Strategic Shortcuts and Provisional Representations in Children's Language Learning

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Studies of children's "statistical learning" abilities over the last decade and a half have established that even infants are very competent at extracting grammar-like structure from raw perceptual data, usually in the form of sequences of meaningless sounds. However, claims that children can infer and utilize complex abstract structures from such an early age sit somewhat uncomfortably with the multitude of findings that children's ability to use some of the most basic grammatical resources remains unlike that of adult speakers until a great deal later in development. In this talk I will attempt to explain this gap by thinking strategically about the challenges infants face and about the nature of the input they hear. The input contains a great many opportunities and shortcuts that allow children to become functioning communicators without committing to the full grammar of their language. I will describe experimental findings that children do indeed utilize such "provisional representations," even at quite late stages of development. I will also describe a computational modeling framework that allows us to explore the kinds of provisional representations that individual children are exploiting. I will report on a study that indicates how these representations might arise from simple strategic decision-making in interactions with adult speakers. Finally, I will present evidence that children are sensitive to statistical patterns in the ambient language that they do not apply in communicating, and I will argue that we need to rethink the relationship between the patterns children notice and the behaviors they adopt.