

## Exploring the infant talker bias: A novel online listening preference study

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Infants prefer to listen to vowels produced with the characteristic pitch and resonances of an infant vocal tract; in lab-based experiments, this is observed in pre-babbling infants (4-5 months; Masapollo et al. 2015) and increases at the onset of babbling (6-8 months; Polka et al., 2022). This infant talker bias suggests infants gain an awareness of the mapping between articulatory gestures and their acoustic correlates as their own vocal abilities emerge. In this study, we aimed to replicate and extend these findings using a novel online testing paradigm. In a remote look-to-listen experiment conducted using Lookit, infants watched a dynamic visual pattern while vowel signals were presented; four trials contained infant vowels and four had adult female vowels. We indexed infant listening by manually coding looking time on each trial. Here we present the results of an analysis of a subset of the data that match the age groups studied in Polka et al. (2022). Our mixed-effects regression model shows that babies listened longer to infant than adult vowels ( $n = 44$ ,  $p < .01$ ). Post-hoc Mann-Whitney U tests reveal that the preference for infant speech was observed in 6.5- to 7.5-month-olds ( $n = 19$ ,  $p < .01$ ), but not in 4- to 6-month-olds ( $n = 25$ ,  $p > .05$ ). These results align with earlier in-lab findings showing developmental changes in infant attraction to speech signals that are similar to their own vocalizations. We will analyze data from older infants (8-12 months) and compare the manually coded data with results based on automated coding of looking obtained using facial analysis software—BabyFaceReader. We are also using BabyFaceReader to explore other potential preference indicators including arousal and smiling. The findings provide new insights into the utility and the limitations of remote testing methods in infant speech perception research.