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Science **NOW** UP TO THE MINUTE NEWS FROM SCIENCE

Trying to Learn a Foreign Language? Avoid Reminders of Home

by [Emily Underwood](#) on 17 June 2013, 3:50 PM | [15 Comments](#)

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Something odd happened when Shu Zhang was giving a presentation to her classmates at the Columbia Business School in New York City. Zhang, a Chinese native, spoke fluent English, yet in the middle of her talk, she glanced over at her Chinese professor and suddenly blurted out a word in Mandarin. "I meant to say a transition word like 'however,' but used the Chinese version instead," she says. "It really shocked me."

Shortly afterward, Zhang teamed up with Columbia social psychologist Michael Morris and colleagues to figure out what had happened. In a new study, they show that reminders of one's homeland can hinder the ability to speak a new language. The findings could help explain why cultural immersion is the most effective way to learn a foreign tongue and why immigrants who settle within an ethnic enclave acculturate more slowly than those who surround themselves with friends from their new country.

Previous studies have shown that cultural icons such as landmarks and celebrities act like "magnets of meaning," instantly activating a web of cultural associations in the mind and influencing our judgments and behavior, Morris says. In an earlier study, for example, he asked Chinese Americans to explain what was happening in a photograph of several fish, in which one fish swam slightly ahead of the others. Subjects first shown Chinese symbols, such as the Great Wall or a dragon, interpreted the fish as being chased. But individuals primed with American images of Marilyn Monroe or Superman, in contrast, tended to interpret the outlying fish as leading the others. This internally driven motivation is more typical of individualistic American values, some social psychologists say, whereas the more externally driven explanation of being pursued is more typical of Chinese culture.

To determine whether these cultural icons can also interfere with speaking a second language, Zhang, Morris, and their colleagues recruited male and female Chinese students who had lived in the United States for a less than a year and had them sit opposite a computer monitor that displayed the face of either a Chinese or Caucasian male called "Michael Lee." As microphones recorded their speech, the volunteers conversed with Lee, who spoke to them in English with an American accent about campus life.

Next, the team compared the fluency of the volunteers' speech when they were talking to a Chinese versus a Caucasian face. Although participants reported a more positive experience chatting with the Chinese version of "Michael Lee," [they were significantly less fluent, producing 11% fewer words per minute on average](#), the authors report online today in the *Proceedings of the National Academy of Sciences*. "It's ironic" that the more comfortable volunteers were with their conversational partner, the less fluent they became, Zhang says. "That's something we did not expect."

To rule out the possibility that the volunteers were speaking more fluently to the Caucasian face on purpose, thus explaining the performance gap, Zhang and colleagues asked the participants to invent a story, such as a boy

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Tongue twister. Bilingual immigrants are more likely to slip back into their first languages when reminded of home.

Credit: Michael Morris and Shu Zhang;
Image of pistachio nut © Dmitry Rukhlenko/iStockphoto.com

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swimming in the ocean, while simultaneously being exposed to Chinese and American icons rather than faces. Seeing Chinese icons such as the Great Wall also interfered with the volunteers' English fluency, causing a 16% drop in words produced per minute. The icons also made the volunteers 85% more likely to use a literal translation of the Chinese word for an object rather than the English term, Zhang says. Rather than saying "pistachio," for example, volunteers used the Chinese version, "happy nuts."

Understanding how these subtle cultural cues affect language fluency could help employers design better job interviews, Morris says. For example, taking a Japanese job candidate out for sushi, although a well-meaning gesture, might not be the best way to help them shine.

"It's quite striking that these effects were so robust," says Mary Helen Immordino-Yang, a developmental psychologist at the University of Southern California in Los Angeles. They show that "we're exquisitely attuned to cultural context," she says, and that "even subtle cues like the ethnicity of the person we're talking to" can affect language processing. The take-home message? "If one wants to acculturate rapidly, don't move to an ethnic enclave neighborhood where you'll be surrounded by people like yourself," Morris says. Sometimes, a familiar face is the last thing you need to see.

**Correction, 10:50 a.m., 18 June: Volunteers conversed with Michael Lee, not Michael Yee, as previously reported. The name has been corrected.*

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**Sarah Hallgren** • 8 days ago

This is the whole idea behind "language immersion" itself. I know I certainly wouldn't have become fluent in Japanese and Korean if I had done culturally American things all these years.

It works in reverse too, b/c I will slip Japanese or Korean phrases into my English speech if I'm talking to someone who has cultural experience in those countries.

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**Kaisasha** • 9 days ago

I have noticed this problem also! I live in China and have studied the language for several years. When I speak Chinese with my (Chinese) husband or colleagues, I usually feel quite comfortable and fluent. But when I speak Chinese when one of my Finnish friends (who speaks Chinese more fluently than me) is present, I feel very uncomfortable and get a lot of things wrong. I think the problem is that I feel intimidated or shy to speak in front of her, and it is also exacerbated because she reminds me of my native language.

Excellent article!

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**Margaret Nahmias** • 9 days ago

That is the curse of studying a language at home you are surrounded by your own culture.

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**FTB** • 9 days ago

I also find it interesting that when I try to speak yet another language (like French), I'm thinking in Swedish (my second language) and not English (my first). Kinda cool.

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**Jbar** → FTB • 8 days ago

I too notice that when studying a new language words tend to bubble up from the previous language I studied.

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**Margaret Nahmias** → FTB • 9 days ago

hahahah Yeah that happens to me with Portuguese. I think to think more in terms of Spanish because the two are similar more than English my first language.

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**Stephanos Konig Dior** • 9 days ago

I speak a few languages with ENGLISH being my native. If I am speaking to a person who is from Mexico, my brain wants to automatically use Spanish with him. If he is indeed MEXican, but raised in the USA and speaks only English, he will speak to me in perfect English and when I go to reply, my brain stumbles with trying to speak English because it sees a person who should speak Spanish and not English. When I come across a person who speaks both English and another language that I speak, as I am talking to her, I will have a problem speaking as my brain tries to figure out which language the conversation should be done in. Clearly I could speak English as they know it, too. Or I could speak the other language which is their native tongue. But which to use? Put me in front of a Latino, I can speak fluently with them in Spanish. Put me in front of a white person who speaks very high Spanish, I will have a tad of difficulty speaking Spanish with them as my brain starts to fry because it knows I should be speaking English, not Spanish. So, in point, the person's appearance changes my ability to speak. I can overcome this problem by taking a breath, and slowing down my velocity of mouth. --Steve from www.Lorio.net

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