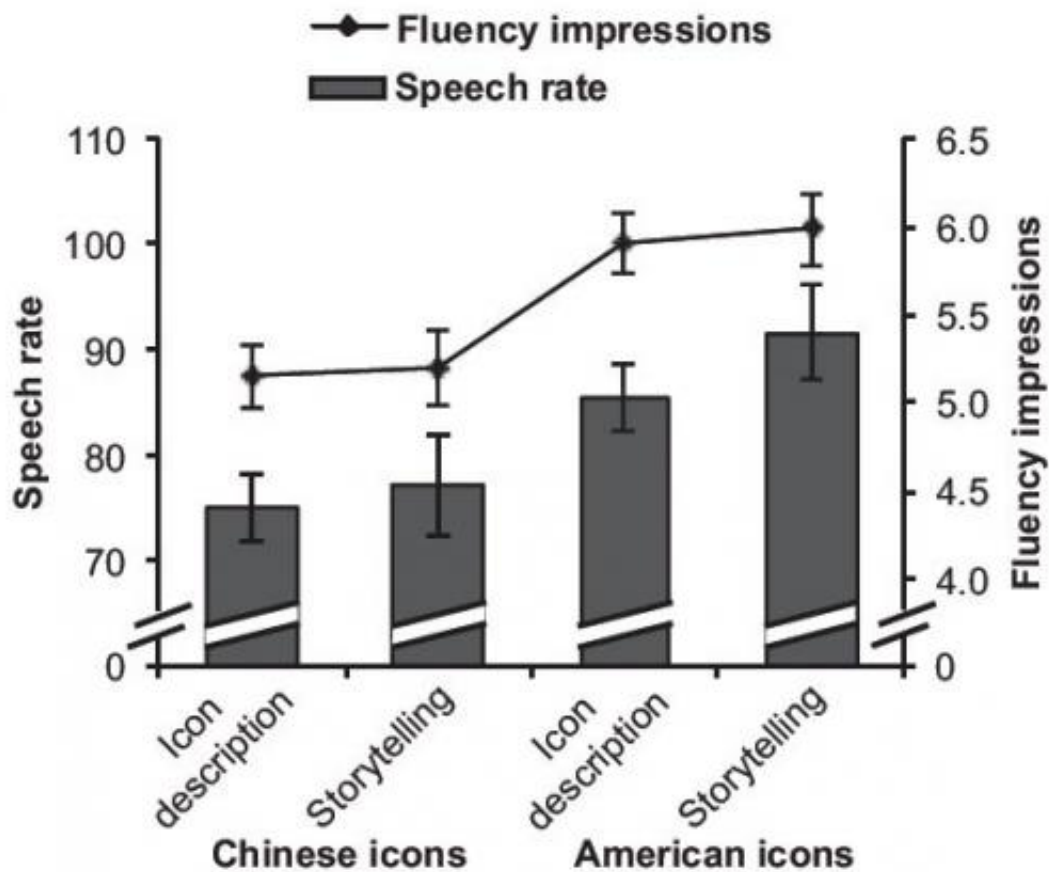


Study shows cultural images may hinder proficiency in second language skills

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Effects of icon primes on fluency impressions and speech rate on culture-icon description and storytelling tasks. Credit: (c) *PNAS*, Published online before print June 17, 2013, doi: 10.1073/pnas.1304435110

(Medical Xpress)—A team of combined researchers from Columbia

Business School and Singapore Management University has found that people who have learned a second language become less proficient at speaking it after being exposed to cultural images. In their paper published in the *Proceedings of the National Academy of Sciences*, the team describes three exercises they carried out to test second-language skill proficiency after exposure to cultural images.

Prior research has shown that people living in a country foreign to them often respond to images of cultural landmarks from their homeland by switching to their native cultural reference associations. In this new effort, the research team sought to find out if the same is true of linguistic abilities.

In their first exercise, the research team recruited 42 native Chinese speakers living in the U.S. for at least a year. Each was asked to "converse" with a graphic on a computer screen representing a person. In one run, the graphic represented a Chinese person, in another, a Caucasian. In studying recordings of the verbal responses given by the volunteers, the researchers found that their English skills declined when speaking with someone who looked Chinese.

To find out if the volunteers were simply trying to speak better English when speaking with a native English speaker, the researchers ran another test. This time, the volunteers were asked to describe cultural icons shown in photographs. In studying the results, the researchers found that English speaking skills were lower when the volunteers were describing icons familiar to them from their native land.

In the third exercise, volunteer native Chinese speakers who had only been speaking English for a few months were asked to look at photographs of different cultural icons. They found that the volunteers who looked at icons from their homeland first were more likely to revert to using [literal translation](#) to describe objects than they were prior to

looking at such icons. They would describe a lollipop as "stick candy" for example, despite knowing its English name.

Together the three studies indicate, the researchers say, that human beings have something they call frame-switching, which is where associations are made between words and icons—seeing those icons causes a different frame to be brought to mind. This might explain, they note, why immigrants who live in clusters of people from their homeland have more difficulty assimilating into a new culture, or why people who frequently look at pictures of loved ones while living abroad find it more difficult to learn a new language.

More information: Heritage-culture images disrupt immigrants' second-language processing through triggering first-language interference, *PNAS*, Published online before print June 17, 2013, [doi: 10.1073/pnas.1304435110](https://doi.org/10.1073/pnas.1304435110)

Abstract

For bicultural individuals, visual cues of a setting's cultural expectations can activate associated representations, switching the frames that guide their judgments. Research suggests that cultural cues may affect judgments through automatic priming, but has yet to investigate consequences for linguistic performance. The present studies investigate the proposal that heritage-culture cues hinder immigrants' second-language processing by priming first-language structures. For Chinese immigrants in the United States, speaking to a Chinese (vs. Caucasian) face reduced their English fluency, but at the same time increased their social comfort, effects that did not occur for a comparison group of European Americans (study 1). Similarly, exposure to iconic symbols of Chinese (vs. American) culture hindered Chinese immigrants' English fluency, when speaking about both culture-laden and culture-neutral topics (study 2). Finally, in both recognition (study 3) and naming tasks (study 4), Chinese icon priming increased accessibility of anomalous

literal translations, indicating the intrusion of Chinese lexical structures into English processing. We discuss conceptual implications for the automaticity and adaptiveness of cultural priming and practical implications for immigrant acculturation and second-language learning.

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