

Distinguishing between foreign-language talkers: Another bilingual advantage emerging in early infancy?

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Linguistic and non-linguistic aspects of the speech signal are processed interdependently from an early age; four-month-old monolingual infants are better at telling apart talkers of a familiar language than an unfamiliar language (1). But what if the infant knows more than one language? Bilingual 9-month-olds can successfully learn face-voice pairings in an unfamiliar language when monolinguals cannot (2). However, it is unknown whether multilingualism also affects the processing of non-linguistic aspects i.e. talker discrimination at an even earlier age. Building upon previous findings, we hypothesize that bilingual 4-month-old infants will demonstrate a heightened ability to discriminate between speakers of an unfamiliar language compared to monolinguals. In the current study, bilingual 4.5-month-olds (current $n=37$, target $n=48$) were tested on their ability to tell apart talkers in a familiar language (English) compared to unfamiliar language (Polish or Spanish). Infants were tested by using a visual fixation procedure identical to that used in Fecher & Johnson (2). In line with our hypothesis, infants looked significantly longer to the screen on switch ($m=8.8$ seconds) than same trials ($m=6.9$ seconds), ($f(1,35)=4.99$, $p=.032$). In contrast to previous results with monolinguals, we observed no effect of language familiarity, and no interaction between looking time and language familiarity. In other words, our preliminary results suggest that bilingual 4.5-month-olds outperform monolingual 4.5-month-olds in telling apart talkers speaking an unfamiliar language. Why would bilinguals outperform monolinguals in this task? Greater perceptual attunement to the native language in monolinguals than bilinguals is a possible explanation. Another closely related possibility is greater sensitivity to speech contrasts in bilinguals than monolinguals. Whatever the explanation, this finding fits well with recent work demonstrating that multilingualism may influence the early development of non-linguistic aspects of the speech signal (2). Our findings contribute to a growing understanding of the mechanisms underlying bilingual children's linguistic development.