

Bilingual babies: The roots of bilingualism in newborns

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It may not be obvious, but hearing two languages regularly during pregnancy puts infants on the road to bilingualism by birth. According to new findings in *Psychological Science*, a journal of the Association for Psychological Science, infants born to bilingual mothers (who spoke both languages regularly during pregnancy) exhibit different language preferences than infants born to mothers speaking only one language.

Psychological scientists Krista Byers-Heinlein and Janet F. Werker from the University of British Columbia along with Tracey Burns of the Organization for Economic Co-operation and Development in France wanted to investigate language preference and discrimination in newborns. Two groups of newborns were tested in these experiments: English monolinguals (whose mothers spoke only English during pregnancy) and Tagalog-English bilinguals (whose mothers spoke both Tagalog, a language spoken in the Philippines, and English regularly during [pregnancy](#)). The researchers employed a method known as "high-amplitude sucking-preference procedure" to study the infants' language preferences. This method capitalizes on the newborns' sucking reflex — increased sucking indicates interest in a stimulus. In the first experiment, infants heard 10 minutes of speech, with every minute alternating between English and Tagalog.

Results showed that English monolingual infants were more interested in English than Tagalog — they exhibited increased sucking behavior when they heard English than when they heard Tagalog being spoken. However, bilingual infants had an equal preference for both English and

Tagalog. These results suggest that prenatal bilingual exposure may affect infants' language preferences, preparing bilingual infants to listen to and learn about both of their native languages.

To learn two languages, bilingual [newborns](#) must also be able to keep their languages apart. To test if bilingual infants are able to discriminate between their two languages, infants listened to sentences being spoken in one of the languages until they lost interest. Then, they either heard sentences in the other language or heard sentences in the same language, but spoken by a different person. Infants exhibited increased sucking when they heard the other language being spoken. Their sucking did not increase if they heard additional sentences in the same language. These results suggest that bilingual infants, along with monolingual infants, are able to discriminate between the two languages, providing a mechanism from the first moments of life that helps ensure bilingual infants do not confuse their two languages.

The researchers observe that, "Monolingual newborns' preference for their single native language directs listening attention to that language" and that, "Bilingual newborns' interest in both languages helps ensure attention to, and hence further learning about, each of their languages." Discrimination of the two languages helps prevent confusion. The results of these studies demonstrate that the roots of bilingualism run deeper than previously imagined, extending even to the prenatal period.

Provided by Association for Psychological Science

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