

Understanding language learning using computational methods

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Language learning can be thought of as an ongoing mental computation that occurs in children's minds and generates a system of linguistic knowledge. We can investigate many different questions about this mental computation, including (i) what learning strategies comprise it, (ii) what learning biases are involved in it, (iii) what knowledge representations are learnable with it, and (iv) when children learn different aspects of the linguistic system using it. In this talk, I will focus on how to use computational methods to investigate the learning strategies and learning biases children have, drawing on two case studies. The first examines learning strategies for word segmentation, looking for those that are useful, useable by children, and likely to work better when cognitive limitations are present, as children are better than adults at language learning. The second case study examines biases necessary for learning about syntactic islands, identifying the components of children's language learning toolkit and examining the nature of those components.