

# Semantics of Adjectival Modification: Getting Started

## *Preliminaries*

This course will concern a general topic in semantics: the interpretation of adjectival modifiers. However, my presentation and development of the subject will be framed around a certain, particular phenomenon that I am interested in. We might call it "apparent adverbial modification inside DP".

My plan for the course is as follows:

- **Day 1:** Introduction to the problem area and certain basic issues in adjectival semantics; sketch of the analysis to be pursued
- **Day 2:** Discussion of two previous analyses of attributive modification in the literature: Wheeler (1972)/Platts(1979), and Siegel (1975)
- **Day 3:** Development of the event theory and a sketch of problems
- **Day 4:** Extensions of the event theory to the structure of possessive DPs
- **Day 5:** Various topics, including: events readings in attributive & predicate position, "constructional events", the semantics of *old*, and Infrequency modification in DP.

Some notes:

- The assigned readings for this course are intended as background; a more extensive reading list is available, as well as some additional articles.
- Many of the ideas presented here are tentative hence I welcome: challenges, suggestions, new data, alternative proposals, etc.
- This won't be a "high-tech" course; basically we won't need much formal apparatus beyond 1st-order logic
- The ideas presented here build on the excellent work of many fine researchers. Please point out any failures of citation, or connected work.

I have a long-stranding interest in these areas. If you become interested too and want to correspond about them, email me at *richard.larson@stonybrook.edu*.

## 1.0 Introducing the Problem Area

Adjectives are said to occur **predicatively** when they function as the main predicate in a clause or clause-like structure (1a-d); they are said to occur **attributively** when they function as modifiers in a nominal (2a-d):

- (1) a. Beatrice is **small**  
b. Max considers [Beatrice **small**]  
c. Beatrice seems [ t **small**]  
d. Beatrice feels [PRO **cold**]  
"feels herself to be cold"

- (2) a. [Two **small** elephants] appeared.
- b. Monticello is [a **white** building].
- c. Marcel is a **possible** participant.
- d. Hillary spoke to [an **alleged** liar].

We will be concentrating here on attributive adjectives

### 1.1 Intersective Interpretation of Attributives

One simple way idea about the semantics of attributive modification is that both the noun and adjectives are one-place predicates that are true of things (3a,b). On this idea, the interpretation of (4a,b) as simple conjunctions of predicates (5a,b):

- (3) a. white(x) , building(x)
- b. small(x) , elephant(x)
  
- (4) a. Monticello is a **white building**
- b. Beatrice is a **small elephant**
  
- (5) a. white(m) & building(m)
- b. small(b) & elephant(b)

Such an interpretation for attributive adjectives is sometimes called **intersective**. Think of one-place predicates (adjective & noun) as picking out sets, and interpret the A-N combination by taking the intersection of their respective sets. When a sentence of the form (6a) is being understood intersectively it can be paraphrased accurately as in (6b):

- (6) a. NP is a(n) A N
- b. NP is an A and NP is an N

### **Comparison Class Relativity**

There is a proviso regarding intersective interpretations that we must take account of before going on. It's often noted that interpreting *Beatrice is a small elephant* as in (7) is inadequate since smallness is not predicated "absolutely" of a thing, but rather relatively:

- (7) small(b) & elephant(b)

When we say *Beatrice is a small elephant* we don't mean that she is a small object per se, but rather something like "*Beatrice is a small elephant for an elephant*". One way of seeing what is wrong with (7) is to think about the corresponding interpretation assigned to *Felix is a large flea*:

- (8) large(f) & flea(f)

It's reasonable to think that if something is big, it's larger than something that is small. But we surely don't want to reason as in (9):

- (9) Beatrice is a small elephant  
 Felix is a large flea  
 -----  
 Felix is larger than Beatrice

Intuitively, what goes wrong here is that *small* and *big* are attributed wrt a **standard** or **comparison class**, and being small wrt one standard (like elephant-size) doesn't entail smallness wrt another standard (like flea-size). A great many adjectives, including *big*, *small*, *tall*, *short*, *wide*, *narrow*, *sweet*, *sour*, etc. are understood this way - i.e., relative to some standard, which is often fixed by context.

One way of capturing the idea that adjectives are predicated wrt a standard is to think of them as including an additional argument position. Call it "*C*" for "comparison class". So *small* would be represented semantically like this:

- (10)  $\text{small}(x, C)$                     "x is small for a *C*"

The comparison class argument would be what is spelled out explicitly by a *for*-PP, as in (11a-c); the argument would be left implicit when the *for*-PP is absent.

