings of Gottlob Frege*, 42-55. Oxford: Blackwell.
- Frey, Werner, and Hans Kamp. 1986. "Plural Anaphora and Plural Determiners." Ms., Institut für maschinelle Sprachverarbeitung, Stuttgart University.
- Fuchs, Anna. 1980. "Accented Subjects in 'All-New' Utterances." In G. Brettschneider and C. Lehmann, eds., *Wege zur Universalienforschung: Sprachwissenschaftliche Beiträge zum 60. Geburtstag von Hansjakob Seiler*, 449-461. Tübingen: Narr.
- Furukawa, N. 1986. *L'article et le problème de la référence en français*. Tokyo: Editions France Tosho.
- Galmiche, Michel. 1983. "L'utilisation des articles génériques comme mode de dénotation de la vérité." *LINX* 9:29-87.
- Galmiche, Michel. 1985. "Phrases, syntagmes et articles génériques." *Langages* 79:1-39.
- Gazdar, Gerald. 1979. *Pragmatics*. New York: Academic Press.
- Gerstner, Claudia. 1979. *Über Generizität*. M.A. thesis, University of Munich.
- Gerstner-Link, Claudia. 1988. *Über Generizität. Generische Nominalphrasen in singulären Aussagen und generischen Aussagen*. Ph.D. dissertation, University of Munich.
- Gerstner, Claudia, and Manfred Krifka. 1993. "Genericity." In J. Jacobs, A. von Stechow, W. Sternefeld, and Th. Vennemann, eds., *Handbuch der Syntax*, 966-978. Berlin: de Gruyter.
- Geurts, Bart. 1985. "Generics." *Journal of Semantics* 4:247-255.
- Geurts, Bart. 1988. "The Representation of Generic Knowledge." In M. Krifka, ed., *Genericity in Natural Language*, 155-174. SNS-Bericht 88-42, University of Tübingen.
- Goodman, Nelson. 1955. *Fact, Fiction and Forecast*. Cambridge, Mass.: Harvard University Press.
- Grice, H. Paul, and Alan Code. 1979. "The Realm between Form, Matter, and Composite in Aristotle's *Metaphysics Z*. Paper presented at the Conference on Ancient Philosophy, University of Victoria.
- Grimshaw, Jane. 1987. "Psych Verbs and the Structure of Argument Structure." Ms., Brandeis University.
- Grimshaw, Jane. 1990. *Argument Structure*. Cambridge, Mass.: MIT Press.
- Groenendijk, Jereon, and Martin Stokhof. 1987. "Dynamic Predicate Logic." Paper presented at the ASL/LSA Logic and Linguistics meeting, Stanford, Cal.
- Groenendijk, Jereon, and Martin Stokhof. 1989. "Dynamic Predicate Logic." ITLI LP-89-02. Institute for Language, Logic, and Information, University of Amsterdam.
- Groenendijk, Jereon, and Martin Stokhof. 1990. "Dynamic Montague Grammar." In L. Kálmán and L. Pólos, eds., *Proceedings of the Second Symposium on Logic and Language*, 3-48. Budapest: Akadémiai Kiadó.
- Groenendijk, Jereon, and Martin Stokhof. 1991. "Dynamic Predicate Logic." *Linguistics and Philosophy* 14:39-100.
- Guericolas, Claude. 1988. "Les phrases dispositionnelles: une approche informelle." In G. Kleiber ed., *Rencontre(s) avec la Généricité*, 33-57. *Recherches linguistiques* 12; Université de Metz.
- Gussenhoven, Carlos. 1983. "Focus, Mode, and the Nucleus." *Journal of Linguistics* 19:377-417.
- Haider, Hubert. 1988. "Die Struktur der deutschen Nominalphrase." *Zeitschrift für Sprachwissenschaft* 7:32-59.
- Halliday, M. A. K. 1970. *A Course in Spoken English: Intonation*. Oxford: Oxford University Press.
- Hamblin, C. L. 1973. "Questions in Montague English." *Foundations of Language* 10:41-53. Reprinted in B. Partee, ed., 1976, *Montague Grammar*, 247-259. New York: Academic Press.
- Hansen, Chad. 1983. *Language and Logic in Ancient China*. Ann Arbor: The University of Michigan Press.
- Harweg, R. 1969. "Unbestimmter und bestimmter Artikel in generalisierender Funktion." *Orbis* 18:297-331.
- Hawkins, John A. 1978. *Definiteness and Indefiniteness: A Study in Reference and Grammaticality Prediction*. New York: Humanities Press.
- Heim, Irene. 1982. *The Semantics of Definite and Indefinite Noun Phrases*. Ph.D. dissertation, University of Massachusetts, Amherst, and SFB-Papier 73, University of Konstanz.
- Heim, Irene. 1983a. "On the Projection Problem for Presuppositions." *Proceedings of WCCFL 2*, 114-125. Stanford, Cal.: Stanford Linguistics Association, Stanford University.
- Heim, Irene. 1983b. "File Change Semantics and the Familiarity Theory of Definiteness." In R. Bäuerle, C. Schwarze, and A. von Stechow, eds., *Meaning, Use and the Interpretation of Language*, 164-189. Berlin: de Gruyter.
- Heim, Irene. 1984. "A Note on Negative Polarity and Downward Entailment." *Proceedings of NELS 14*, 98-107. Amherst, Mass.: GLSA, University of Massachusetts.
- Heim, Irene. 1987a. "E-type Pronouns in 1987." Talk given at Stuttgart University, 11 December.
- Heim, Irene. 1987b. "Where Does the Definiteness Restriction Apply? Evidence from the Definiteness of Variables." In E. Reuland and A. ter Meulen, eds., *The Representation of (In)Definiteness*, 21-42. Cambridge, Mass.: MIT Press.
- Hempel, Carl, and Robert Oppenheim. 1936. *Der Typusbegriff im Lichte der neueren Logik*. Leiden: Sijhoff.
- Henne, M., O. B. Rongen, and L. J. Hansen. 1977. *A Handbook on Chinese Language Structure*. Oslo: Universitetsforlaget.

