

# Baby boys more chatty than girls, according to large study

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Children play at the childcare center of the Hopital Necker - Enfants Malades AP-HP (Welfare Services - Paris Hospitals) hospital in Paris.

Baby boys babble more than girls, according to a scientific paper out Wednesday that upends a common belief that females hold a language

advantage over males early on in life.

The findings, published in *iScience* after the largest ever study on the subject, came as a surprise even to the paper's authors.

They say it might be the result of an important sex difference that emerged during our species' evolution.

A team led by D. Kimbrough Oller of the University of Memphis, Tennessee used an algorithm to trawl through a data set of more than 450,000 hours of non-stop audio from 5,899 infants, recorded using an iPod sized device over two years.

"This is the biggest sample for any study ever conducted on [language development](#), as far as we know," Oller said in a statement.

While young babies don't talk, they produce pre-speech vocalizations—squeals, growls, raspberries, and later word-like sounds such as "ba" and "ga"—collectively called "protophones" that eventually give way to real words and sentences.

The idea that [girls](#) acquire language faster than boys has long held sway in scientific circles, and with it the assumption that baby girls vocalize more than baby boys.

However, the results showed that boys made 10 percent more utterances in the first year of life, before the girls caught up and made seven percent more sounds by the second year.

## **Evolutionary theory**

The differences occurred despite the fact that adult care-givers spoke more to girls than to boys across both years.

One theory for the finding was that male infants were more vocal because they were more active in general. But the data did not support this, since higher male vocalizations gave way to females around the 16 month mark, but higher physical activity did not.

Instead, the team suggests their findings might fit an [evolutionary theory](#) which holds that infants make sounds in order to signal their wellbeing to their caregivers, who in turn invest more energy and attention in them.

Boys have higher mortality rates than girls in their first year of life, according to a broad body of research, and so it may follow that more vocal baby boys in the distant past were more likely to survive and pass on their genes.

But by the second year of life, [death rates](#) have dropped dramatically for both sexes, and "the pressure on special fitness signaling is lower for both boys and girls," said Oller.

Next, Oller plans more research on how caregivers respond to baby talk.

"We anticipate that caregivers will show discernible reactions of interest and of being charmed by the speech-like sounds, indicators that fitness-signaling by the baby elicits real feelings of fondness and willingness to invest in the well-being of infants," he said.

**More information:** D. Kimbrough Oller, Sex differences in infant vocalization and the origin of language, *iScience* (2023). [DOI: 10.1016/j.isci.2023.106884](https://doi.org/10.1016/j.isci.2023.106884). [www.cell.com/iscience/fulltext ... 2589-0042\(23\)00961-6](https://www.cell.com/iscience/fulltext/S2589-0042(23)00961-6)

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