

Being bilingual alters your brain. Here's how

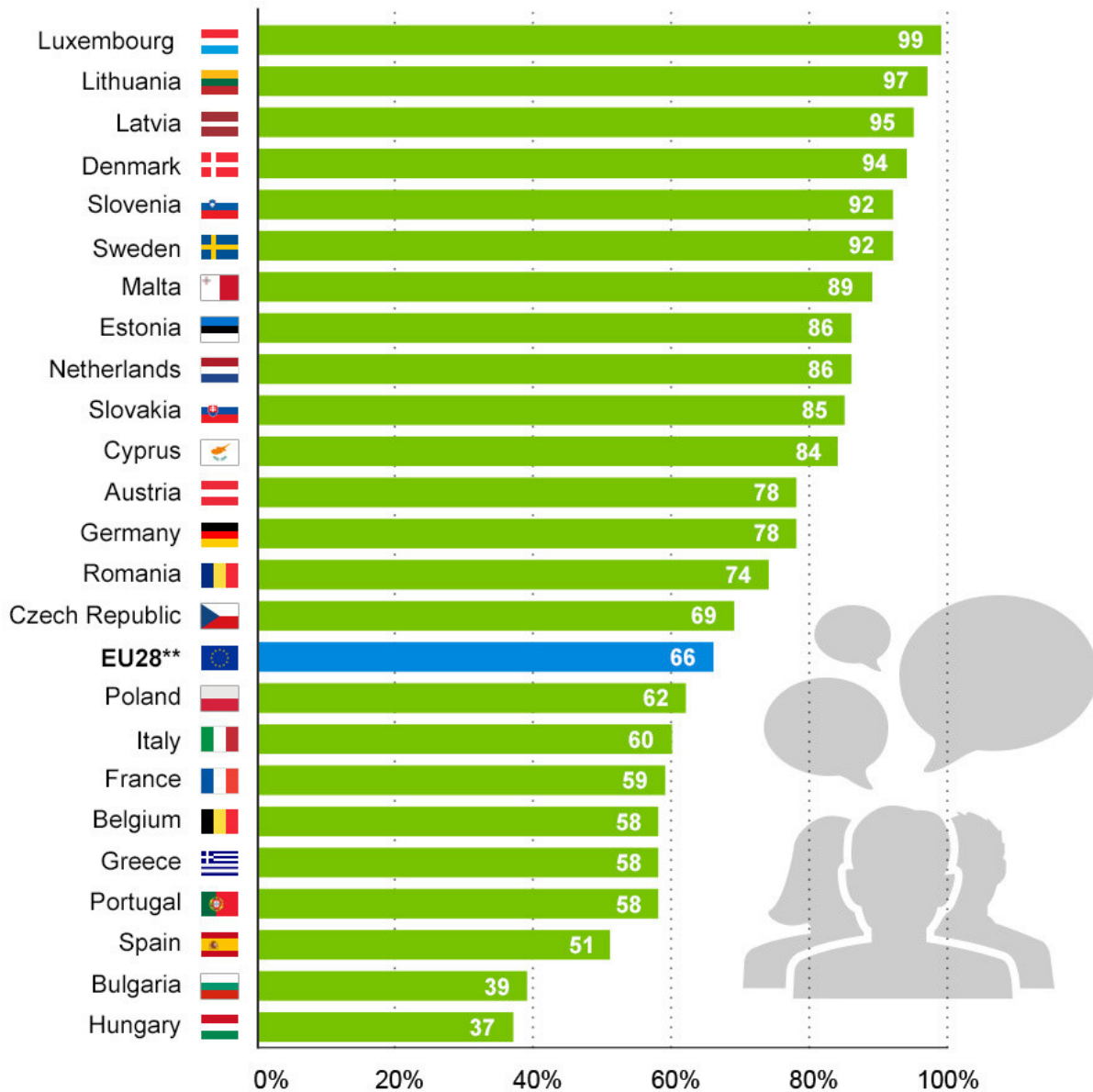
weforum.org/agenda/2016/02/how-being-bilingual-rewires-your-brain/

It's well known that being bilingual has cognitive benefits: switching between two languages has been compared to mental gymnastics. But now, research suggests that mastering two languages can fundamentally alter the structure of your brain, rewiring it to work differently than the brains of those who only speak one language.

"Bilinguals are a really a model of cognitive control," Pennsylvania State University cognitive scientist Judith F. Kroll told Quartz, citing bilinguals' ability to both hold two languages in their head and expertly switch between them at the right times. Kroll presented her work at the American Association for the Advancement of Science meeting held in Washington, DC last weekend (Feb. 13). If you speak two languages and have ever found this task to be difficult—choosing the "right" tongue based on the context you're in—it's because both languages are always "on" in the brains of bilinguals, as Kroll and other cognitive scientists have seen. In other words, the brain is continually processing information in both languages.

Two Thirds of Working-Age Europeans Know a Foreign Language

Share of the population stating they know at least one foreign language*



* Aged 25-64

**EU28 aggregate includes only Member States for which data is available

The mental struggle of selecting and switching between two languages actually helps reshape the brain's networks, according to Kroll. One study looked at four-month old, eight-month old, and one-year old infants—60 of whom were bilingual and 60 monolingual—and found that, as they grew older, infants who were exposed to both Spanish and Catalan started looking at speakers' mouths instead of their eyes when listening to someone talk. The monolingual infants, however, only looked at mouths more than eyes when they were listening to someone speak their native tongue.

Kroll told Quartz this study is a great example of how being bilingual can improve speakers' cognitive abilities. "Babies who are listening to two languages [growing up] become attuned to those two languages right away," said Kroll. "It's not confusing them or messing them up developmentally—the opposite is true."

This rewiring doesn't happen the same way in every bilingual brain—it's different for each person, just as each person has their own language experience. But Kroll's research demonstrates that no matter how effortlessly other bilinguals may seem to switch between their two tongues, there's a lot going on under the hood. That should come as a small relief for anyone attempting to pick up a new language.

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