- Herschensohn, J. 1980. "Genericness and Intensionality." *Cornell Working Papers in Linguistics*, 1:93–102. Ithaca, N.Y.: Cornell University Press.
- Heyer, Gerhard. 1985. "Generic Descriptions, Default Reasoning, and Typicality." *Theoretical Linguistics* 11:33–72.
- Heyer, Gerhard. 1987. *Generische Kennzeichnungen. Zur Logik und Ontologie generischer Bedeutungen*. Munich: Philosophia.
- Heyer, Gerhard. 1988. "A Frame-Based Approach to Generic Descriptions." In M. Krifka, ed., *Genericity in Natural Language*, 175–197. SNS-Bericht 88-42, University of Tübingen.
- Heyer, Gerhard. 1990. "Semantics and Knowledge Representation in the Analysis of Generic Descriptions." *Journal of Semantics* 7:93–110.
- Higginbotham, James. 1983. "The Logic of Perceptual Reports: An Extensional Alternative to Situation Semantics." *Journal of Philosophy* 80:100–127.
- Higginbotham, James. 1985. "On Semantics." *Linguistic Inquiry* 16:547–593.
- Higginbotham, James. 1988. "Elucidations of Meaning." *Lexicon Project Working Papers* 19, MIT Center for Cognitive Science.
- Higgins, Roger. 1973. *The Pseudocleft Construction in English*. Ph.D. dissertation, MIT. Published 1979 by Garland Press, New York.
- Hill, Archibald A. 1966. "A Re-Examination of the English Articles." *Monograph Series on Languages and Linguistics* 19. Washington, D.C.: Georgetown University Press.
- Hinrichs, Erhard. 1981. *Temporale Anaphora im Englischen*. Zulassungsarbeit (ms.), University of Tübingen.
- Hinrichs, Erhard. 1985. *A Compositional Semantics for Aktionsarten and NP Reference in English*. Ph.D. dissertation, Ohio State University.
- Hintikka, Jaakko. 1980. "On the Any-Thesis and the Methodology of Linguistics." *Linguistics and Philosophy* 4:101–122.
- Hintikka, Jaakko, and Lauri Carlson. 1979. "Conditionals, Generics, Quantifiers, and Other Applications of Subgames." In F. Guenther and F. Schmidt, eds., *Formal Semantics and Pragmatics for Natural Languages*, 1–36. Dordrecht: Reidel.
- Hirschbühler, Paul. 1982. "VP Deletion and Across the Board Quantifier Scope." In J. Pustejovsky and P. Sells, eds., *Proceedings of NELS 12*, 132–139. Amherst, Mass.: GLSA, University of Massachusetts.
- Hoeksema, J. 1983. "Plurality and Conjunction." In A. ter Meulen, ed., *Studies in Modeltheoretic Semantics*, 63–83. Dordrecht: Foris.
- Horn, Larry. 1969. "A Presuppositional Analysis of *Only* and *Even*." *CLS* 5, 98–107. Chicago: Chicago Linguistic Society.
- Horty, Jeffry, Richmond Thomason, and David Touretsky. 1990. "A Skeptical Theory of Inheritance in Non-Monotonic Semantic Nets." *Artificial Intelligence* 42: 311–348.
- Huang, C.-T. J. 1982. *Logical Relations in Chinese and the Theory of Grammar*. Ph.D. dissertation, MIT.
- Jackendoff, Ray. 1972. *Semantic Interpretation in Generative Grammar*. Cambridge, Mass.: MIT Press.

- Jackendoff, Ray. 1977. *X' Syntax: A Study of Phrase Structure*. Cambridge, Mass.: MIT Press.
- Jacobs, Joachim. 1983. *Fokus und Skalen: Zur Syntax und Semantik von Gradpartikeln im Deutschen*. Tübingen: Niemeyer.
- Jacobs, Joachim. 1984. "Funktionale Satzperspektive und Illokutionssemantik." *Linguistische Berichte* 91:25–58.
- Jacobs, Joachim. 1991. "Focus Ambiguities." *Journal of Semantics* 8:1–36.
- Jacobson, Polly. 1990. "Raising as Function Composition." *Linguistics and Philosophy* 13:423–475.
- Jacobson, Polly. 1991. "On the Quantification Force of English Free Relatives." To appear in E. Bach et al., eds., *Crosslinguistic Quantification*, Dordrecht: Kluwer.
- Jaeggli, Osvaldo. 1986. "Arbitrary Plural Pronominals." *Natural Language and Linguistic Theory* 4:43–76.
- Jakubczak, I. 1973. "Some Remarks on Generic Relative Constructions in English and Polish." *Papers and Studies in Contrastive Linguistics* 2:227–232.
- Janssen, Th. 1984. "Individual Concepts Are Useful." In F. Landman and F. Veltman, eds., *Varieties of Formal Semantics*, 171–192. GRASS 3. Dordrecht: Foris.
- Jespersen, Otto. 1924. *The Philosophy of Grammar*. Republished 1965 by Norton, New York.
- Johanson, L. 1971. *Aspekt im Türkischen: Vorstudien zu einer Beschreibung des türkeitürkischen Aspektsystems*. Acta Universitatis Upsaliensis, Studia Turcica Upsaliensia 1. Stockholm: Almqvist & Wiksell.
- Joly, A. 1986. "La détermination nominale et al querelle des universels." In J. David and G. Kleiber, eds., *Déterminants: Syntaxe et sémantique*, 113–133. Paris: Klincksieck.
- Jonasson, K. 1986a. "L'article indéfini générique et la structure de l'énoncé." *Travaux de linguistique et de littérature* 24:309–345.
- Jonasson, K. 1986b. "L'article indéfini générique et l'interprétation des modaux." In J. David and G. Kleiber, eds., *Déterminants: syntaxe et sémantique*, 217–226. Paris: Klincksieck.
- Kadmon, Nirit. 1987. *On Unique and Non-Unique Reference and Asymmetric Quantification*. Ph.D. dissertation, University of Massachusetts, Amherst.
- Kadmon, Nirit. 1990. "Uniqueness." *Linguistics and Philosophy* 13:273–324.
- Kadmon, Nirit, and Fred Landman. 1993. "Any." *Linguistics and Philosophy* 16: 353–442.
- Kálmán, László. 1987. "Generics, Common-Sense Reasoning, and Monotonicity in Discourse Representation Theory." In J. Ruzsa and A. Szabolcsi, eds., *Logic and Language: Proceedings of the '87 Debrecen Conference*, 95–110. Budapest: Akadémiai Kiadó.
- Kamareddine, Fairouz. 1988. "Internal Definability and Collections." In M. Krifka, ed., *Genericity in Natural Language*, 199–219. SNS-Bericht 88-42, University of Tübingen.
- Kamp, Hans. "Two Theories about Adjectives." In E. Keenan, ed., *Formal Semantics of Natural Language*, 123–155. Cambridge: Cambridge University Press.