- (11) a.  $\text{small}[\text{PP for an elephant}]$              $\text{small}(x, \textit{elephant})$   
 b.  $\text{large}[\text{PP for a flea}]$                      $\text{large}(x, \textit{flea})$

Adopting the idea of a comparison class argument, the representations for *Beatrice is a small elephant* and *Felix is a large flea*, on their intersective interpretations, become a little more complex:

- (12) a.  $\text{small}(\textit{Beatrice}, \textit{elephant}) \ \& \ \textit{elephant}(\textit{Beatrice})$   
 b.  $\text{large}(\textit{Felix}, \textit{flea}) \ \& \ \textit{flea}(\textit{Felix})$

The interpretation of *Beatrice is a small elephant* is still intersective, only now it's not the set of elephants and the set of small things that are being intersected. Rather it's the set of elephants and the set of small-things-that-are-small-for-an-elephant. Notice that with the introduction of *C*, there is no chance that (12a,b), taken together, will entail Felix being larger than Beatrice. Relativity to comparison class will come up regularly, as we will see.

## 1.2 Problem 1: Adverbial Adjectives Modifying Inside the Nominal

Not all attributive adjectival modification is intersective, even when comparison class relativity is factored in. Consider examples like this:

- (13) a. Marcel and Rene are [two **possible** participants].  
 b. Hillary spoke to [an **alleged** liar].  
 c. Jan Wouter owns [a **toy** gun].  
 d. Sjef lost [his **rubber** duck].  
 e. Ellen Petra bought [some **fake** flowers].
- (14) a. Olga is a **beautiful** dancer.  
 b. Kathrin is an **intelligent** student.  
 c. George is a **skillful** manager.  
 d. Teun was a **fierce** arguer.  
 e. Yo-yo is a **good** cellist.  
 f. Bill is a **diligent** president.  
 g. Peter is an **old** friend.

The two sets of cases are somewhat different. The first appear to have no appropriate intersective readings, for differing reasons in the different cases. For example, even if Marcel is a possible participant, it's not clear what (15a) would mean. Similarly even if Bill is an alleged liar, what would it mean to say that he is alleged?

- (15) a. #Marcel is possible and Marcel is a participant  
 b. #Bill is alleged and Bill is a liar

By contrast, in the case of (13c-e), the intersective readings are not incoherent, but rather appear to yield an incorrect entailment. If something is a toy gun, then it is a toy, but it is precisely not a gun. Similarly for (13d,e).

The examples in (14) present a different picture. Certainly each of these has a reading where the A - N combination is understood intersectively.

- (16) a. Olga is **beautiful** and Olga is a dancer.  
 b. Kathrin is **intelligent** and Kathrin is a student.  
 c. George is **skillful** and George is a manager.  
 d. Teun was **fierce** and Teun was an arguer.  
 e. Yo-yo is **good** and Yo-yo is a cellist.  
 f. Bill is **diligent** and Bill is a president.  
 g. Peter is **old** and Peter is a friend.

But each also has another reading where the A - N combination is understood non-intersectively. There are two different ways to paraphrase this reading. One uses an *as-PP* (17). The other paraphrase uses an adverbial counterpart of the adjective (18).

- (17) a. Olga is a **beautiful as a dancer**.  
 b. Kathrin is an **intelligent as a student**.  
 c. George is a **skillful as a manager**.

- d. Teun was **fierce as an arguer**.
- e. Yo-yo is a **good as a cellist**.
- f. Bill is a **diligent as a president**.
- g. ??Peter is an **old as a friend**. (better: **old as friends go**)

- (18)
- a. Olga dances **beautifully**.
  - b. Kathrin studies **intelligently**.
  - c. George manages **skillfully**.
  - d. Teun argued **fiercely**.
  - e. Yo-yo plays cello **well**.
  - f. Bill executes the office of president **diligently**.
  - g. Peter has been a friend **for a long time**.

