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The effect of facial dynamics on infant perception of adult-directed speech in noise

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Recently Polka and Rvachew (in press) found that 6- to 8-month-old infants discriminated a native contrast ("bu" - "gu") when familiarized and tested with syllables presented in quiet, but not when familiarized with syllables mixed with a competing noise, even when testing was conducted in quiet. Because the competing noise (segments of cricket and bird song) did not create energetic masking, infant failure to encode the familiarization syllable was due to a disruption in attention to the speech stream. Importantly, in this study, infants watched a checkerboard while listening to syllables spoken in an adult-directed (AD) style. The current study investigated if the addition of a dynamic face facilitates infants' speech processing in the same task. Six-month-olds were habituated to repetitions of the native syllable "ba" mixed with the same noise but these infants saw and heard syllables produced in AD style. Following habituation, infants were presented familiar (repetitions of "ba") and novel test trials (repetitions of "ga"). Infants failed to show syllable discrimination as indexed by a reliable preference for the novel test trials. These findings show that a dynamic face producing AD speech does not engage infant attention to speech enough to support syllable discrimination in noise.