MSU, October 27, 2005

Restrictions on Nonrestrictive Interpretations: Linear Order and Expressive Meaning

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1 Introduction

Two areas of lingering empirical and theoretical uncertainty:

- the systematic but often subtle semantic differences between pre-nominal and post-nominal adjectives, many of them articulated by Bolinger (1967)
- the systematic but often subtle semantic differences between preverbal and postverbal adverbs, many of them articulated by Jackendoff (1972)

The focus here, a part of this larger puzzle: A parallel between prenominal adjectives and preverbal adverbs in the availability of nonrestrictive interpretations.

The agenda:

- use the contrast in the availability of nonrestrictive interpretations between prenominal and postnominal adjectives to probe a corresponding distinction among adverbs

For comments on various incarnations of this work, thanks to Adam Wyner, Angelika Kratzer, Anna Maria di Sciullo, Anne-Michelle Tessier, Ben Shaer, Brigid Copley, Chris Kennedy, Chris Piñón, Gina Taranto, Iannis Thomadakis, Louise McNally, Peter Svenonius, Tom Ernst, and audiences at the Workshop on the Semantics of Adjectives and Adverbs at Universitat Pompeu Fabra in Barcelona and at the '05 LSA Annual Meeting in Oakland, and to the various people I'm no doubt forgetting.

- argue that this is in fact essentially the same phenomenon, and that independent assumptions about modifier syntax, focus/information structure, or prosody do not suffice to explain it
- propose an interpretation for these nonrestrictive uses in which they contribute expressive meaning involving modification of something like an implicit contextually-restricted definite description
- present a means of assembling these interpretations—in terms of (more or less) the understanding of expressive meaning in Potts (2003) in which it is a separate semantic dimension computed alongside ordinary meaning—that relies on a proposed structural asymmetry in the semantic mechanism that gives rise to non-restrictive interpretations
- consider (or at least ask) whether a multidimensional interpretive procedure in which aspects of (pretheoretically) pragmatic meaning are calculated compositionally alongside ordinary semantic meaning (such as that of Potts or Chierchia 2001) might warrant the sort of re-evaluation I consider here of the role of linear order in interpretation

2 The Phenomenon

2.1 *The Contrast in Adjectives*

No surprise: The position of an adjective correlates with its interpretation in a variety of diverse ways (Bolinger 1967, Sproat and Shih 1988, Valois 1991, Bernstein 1993, Cinque 1994, Laenzlinger 2000, McNally and Boleda Torrent 2003, among many others, and work in the typological tradition including Hetzron 1978 and Dixon 1982). A handful of examples:

(1) a. the visible stars (Bolinger 1967)
b. the stars visible

(2) a. the navigable river (Bolinger 1967)
b. the river navigable

(3) a. a religious social masochist
b. a social religious masochist

(4) a. the big red balloon
b. *the red big balloon

(5) a. a nice big budget deficit
b. *a big nice budget deficit

The relevant puzzle here: prenominal adjectives in English are ambiguous between what Bolinger (1967) characterizes as restrictive and nonrestrictive readings, as in (6), but postnominal adjectives have only the restrictive reading, as in (7):

(6) Every *unsuitable word* was deleted. (Larson and Marušič 2004)
a. Restrictive: 'Every word that was unsuitable was deleted.'
b. Nonrestrictive: 'Every word was deleted; they were unsuitable.'

(7) Every *word unsuitable* was deleted. (Larson and Marušič 2004)
a. Restrictive: 'Every word that was unsuitable was deleted.'
b. *Nonrestrictive: 'Every word was deleted; they were unsuitable.'

(8) Naturally, all the inevitable errors are my fault.
a. Nonrestrictive: 'All the errors, which of course are inevitable, are my fault.'
b. Restrictive: 'Every error that is inevitable is my fault; the avoidable ones might not be.'

This effect is not always easy to demonstrate—in part because English adjectives don't generally like to be postnominal—but it can also be perceived in judgments of pragmatic oddness:

(9) a. Every *needless and thoroughly reprehensible war crime* should be prosecuted.
b. #Every *war crime needless and thoroughly reprehensible* should be prosecuted.