I am going to concentrate on the class of cases in (14), putting aside those in (13), perhaps for later. Regarding the cases in (14), there is a decision to be made as to which one of these paraphrases possibilities - (17) or (18) - we're going to take as indicating what's "really" going on in the construction. (The possibility exists, of course, that neither does). A useful general principle is to prefer the paraphrase for which one has a good (or promising), independent analysis. I will argue below that the work of Donald Davidson provides an attractive account of adverbial semantics. Accordingly, I am going to take the adverbial paraphrase as my jumping off point for further analysis. Accepting that decision, what the data in (14) seem to suggest is that in certain cases an adjective can function essentially as an adverb, even when it occurs internally to a noun phrase

This raises a simple and obvious question:

**Question 1:** How is adverbial modification of a noun by an adjective possible, and how does it work?

**Why the Question Seems Important:** Because it runs counter to the story familiar from grammar books that adverbs have to do with verbs, whereas adjectives have to do with nouns - put in semantic terms, adverbs qualify actions, events, etc. , whereas adjectives qualify things, stuffs, etc. What we seem to have here is an adjective behaving semantically as an adverb inside the nominal. If that is correct, it would seem to indicate the presence of something like verbal semantic structure inside the nominal.

This result may appear unsurprising given that *er*-nominals like *dancer* are derived directly from verbs (*dance*). In view of this, think of *beautiful* qualifying *dancer* in the same way that *beautifully* qualifies *dances*. But what about the following pair, noted by Vendler:

- (19)
- a.i. Arthur was a **just** ruler.
  - ii. Arthur ruled **justly**.

- b.i. Arthur was a **just** king.
- ii. Arthur ??-ed **justly**.

Suppose we analyze the relation between *just* and *ruler* in (19ai) as identical to the relation between *justly* and *rule* in (19aai). How are we to understand the relation between *just* and *king* in (19bi)? Semantically, (19ai) and (19bi) appear parallel. But there is no verb *king*.

### **Follow-up Notes**

There are many interesting puzzles in this domain. Consider examples like *Max is an angry drunk*. It cannot be paraphrased as "Max drinks angrily" - the latter barely makes sense. Even something like *Max is angry as a drunk/drinker* seems a bit rough. Better would be *Max is/becomes angry when drunk*. Here we seem to have something like a temporal adverb reading of the adjective.

### **1.3 Problem 2: Adverbial Adjectives Modifying Outside the Nominal?**

Bolinger (1967) notes examples like the following:

- (20) a. [ the **occasional** customer ] strolled by.
- b. Barbara saw [ the **occasional** customer].

- (21) a. [ a **sporadic** shot ] was heard.
- b. Rita heard [ a **sporadic** shot ].

- (22) [ an **infrequent** visitor ] was seen.

What is interesting about these cases is that an adjective that occurs internal to the bracketed nominal appears to be understood like a matrix adverbial; compare:

- (20') a. **Occasionally** [ a customer ] strolled by.
- b. **Occasionally** Barbara saw [ a customer]

- (21') a. **Sporadically** [ a shot ] was heard.
- b. **Sporadically** Rita heard [ a shot ].

- (22') [ a visitor ] was seen **infrequently**.

Note that this phenomenon is constrained in curious ways. The adverbs in question seem to be adverbs expressing infrequency (cf. (23)); notice also the alternation between definite nominals and the sentence equivalent with an indefinite nominal (16''):

- (23) a. [ a **frequent** customer ] strolled by.  
      (cf. *Frequently a customer strolled by.*)

- b. Barbara saw [ a **regular** customer].  
(cf. *Regularly Barbara saw a customer.*)

- (20")a. **Occasionally** [ the customer ] strolled by.
- b. **Occasionally** Barbara saw [ the customer]

The adverbial adjective behavior seen in these examples is different from that noted above. And in fact in certain examples, both adverbial readings can be observed. For example, it seems possible to understand (24) in either of the two ways indicated below it.

- (24) Barbara saw an occasional sailor
- "Barbara saw a person who occasionally sailed"
- "Occasionally, Barbara saw a sailor"

The first reading is one of the kind noted above, where *occasional* behaves as an adverbial modifier of the noun *sail(or)*. The second reading is one of the newer kind, where *occasional* seems to modify the whole clause.

The questions raised here are the following:

**Questions:** What does adjectival modification with sentence-level adverbial semantics amount to? How does it work? What are the sources of the constraints we see (lexical restrictions, contrast between definite indefinite determiners, etc.)?

**Why the Questions Seem Important:** Because there is a serious compositionality question here. How can a phrase X contained within a constituent of Y act as a modifier of Y?