- Kamp, Hans. 1981. "A Theory of Truth and Semantic Representation." In J. Groenendijk, T. Janssen, and M. Stokhof, eds., *Formal Methods in the Study of Language*, 277–322. Mathematical Centre Tracts 135, Mathematisch Centrum, Amsterdam. Reprinted in J. Groenendijk, T. Janssen, and M. Stokhof, eds., 1984, *Truth, Interpretation and Information*, 1–41. Dordrecht: Foris.
- Kamp, Hans. 1983. "Events, Instants and Temporal Reference." In R. Bäuerle, U. Egli, and A. von Stechow, eds., *Semantics from Different Points of View*, 376–417. Berlin: Springer-Verlag.
- Kamp, Hans, and Nicholas Asher. 1989. "Self-Reference, Attitudes and Paradox." In G. Chierchia, B. H. Partee, and R. Turner, eds., *Properties, Types, and Meaning*, vol. 2: *Semantic Issues*, 85–158. Dordrecht: Kluwer.
- Kanouse, David. 1972. "Verbs as Implicit Quantifiers." *Journal of Verbal Learning and Verbal Behavior* 11:141–147.
- Kanski, Z. 1992. "Impersonal Constructions as a Strategy for Second-Order Predication." In M. Kefer and J. van der Auwera, eds., *Meaning and Grammar: Cross-Linguistic Perspectives*, 95–121. Berlin: Mouton de Gruyter.
- Karimi, Ezat. 1989. "Null Pronominals with Arbitrary Interpretation." Ms., University of Texas at Austin.
- Karttunen, Lauri. 1969. "Discourse Referents." Published in J. McCawley, ed., 1976, *Syntax and Semantics 7: Notes from the Linguistic Underground* 363–385. New York: Academic Press.
- Karttunen, Lauri, and Stanley Peters. 1979. "Conventional Implicature." In C.-K. Oh and D. Dinneen, eds., *Syntax and Semantics 11: Presupposition*, 1–56. New York: Academic Press.
- Kay, Paul. 1971. "Taxonomy and Semantic Contrast." *Language* 47:866–887.
- Keenan, Edward L., ed. 1975. *Formal Semantics of Natural Language*. Cambridge: Cambridge University Press.
- Keenan, Edward L. 1987. "A Semantic Definition of 'Indefinite NP'." In E. Reuland and A. ter Meulen, eds., *The Representation of (In)definiteness*, 286–317. Cambridge, Mass.: MIT Press.
- Kenny, Anthony. 1963. *Action, Emotion and Will*. London: Routledge & Kegan Paul.
- Kim, Boomee. 1991. "A Uniform Analysis of Arbitrary Null Subjects and Objects." *Proceedings of WCCFL 10*, 283–296. Stanford, Cal.: Stanford Linguistics Association, Stanford University.
- Kiparsky, Paul. 1973. "'Elsewhere' in Phonology." In S. Anderson and P. Kiparsky, eds., *A Festschrift for Morris Halle*, 93–106. New York: Holt, Rinehart and Winston.
- Kitagawa, Y. 1986. *Subjects in Japanese and in English*. Ph.D. dissertation, University of Massachusetts, Amherst.
- Kitagawa, Y. 1989. "Deriving and Copying Predication." *Proceedings of NELS 19*, 279–300. Amherst, Mass.: GLSA, University of Massachusetts.
- Kleiber, Georges. 1981. *Problèmes de référence: descriptions définies et noms propres*. Paris: Klincksieck.
- Kleiber, Georges. 1985. "Du côté de la genericité verbale: les approches quantificationnelles." *Langages* 79:61–88.
- Kleiber, Georges. 1988a. "Comment analyser les phrases habituelles du français?" In M. Krifka, ed., *Genericity in Natural Language*, 221–245. SNS-Bericht 88-42, University of Tübingen.
- Kleiber, Georges. 1988b. "Phrases génériques et raisonnement par défaut." *Le français moderne* 56:1–14.
- Kleiber, Georges. 1989a. "LE générique: un massif?" *Langages* 94:73–113.
- Kleiber, Georges. 1989b. "Comment traiter LE générique?" In *Travaux de linguistique, Actes du Colloque de Bruxelles de décembre 1988 sur genericité, spécificité, aspect*.
- Kleiber, Georges. 1989c. "LE générique: un article intensionnel?" In E. Faucher, F. Hartweg, and J. Janitza, eds., *Sens et Etre. Mélanges en l'honneur de Jean-Marie Zemb*, 117–128. Nancy: Presses Universitaires de Nancy.
- Kleiber, Georges. 1990. *L'article LE générique: La genericité sur la mode massif*. Geneva: Librairie Droz.
- Kleiber, Georges, and Helene Lazzaro. 1988. "Qu'est-ce qu'un syntagme nominale générique? Ou les carottes qui poussent ici sont plus grosses que les autres." In G. Kleiber, ed., *Rencontre(s) avec la Genericité*, 73–112. Recherches linguistiques 12, Université de Metz.
- Klein, Wolfgang, and Arnim von Stechow. 1982. "Intonation und Bedeutung von Fokus." *Arbeitspapier 77 des SFB 99*, University of Konstanz.
- Koene, Netta. 1989. "Ambiguity: Syntactic and Prosodic Form in Empirical Semantics." In R. Bartsch, J. van Benthem, and P. van Emde Boas, eds., *Semantics and Contextual Expressions*, 57–73. Dordrecht: Foris.
- Koopman, Hilda, and Dominique Sportiche. 1985. "Θ-Theory and Extraction." Paper presented at Colloquium on Parametric Typology, Brussels.
- Koopman, Hilda, and Dominique Sportiche. 1988. "Subjects." Ms., UCLA.
- Kratzer, Angelika. 1978. *Semantik der Rede, Kontexttheorie-Modalwörter, Konditionalsätze*. Königstein: Scriptor.
- Kratzer, Angelika. 1980. "Die Analyse des bloßen Plural bei Gregory Carlson." *Linguistische Berichte* 70:47–50.
- Kratzer, Angelika. 1981. "The Notional Category of Modality." In H.-J. Eikmeyer and H. Rieser, eds., *Words, Worlds, and Contexts: New Approaches to Word Semantics*, 38–74. Berlin: de Gruyter.
- Kratzer, Angelika. 1986. "Conditionals." In A. M. Farley, P. Farley, and K. E. McCullough, eds., *Papers from the Parasession on Pragmatics and Grammatical Theory*, 1–15. Chicago: Chicago Linguistic Society.
- Kratzer, Angelika. 1988. "Stage-Level and Individual-Level Predicates." In M. Krifka, ed., *Genericity in Natural Language*, 247–284. SNS-Bericht 88-42, University of Tübingen.
- Kratzer, Angelika. 1989. "An Investigation of the Lumps of Thought." *Linguistics and Philosophy* 12:607–653.
- Kratzer, Angelika. 1991. "The Representation of Focus." In A. von Stechow and D. Wunderlich, eds., *Semantik/Semantics: Ein internationales Handbuch der zeitgenössischen Forschung/An International Handbook of Contemporary Research*, 825–834. Berlin: de Gruyter.
- Krifka, Manfred. 1987. *An Outline of Genericity*, partly in collaboration with Claudia Gerstner. SNS-Bericht 87-23, University of Tübingen.

