Learning about the structure of scales:
Adverbial modification and the acquisition of the semantics of gradable adjectives

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Dissertation Abstract

This work investigates children’s early semantic representations of gradable adjectives (GAs) and proposes that infants perform a probabilistic analysis of the input to learn about abstract differences within this category. I first demonstrate that children as young as age three distinguish between relative (e.g., big, long), maximum standard absolute (e.g., full, straight), and minimum standard absolute (e.g., spotted, bumpy) GAs in the way that the standard of comparison is set and how it interacts with the discourse context. I then ask if adverbs enable infants to learn these differences. In a corpus analysis, I demonstrate that statistically significant patterns of adverbial modification are available to the language learner: restricted adverbs (e.g., completely) are more likely than non-restricted adverbs (e.g., very) to select for maximal GAs with bounded scales. Non-maximal GAs, which are more likely to be modified by adverbs in general, are more likely to be modified by a narrower range, predominantly composed of intensifiers (e.g., very). I then ask if language learners recruit this information when learning new adjectives.

In a word learning task employing the preferential looking paradigm, I demonstrate that 30-month-olds use adverbial modifiers they are not necessarily producing to assign an interpretation to novel adjectives. Adjectives modified by completely are assigned an interpretation corresponding to an absolute property, while adjectives modified by very correspond to a relative property. Infants presented with an adjective modified by no adverb, a novel adverb (pentically), or a low-frequency intensifier (extremely) pattern at chance. I argue that a form-meaning correspondence similar to the one discussed in verb learning is active in adjective learning. Infants are guided by their conceptual representations when attending to the distributional patterns of adverb-adjective bigrams in the exposure language, and expect that these surface-level cues will partition the class of GAs according to differences in scalar structure. I finish by connecting the structure of scales and paths in linguistic representations, and suggest that given that infants attend to the structure of paths when parsing events, it is optimistic to expect that they might also attend to the structure of scales when attending to properties.