Integrating formal and distributional semantics

Formal semantics (FS) and distributional semantics (DS) have two seemingly very different approaches to providing a theory of the meaning of words and how those meanings combine to assign a content to complex expressions of the language. We think that both FS and DS can profit from each other. In fact DS already has profited in the work of Baroni, Clarke and others by exploiting ideas in FS about the meanings of various expressions and about the compositional process itself. FS has, unfortunately for its own health, largely ignored DS, though some theories gesture at the possibility of a fruitful interaction. We offer a modest but detailed proposal for how to integrate the ideas of the two. Ultimately, we will interleave distributional and formal methods of composition, which we illustrate with a simple case of composition, adjective noun composition.