

Colloquium

Language learning as a constrained computation

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Human babies acquire their ambient language universally and seemingly in an effortless manner, suggesting that they come equipped with innate knowledge about the general shape of natural languages. However, they still need to learn the specifics of their particular language including the words, sound patterns, and syntax.

We now know that babies are better learners than was once believed. In particular, they are able to compute certain distributional properties in the speech they hear, including transition probabilities between syllables, conditional probabilities of words given specific object referents, and so on. These computational abilities have led to proposals that language is not a specialized human faculty, and/or that language learning relies on “domain-general” computational machinery.

I will present data from my work that suggests a different formulation: when general-purpose, distributional computations are applied to language acquisition, they are constrained in ways that align with the structural organization of language. According to this view, our faculty of language includes specific computational constraints and biases that enable uniform and rapid acquisition from finite data.

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04:00 PM (Tea/Coffee at 03:30 PM)

Auditorium, TIFR-H