

# **Do we judge distance based on how a word sounds?**

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Husband-and-wife research team Cristina Rabaglia and Sam Maglio examine whether we judge distances based on word sounds. Credit: University of Toronto Scarborough

Marketers and brand managers responsible for naming new products should be interested to learn that people associate certain sounds with nearness and others with distance, say researchers from the University of Toronto, whose new study adds to the body of knowledge about symbolic sound.

In a study published online April 15 in the journal, *Cognition*, Sam Maglio, a professor of marketing at the University of Toronto Scarborough and the Rotman School of Management, and Cristina Rabaglia, a research fellow in psychology at the University of Toronto Mississauga, demonstrate that people intuitively associate front [vowel](#) sounds - those produced with the tongue relatively far forward in the mouth, such as the ee in feet—with things that are close by. Conversely, they relate back vowel sounds - those produced with the tongue far back in the mouth, such as oo in food - to things that are farther away.

"Our feelings and intuitions about sounds influence what we feel is okay for names of specific items or brands," Rabaglia says. "If you name something in a way that isn't intuitive, it could decrease the likelihood that people will want to interact with that product."

Maglio notes, "Perhaps it's no coincidence that a long haul airline carrier such as Lufthansa has a name that uses back vowels."

Their findings are based on a series of five experiments conducted in

New York City, including one in which the subjects were told that they would be given names of cities in New York State and asked to estimate their [distance](#) from NYC. They were also advised that the greatest distance between any in-state city and NYC was 400 miles.

The names of these non-existent cities were crafted so that one, Fleen, contained a front vowel and the other, Floon, contained a back vowel. Participants were randomly asked to estimate the distance between NYC and one of the two cities, not knowing that they weren't actual places. The participants regularly predicted that Floon, N.Y., was much further from NYC than Fleen, demonstrating that people associated back vowels with distance and front vowels with nearness. The other four experiments yielded similar results; when hearing words created especially for the research; subjects generally paired those containing back vowels with distance and those including front vowels with nearness.

The study is a significant addition to the existing body of knowledge about sound symbolism, the intuitive understanding of the meaning of specific sounds. Previous studies have focused largely on sound and the properties of concrete objects, relating sounds to the roundness or sharpness of an object.

The concept of symbolic sound has been gaining currency in the field of linguistics since the 1960s, says Rabaglia.

"Previously, the idea that language was arbitrary - that one word for an object was as good as any other - held sway," she says. "However, this isn't true all the time. Feelings and intuitions about sounds also have currency, perhaps because we are human and we interpret things in a particular way."

**More information:** Cristina D. Rabaglia, The sound of distance,

*Cognition* (2016). [DOI: 10.1016/j.cognition.2016.04.001](https://doi.org/10.1016/j.cognition.2016.04.001)

Provided by University of Toronto

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