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THE IMPACT OF BILINGUALISM ON COGNITIVE FUNCTIONS ACROSS LIFESPAN AND IN BRAIN DISEASES

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The last decades have witnessed fundamental changes in our understanding of both brain and language. In cognitive neuroscience, the static, localisationist view of a bilingual’s language areas and their interactions with other cognitive functions allowed for a better performance on many executive tasks. However, the complex nature of bilingualism transcends language itself, leading to a better performance on many executive tasks, particularly those requiring inhibition and switching. In contrast, given the complex nature of a bilingual (or even multilingual) vocabulary leading to multiple interactions, lexical access in bilinguals tends to be slower. These theoretical considerations are supported by converging empirical evidence comparing systematic performance of monolingual and bilingual subjects on a range of cognitive tasks, particularly on those involving frontal-executive functions. A better performance in the bilingual group has been documented across the lifespan, in young as well as elderly subjects. Bilinguals have been shown to develop dementia 4-6 years later than monolinguals and to be twice as likely to recover their cognitive functions after stroke. This suggests that bilinguals are able to build up a stronger ‘cognitive reserve’, offering some protection against cognitive ageing and the effects of different brain pathologies.

As the discussion at the EAN congress in Copenhagen, Denmark, showed, many questions remain open and will require further research. Traditionally, bilingualism research has focussed on what was considered to be its ideal case: early acquisition and perfect command of more than one language. In contrast, recent studies suggest that the effects of bilingualism are possibly even stronger in those who acquire a second language later in life. Even a short intensive language course can improve attentional switching and the effect is maintained 9 months after in those who practice 5 hours per week or more. Future studies will need to go beyond a simple comparison of monolinguals and bilinguals as distinct, dichotomous groups and determine the ‘dose-response curve’, defining language learning, knowledge, and use to their cognitive effects. This includes not only the beneficial effects of bilingualism but also its potential side effects, such as slower lexical access.

REFERENCES

Abstract Reviews

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