The postnominal position in (9b) gives rise to the feeling that the speaker does not regard all war crimes as needless and reprehensible.

An explanation for why we won't be hiring Harold to play Santa this year at the mall:

(10) a. Last year, while talking to the kids, he used several *obviously stunningly inappropriate profanities*.
b. #Last year, while talking to the kids, he used several *profanities obviously stunningly inappropriate*.

Nothing odd about (10a) (apart from perhaps Harold's behavior), but (10b) is pragmatically surprising. It suggests that Harold erred in selecting the wrong profanities to utter to the children, and that if he had selected different ones we might gladly hire him again.

The same contrast occurs in Spanish more straightforwardly than in English:

(11) los *sofisticados amigos* de María (Mackenzie 2004)
Nonrestrictive: 'María's friends in general; attributes sophistication to them as an incidental property' 'María's friends in general (who all happen to be sophisticated)'

(12) los *amigos sofisticados* de María (Mackenzie 2004)
Ambiguous: 'just those friends of María who are sophisticated', or 'María's friends in general (who all happen to be sophisticated)'

Italian is similar:

(13) Le noiose lezioni di Ferri se le ricordano tutti. (Cinque 2003)
a. *Restrictive: 'Everybody remembers F's classes, all of which were boring.'
b. Nonrestrictive: 'Everybody remembers just F's classes which were boring.'

(14) Le lezioni noiose di Ferri se le ricordano tutti. (Cinque 2003)
a. Restrictive: 'Everybody remembers F's classes, all of which were boring.'
b. Nonrestrictive: 'Everybody remembers just F's classes which were boring.'

2.2 *The Contrast in Adverbs*

Just as with adjectives—perhaps more so, or at least more famously—the position of an adverb also correlates with its interpretation (among many others, Jackendoff 1972, Bellert 1977, McConnell-Ginet 1982, Wyner 1994, 1998, Geuder 2000, Ernst 1984, 2002, Cinque 1999, Alexiadou 1997, Rawlins 2003). Momentary glance at some examples:

(15) Happily, Clyde would happily play the tuba happily.[1]

(16) a. #Lavishly, Josie has furnished the house.
(McConnell-Ginet 1982)
b. #Josie lavishly has furnished the house.
c. Josie has furnished the house lavishly.

So, again, the adverb effect of interest here will be one element of a larger and more complicated picture.

Adverbs also manifest a version of the restrictive-nonrestrictive contrast. Peterson (1997) makes this essential observation, using examples along the lines of (17):

(17) The Titanic('s) rapidly sinking caused great loss of life.
a. Restrictive: 'The Titanic's sinking being rapid caused great loss of life.'
b. Nonrestrictive: 'The Titanic's sinking, which was rapid, caused great loss of life.'

Peterson doesn't relate this contrast to the structural position of the modifier—in fact, he suggests postverbal manner adverbs like the one in (18b) have nonrestrictive readings too. As Shaer (2000, 2003) points out, though, the availability of such non-restrictive readings is doubtful:[2]

(18) The Titanic('s) sinking rapidly caused great loss of life.
a. Restrictive: 'The Titanic's sinking being rapid caused great loss of life.'
b. *Nonrestrictive: 'The Titanic's sinking, which was rapid, caused great loss of life.'

[1] This is built around an example due to Jackendoff (1972).

[2] The * here is mine.

This may be clearer in embedded contexts, as in (19), or—paralleling the adjectival cases more closely—in antecedents of conditionals that restrict a quantificational adverb, as in (20):

(19) a. It is regrettable that the Titanic slowly sank.
b. It is regrettable that the Titanic sank slowly.

(20) a. If a ship slowly sinks, it is always regrettable.
b. If a ship sinks slowly, it is always regrettable.

An attempt to sharpen the intuition:

(21) I'll bet you $80 that Floyd, who has read a lot of medical books, could easily perform a successful nose job in a moving taxi.