- Krifka, Manfred. 1988a. "The Relational Theory of Genericity." In M. Krifka, ed., *Genericity in Natural Language*, 285–312. SNS-Bericht 88-42, University of Tübingen.
- Krifka, Manfred. 1988b. "Review of G. Heyer, *Generische Kennzeichnungen: Zur Logik und Ontologie generischer Bedeutungen*." *Journal of Semantics* 6: 161–168.
- Krifka, Manfred. 1989. "Nominal Reference, Temporal Constitution and Quantification in Event Semantics." In J. van Benthem, R. Bartsch, and P. van Emde Boas, eds., *Semantics and Contextual Expression*, 75–115. Dordrecht: Foris.
- Krifka, Manfred. 1991a. "A Compositional Semantics for Multiple Focus Constructions." *Linguistische Berichte* (Sonderheft) 4:17–54.
- Krifka, Manfred. 1991b. "A Compositional Semantics for Multiple Foci." *Proceedings of SALT 1*, 127–158. Cornell Working Papers in Linguistics 10. Ithaca, N.Y.: Cornell University Press.
- Krifka, Manfred. 1992a. "Definite NPs Aren't Quantifiers." *Linguistic Inquiry* 23: 156–163.
- Krifka, Manfred. 1992b. "A Framework for Focus-Sensitive Quantification." *Proceedings of SALT 2*, 215–236. Ohio State University Working Papers in Linguistics 40, Department of Linguistics, Ohio State University.
- Krifka, Manfred. 1992c. "Focus, Quantification, and Dynamic Interpretation." Presented at the Eighth Amsterdam Colloquium.
- Krifka, Manfred. 1993. "Some Remarks on Polarity Items." In D. Zaefferer, ed., *Semantic Universals and Universal Semantics*, 150–189. Berlin: Foris.
- Kripke, Saul A. 1972. "Naming and Necessity." In D. Davidson and G. Harman, eds., *Semantics of Natural Language*, 253–355. Dordrecht: Reidel.
- Kučera, H. 1981. "Aspect, Markedness and t_0 ." In P. Tedeschi and A. Zaenen, eds., *Syntax and Semantics 14: Tense and Aspect*, 177–190. New York: Academic Press.
- Kuroda, S.-Y. 1972. "The Categorical and the Thetic Judgment: Evidence from Japanese Syntax." *Foundations of Language* 9:153–185.
- Kuroda, S.-Y. 1988. "Whether We Agree or Not: A Comparative Syntax of English and Japanese." *Linguisticae Investigationes* 12:1–47.
- Kyburg, Henry. 1990. "Probabilistic Inference and Nonmonotonic Inference." In R. Shachter, T. Levitt, L. Kanal, and J. Lemmer, eds., *Uncertainty in Artificial Intelligence 4*, 319–326. Amsterdam: North-Holland.
- Laca, Brenda. 1990. "Generic Objects: Some More Pieces of the Puzzle." *Lingua* 81:25–46.
- Ladusaw, William. 1979. *Polarity Sensitivity as Inherent Scope Relations*. Ph.D. dissertation, University of Texas at Austin.
- Landman, Fred. 1986a. "Pegs and Alecs." In J. Halpern, ed., *Theoretical Aspects of Reasoning about Knowledge*, 45–61. Los Altos: Morgan Kaufmann.
- Landman, Fred. 1986b. "Towards a Theory of Information: The Status of Partial Objects in Semantics." GRASS 6. Dordrecht: Foris.
- Landman, Fred. 1989. "Groups I," "Groups II." *Linguistics and Philosophy* 12:559–605, 723–744.
- Landman, Fred. 1992. "The Progressive." *Natural Language Semantics* 1:1–32.
- Langford, C. H. 1949. "The Institutional Use of 'The'." *Philosophy and Phenomenological Research* 10:115–120.
- Laparra, Marceline. 1988. "Degrés de l'explicitation de la lecture générique de certains syntagmes nominaux dans un corpus de langue orale." In G. Kleiber, ed., *Rencontre(s) avec la Généricité*, 113–131. *Recherches linguistiques* 12, Université de Metz.
- Lawler, John. 1972. "Generic to a Fault." *CLS* 8, 247–258. Chicago: Chicago Linguistic Society.
- Lawler, John. 1973a. *Studies in English Generics*. University of Michigan Papers in Linguistics 1:1. Ann Arbor: University of Michigan Press.
- Lawler, John. 1973b. "Tracking the Generic Toad." *CLS* 9, 320–331. Chicago: Chicago Linguistic Society.
- Léard, Jean-Marcel. 1984. "Morphogénèse et lexigénèse." *Revue Québécoise de Linguistique* 13:325–379.
- Léard, Jean-Marcel. 1988. "Quelques aspects morpho-syntaxiques des syntagmes et des phrases génériques." In G. Kleiber, ed., *Rencontre(s) avec la Généricité*, 133–155. *Recherches linguistiques* 12, Université de Metz.
- Lemmon, E. J. 1967. "Comments on D. Davidson's 'The Logical Form of Action Sentences'." In N. Rescher, ed., *The Logic of Decision and Action*, 96–103. Pittsburgh: University of Pittsburgh Press.
- Lerner, J. Y., and Wolfgang Sternefeld. 1984. "Zum Skopus der Negation im komplexen Satz des Deutschen." *Zeitschrift für Sprachwissenschaft* 3:159–202.
- Lewis, David. 1973. *Counterfactuals*. Cambridge, Mass.: Harvard University Press.
- Lewis, David. 1975. "Adverbs of Quantification." In E. Keenan, ed., *Formal Semantics of Natural Languages*, 3–15. Cambridge: Cambridge University Press.
- Lewis, David. 1983. "Scorekeeping in a Language Game." In R. Bäuerle, U. Egli, and A. von Stechow, eds., *Semantics from Different Points of View*, 172–187. Berlin: Springer-Verlag.
- Lewis, G. L. 1967. *Turkish Grammar*. Oxford: Clarendon Press.
- Lifschitz, V. 1986. "On the Satisfiability of Circumscription." *Artificial Intelligence* 28:17–27.
- Link, Godehard. 1983. "The Logical Analysis of Plurals and Mass Terms: A Lattice-Theoretical Approach." In R. Bäuerle, C. Schwarze, and A. von Stechow, eds., *Meaning, Use and Interpretation of Language*, 303–323. Berlin: de Gruyter.
- Link, Godehard. 1987. "Algebraic Semantics of Event Structures." In J. Groenendijk, M. Stokhof, and F. Veltman, eds., *Proceedings of the Sixth Amsterdam Colloquium*, 243–262. Amsterdam: ITLI, University of Amsterdam.
- Link, Godehard. 1988. "Dependency in the Theory of Generics." In M. Krifka, ed., *Genericity in Natural Language*, 313–335. SNS-Bericht 88-42, University of Tübingen.
- Löbner, Sebastian. 1987. "Natural Language and Generalized Quantifier Theory." In P. Gärdenfors, ed., *Generalized Quantifiers: Linguistic and Logic Approaches*, 181–201. Dordrecht: Reidel.

