Infants use prosody for syntactic analysis and grammatical categorization

Sarah Massicotte-Laforge & Rushen Shi

We tested the hypothesis that phrasal prosody assists early syntactic acquisition. In Experiment 1 sentence-strings consisting of pseudo-words and French determiners were syntactically ambiguous; phrasal prosody, however, indicated distinct syntactic structures, e.g.,

Structure-1: [[Ton_{Det} $felli_{Adj}$ $crale_{N}$]$_{NP}$ [vur_{V} la_{Det} $gosine_{N}$]$_{VP}$]

Structure-2: [[Ton_{Det} $felli_{N}$]$_{NP}$ [$crale_{V}$ vur_{Prep} la_{Det} $gosine_{N}$]$_{VP}$]

French-learning 20-month-olds were familiarized with the sentences either in the prosody of one or the other structure. All infants were tested with Det+N (e.g., Le_{Det} $crale_{N}$) versus Pron+V (e.g., Tu_{Pron} $crales_{V}$) trials containing other non-familiarized functors. Results show that infants perceived the test-stimuli according to the familiarized structure. Experiment 2 further examined if prosody alone can enable 20-month-olds to interpret the same structures. The two familiarization structures now contained entirely pseudo-words. Test trials were as in Experiment 1. The Structure-1 prosody group did not discriminate the test trials, whereas the Structure-2 group did. Results show that both prosody and functors affect initial syntactic acquisition.