If it turns out that Floyd has in fact read *no* medical books, I don't lose the bet—indeed, if he has read no medical books but nonetheless manages to perform a successful nose job in a moving taxi, I win it.

If, though, Floyd manages to perform a successful nose job in a moving taxi, but it was not easy, a quandary results—it is not clear whether I win or lose the bet.

This is expected, because the *easily* in (21) has both restrictive and nonrestrictive readings. On the restrictive reading, I lose. On the nonrestrictive one, I win.

If nonrestrictive interpretations were possible post-verbally, we would expect the same uncertainty to arise if the terms of the bet had instead been (22):

(22) I'll bet you $80 that Floyd, who has read a lot of medical books, could perform a successful nose job in a moving taxi easily.

But not so. If this is the bet we had made, and it had in fact required some effort for Floyd to perform the nose job, I clearly lose. So a nonrestrictive reading is not possible here.

THE UPSHOT: Adjectives and adverbs behave similarly with respect to these contrasts—in English, both permit nonrestrictive readings on the left but not on the right.

3 Some Analytical Possibilities

3.1 *Blaming Focus*

A natural intuition: This is about focus. Focused modifiers are restrictive and non-focused ones are nonrestrictive (Göbbel 2004).

Certainly, there seems to be a connection here, and prosodic considerations more generally seem to be relevant, but this kind of explanation doesn't seem to be sufficient on its own to explain the contrasts:

WRONG PREDICTIONS One difficulty is that no matter how one manipulates focus in the betting example with a postverbal adverb in (22), I lose:

(23) a. I'll bet you $80 that Floyd, who has read a lot of medical books, could perform a SUCCESSFUL nose job in a moving taxi easily.
b. I'll bet you $80 that Floyd, who has read a lot of medical books, could perform a successful NOSE JOB in a moving taxi easily.
c. I'll bet you $80 that Floyd, who has read a lot of medical books, could perform a successful nose job in a MOVING taxi easily.

If the restrictive reading were only possible when the adverb is focused, it would be necessary to suppose that *easily* is in fact focused in all of these examples, and indeed that it is not possible to *not* to focus it in this position. This seems undesirable.

SOME ADJECTIVES REQUIRE FOCUS? Perhaps what's happening here, as Göbbel (2004)'s approach might imply, is that phrasal prosody is somehow directly driving the placement of focus. But there does not appear to be any phonological difference between English and Spanish, say, that would suffice to achieve this. At best, perhaps it might conceivably be able to rule out non-restrictive readings in medial positions in (11–12), wrongly (Anne-Michelle Tessier, p.c.).

SOME ADJECTIVES FORBID FOCUS? It would require that prenominal adjectives in Spanish and Italian often *cannot* be focused, since these are generally nonrestrictive... An odd state of affairs, and one that would in itself require some kind of explanation.[3]

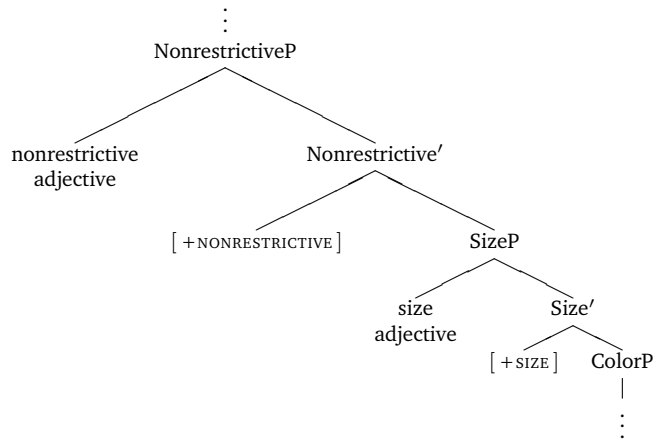
FEELS LIKE MORE THAN FOCUS These effects are typically described using terms like 'nonrestrictive', 'double assertion' (Peterson 1997), or 'parenthetical', and they are naturally paraphrased using *incidentally* or *by the way*. This is not how expressions that simply lack focus are normally described.

