

Early perception of the prosody of statements and questions

Sónia Frota
University of Lisbon

Languages differ in how the distinction between statements and yes–no questions is conveyed. In European Portuguese (EP), this distinction is marked by prosodic means (H+L* L% vs. H+L* LH% nuclear contours), and so EP-speakers must distinguish between the prosodic features associated with statements and yes–no questions to be able to understand the implied meaning of the utterance.

Studies on the development of infants' perception of prosody have shown differences across domains, with pitch contrasts in tone languages, pitch accent languages, and intonation languages, as well as stress contrasts, showing diverse paths. Prosodic contrasts related to sentence type distinctions are important for language acquisition, as the ability to distinguish between basic and frequent sentence types, like statements and questions, is crucial for language processing and social interaction (Frazier, Gelman, & Wellman, 2009; Koegel et al, 2010; Tyack & Ingram, 1977). Indeed, this prosodic discrimination ability is a prerequisite for the acquisition of statement/yes-no question categories in a language that marks this contrast only by prosodic means.

Early discrimination of question- and statement-like prosody was investigated through a series of experiments. EP-learning infants successfully discriminate utterances that differed only in the prosodic features associated with statements and questions, as early as 5 months and maintain this ability at 8-9 months (Frota, Butler, & Vigário, 2014). To address the question of whether infants are just responding to phonetic salience of pitch contrasts or listening natively, English-learning and Basque-learning infants listened to the EP stimuli, and EP-learning infants listened to similar overall pitch contour shapes (a Mandarin Chinese tone contrast and the Japanese pitch accent contrast). In English, questions are cued both by word order and intonation (final rise), whereas in Basque (and Spanish) the crucial cue is intonation (final fall in Basque, final rise in Spanish). The Mandarin, Japanese and EP pitch contrasts, although similar in shape, differ in how the contours relate to the text. The findings from these experiments all point to the influence of native language experience on infants' perception (Sundara, Molnar, & Frota, 2015; Frota et al., 2016, in progress).

A further question is whether and when infants assign a function to the prosodic contrast perceived. In a word learning study, EP-learning infants respond differently to one-word utterances depending on their statement or question prosody at 12 months, showing that the prosodic contrast affects meaning (Frota et al., 2012, in progress). These findings are supported by results from a parental report study on prosodic development (Vigário et al., 2015).

Given that prosodic cues to questions are not the same across languages, the findings from EP are discussed in the context of a potential advantage for some prosodic contrasts over others and resulting implications for the acquisition of linguistic categories cued by prosody.