The development of prosodic gestures during parent-child discourse interactions

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There is increasing evidence of a synchronous relationship between the prosodic structure of gestures and speech (McNeill, 1992; Shattuck-Hufnagel & Ren, 2012). Both systems also seem to share the same neural structures in both perception and production of gestures (Bernardis & Gentilucci, 2006). Some aspects of this gesture-speech synchrony have been studied in infants and young children, demonstrating that gestural development precedes lexical acquisition (Bates et al., 1979).

A recent study has compared the multi-modal narrative abilities of five- and ten-year-old Italian, American and French children and classified beats as discursive gestures (Colletta, Guidetti, Caprici, Cristilli, Demir, Kunene-Nicolas & Levine, 2014). It was found that older children produced significantly more cohesive discursive gestures than when compared to their younger counterparts. This then raises the question of what grammatical and prosodic contexts help elicit prosodic gestures in children. It also leads to the question of when and how the development of prosodic gestures occurs in children.

The goal of this study was first to determine the types of tasks that would induce the prosodic use of gestures by children, and second, to determine the extent to which these might share the same characteristics as that found in adults. Participants included six children (4 male, 2 female) aged between 5-7 years who completed 2 tasks (narration and explanation while talking to their mother). The preliminary results indicate that among the six participants, only 2 children demonstrated prosodic use of gestures. There were two types of gestures observed, namely, independent and embedded gestures, and these were seen more frequently in explanation task. Most of these gestures occurred in words with pitch accents and frequently on nouns. The implications for models of speech planning and production are discussed.

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