3.2 *Assimilating These to Other Effects of Modifier Position*

Another natural approach to these observations: Solution should follow straightforwardly from a general theory of modifier position—from whatever determines the relative order of evaluation, color, and size adjectives, or pragmatic, subject-oriented, and manner adverbs.

Might there be a single spot associated with nonrestrictive modification, as perhaps in a vaguely Cinquean (Cinque 1994, 1999 and many others) treatment as in (24)?:

(24) A MORE-OR-LESS CINQUEAN POSSIBILITY:



[3] Certainly, it is not clear that this result would follow purely from facts about the distribution of phrasal stress, for example.

Maybe. But there is reason to think that these facts about nonrestrictive readings are of a different sort:

CROSS-CUTS OTHER CLASSES As Shaer points out, the restrictive/nonrestrictive distinction in adverbs cuts across adverb classes. Both the subject-oriented adverb *accidentally* and the (pure) manner adverb *softly* manifest the contrast, for example:

(25) a. Clyde {softly / accidentally} muttered something offensive.

b. Clyde muttered something offensive {softly / accidentally}.

This distinction similarly cross-cuts adjective classes as well.

MULTIPLE MODIFIERS SIMULTANEOUSLY The restrictive-nonrestrictive contrast targets multiple modifiers at a time, grouping together ones of different classes:

(26) I'm positively tickled pink to meet your charming lovely Norwegian wife.

Here, all the prenominal adjectives are most naturally interpreted nonrestrictively—this does not suggest that the addressee has any other wives, or that any of them are anything other than charming, lovely, and Norwegian.[4]

4 Modifier Position in Computing Expressive Meaning

4.1 *Expressive Meaning*

Crucial to what needs to be captured: The sense of 'double assertion'.

This can be done by recognizing that, like nonrestrictive relatives and numerous other constructions, these nonrestrictive modifiers involve a species of expressive meaning (Kratzer 1999, Potts 2003, and references there).

A few characteristics of expressive meaning:

- Speaker oriented: Convey the speaker's commentary on what is being said.
- Resistant to narrow scope.
- Unlike conversational implicatures, do not arise from the context of use.

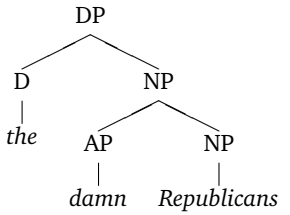
4.2 *Potts 2003: Some Theoretical Machinery and* Damn *Expressive Adjectives*

Potts framework: expressive and ordinary ('descriptive') meaning is computed...

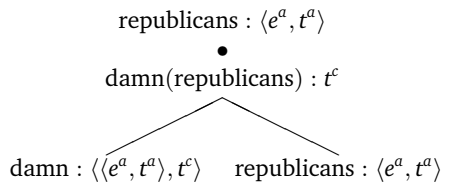
- compositionally
- in parallel
- along distinct dimensions

Potts proposes an analysis of nonrestrictive adjectives that focuses on adjectives that lexicalize an nonrestrictive meaning, e.g., *damn* and *fucking*:[5]

(27)



(28)



[4] Curiously, it seems to be the case that when one prenominal adjective is interpreted nonrestrictively, all of them tend to be. I have no explanation of this—maybe it's some kind of psycholinguistic effect.

[5] He calls these 'expressive adjectives', using the term in a more restricted sense than I will here. He suggests, though, that analogous nonrestrictive uses of e.g. *lovely* work roughly similarly.

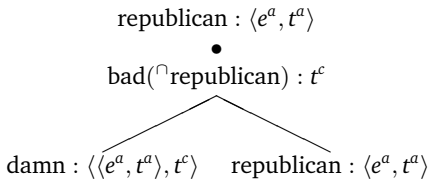
The crucial ingredients in (28):

- Ordinary meaning is above the bullet; expressive meaning is below it.
- The colons separate denotations and their types. Types come in two flavors:
  - ordinary (descriptive, at-issue), superscripted with a
  - expressive (conventionally-implicated), superscripted with c
- A rule of semantic composition—'CI Application'[6]—that puts descriptive and expressive denotations together in the way (28) reflects. This rule is roughly the expressive counterpart of the standard functional application rule.