- Lyons, John. 1977. *Semantics*. (2 vols.). Cambridge: Cambridge University Press.
- Maillard, Michel. 1988. "Un zizi, ça sert à faire pipi debout! Les références génériques de ca en grammaire française." In G. Kleiber, ed., *Rencontre(s) avec la Généricité*, 157–205. Recherches linguistiques 12, Université de Metz.
- Martin, R. 1986. "Les usages génériques de l'article LA et la pluralité." In J. David and D. Kleiber, eds., *Déterminants: syntaxe et sémantique*, 187–202. Paris: Klincksieck.
- Martin, R. 1987. *Langage et croyance: les "univers de croyance" dans la théorie sémantique*. Brussels: P. Mardaga.
- May, Robert. 1977. *The Grammar of Quantification*. Ph.D. dissertation, MIT.
- May, Robert. 1985. *Logical Form: Its Structure and Derivation*. Cambridge, Mass.: MIT Press.
- Mayer, Rolf. 1980. *Ontologische Aspekte der Nominalsemantik*. Tübingen: Niemeyer.
- McCarthy, John. 1980. "Circumscription: A Form of Non-Monotonic Reasoning." *Artificial Intelligence* 13:27–39.
- McCarthy, John. 1986. "Applications of Circumscription to Formalizing Common Sense Knowledge." *Artificial Intelligence* 28:89–116.
- McDermott, Drew, and Jon Doyle. 1980. "Non-Monotonic Logic I." *Artificial Intelligence* 13:41–72.
- Mehlig, H. R. 1982a. "Generic States and Specific States." In K. Detering, *Sprache, Erkennen und Verstehen*, 28–37. Tübingen: Niemeyer.
- Mehlig, H. R. 1982b. "Nominale Referenz, Zeitreferenz und Prädikatssemantik." In H. R. Mehlig, ed., *Slavistische Linguistik*, 48–75. Munich: Sagner.
- Milner, J. C. 1978. *De la syntaxe à l'interprétation: quantites, insultes, exclamations*. Paris: Le Seuil.
- Milsark, Gary. 1974. *Existential Sentences in English*. Ph.D. dissertation, MIT. Distributed by Indiana University Linguistics Club.
- Milsark, Gary. 1977. "Toward an Explanation of Certain Peculiarities of the Existential Construction in English." *Linguistic Analysis* 3:1–30.
- Mithun, Marianne. 1984. "The Evolution of Noun Incorporation." *Language* 60: 847–894.
- Moens, M., and M. Steedman. 1988. "Temporal Ontology and Temporal Reference." *Computational Linguistics* 14:15–28.
- Moltmann, Friederike. 1995. *Parts and Wholes in Semantics*. Oxford: Oxford University Press.
- Mønnesland, S. 1984. "The Slavonic Frequentative Habitual." In C. de Groot and H. Tammola, eds., *Aspect Bound*, 53–76. Dordrecht: Foris.
- Montague, Richard. 1973. "The Proper Treatment of Quantification in Ordinary English." In J. Hintikka, J. Moravcsik, and P. Suppes, eds., *Approaches to Natural Language*, 221–242. Dordrecht: Reidel. Also in R. Thomason, ed., 1974, *Formal Philosophy: Selected Papers of Richard Montague*. New Haven, Conn.: Yale University Press.
- Moore, Robert. 1984. "Possible-World Semantics for Autoepistemic Logic." In *Proceedings of the 1984 AAAI Workshop on Nonmonotonic Reasoning*, 334–354. Menlo Park, Cal.: American Association for Artificial Intelligence.
- Morreau, Michael. 1988. "Default Formalisms for Generics: A Consumer Report."

- In M. Krifka, ed., *Genericity in Natural Language*, 337–356. SNS-Bericht 88-42, University of Tübingen.
- Morreau, Michael. 1992a. *Conditionals in Philosophy and Artificial Intelligence*. Ph.D. dissertation, University of Amsterdam.
- Morreau, Michael. 1992b. "Norms or Inference Tickets? A Frontal Collision between Intuitions." In T. Briscoe, V. De Paiva, and A. Copestake, eds., *Inheritance, Defaults, and the Lexicon*, 58–73. Cambridge: Cambridge University Press.
- Morreau, Michael. 1993. "The Conditional Logic of Generalizations." Paper presented at the IJCAI-93 Workshop on Conditionals, Chambéry, France.
- Mourelatos, Alexander P. D. 1978. "Events, Processes and States." *Linguistics and Philosophy* 2:415–434.
- Mufwene, Salikoko. 1986. "Number Delimitation in Gullah." *American Speech* 61: 33–60.
- Muller, Claude. 1988. "A propos de l'indéfini générique." In G. Kleiber, ed., *Rencontre(s) avec la Généricité*, 207–233. Recherches linguistiques 12, Université de Metz.
- Newton, Brian. 1979. "Scenarios, Modality and Verbal Aspect in Modern Greek." *Language* 55:139–167.
- Nunberg, Geoff. 1993. "Indexicality and Deixis." *Linguistics and Philosophy* 16:1–44.
- Nunberg, Geoff, and C. Pan. 1975. "Inferring Quantification in Generic Sentences." *CLS* 11, 412–422. Chicago: Chicago Linguistic Society.
- Ojeda, Almerindo E. 1991. "Definite Descriptions and Definite Generics." *Linguistics and Philosophy* 14:367–397.
- Oomen, I. 1977. *Determination bei generischen, definiten und indefiniten Beschreibungen*. Tübingen: Niemeyer.
- Parsons, Terence. 1970. "An Analysis of Mass Terms and Amount Terms." *Foundations of Language* 6:362–388. Reprinted in F. J. Pelletier, ed., 1979, *Mass Terms: Some Philosophical Problems*, 137–166. Dordrecht: Reidel.
- Parsons, Terence. 1980. "Modifiers and Quantifiers in Natural Language." In F. J. Pelletier and C. Normore, eds., *New Essays in Philosophy of Language*. *Canadian Journal of Philosophy*, suppl. vol. 6:29–60.
- Parsons, Terence. 1985. "Underlying Events in the Logical Analysis of English." In E. LePore and B. P. McLaughlin, eds., *Actions and Events: Perspectives on the Philosophy of Donald Davidson*, 235–267. Oxford: Blackwell.
- Parsons, Terence. 1990. *Events in the Semantics of English*. Cambridge, Mass.: MIT Press.
- Partee, Barbara. 1973. "Some Structural Analogies between Tenses and Pronouns in English." *The Journal of Philosophy* 70:601–609.
- Partee, Barbara. 1977. "John is Easy to Please." In A. Zampolli, ed., *Linguistic Structures Processing*, 281–312. Amsterdam: North-Holland.
- Partee, Barbara. 1978. "Bound Variables and Other Anaphora." In D. Waltz, ed., *Proceedings of TINLAP-2*, 79–85. New York: Association for Computing Machinery.
- Partee, Barbara. 1984. "Nominal and Temporal Anaphora." *Linguistics and Philosophy* 7:243–286.

