

## Bootstrapping the syntactic bootstrapper

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For a long time, children were thought to acquire first the sounds of their native language (phonology), then its words (lexicon), then the way in which words are organized into sentences (syntax). This corresponds to what young children produce: first they babble (between 6 and 12 months), then they speak in isolated words (1-2 years), and then they start combining words together. Accordingly, researchers have looked for ways in which children may acquire the sound system of their language before they know words, words before they know syntax, and so on. In many cases however, computational studies have shown that some learning problems are intractable unless one postulates access to at least partial information from other domains, and experimental studies have shown that children have managed to learn some of this partial information.

I will present experimental work on the acquisition of the lexicon, focussing on how children could gather and use syntactic information to facilitate their learning of word meanings – the *syntactic bootstrapping* hypothesis (Gleitman, 1990). Although many experiments show that infants are able to use the syntactic contexts in which unknown words appear to infer something about their potential meanings, what remains unclear is *how* children learn which syntactic contexts correspond to which conceptual features – for instance, how do they figure out that words occurring in noun contexts usually refer to objects, and how do they learn the characteristics of noun contexts in their language? I will present the hypothesis that children might learn these by generalizing from a handful of words for which they already have a meaning, a *semantic seed*. I will back up this hypothesis with computational work (showing that this learning mechanism is feasible), and experimental work (showing that toddlers do indeed learn syntactic contexts in this way).