He suggests *damn* denotes a function that predicates of *the kind correlate of its argument* some generalized disapproval predicate whose exact nature is irrelevant to the combinatorics, as in (29) (where $^\cap$ is the nominalization function of Chierchia 1984, which maps a predicate to a corresponding kind):

(29) $damn \rightsquigarrow \lambda X \,.\, \text{bad}(^\cap X) : \langle\langle \tau^a, t^a\rangle, t^c\rangle$
very roughly: true of a property iff things that have that property are bad

So (28) could be spelled out more fully as (30):

(30)


4.3 *Bumps in the Road*

A few difficulties would have to be overcome in directly extending this approach to the phenomena of interest here.

[6] 'CI' is for 'conventional implicature'.

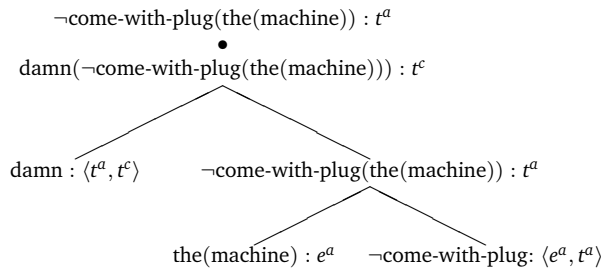
SCOPE AND CONSTITUENCY In order to account for many uses of expressive adjectives of this sort, this approach involves assumptions about the relation between constituency and compositionality that give rise to severe problems in understanding the adverb facts:

(31) The damn machine didn't come with an electric plug. (Potts 2003)

Predicted interpretation given (29), roughly: 'The machine didn't come with an electric plug, and machines are bad.'

But on its most natural interpretation, this does not convey the speaker's disapproval of machines as a kind.

Potts suggests that the expressive adjective here might receive a clause-modifying adverbial interpretation (as adjectives such as *occasional* can; Stump 1981, Larson 1999, Zimmerman 2000):

(32)


New predicted interpretation, roughly: 'Damn. The machine didn't come with an electric plug.' Better, maybe, but...

This sort of explanation predicts that (33a), which involves the expressive adjective *fucking*, should have a reading identical to that of (33b), which involves its adverbial counterpart:

(33) a. A fucking Republican sold my grandmother to Halliburton.
b. A Republican fucking sold my grandmother to Halliburton.

These do, however, differ—(33a) conveys disapproval of Republicans, (33b) of having one's grandmother sold to Halliburton. There need not be any disapproval of Republicans generally conveyed in

(33b), but there does not appear to be any natural reading of (33a) that fails to convey disapproval of Republicans.

Similarly, (34) has one reading involving disapproval of one's grandmother that neither (33a) or (33b) quite seems to have:[7]

(34) A Republican sold my fucking grandmother to Halliburton.

PROBLEMS WITH OTHER MODIFIERS If either version of this approach were simply applied as-is to most of the examples of interest here, the wrong interpretation would result:

(35) Every unsuitable word was deleted.
a. 'Words (as a kind) are unsuitable.'
b. 'Unsuitably, every word was deleted.'

(36) It's regrettable that the Titanic slowly sank.
a. 'Sinkings (as a kind) are slow.'
b. #?'Slowly, it's regrettable that the Titanic sank.'

LINEAR ORDER The distinction between leftward and rightward modifiers remains to be explained.

4.4 *A Positive Prediction*

In light of these problems, why go down this road? Despite the obstacles, a surprising desirable prediction:

If we view *damn* and *fucking* as simply lexicalizing nonrestrictive interpretations that are in general available, but, crucially, available only in leftward positions, we would expect it to be impossible to use them on the right (on the relevant interpretation). This seems to be the case:

(37) a. He fucking ate the whole goddamn thing.
b. *He ate the whole goddamn thing fucking.