- Partee, Barbara. 1987. "Noun-Phrase Interpretation and Type-Shifting Principles." In J. Groenendijk and M. Stockhof, eds., *Studies in Discourse Representation Theory and the Theory of Generalized Quantifiers*, 115–143. GRASS 8. Dordrecht: Foris.
- Partee, Barbara. 1991. "Topic, Focus, and Quantification." In *Proceedings of SALT 1*, 257–280. Cornell Working Papers in Linguistics 40. Ithaca, N.Y.: Cornell University Press.
- Partee, Barbara, and Mats Rooth. 1983. "Generalized Conjunction and Type Ambiguity." In R. Bäuerle, C. Schwarze, and A. von Stechow, eds., *Meaning, Use and Interpretation of Language*, 361–383. Berlin: de Gruyter.
- Pease-Gorrissen, Margarita. 1980. "The Use of the Article in Spanish Habitual and Generic Sentences." *Lingua* 51:311–336.
- Pease-Gorrissen, Margarita. 1982. *Generic Sentences with Special Reference to Spanish*. Dissertation Abstracts International, 42/10, 4437-A.
- Pelletier, Francis Jeffry. 1974. "On Some Proposals for the Semantics of Mass Terms." *Journal of Philosophical Logic* 3:87–108.
- Pelletier, Francis Jeffry. 1979. "Aristotle on Sameness and Referential Opacity." *Noûs* 13:283–311.
- Pelletier, Francis Jeffry. 1991. "Mass Terms." In B. Smith, ed., *Handbook of Metaphysics and Ontology*, 495–499. Munich: Philosophia.
- Pelletier, Francis Jeffry, and Lenhart K. Schubert. 1989. "Mass Expressions." In D. Gabbay and F. Guenther, eds., *Handbook of Philosophical Logic*, vol. 4, 327–407. Dordrecht: Kluwer.
- Perlmutter, David. 1970. "On the Article in English." In M. Bierwisch and K. Heider, eds., *Progress in Linguistics*, 233–248. The Hague: Mouton.
- Perlmutter, David. 1978. "Impersonal Passives and the Unaccusative Hypothesis." *Berkeley Linguistics Society* 4, 157–189.
- Pesetsky, David. 1982. *Paths and Categories*. Ph.D. dissertation, MIT.
- Picabia, Lelia. 1988. "Quand y a-t-il générique?" In G. Kleiber, ed., *Rencontre(s) avec la Généricité*, 235–259. *Recherches linguistiques* 12, Université de Metz.
- Pierrehumbert, Janet. 1980. *The Phonology and Phonetics of English Intonation*. Ph.D. dissertation, MIT.
- Pinkal, M., ed. 1986. "Tutorial: Situationssemantik und Diskursrepräsentationstheorie." In H. Stoyan, ed., *GWAI-85*, 395–471. Informatik Fachberichte 188. Berlin: Springer-Verlag.
- Platteau, F. 1980. "Definite and Indefinite Generics." In J. van der Auwera, ed., *The Semantics of Determiners*, 112–123. London: Croom Helm.
- Porterfield, Leslie, and Veneeta Srivastav. 1988. "(In)definiteness in the Absence of Articles: Evidence from Hindi and Indonesian." *Proceedings of WCCFL 7*, 265–276. Stanford, Cal.: Stanford Linguistics Association, Stanford University.
- Portner, Paul. 1992. *Situation Theory and the Semantics of Propositional Expressions*. Ph.D. dissertation, University of Massachusetts, Amherst.
- Postal, Paul. 1970. "On Coreferential Subject Deletion." *Linguistic Inquiry* 1: 439–500.
- Putnam, Hilary. 1970. "Is Semantics Possible?" In H. E. Kiefer and M. K. Munitz, eds., *Language, Belief and Metaphysics*, 50–63. Albany, N.Y.: State University of New York Press. Also in H. Putnam, 1975, *Mind, Language and Reality (Philosophical Papers, vol. 2)*, 139–152. Cambridge: Cambridge University Press.
- Putnam, Hilary. 1975. "The Meaning of 'Meaning'." In K. Gunderson, ed., *Language, Mind and Knowledge*, 131–193. Minneapolis: University of Minnesota Press. Also in H. Putnam (1975), *Mind, Language and Reality (Philosophical Papers, vol. 2)*, 215–271. Cambridge: Cambridge University Press.
- Quine, Willard Van Orman. 1960. *Word and Object*. Cambridge, Mass.: MIT Press.
- Quirk, Randolph, Sidney Greenbaum, Geoffrey Leech, and Jan Svartvik. 1985. *A Comprehensive Grammar of the English Language*. London: Longman.
- Reinhart, Tanya. 1981. "Pragmatics and Linguistics: An Analysis of Sentence Topics." *Philosophica* 27:53–93.
- Reiter, Ray. 1980. "A Logic for Default Reasoning." *Artificial Intelligence* 13: 81–132.
- Reiter, Ray. 1987. "Nonmonotonic Reasoning." *Annual Reviews of Computer Science* 2:147–187.
- Rizzi, Luigi. 1986. "Null Objects in Italian and the Theory of *Pro*." *Linguistic Inquiry* 17:501–557.
- Rizzi, Luigi. 1990. *Relativized Minimality*. Cambridge, Mass.: MIT Press.
- Roberts, Craige. 1987. *Modal Subordination, Anaphora, and Distributivity*. Ph.D. dissertation, University of Massachusetts, Amherst.
- Roberts, Craige. 1989. "Modal Subordination and Pronominal Anaphora in Discourse." *Linguistics and Philosophy* 12:683–721.
- Rochmont, Michael. 1986. *Focus in Generative Grammar*. Amsterdam: John Benjamins.
- Rodman, R. 1976. "Scope Phenomena, 'Movement Transformations', and Montague Grammar." In B. H. Partee, ed., *Montague Grammar*, 165–176. New York: Academic Press.
- Root, Rebecca. 1986. *The Semantics of Anaphora in Discourse*. Ph.D. dissertation, University of Texas at Austin.
- Rooth, Mats. 1985. *Association with Focus*. Ph.D. dissertation, University of Massachusetts, Amherst.
- Rooth, Mats. 1987. "Noun Phrase Interpretation in Montague Grammar, File Change Semantics, and Situation Semantics." In P. Gärdenfors, ed., *Generalized Quantifiers: Linguistic and Logical Approaches*, 237–268. Dordrecht: Kluwer.
- Rosch, Eleanor. 1978. "Principles of Categorization." In E. Rosch and B. B. Lloyd, eds., *Cognition and Categorization*, 27–48. Hillsdale, N.J.: Lawrence Erlbaum.
- Ryle, Gilbert. 1949. *The Concept of Mind*. London: Hutchinson.
- Sag, Ivan. 1976. *Deletion and Logical Form*. Ph.D. dissertation, MIT. Published 1980 by Garland Press, New York.
- Saito, M. 1985. *Some Asymmetries in Japanese and Their Theoretical Consequences*. Ph.D. dissertation, MIT.
- Salmon, Nathan. 1989. "Reference and Information Content: Names and Descriptions." In D. Gabbay and F. Guenther, eds., *Handbook of Philosophical Logic*, vol. 4, 409–461. Dordrecht: Kluwer.

