

Computation in Acquisition

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Computation can connect to acquisition in at least two ways: (1) as the information processing done by human minds during language acquisition, and (2) as the computational methods used to understand this human information processing. The first involves defining what is computed, when it is computed, what constraints there are in computing it, and what it is computed from. The second uses these definitions to empirically ground exploration of how children's minds can accomplish the acquisition computation. In this talk, I present two examples of using computational methods to understand the acquisition task, as defined by theoretical and experimental research, while considering the utility of both models of learnability (what can be learned assuming unlimited cognitive resources) and models of acquirability (what can be learned assuming cognitive constraints). The first case study explores word segmentation and what transitioning from an ideal learner model to a constrained learner model reveals. The second case study examines the acquisition of a generative system of metrical phonology, and when moving from an acquirability model to a learnability model can be informative for both the process of acquisition and for evaluating theoretical representations.