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05-06-23 | [MINDFULNESS AT WORK](#)

The surprising creative power of the multilingual brain

From business to fashion, people who speak two or more languages tend to demonstrate more out of the box thinking, new research suggests.

BY VIORICA MARIAN, MATIAS FERNANDEZ-DUQUE, AND ASHLEY CHUNG-FAT-YIM

The Coperni fashion brand made international news in March by selling [purses made of meteorite](#). Coperni's outside-the-box thinking has featured [robot dogs](#) as models and spray-on dresses at Paris Fashion Week. Model [Bella Hadid broke the internet](#) when she walked onto the runway wearing only underwear, before being sprayed with a compressed liquid that transformed into a white, fabric-like dress.

How are such ideas conceived? In the case of the spray-on dress, the innovation sprang from the mind of designer and scientist Manel Torres. [Torres'](#) multicultural and multilingual background may have helped him formulate the idea.

Foreign experience [predicts the creativity](#) of designers' collections, according to research. In fact, the number of years a director spent abroad predicts creative innovation.

Born in Barcelona, Torres studied fashion design at London's Royal College of Art, before working in India's fashion industry for several years. He returned to London to complete an interdisciplinary PhD in chemistry and fashion, where he patented his now famous spray-on fabric and founded Fabrican. He continues [to visit Japan](#) for inspiration.

Likewise, being multilingual fosters creativity. Knowing multiple languages transforms the mind. Learning a new language allows for greater

flexibility in thought and increases connections between concepts, which in turn enhances creativity. For example, bilinguals find it easier to view a problem from [multiple perspectives](#), which can result in more creative solutions.

The broader fashion industry is brimming with multilinguals recognized for their creativity. For example, most Wall Street Journal Fashion Innovator award winners speak more than one language, such as Saint Laurent's [Anthony Vaccarello](#) and Calvin Klein's [Raf Simons](#), who are multilingual.

Torres himself speaks Catalan, Spanish, and English, which may explain the clever multilingual play on words that comprises the name "Fabrican": *fabrican* means *they make* in Spanish, and is a combination of "fabric" and "can" in English.

Measuring creativity is difficult, but one way researchers examine the association between multilingualism and creativity is by measuring divergent thinking, which is the process of generating new associations between existing concepts.

Imagine you were given a piece of paper with nine identical triangles and asked to draw different pictures using them. What would you draw? A house, a pizza slice, a mountain, a flag? Or imagine you could walk on air and fly. What problems might this create? Individuals who speak [multiple languages produce more innovative responses](#) to these problems than those who speak only one language, according to research.

Multilingualism may promote creativity via denser connections between words and mental representations. Words that are unrelated in one language may be related in another language, which gives multilinguals another way to form novel and unexpected associations between ideas.

[A study](#) in [our lab](#) at Northwestern University found that speakers of more than one language were more likely than monolinguals to rate apparently unrelated objects (e.g., "cloud" and "present") as related. Multilingualism

can trigger connections between different ideas, an important feature of ingenuity.

Others argue that because multilinguals often switch between languages and must filter out the language that is not being used, they may be better at filtering out information that is irrelevant to a task.

Multilinguals often combine elements from each language in novel and original ways when they code-switch between languages, which ranges from inserting a single word from one language into another to switching back-and-forth between languages as they speak. Bilinguals who code-switch frequently produce [more novel ideas](#).

Beyond individual creativity, the influence of multilingualism can also be seen on the larger scale of national economies. Switzerland boasts four national languages—French, Italian, German, and Romansch—and 68% of its population [uses two or more languages regularly](#). It has one of the highest GDPs per capita in the world, ranks first on the [Global Innovation Index](#), and leads Europe in [patent applications](#).

A 2010 [study](#) estimated that multilingualism contributed to 10.8% of Switzerland's GDP (about \$80 billion USD today) and was a fundamental contributor to the country's competitive edge. In our globalized economy, a multilingual population may be a driving force of innovation within and across borders.

For your next creative endeavor, tapping into the multilingualism within and around you might just be the key to unlocking a greater creative potential.

Viorica Marian is a professor at Northwestern University and the author of the new book [The Power of Language](#). Matias Fernandez-Duque is a PhD candidate and Ashley Chung-Fat-Yim, PhD is a postdoctoral fellow in Marian's Bilingualism and Psycholinguistics Laboratory at Northwestern.