[ Y ... [ ... X... ] ... ]

Notice by the way, that it would not be satisfactory simply to propose that at LF the constituency gets rearranged so that what was NP-internal becomes NP-external in the syntax:

[ the occasional customer ] strolled by  
occasional [ the t customer ] strolled by  
    \\_\_\_\_\_/

Something like this is proposed by Y. Kitagawa (1986) to account for a similar phenomenon occurring in Japanese. But this "solution" just begs the question of why the adjective was projected within NP in the first place. Furthermore, with respect to the present case, the "LF readjustment" analysis:

- does nothing to clarify why the phenomenon appears limited to infrequency As and isn't perfectly general.
- would seem to make the wrong predications regarding (20a,b), incorrectly equating them to (20'a,b), rather than (20'a,b).

### ***Follow-up Note***

Cases of this kind show considerable complexity, as revealed by paraphrases. Consider (24), which can mean something like (25a). This is distinct (it seems) from (25b); (24) can also mean something like (25c):

(24) Naoko bought her usual newspaper.

- (25) a. As usual/as she usually did, Naoko bought a newspaper.  
 b. Usually, Naoko bought a newspaper.  
 c. Naoko bought the newspaper she usually bought.

In all of these cases the function of A is adverbial, broadly speaking, but exactly how the verbal component is understood varies considerably.

### **1.4 Problem 3: Prenominal-Postnominal Meaning Contrasts**

English is a language in which adjectives typically occur prenominally (26a,b). In certain cases, however, postnominal adjectives are also allowed; cf. the pairs in (27a-e):

- (26) a. a tall man  
 b. \*a man tall

- (27) a. the responsible individuals (include Mary, John and Alice)  
 the individuals responsible (include Mary, John and Alice)  
 b. the stolen jewels (were on the table).  
 the jewels stolen (were on the table).  
 c. the navigable rivers (include the Nile, the Amazon and the Ganges)  
 the rivers navigable (include the Nile, the Amazon and the Ganges)  
 d. the visible stars (include Capella, Betelgeuse, and Sirius)  
 the stars visible (include Capella, Betelgeuse, and Sirius)

Bolinger (1967) notes a subtle, but systematic contrast in meaning that accompanies the difference in position. When the adjective occurs postnominally it appears to attribute a temporary property to the individuals denoted by N. Thus *the stars visible* refers to the stars that, observing conditions being what they are at the time, can be picked out by the eye, etc. When the adjective occurs prenominally it can have this temporary property reading. But it can also have a reading where it seems to attribute an enduring or stable property to the individuals denoted by N. Thus *the visible stars* can refer to what *the stars visible* does. But it can also refer to the stars whose intrinsic brightness renders them detectable to the unaided eye - in astronomical terms, stars of



magnitude one to five. The postnominal adjective does not have this stable property reading.

The difference is truth conditional. On a night where clouds obscure some portion of the sky, (28a) might well be true and (28b) false at the very same time:

- (28) a. The visible stars include Capella.  
b. The stars visible include Capella.

So the questions that comes up here are:

**Questions:** What is responsible for the meaning contrast between prenominal and postnominal occurrences of adjectives? How is the meaning difference derived and why does the correlation go the way it does?

**Why the Questions Seem Important:** One reason is because the contrast seems to track the difference between the attributive versus the predicative use of adjectives. Compare (29a,b):

- (29) a. Capella is visible.  
b. The stars which are visible include Capella.  
c. Capella is a visible star.

It seems to me that when used as a predicate, as in (29a,b), *visible* can only have its "temporary property" meaning. (29a,b) talk about stars that happen to be visible at the time of speech, not about stars that are intrinsically bright. It's only when *visible* is used as a prenominal modifier of N that the permanent property meaning becomes available (29c). Accordingly, the prenominal-postnominal contrast may offer insight into the attributive - predicative distinction.

A second reason why this issue seems interesting is because the contrast in meaning observed here seems suspiciously close to what has been called the stage-level vs. individual-level contrast in predicates (Carlson (1977)). Stage-level predicates are ones that attribute properties to temporal stages of individuals ("time-slices" of them); accordingly stage-level predicates attribute temporary properties. An example is *sick*. Individual-level predicates attribute properties to the individual as a whole, and not relative to a temporal stage; hence, individual-level predicates attribute stable properties. An example is *tall*.

Certain environments seem to select for one kind of predicate versus another Consider the following contrast in *there*-insertion sentences, where *sick* is a stage-level predicate and *tall* is an individual-level predicate. Descriptively speaking, *there*-insertion sentences require a stage-level predicate in the coda (30). Note that this correlates with the ability to occur pre- and post-nominally (31):

- (30) a. There are many children sick.  
 b. \*There are many children tall.
- (31) a.i. The sick children include Mary, Beth and Bill.  
 ii. The children sick include Mary, Beth and Bill.  
 b.i. The tall children include Mary, Beth and Bill.  
 ii. \*The children tall include Mary, Beth and Bill.