- Sasse, Hans-Jürgen. 1987. "The Thetic/Categorical Distinction Revisited." *Linguistics* 25:511-580.
- Scha, Remko. 1981. "Distributive, Collective and Cumulative Quantification." In J. Groenendijk, T. Janssen, and M. Stokhof, eds. *Formal Methods in the Study of Language*, 483-512. Mathematical Centre Tracts 135, Mathematisch Centrum, Amsterdam.
- Schaller, George B., and Millicent E. Selsam. 1969. *The Tiger: Its Life in the Wild*. New York: Harper and Row. (A book dealing with the natural history of tigers, from which example sentences have been taken).
- Scheutz, Hannes. 1988. "Determinanten und Definitheitsarten im Bairischen und Standarddeutschen." In P. Stein, A. Weiss, and G. Hayer, eds., *Festschrift für Ingo Reiffenstein zum 60. Geburtstag*, 231-258. Göppingen: Kümmerle.
- Schubert, Lenhart K., and Francis Jeffry Pelletier. 1987. "Problems in the Representation of the Logical Form of Generics, Plurals, and Mass Nouns." In E. LePore, ed., *New Directions in Semantics*, 385-451. London: Academic Press.
- Schubert, Lenhart K., and Francis Jeffry Pelletier. 1988. "An Outlook on Generic Statements." In M. Krifka, ed., *Genericity in Natural Language*, 357-372. SNS-Bericht 88-42, University of Tübingen.
- Schubert, Lenhart K., and Francis Jeffry Pelletier. 1989. "Generically Speaking: Or, Using Discourse Representation Theory to Interpret Generics." In G. Chierchia, B. Partee, and R. Turner, eds., *Properties, Types and Meaning*, vol. 2: *Semantic Issues*, 193-268. Dordrecht: Kluwer.
- Schwartz, Stephen P. 1977. *Naming, Necessity and Natural Kinds*. Ithaca, N.Y.: Cornell University Press.
- Searle, John. 1969. *Speech Acts*. Cambridge: Cambridge University Press.
- Selkirk, Elizabeth. 1977. "Some Remarks on Noun Phrase Structure." In P. Culicover, T. Wasow, and A. Akmajian, eds., *Formal Syntax*, 285-316. New York: Academic Press.
- Selkirk, Elizabeth. 1984. *Phonology and Syntax: The Relation Between Sound and Structure*. Cambridge, Mass.: MIT Press.
- Sellars, Wilfred. 1963. "Abstract Entities." *Review of Metaphysics* 16:627-671. Reprinted in Wilfred Sellars, 1967, *Philosophical Perspectives*, 229-269. Springfield, Ill.: Charles Thomas Publ.
- Sharvy, Richard. 1978. "Maybe English Has No Count Nouns: Notes on Chinese Semantics. An Essay in Metaphysics and Linguistics." *Studies in Language* 2:345-365.
- Sharvy, Richard. 1980. "A More General Theory of Definite Descriptions." *The Philosophical Review* 89:607-624.
- Smith, Carlota. 1964. "Determiners and Relative Clauses in Generative Grammar of English." *Language* 40:37-52.
- Smith, Neil. 1975. "On Generics." *Transactions of the Philological Society*, 27-48.
- Spears, A. K. 1974. "On the Notion Occasion and the Analysis of Aspect." *CLS* 10, 672-683. Chicago: Chicago Linguistic Society.
- Spohn, Wolfgang. 1988. "Ordinal Conditional Functions: A Dynamic Theory of Epistemic States." In W. L. Harper and B. Skyrms, eds., *Causation in Decision, Belief Change, and Statistics*, vol. 2, 105-134. Dordrecht: Kluwer.
- Srivastav, Veneeta. 1991. *WH-Dependencies in Hindi and the Theory of Grammar*. Ph.D. dissertation, Cornell University.
- Stalnaker, Robert. 1968. "A Theory of Conditionals." In N. Rescher, ed., *Studies in Logical Theory*, 98-112. Oxford: Blackwell.
- Stalnaker, Robert. 1978. "Assertion." In P. Cole, ed., *Syntax and Semantics 9: Pragmatics*, 315-332. New York: Academic Press.
- Stalnaker, Robert. 1987. *Inquiry*. Cambridge, Mass.: MIT Press.
- Stowell, Tim. 1978. "What Was There Before There Was There." In D. Farkas, W. Jacobson, and K. Todrys, eds., *CLS* 14, 458-471. Chicago: Chicago Linguistic Society.
- Strigin, Anatoli. 1985. "Eine Semantik für generische Sätze." *Linguistische Studien* 125:1-85.
- Stump, Gregory. 1981. *Formal Semantics and Pragmatics of Free Adjuncts and Absolutes*. Ph.D. dissertation, Ohio State University.
- Stump, Gregory. 1985. *The Semantic Variability of Absolute Constructions*. Dordrecht: Reidel.
- Tamba, Irene. 1988. "Quelques aspects des expressions génériques en japonais." In G. Kleiber, ed., *Rencontre(s) avec la Généricité*, 281-300. Recherches linguistiques 12, Université de Metz.
- Tateishi, K. 1988. "On the Universality of X-bar Theory: The Case of Japanese." *Proceedings of WCCFL* 7, 331-345. Stanford, Cal.: Stanford Linguistics Association, Stanford University.
- ter Meulen, Alice. 1980. *Substances, Quantities and Individuals*. Ph.D. dissertation, Stanford University. Distributed by Indiana University Linguistics Club.
- ter Meulen, Alice. 1981. "An Intensional Logic for Mass Terms." *Philosophical Studies* 40:105-126.
- ter Meulen, Alice. 1986a. "Generic Information, Conditional Contexts and Constraints." In E. Traugott, A. ter Meulen, J. Snitzer-Reilly, and C. Ferguson, eds., *On Conditionals*, 123-145. Cambridge: Cambridge University Press.
- ter Meulen, Alice. 1986b. "Plural Pronouns with Nominal and Predicative Antecedents." *Proceedings of WCCFL* 5, 165-177. Stanford, Cal.: Stanford Linguistics Association, Stanford University.
- ter Meulen, Alice. 1987. "The Dynamic Interpretation of Discourse." In T. Ballmer and W. Wilden, eds., *Process Linguistics*, 283-308. Tübingen: Niemeyer.
- ter Meulen, Alice. 1988. "Semantic Constraints on Type-Shifting Anaphora." In M. Krifka, ed., *Genericity in Natural Language*, 373-393. SNS-Bericht 88-42, University of Tübingen.
- Thomason, Richmond. 1988. "Theories of Nonmonotonicity and Natural Language Generics." In M. Krifka, ed., *Genericity in Natural Language*, 395-406. SNS-Bericht 88-42, University of Tübingen.
- Thrane, T. 1980. *Referential-Semantic Analysis: Aspects of a Theory of Linguistics*. Cambridge: Cambridge University Press.
- Tichy, Pavel. 1980. "The Semantics of Episodic Verbs." *Theoretical Linguistics* 7: 263-296.

