

## Why people around the world trip over their tongues sometimes

May 28 2018



(HealthDay)—Can't quite spit out the right, uh, word at times? A new



study helps explain why.

European researchers analyzed thousands of recordings of spontaneous speech in <u>different languages</u> from around the world. They included English and Dutch speakers as well as conversation from people in the Amazon rainforest, Siberia, the Himalayas and the Kalahari desert.

"We discovered that in this diverse sample of languages, there is a robust tendency for slow-down effects before nouns as compared to verbs," study leaders Frank Siefart and Balthasar Bickel said in a University of Zurich news release.

Yes, nouns—words that describe people, places or things—slow you down. Action words, or verbs, not so much.

In other words, when you use a <u>noun</u> like "friend" or "town," you're more likely to pause a little first or throw in an "uh" or "uhm" than when you invoke a <u>verb</u> like "run" or "swim."

It suggests the brain has more trouble planning some words than others, Siefart and Bickel said.

Siefart is a faculty member at the University of Amsterdam. Bickel is a professor at the University of Zurich.

For the study, the researchers examined slow-down effects before nouns and verbs. They measured how quickly the words were spoken, noting when people took short pauses in their speech.

"Nouns are more difficult to plan because they're usually only used when they represent new information," the researchers said.

On second reference, most speakers use pronouns instead. For example,



"my friend" becomes "she." Verbs communicate both old and new information.

This slow-down effect before nouns may also help explain why complex forms, such as prefixes, are more common in verbs, the study suggested.

The findings advance knowledge of how the human brain processes language, researchers said. Understanding how languages work is increasingly important as we communicate more with artificial systems—ones that might not slow down as humans naturally do, they added.

Future study should include rarer languages and investigate how the brain reacts to the information value of various words, the team said.

The study was published recently in *Proceedings of the National Academy of Sciences*.

**More information:** Frank Seifart, Jan Strunk, Swintha Danielsen, Iren Hartmann, Brigitte Pakendorf, Søren Wichmann, Alena Witzlack-Makarevich, Nivja de Jong, Balthasar Bickel. Nouns slow down speech: evidence from structurally and culturally diverse languages. *Proceedings of the National Academy of Sciences*.

http://www.pnas.org/cgi/doi/10.1073/pnas.1800708115

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Citation: Why people around the world trip over their tongues sometimes (2018, May 28) retrieved 26 April 2024 from

https://medicalxpress.com/news/2018-05-people-world-tongues.html

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