Putting the “Mother” Back in Mother-tongue: A Comparison of the Intonational Characteristics of Marathi Infant-Directed Speech and Songs

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The prosodic features of infant-directed speech and song directed to infants under 18-months of age were measured in terms of rhythm, pitch, and dynamics in order to determine whether the sound elements of the songs versus those of the speech are more similar to one another than to the sound elements of peer-directed speech. Nine Marathi-speaking mothers from middle to upper class homes were recorded speaking to their infants, singing two infant-directed songs of their choice, and speaking to a peer over a telephone conversation. Participants were then asked to answer a series of standardized interview questions regarding their views on language, and more specifically with regard to motherese and to the multilingualistic nature of middle to upper class Maharashtrian households. Speech samples were then analyzed in terms of their rhythm, pitch, and dynamics, more specifically attending to measures of pitch range, mean pitch, fraction of locally unvoiced frames, mean phrase length, and intensity range. After dividing samples of infant-directed song (ID Song) into subcategories of playsongs and lullabies, it was determined that the acoustic features of the playsongs more closely resemble those of the infant-directed speech (ID Speech) and peer-directed speech (PD Speech) than those of the lullabies do to either types of the speech samples (namely ID Speech and PD Speech). This pattern of results suggests that the type of song directed toward a specific demographic group (in this case, the category of infants under 18 months of age) acoustically resembles the type of speech directed toward the same group. Furthermore, the styles of speech and song employed under similar social circumstances (such as playsongs and play-speech versus lullabies and soothing-speech) share a closer acoustic relationship with one another than they would with a style of sound communication intended for a different social circumstance.