This suggests that what is going on with (26) and (27) is a matter of the stage-level vs. individual-level status of the predicates. The meaning difference with pre- and postverbal adjectives may thus shed light on the more general stage-level/individual-level contrast.

## 2.0 What Ties These Problems Together?

We've reviewed three simple problems, and some reasons for being interested in them. Stated so far they aren't much more than a list. What would be interesting would be to stitch them together. The thread that I want to sew with in these lectures is event semantics, following up some lines of thinking begun in Larson (1983, 1995) and Larson and Segal (1995). First a little background on the general approach.

### 2.1 Event Semantics

Event semantics can be traced ultimately to proposals by the Sanskrit grammarians, but it was ushered back into modern theorizing by the American philosopher Donald Davidson in a famous 1967 paper called "The Logical Form of Action Sentences." Davidson introduced events as a way of explaining how adverbs work semantically. His suggestion was simple, but elegant.

Consider a basic example like (32a). On a standard view, its logical form would be as in (32b) (ignoring tense). Here *kick* is represented by the two-place relation 'kick(\_\_, \_\_)', and 'shem' and 'shaun' are constants picking out the individuals shem and shaun:

- (32) a. Shem kicked Shaun.  
 b. kick(shem, shaun)

Davidson suggested that the logical representation of (32a) was actually more complicated than (32b). He proposed (33), which differs in that it contains an extra position 'e' and a quantifier '∃', read: "there exists":

- (33) ∃e[kick(shem, shaun, e)]  
 (In prose: "There is an e, such that e is a kicking of shaun by shem.")

The addition of the event place e allows adverbs to be accommodated in a simple way:

adverbs are analyzed by Davidson as predicates that are true of events. So (34a)-(36a) are interpreted as in (34b)-(36b):

- |  |          |
|--|----------|
| (34) a. Shem kicked Shaun quickly  | MANNER   |
| b. $\exists e[\text{kick}(\text{shem}, \text{shaun}, e) \ \& \ \text{quick}(e)]$       |          |
| (35) a. Shem kicked Shaun for-an-hour  | DURATION |
| b. $\exists e[\text{kick}(\text{shem}, \text{shaun}, e) \ \& \ \text{for-an-hour}(e)]$ |          |
| (36) a. Shem kicked Shaun in-the-park  | LOCATION |
| b. $\exists e[\text{kick}(\text{shem}, \text{shaun}, e) \ \& \ \text{quick}(e)]$       |          |

In each case the adverbial element in the syntax corresponds to a predicate of events in the logic. There are many nice consequences of this analysis. We won't review them, but will simply assume that the Davidsonian position is correct. This will be the key for approaching our three questions. In closing now, I will just sketch the directions that Davidsonian events suggest.

## 2.2 Adverbial Modification of Nouns

Suppose Davidson is right that adverbial semantics is a matter of event predication. And suppose that the adjective in (37a) is analysed parallel to the adverb in (37b) (as I have suggested):

- (37) a. Olga is a beautiful dancer.  
    b. Olga dances beautifully.

Then it follows that the noun *dancer*, like the verb *dance*, must introduce an event that the adjective/adverb can be predicated of. That is, for both (37a) and (37b) we apparently need something like (38):

- (38)  $\exists e[\text{dance}(\text{olga}, e) \ \& \ \text{beautiful}(e)]$

Put succinctly, for an adjective to behave like an adverb, there must be events introduced inside NP. There is a long way that we can follow this idea. And some surprising turns when we do. How to proceed is fairly clear however.

## 2.3 Adverbial Semantics Inside and Outside NP

We've discussed Davidson's idea that sentences as a whole make reference to events. Suppose that NPs may also make reference to events in their semantics. For our examples motivating question 2, what seems to be true is that an adjective inside an NP can be directly predicated of (or quantify over) events introduced outside it.

If this is the right way of looking at things, working it out requires care. Consider, for example, the obvious idea of identifying the sentence and noun events, so that the "e"

introduced by S and the "e" introduced by NP are the same. Under this idea, modification of the second "e" would be tantamount to modification of the first. This proposal can't possibly work. Consider (39) on the reading "Occasionally, a sailor strolled by". We don't want to render this as in (40):

(39) [ an occasional sailor ] strolled by.