[7]None of this is to say that (33) and (34) don't all have at least one reading in common, roughly consistent with the clause-modifying analysis and more or less paraphrasable as 'Fuck. A Republican sold my grandmother to Halliburton.' (Peter Svenonius, p.c., rendered this point particularly clear to me).

(38) a. He'll damn well invade Iran.
b. *He'll invade Iran damn well.

4.5 *The Binding Problem*

A fundamental principle about expressive meaning (or conventional implicatures): A constituent can't host a nonrestrictive modifier if it contains a variable bound from outside it. (Potts, following Karttunen and Peters 1975, Beaver 1992, calls this 'the binding problem'.)

A theory-internal formulation: it is not possible for an element in the ordinary dimension of meaning to bind a variable in the expressive dimension.

The deeper intuition behind this: Nonrestrictive modification involves reference (or at least quantificational independence).

This is, the idea goes, why (39b) is odd:

(39) a. Clyde, who enjoys monkeys, is not that entertaining.
b. #Every eight-year-old, who enjoys monkeys, is not that entertaining.

The relative clause here can't get a nonrestrictive interpretation because *every eight-year-old* is not referential.

But the nonrestrictive modifiers in (40) *do* seem to target non-referential expressions:

(40) a. Every damn Republican wants to sell your grandmother to Halliburton.
b. Every unsuitable word was deleted.

Potts' suggestion that these involve predicating the modifier of a kind would assimilate these to (40a). But since that won't work, how to reconcile the facts in (39) and (40)? What *do* these modifiers modify?

4.6 *Building an Alternative*

An old analytical intuition: Expressive meaning/nonrestrictive modification involves, in some sense, interleaving two utterances, one commenting on or elaborating the other.

Maybe the Larson and Marušič (2004) paraphrase of (41a) in (41b) is more than just apt, but actually more profoundly revealing:

(41) a. Every unsuitable word was deleted.
b. Every word was deleted. They were unsuitable.

What's special about (41a) (on the relevant reading) is that it is a way of saying both sentences of (41b) at once.

An answer to the question above: What (these) nonrestrictive modifiers modify is a (potentially plural) discourse referent of the sort that the pronoun in (41b) refers to.

The anaphora possible in (41b) would not be possible with a singular pronoun:

(42) *Every word$_i$ was deleted. It$_i$ was unsuitable.

That is, (42) can't mean 'Every word was deleted and unsuitable'.

A fairly standard analysis of why this is possible in (41) is that *they* is an E-type pronoun in this sentence—that is, that it is interpreted like a definite description (Heim 1990):

(43) Every word was deleted. *The words* were unsuitable.

4.7 *Another Ingredient: Contextual Domain Restrictions*

This approach helps avoid an interpretation that includes an element such as 'words were unsuitable', because, unlike kinds, definite descriptions involve a *contextual domain restriction*.

What's being quantified over in the unsuitable-words example is not, of course, all words, but only the contextually relevant ones—a fact I'll reflect here using a contextually-supplied resource domain variable C (cf. Westerståhl 1985, von Fintel 1994):[8]

[8] In addition to contextual domain restrictions, these rough interpretations introduce a supremum operator that loosely corresponds to the definite determiner in the paraphrases. This is not as significant a move, however. Indeed, the Chierchia (1984) nominalizing type-shift $\cap$ itself has this general kind of semantics (at least extensionally). I am also placing the resource variable C directly in the syntax, as a subscript on the head, for reasons that may become clear.

(44) a. Every unsuitable word$_C$ was deleted.
b. 'Every word$_C$ was deleted. The words$_C$ were unsuitable.'
c. 'For every word x in C, x was deleted, and the sum of the words in C was unsuitable.'

