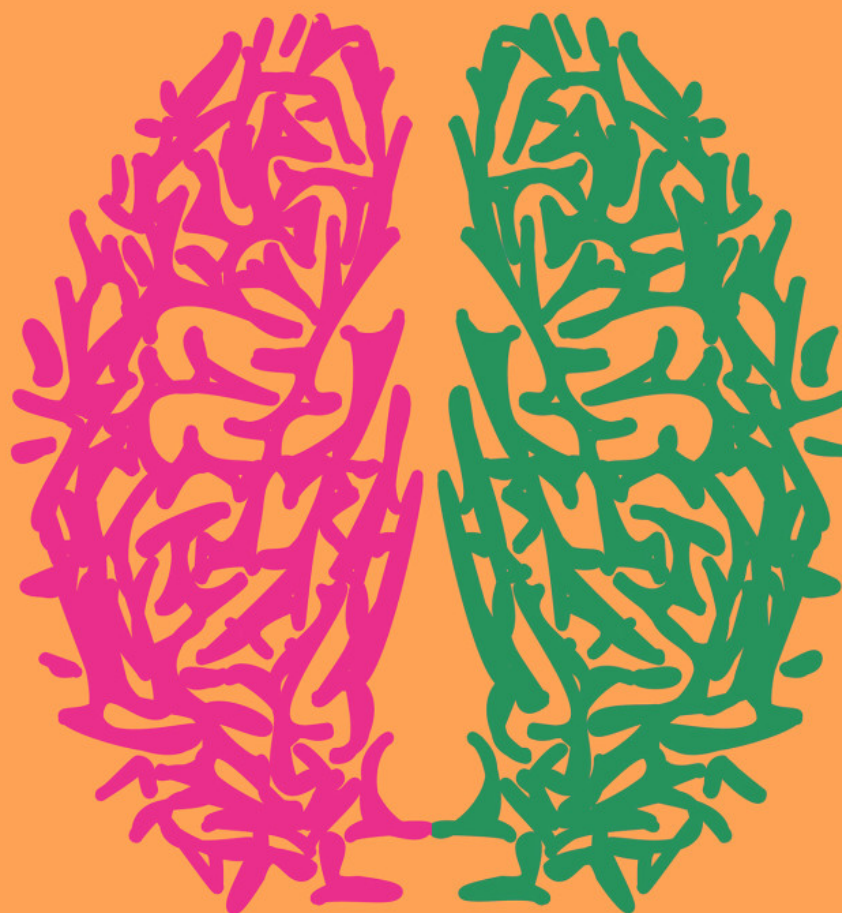


LIZZIE WADE | SCIENCE | 02.15.16 | 3:36 PM

BEING BILINGUAL CHANGES THE ARCHITECTURE



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I'D BEEN BACK from studying abroad in Mexico City for a couple of days when I asked my dad, "Can I use the *lavadora*?"

“The what?” He didn’t speak Spanish. I knew that, of course. *I* didn’t even really speak Spanish. I had barely been able to hold a conversation for most of the six months I had just spent in Mexico. So why when I needed to do laundry, the only word that came into my head was in Spanish?

“You know, the...umm...the thing that washes your clothes?” *What is happening to me?* I thought. *How could I be forgetting English? I thought I was great at English!*

“You mean the washing machine?”

“Yes, that!” I said, relieved to recognize a noun I had known and used for over 20 years. This momentary aphasia freaked me out when it first happened. But in the almost 10 years since this conversation—during which time I moved back to Mexico City as a grad student and then as a journalist—I’ve gotten used to it. I forget some English word or another at least once a day. I’m fluent in Spanish now, and I’m proud of that. But has speaking a second language somehow made me less fluent in my native language?

Judith Kroll thinks so. She’s a psychologist who studies bilingualism and its cognitive consequences at Pennsylvania State University. “A bilingual’s two languages sometimes converge, but often they compete,” she said this weekend during a presentation at the American Association for the Advancement of Science meeting in Washington, DC. When I speak Spanish, it’s not an effortless cognitive switch. My brain needs to actively choose Spanish every time I say a word or construct a sentence. Even after years and years of speaking Spanish every day, I can often feel that work happening. It’s tiring, and switching to English can be a relief.

But when I do, my brain is still doing all the same work, Kroll said. It’s just

that now I'm choosing English instead of Spanish. Spanish is always there in my brain, forcing me to do a little extra work to find the English words, even though I've known them far longer than their Spanish equivalents. "Especially in immersive environments, it's harder to grab hold of the native language," Kroll said. "You might have a moment of panic."

But if you really want to learn that second language, you can't shy away from that panic. You should lean into it. "The native language may take a hit during second language learning," Kroll said. "But that may be a crucial processes in learning to regulate language." Preliminary results from her own lab suggest that "learners who are better able to take that hit to their native language and suffer those early consequences may be better able to learn the second language," she said.

Plus, making a decision with every word you say may actually be like weightlifting for the brain. Every time I choose "washing machine" over "lavadora," or vice versa, my brain gets a little stronger. Kroll thinks this constant cognitive challenge that bilinguals face may be responsible for an observed improvement in what's called executive function, or the ability to filter out unnecessary information and make decisions. (Other researchers doubt that bilingualism has any effect on executive function, citing small sample sizes and a failure to replicate many positive results. You can read more about that debate [here](#).)

Of course, any bilingual person will tell you that sometimes they don't bother making a choice. When I talk to other people who speak English and Spanish, I often mix the languages together, saying things like, "Quieres un toast?" and "I wanted to aprovechar the holiday and viajar un poco." If I want to maximize the cognitive benefits of speaking two languages, should I stop mixing and force my brain through the gymnastics every time I open my mouth? In short: no. "Back in the 1980s, people claimed that language mixing was pathological," Kroll said. "It's actually a normal and typical part of bilingual experience." Plus, it's not like my brain is slacking off. I'm still choosing between languages with

every word, it's just that I'm not making the same choice every time.

From the day I landed in Mexico City, it was obvious that my English was always going to influence my Spanish—in my accent, in my vocabulary, in my embarrassing false-cognate fails. But as my lavadora moment made clear, learning Spanish quickly reshaped the way I spoke English, too. I don't have two monolingual minds operating separately in one head. I have one bilingual brain. Messy? Yes. Bewildering? Sometimes. Cognitively strong? I hope so.

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