- Traugott, E., A. ter Meulen, J. Snitzer-Reilly, and C. Ferguson, eds. 1986. *On Conditionals*. Cambridge: Cambridge University Press.
- Turner, Raymond. 1983. "Montague Grammar, Nominalizations and Scott's Doleans." *Linguistics and Philosophy* 6:259-288.
- Uhmman, Susanne. 1991. *Fokusphonologie. Eine Analyse deutscher Intonationskonstrukturen im Rahmen der nicht-linearen Phonologie*. Tübingen: Niemeyer.
- van Benthem, Johan. 1984. "Foundations of Conditional Logic." *Journal of Philosophical Logic* 13:303-349.
- van Benthem, Johan, and Alice ter Meulen, eds. 1985. *Generalized Quantifiers in Natural Language*. GRASS 5. Dordrecht: Foris.
- van Langendonck, Willy. 1980a. "Indefinites, Exemplars, and Kinds." In J. van der Auwera, ed., *The Semantics of Determiners*, 211-231. London: Croom Helm.
- van Langendonck, Willy. 1980b. "On a Narrow Conception of Genericness." *Linguistics* 18:1085-1094.
- van Riemsdijk, Henk. 1987. "Movement and Regeneration: A First Short Outline." Ms., Tilburg University.
- Vater, Hans. 1979. *Das System der Artikelformen im gegenwärtigen Deutsch*. 2d ed. Tübingen: Niemeyer.
- Veltman, Frank. 1995. "Defaults in Update Semantics." Forthcoming in *The Journal of Philosophical Logic*.
- Vendler, Zeno. 1967. *Linguistics in Philosophy*. Ithaca, N.Y.: Cornell University Press.
- von Stechow, Arnim. 1982. "Structured Propositions." Forschungsbericht 59 des SFB 99, University of Konstanz.
- von Stechow, Arnim. 1986. "Alternative Semantics for Questions." Ms., University of Konstanz.
- von Stechow, Arnim. 1989. "Focusing and Backgrounding Operators." Arbeitspapier 6 der Fachgruppe Sprachwissenschaft, University of Konstanz.
- von Stechow, Arnim, and Wolfgang Sternefeld. 1988. *Bausteine syntaktischen Wissens: Ein Lehrbuch der generativen Grammatik*. Opladen: Westdeutscher Verlag.
- von Stechow, Arnim, and Susanne Uhmman. 1986. "Some Remarks on Focus Projection." In W. Abraham and S. de Mey, eds., *Topic, Focus and Configurationality*, 295-320. Amsterdam: John Benjamins.
- Ware, Robert X. 1975. "Some Bits and Pieces." *Synthese* 31:379-393. Reprinted in F. J. Pelletier, ed., 1979, *Mass Terms: Some Philosophical Problems*, 15-29. Dordrecht: Reidel.
- Wasow, Tom. 1972. *Anaphoric Relations in English*. Ph.D. dissertation, MIT.
- Wasow, Tom. 1979. *Anaphora in Generative Grammar*. Gent: Story-Scientia.
- Webber, Bonnie Lynn. 1978. *A Formal Approach to Discourse Anaphora*. Ph.D. dissertation, Harvard University.
- Webelhuth, Gerd. 1985. "German is Configurational." *Linguistic Review* 4:203-246.
- Webelhuth, Gerd. 1989. *Syntactic Saturation Phenomena and the Modern Germanic Languages*. Ph.D. dissertation, University of Massachusetts, Amherst.
- Weir, Carl Edward. 1986. *English Gerundive Constructions*. Ph.D. dissertation, University of Texas at Austin.
- Westerstahl, Dag. 1985. "Logical Constants in Quantifier Languages." *Linguistics and Philosophy* 8:387-413.
- Westerstahl, Dag. 1989. "Quantifiers in Formal and Natural Languages." In D. Gabbay and F. Guenther, eds., *Handbook of Philosophical Logic*, vol. 4, 1-131. Dordrecht: Reidel.
- Whorf, Benjamin L. 1956. *Language, Thought, and Reality: Selected Writings of B. L. Whorf*. Ed. J. B. Carroll. London: Chapman & Hall; Cambridge, Mass.: MIT Press.
- Wilkinson, Karina. 1986. "Genericity and Indefinite NPs." Ms., University of Massachusetts, Amherst.
- Wilkinson, Karina. 1988. "The Semantics of the Common Noun 'Kind'." In M. Krifka, ed., *Genericity in Natural Language*, 407-429. SNS-Bericht 88-42, University of Tübingen. A revised version titled "(In)definites and kind NPs" appeared in E. J. Fee and K. Hunt, eds., *Proceedings of the WCCFL-8* (1989), 414-428, Stanford Linguistics Association, Stanford, Cal.
- Wilkinson, Karina. 1991. *Studies in the Semantics of Generic Noun Phrases*. Ph.D. dissertation, University of Massachusetts, Amherst.
- Williams, Edwin. 1977. "Discourse and Logical Form." *Linguistic Inquiry* 18: 101-139.
- Williams, Edwin. 1981. "Argument Structure and Morphology." *The Linguistic Review* 1:81-114.
- Williams, Edwin. 1987. "NP-trace in Θ -Theory." *Linguistics and Philosophy* 10: 433-447.
- Wilmet, Marc. 1985. "A Kiwi Abounds in this Area: Note sur l'article «indéfini générique»." In G. Debusscher and J.-P. van Noppen, eds., *Communiquer et traduire*, 219-226. Brussels: Éditions de l'Université.
- Wilmet, Marc. 1988. "Contre la généricité." *Lingua* 75:231-250.
- Wittgenstein, Ludwig. 1953. *Philosophical Investigations*. Oxford: Blackwell.
- Wolff, J. U. 1966. *Beginning Cebuano*. Part 1 and 2. New Haven, Conn.: Yale University Press.
- Woolford, Ellen. 1988. "VP Internal Subjects in VSO and Non-Configurational Languages." Ms., Pennsylvania State University.
- Ziff, Paul. 1972. *Understanding Understanding*. Ithaca, N.Y.: Cornell University Press.
- Zuber, Ryszard. 1978. "Analyticity and Genericness." *Grazer Philosophische Studien* 6:63-73.
- Zuber, Ryszard. 1989. "Phrases génériques et oppositions privatives." *Travaux de Linguistique* 18:95-111.
- Zucchi, Alessandro. 1990. *The Language of Propositions and Events*. Ph.D. dissertation, University of Massachusetts, Amherst.
- Zwarts, Joost. 1988. "An Analysis of Genericity and Its Translation in Rosetta." Report of Philips Research Laboratories, Eindhoven, and Instituut A. W. de Groot voor Algemene Taalwetenschap, Utrecht.
- Zwarts, Joost. 1990. "Kinds and Generic Terms." In M. Stokhof and L. Torenvliet, eds., *Proceedings of the Seventh Amsterdam Colloquium*, 685-705. Amsterdam: ITLI, University of Amsterdam.

THE GENERIC BOOK

Edited by

Gregory N. Carlson

and

Francis Jeffry Pelletier

THE UNIVERSITY OF CHICAGO PRESS

Chicago and London

1995