(45) $$\forall x[[\text{word}(x) \wedge x \in C] \rightarrow \text{deleted}(x)] : t^a$$
$$\bullet$$
$$\text{unsuitable}(\textit{sup}(\lambda y\ .\ \text{words}(y) \wedge y \in C)) : t^c$$

Striving to assemble these interpretations may be a step toward a more adequate general understanding:[9]

(46) a. If a ship slowly sinks$_C$, it's always regrettable.
b. 'Every ship-sinking$_C$ is regrettable. The sinkings$_C$ (i.e., the relevant sinkings) are slow.'
c. 'For every ship-sinking event e in C, e is regrettable, and the sum of all the ship-sinking events in C is slow.'

(47) $$\forall e[[\text{ship-sinking}(x) \wedge e \in C] \rightarrow \text{regrettable}(e)] : t^a$$
$$\bullet$$
$$\text{slow}(\textit{sup}(\lambda e'\ .\ \text{ship-sinking}(e') \wedge e' \in C)) : t^c$$

4.8 *The Proposal: Expressive Predicate Modification*

The essential idea: Since this is a two-dimensional semantics, with two distinct kinds of meaning being computed and different composition rules assembling them, perhaps we can assume rules that introduce expressive meaning may look different in principle from ones that do not. Specifically, maybe rules that introduce expressive meaning can be directly sensitive to linear order in a way ordinary non-expressive meaning is not.

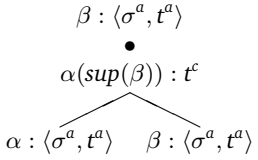
(This would accord naturally with the intuition that nonrestrictive modifiers are in some sense secondary or additional, extra comments on the current utterance that happen to be interleaved with it.)

So, let's supplement Potts' model—which already has a rough counterpart to standard functional application—with a rough

[9] There is a certain amount of sleight of hand taking place in (46) to avoid intensionality.

counterpart of a rule of intersective modifier interpretation, and make it sensitive to linear order:[10]

(48) EXPRESSIVE PREDICATE MODIFICATION



...where α is left of β

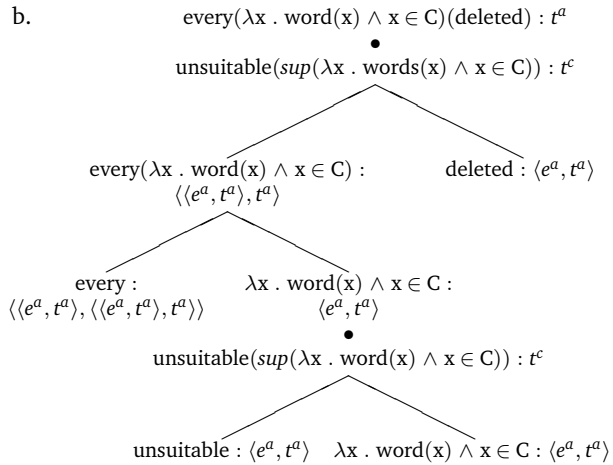
What this does:

- modified expression is interpreted is mapped to the largest plural individual in its extension (the *sup* operator)
- modifier predicated of this individual *in the expressive dimension of interpretation*
- ordinary meaning of the modified expression is simply passed up as the ordinary meaning of the whole

This will give rise to interpretations such as (49) and (50):[11]

(49) a. [Every [unsuitable word$_C$]] was deleted.

b.

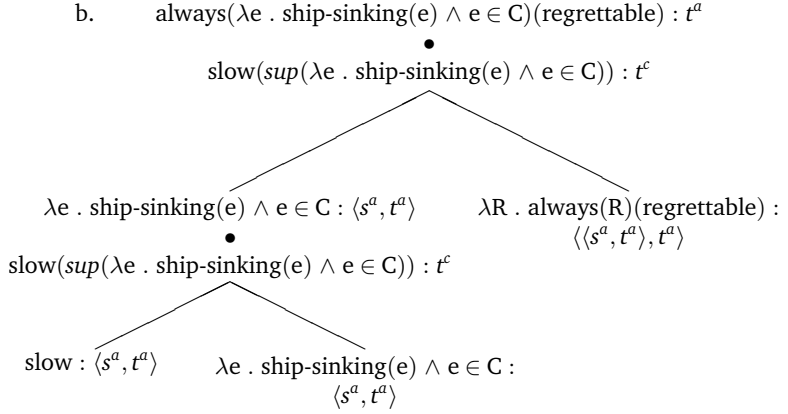


This mirrors the Larson and Marušič (2004) paraphrase.

