## **Flexible Semantics for Reinterpretation Phenomena**

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By "reinterpretation" Egg means to include various phenomena hitherto treated separately: metonymy (*Amelie labeled the wine*, i.e., bottles of wine; *All the tenors are on the top shelf*, i.e., CDs of tenors), where either semantic mismatch or contextual implausibility cause us to do some reasoning in order to arrive at a likely interpretation; examples of the type *enjoy the book* discussed in the generative lexicon literature (Pustejovsky 1995); ambiguous adjectival modification of agentives such as *beautiful dancer* (one who dances beautifully or a beautiful one who dances); and the various types of coercion encountered in aspectual composition, where a sentence like *John sneezed* is taken to refer to a single event, whereas *John sneezed for five minutes* is most naturally interpreted as referring to a sequence of sneezing events.

An important contribution of this book to the literature on aspectual coercion is a distinction between two kinds of reinterpretation. The first kind is like the sneezing example where the reinterpretation can be succinctly described formally via the interposition of a type-shifting operator between the temporal modifier and the whole global event complex. The second kind is what Egg calls "landing site" coercion, where some internal component of the verbal event complex is augmented and made the object of the temporal modifier; for example, Joe hired a car for a week, where for a week describes the duration of the result of the hiring event rather than the hiring event itself. The two types of coercion, Egg points out, can differ in their entailment properties. Amelie played the sonata, in a neutral context, entails that she completed it. Amelie played the sonata for an hour can have either an iterative or a progressive reading. On the progressive reading, famously, it is not entailed that Amelie played (i.e., completed) the sonata. However, in an example of "landing site" coercion like Amelie left for an hour the entailment that Amelie left is preserved. Notice that on the iterative reading of the sonata example, however, the perfective entailment that Amelie completed the sonata (at least once, possibly several times) is preserved: The diagnostic is only conclusive for cases like the progressive coercion.

The structure of the book is as follows. Chapter 1 is a survey of previous work in all types of aspectual, nominal, and verbal coercion. Egg's discussion is fair and sympathetic, though not uncritical; he argues, correctly in my view, that Pustejovsky's (1995) account of coercions like *begin the book* draws the line between linguistic and non-linguistic knowledge in the wrong place.

Chapter 2 describes Egg's chosen formalism for representing meanings: The Constraint Language for Lambda Structures, one of a family of representation languages designed to be able to capture underspecification. Although the details are too complex to be included here, the basic idea is that lambda terms are represented in a directed graph notation, where nodes represent constants, variables, and operators, and edges represent structural relations such as dominance. Underspecified meaning representations are incomplete graphs, typically lacking one or more edges, but capable of being monotonically augmented to represent specific (sets of) meanings. For example, different resolutions of scope ambiguities can be represented by adding different dominance constraints between terms representing quantifiers. Egg's treatment of the range of reinterpretation phenomena that are discussed essentially extends this mechanism by allowing various extra-linguistic constraints to fill in for missing edges, their effect being to allow a connection between nodes that would otherwise be incompatible through type or sortal or contextual mismatches.

Chapters 3 and 4 are a detailed account of the mechanics of this process for most of the phenomena introduced and described informally in the earlier chapters. Getting a reasonably complete analysis of any linguistic phenomenon necessitates a few assumptions that are perhaps arguable, and these chapters are no exception, but the account given is detailed and clear enough that it would be perfectly possible to incorporate the main features in an actual implementation (with the usual caveats about the limited coverage of hand-crafted fragments), which is a good deal more than can be said for most published linguistic analyses.

In Chapter 5, Egg embarks on a preliminary sketch of a piece of "commonsense metaphysics." It is clear that one of the primary factors involved in aspectual coercion is a mismatch between temporal durations: We interpret *Joe sneezed for five minutes* as iterative because we know that the typical temporal duration of a sneeze is less than five minutes. Egg develops the beginnings of an account of the role of temporal duration in reinterpretation, arguing that predicates are associated with their typical durations, not in the lexicon, but as part of our knowledge of the world. Egg represents durations as sets of "temporal granularities" such as {minutes}, {hours}, and {0.1 sec}. Mismatch of durations corresponds to empty intersections of these granularities. Egg develops enough of a mechanism for it to be clear how this information could be integrated into his previous account of reinterpretation.

Egg also argues that the availability of an account of temporal duration eliminates the need for a separate aspectual category of punctuality, or the "point" class that Moens and Steedman (1988) added to Vendler's original taxonomy. If we can account for the coercion in *Joe sneezed for five minutes* simply in terms of duration mismatch, we do not need to talk about coercion of a point category into something else. I am less convinced of this in the general case, however. Several accounts of multiple aspectual coercion, such as that exemplified in Moens and Steedman's splendid example *It took me two days to play the "Minute Waltz" in less than sixty seconds for more than an hour* require a complex eventuality "play the Minute Waltz in less than sixty seconds" to be coerced to a point, and then that point to be coerced to an iteration "for more than an hour." It is implausible to assume that non-lexical predicates like this have a prior nonlinguistic association with characteristic temporal durations, and this would in any case suggest a different interpretation for such an example. In these cases at least, a punctual category of "point," in which any internal temporal structure is ignored, does seem to be required.

I enjoyed reading this book, and not just because it agreed with many of my own prejudices. It is clearly written, consistently fair-minded and interesting, and the analyses are detailed enough to be convincing. For those who, like me, still hope that one day the kind of fine-grained semantic analysis illustrated in this book will be capable of implementation on a large scale, there is much of value here.

## References

Moens, Marc and Mark Steedman. 1988. Temporal ontology and temporal reference. *Computational Linguistics*, 14(2):15–28. Pustejovsky, J. 1995. *The Generative Lexicon*. The MIT Press, Cambridge, MA.

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