

# There are also drawbacks to being bilingual

April 26 2016, by Julia Ouzia And Tomas Folke, Anglia Ruskin University

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Might come in handy in parts of Wales. Credit: FatManPhoto

The ability to speak more than one language certainly has its perks. It enables you to work in another country, for example, interact with people while travelling, or consume foreign media.

Bilingualism is very common – [current estimates](#) are that more than half of the world's population is bilingual and that this [prevalence is rising](#).

Cognitive psychologists have been interested in how [bilingualism](#) shapes the mind for almost a century. There are those who [suggest](#) that in order to speak in one language, bilinguals have to suppress the influence of the other. [Research from the past three decades](#) has argued that this unique form of language processing "trains the brain" in the use of non-verbal abilities known as "[executive functions](#)" such as ignoring irrelevant information or shifting attention.

Bilinguals [of different ages and cultural backgrounds](#) have been shown to be faster and more accurate than their monolingual peers when performing [cognitive tasks](#) demanding these abilities. Furthermore, it has been argued that bilingualism may lead to a [delayed onset of symptoms associated with dementia](#).

But the scientific community recently has become increasingly [sceptical](#) of the bilingual advantage hypothesis. One of the main points of criticism is that differences between monolinguals and bilinguals when it comes to executive function are not always apparent. This has generated a heated debate, especially in the [Bilingualism Forum](#) of the [scientific journal Cortex](#), about whether bilingualism is associated with cognitive advantages or not.

## **Fresh challenge**

It appears that research on bilingualism is at a [turning point](#). We need to pursue a new approach to understand, beyond those individual examples of executive functions, how the bilingual mind works. We have attempted to address this challenge by testing whether bilinguals and monolinguals differ in terms of how accurately they can assess their own performance.

This ability is called metacognition and is associated with, but separate from, other areas where bilinguals have been shown to have an advantage. Surprisingly, however, [we found](#) that bilinguals had less insight into their performance than their monolingual peers.

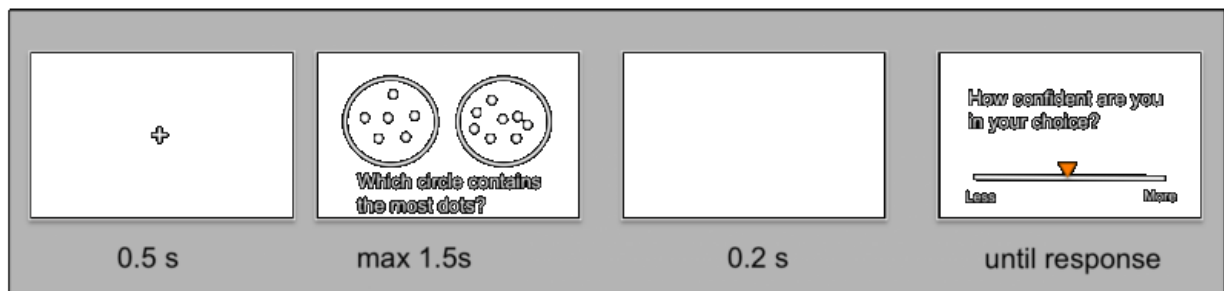


Illustration of the metacognition paradigm employed by Folke et al., 2016.  
Credit: Folkes et al, 2016, Author provided

## Joining the dots

In an effort to find out whether bilinguals also display advantages in other cognitive abilities (beyond [executive function](#)), we evaluated metacognitive processing in young adult monolinguals and bilinguals. Metacognition is the ability to [evaluate one's own cognitive performance](#) or simply to have "thoughts about thoughts".

This ability is a crucial function of everyday life, when we have to make decisions where the outcomes are not immediate. For example, when an entrepreneur reviews their company's performance, they need to take into account a variety of factors – including, for example, revenues and expenses – in order to evaluate whether the company is doing well. Confidence in their ideas and performance can be the determining factor

in whether they decide to keep investing time in their company or give up and apply for another job (the so-called "["exploitation exploration trade-off"](#)").

In [our research](#), we presented participants with a situation in which they had to observe two circles on a screen and guess which one contained more dots. Sometimes the difference was obvious, making the decision easy, while at other times the decision was very difficult (for example, one circle contained 50 dots and the other 49). Participants were then asked to determine how confident they were in their decision on a scale from less to more confident than normal.

Over the course of two experiments, we found that bilinguals and monolinguals were equally likely to choose the circle containing the highest number of dots. However, monolinguals were better able than bilinguals to discriminate between when they were right and when they were wrong. In other words, bilinguals had less insight into their performance than monolinguals. This went against our initial predictions, as we expected to find a bilingual advantage in metacognitive processing. These results indicate that bilingualism may be associated with cognitive disadvantages as well as benefits.

## **What's next?**

The [Multilanguage & Cognition lab](#) (MULTAC) at Anglia Ruskin University is currently undertaking a three-year project funded by the [Leverhulme Trust](#) to enhance our understanding of the bilingual mind.

The lab has already published evidence of cognitive advantages associated with bilingualism, suggesting that bilinguals are better at [filtering out verbal interference](#) as well as visual attention, specifically spotting the difference in a [visuo-spatial working memory task](#).

This new research indicates that bilingual people may experience a disadvantage in metacognition. We hope that this new direction in bilingualism research will encourage further attention and enable us to resolve theoretical debate through the adoption of open-minded, empirically driven exploration of cognitive effects (both positive and negative) that may be associated with learning more than one language.

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