Do Bilingual Babies have More Flexible Brains?

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The results of a new study published online in the Journal of Phonetics August 17 may not come as a shock to you. Researchers at the University of Washington’s Institute for Learning & Brain Sciences strapped caps fitted with electrodes to babies’ heads and monitored their reactions to language. They then tracked the babies’ language acquisition in the following months. Confirming what you probably already knew, the more early exposure a baby has to two languages the more words she will acquire.

However, the researchers’ work also led to a more nuanced finding. Between the age of 8 to 10 months, babies who are exposed to only one language in the home more easily differentiate sounds foreign to their family’s language from their own – the Spanish “da” versus the English “ta” for example. The brain waves of babies growing up with two languages are much less likely to register a response to such differences. So does this mean monolingual babies are smarter because they can tell the difference between languages earlier? Not at all. What it means is that babies who are exposed to two languages on a regular basis remain open longer to the possibility of integrating varied languages into their own vocabularies. In other words, the brains of babies growing up in bilingual homes remain flexible longer than their counterparts in monolingual homes.

This research may lend support to the claim that bilingualism provides cognitive advantages. The results of a 2004 study by Ellen Bialystok and Michelle M. Martin published in Developmental Science online showed that bilingual children are better than monolingual children at ignoring irrelevant perceptual information. That is, they are better at sorting out what information is useful to the task at hand and what can be ignored. This skill may translate into areas such as mathematics where a key part of problem solving is determining what information is relevant.

Bialystok and co-author Kenji Hakuta make the claim in their book In Other Words that learning two languages forces children to think in more complicated ways, increasing their critical thinking skills. Bialystok also believes that bilingualism leads to a greater increase in awareness and understanding of language by individuals in terms of both its structure and meaning.

Many Indigenous peoples have long made the argument that raising bilingual children benefits entire communities by helping to ensure the continuation of localized Indigenous cultures. This research may broaden the appeal of bilingualism by suggesting that those who are bilingual benefit on an individual level as well.