Similar results for the adverbial cases:

(50) a. [If [a ship sinks$_C$]] [it is [always regrettable].

b.



4.9 *Some Evaluation & Elaboration*

What's good so far:

[10] This is slightly simplified, in that strictly speaking, it should reflect that the daughters can themselves have expressive meaning. For expository purposes, though, it is safe to set this aside.

[11] Events (or, as would ultimately be necessary, situations) are of type *s*. I am assuming the following:

(i) for any $\alpha, \alpha_C \rightsquigarrow \lambda x\ .\ \alpha(x) \wedge x \in C$

- this gets the right interpretation
- interpretation is appropriately sensitive to scope
- parallels usual interpretation rules: natural that there should be a counterpart to expressive functional application
- approach parallels effect of discourse anaphora

Some worries:

- whoa—what's this about 'left'? linear order at LF?!
- is 'left branch' really the right way to express this generalization?
- does this capture the analogy to discourse anaphora in a revealing way?

4.10 *Is 'Left Branch' Good Enough? Will Head Movement Break This?*

Maybe & maybe not, respectively.

PERMITS VARIATION This makes it possible to derive, via head movement, a version of this generalization in which pre-head modifiers receive *only* nonrestrictive interpretations and post-head modifiers can get either. This may be desirable in some cases (perhaps including e.g. Spanish adjectives).

FLEXIBILITY But there is in fact more flexibility on this point in (48) than there may seem. This can actually restrict the availability of these interpretations on the basis of the position of the head in a more fine-grained way...

- more often than not, position in which heads are interpreted doesn't matter
- a possible assumption: (some) heads are interpreted in their surface position, binding so-called 'big'—that is, high-type—traces
- in light of (48) and the binding properties of expressive modifiers, this has consequences:
  - the trace of a head inside the scope of an expressive modifier, if bound from outside its scope, would bring about the (independently) ruled-out binding-across-dimensions configuration
  - in other words: head can't bind its trace in the expressive meaning from inside the ordinary-meaning dimension
  - the result: together with the left branch requirement, this creates a system in which expressive modifiers can only occur left of *wherever a head is interpreted*

A PREDICTION In English—assuming (as one normally does) that verbs are interpreted in their base positions—adverbs *should* admit non-restrictive readings, even though right of the verb at the surface, if the verb has moved past them. This may be right:

(51) If a government transfers prisoners secretly t to Syria, it's always tragic.

In (51), the verb may move from the position indicated by the trace (Johnson 1991). Thus *secretly* should be able to get a nonrestrictive interpretation.

5 Final Remark

The core empirical argument: Both adjectives and adverbs can receive nonrestrictive interpretations only in leftward positions, and that they contribute expressive meaning (just as nonrestrictive relatives do).

I suggest an understanding of this couched in the general model of expressive meaning of Potts (2003) in which:

- These nonrestrictive interpretations involve predication of the modifier of something like a contextually-restricted definite description (rather than, say, simply a kind). Analogous to discourse anaphora.
- A rule of semantic composition, Expressive Predicate Modification, is introduced as roughly the expressive counterpart of the ordinary intersective interpretation rule, and makes direct

reference to linear order, requiring an expressive modifier to be on a left branch

- A point I haven't emphasized here, but worth noting: Syntactic and semantic constituency coincide.

A somewhat unnerving big-picture question: Semantic rules are now standardly thought to be unable in principle to refer to linear order. But in light of multidimensional semantic theories such as that of Potts and others (notably Chierchia 2001, who treats scalar implicatures in a compositional multidimensional way), perhaps it is worth asking afresh whether in fact this standard view should extend to these new levels of meaning—or, to put things another way, if these entirely distinct dimensions are genuinely necessary, maybe we should *expect* them to be fundamentally different in various respects.

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