

Learning a new language recruits the right side of the brain

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These results suggest production is hard-wired to the left hemisphere, while comprehension is more flexible. This may explain why it is more difficult to learn to speak a new language as an adult, even though it is possible to learn to understand it quite well.

More information: Kshipra Gurunandan et al. Converging evidence for differential specialization and plasticity of language systems, *The Journal of Neuroscience* (2020). DOI: 10.1523/JNEUROSCI.0851-20.2020

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Provided by Society for Neuroscience

Learning a language later in life changes how the two halves of the brain contribute. As skills improve, language comprehension changes hemisphere specialization, but production does not, according to new research published in *JNeurosci*.

The two sides of the brain don't evenly split labor for every function. In most people, language relies on the <u>left hemisphere</u>, but the <u>right hemisphere</u> can take over after an injury to the left. The right hemisphere can also contribute when learning a new language, making it unclear if the left hemisphere is actually specialized for language.

Gurunandan et al. used fMRI to compare neural activity between hemispheres in adult language learners while reading, listening, and speaking in their native and new languages. In the earlier stages of language learning, native and new languages looked quite similar in the brain, but in advanced learners, the two languages were more distinct. The native and new languages were able to recruit opposite hemispheres for comprehension but speaking either language remained reliant on the left hemisphere.



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