(40)  $\text{OCe}\exists x[\text{strolling}(x, e) \ \& \ \text{sailing}(x,e)]$

"For occasional e and for some x, e is a strolling by x and e is a sailing by x".

Among its problems, this formula asserts that the sailing and the strolling were the same event, which is nonsense.

A more promising approach to (39), I think, is to effect modification of sentence events referred to outside NP indirectly, by means of the individuals and events referred to inside NP. Consider (41a). The sentence is compatible with a scenario where I look at the students as a group, with one event of looking. It's also compatible with my looking at students individually, with an event of looking for each student. Compare (41b); it seems to have only the "many-lookings" reading: one for each student. Evidently the VP adverb *individually* forces the distribution of events, and we have to partition those events over individuals. Now consider (41c):

(41) a. I looked at the students.

b. I looked at the students individually.

c. I looked at the individual students.

The natural reading of (41c) is equivalent to (41b). The adjective apparently forces the students to be read distributively, with the result that the only reading is one where we get individual lookings. In effect, forcing a certain partitioning of the individuals forces a parallel partitioning of the events described by the main clause predicate. The adjective needn't be seen as modifying the clause event directly. Rather it modifies the noun and this has the result of modifying the clause events in a parallel way.

## 2.4 Stage-level/Individual-level as Generic Quantification

Earlier we observed that positional differences between A and N appear to track the stage-level/individual-level distinction (henceforth "s-level" and "i-level"). The example pair involved argument NPs (42), however the same facts hold when the noun + modifier are in predicate position (43):

(42) a. The **visible** stars include Capella.

b. The stars **visible** include Capella.

(43) a. Those are the stars **visible**.

b. Those are the **visible** stars.

The postnominal adjectives are read as s-level ((42a), (43a)). The prenominal adjectives can be read either as s-level or i-level ((42b), (43b)).

In fact the relevant syntactic contrast is not strictly one of linear order, but rather one of relative closeness to N. Note first that it is possible to get more than one occurrence of A in conjunction with N:

- (44) a. The **visible** stars **visible** include Capella.  
b. The **visible visible** stars include Capella.

We understand (44a) along the following follows: "The inherently visible stars that happen to be visible at the moment include Capella". Now observe that the same interpretation attaches to (44b), but with the added intuition that it is the occurrence of *visible* closest to N that we understand as predicating inherent visibility:

- (44b) The **visible visible** stars include Capella.  
s-level i-level

This claim about which adjective in (44b) attributes the intrinsic property and which attributes the transient is supported by the following pair (due to B. Citko):

- (45) The **invisible visible** stars include Capella.  
The **visible invisible** stars include Capella.

The first is coherent, with a meaning something like "the intrinsically visible stars that happen to be invisible at the moment include Capella." The latter is contradictory, with a meaning something like "the intrinsically invisible stars that happen to be visible at the moment include Capella."

### ***Chierchia's Generic Quantifier***

The stage-level/individual-level contrast has been linked to event quantification in an interesting paper by Chierchia (1995). Put briefly, Chierchia proposes that the key difference between i-level and s-level predicates is that the latter must be licensed by a local generic operator (Gen). Thus a VP headed by an i-level verb like *know* has an adjoined Gen (46). Likewise for a predicate NP headed by an i-level noun like *star* (47):

- (46) Mary PRES [<sub>VP</sub> Gen [<sub>VP</sub> knows French ]]

- (47) Capella is [<sub>SC</sub> Gen [<sub>NP</sub> a star ]]

The syntactic item Gen corresponds to a quantifier that I'll notate as "Γ". In the semantic representation for (46), Γ binds an event position in the interpretation of the verb (48a).

In the representation for (47),  $\Gamma$  binds an event position in the interpretation of the noun (48b):

(48) a.  $\Gamma e$  [in(m,e)] [know(m,french,e)]

In prose: "In general, for events/situations  $e$  involving Mary, those events/situations are ones in which Mary knows French"

b.  $\Gamma e$  [in(c,e)] [star(m,e)]

In prose: "In general, for events/situations  $e$  involving Capella, those events/situations are ones in which Capella is a star"

Adapting Chierchia's proposal to our data in (42) and (43) is not straightforward. But the following appears attractive: adjectives occurring within a certain proximity to N can fall within the scope of a generic operator, and hence can be understood as i-level. Adjectives falling outside this domain are not bound by Gen, and hence can be interpreted as s-level. That is, if we think of genericity as a matter of being bound by a covert generic operator binding events/situations, we can view the positional facts in (42) and (43) as matters of scope.