

Infant language acquisition: From perceptual learning to the role of the social environment

Language is a system with a complexity unrivaled in animal communication systems, and that is highly variable across cultures and communities. How do infants learn it with such an astonishing speed and efficiency? Mastering speech sound structure is a crucial building block for becoming a competent speaker of one's native language. Gaining a quantitative understanding of how infants acquire it can serve as a model to understand early language development in more general. Using examples from my own research, I will illustrate the importance of cross-linguistic study in order to disentangle the roles of language-general and language-specific factors, as well as of big data approaches for quantifying the predictors explaining variability in infant speech sound perception.

Beyond the linguistic input, social factors could potentially be central for infants' rapid language acquisition. To date, however, there is no framework that makes it possible to explain the contributions of the social environment to learning mechanistically and systematically. I aim to uncover and specify the mechanisms through which the social environment impacts early language acquisition by means of behavioral and neuroimaging studies. I will illustrate some ongoing and future work aimed at systematically disentangling the contribution of different social cues on learning outcomes, and at developing a novel architecture of how social settings promote learning.