

Two languages offer two 'minds' for bilinguals

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Credit: Paul Brennan/public domain

(Medical Xpress)—If you meet someone who speaks another language that you do not understand, you may not just miss what is being said but what is being perceived. Prof. Panos Athanasopoulos of Lancaster University works in areas of experimental psycholinguistics, cognitive linguistics, bilingual cognition, linguistic and cultural relativity, first, second and additional language learning—all of which indicate that

language learning today is being studied and measured by scientists in ways that go beyond handling vocabulary and sentence structure.

The main questions that guide his research mesh [language](#) learning with [human cognition](#): 1. To what extent do speakers with different cultural and linguistic backgrounds think and perceive the world differently? 2. To what [extent](#) does additional [language learning](#) transform the way we perceive the world? A paper authored by him and other researchers from the UK, Sweden and Germany has been published in the peer-reviewed journal *Psychological Science*.

"Two Languages, Two Minds: Flexible Cognitive Processing Driven by Language of Operation" is a step forward in discussing how the language that a person is using may change the way that person sees what's around— thought processes included. This is not such a radical idea. The authors noted the observation from Charlemagne, King of the Franks and crowned as Emperor of the Romans: to speak another language is to possess another soul.

The researchers posed the question, "Can something as fundamental as categorization preferences in humans be shifted by changing the language context in which such categorization is performed?"

They wrote, "We make sense of objects and events around us by classifying them into identifiable categories. The extent to which language affects this process has been the focus of a long-standing debate: Do different languages cause their speakers to behave differently? Here, we show that fluent German-English bilinguals categorize motion events according to the grammatical constraints of the language in which they operate. First, as predicted from cross-linguistic differences in motion encoding, participants functioning in a German testing context prefer to match events on the basis of motion completion to a greater extent than participants in an English context. Second, when

participants suffer verbal interference in English, their categorization behavior is congruent with that predicted for German and when we switch the language of interference to German, their categorization becomes congruent with that predicted for English. These findings show that language effects on cognition are context-bound and transient, revealing unprecedented levels of malleability in human cognition."

Thought processes can change even in the same people depending on which language they use.

As part of their investigation, the researchers asked German-English bilinguals to provide similarity judgments on video-clip triads depicting goal-oriented motion events (e.g., a woman walking towards a car).

"Speakers of German, Afrikaans, and Swedish, tend to mention endpoints, look at endpoints, and favor endpoints in similarity judgments, whereas speakers of English, Spanish, Arabic, and Russian, do so to a lesser extent."

What does all this "endpoint" talk mean? Nicholas Weiler, in *News From Science*, explained endpoints. "German speakers tend to specify the beginnings, middles, and ends of events, but English speakers often leave out the endpoints and focus in on the action. Looking at the same scene, for example, German speakers might say, 'A man leaves the house and walks to the store,' whereas an English speaker would just say, 'A man is walking.'" As important, bilingual speakers appeared to switch between perspectives "based on the language most active in their minds," wrote Weiler. If [speakers](#) of two languages put different emphasis on actions and consequences, then bilinguals stand to get the best of more than one world view; two languages may result in more flexible thinking.

Weiler illustrated this point quite clearly: *Where did the thief go?* Ask the question in [German](#) and you may get a more accurate reply. *How did she*

get away? You may want to use English for that one.

More information: Two Languages, Two Minds: Flexible Cognitive Processing Driven by Language of Operation, *Psychol Sci.* 2015 Mar 6. pii: 0956797614567509. [Epub ahead of print]

<http://pss.sagepub.com/content/early/2015/03/06/0956797614567509.long> (PDF)

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