Intensionality was only alleged:
On adjective-noun composition in distributional semantics

(Joint work with Marco Baroni, Nghia The Pham, and Louise McNally.)

Formal semantics has traditionally distinguished between extensional and intensional aspects of meaning, roughly equivalent to reference and what people intuitively call "meaning", respectively. It has primarily focused on extension, since this allows for predictions to be made and tested by building models of meaning that are directly grounded on reference, using set theoretic tools. Distributional semantics, in contrast, has been used to model phenomena that are hard to pinpoint using reference only, such as similarity in word meaning. Since the two approaches are largely complementary, it makes sense to use the latter to reexamine puzzles posed by the former.

We model adjective modification using distributional semantics. Our experiments (1) show that adjective modification is never a simple combination of features of the head noun and the adjective, (2) do not yield a distinction between intensional ("former mayor") and non-intensional ("severe mayor") modification. We discuss the implications of these findings for theoretical semantics.