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Title
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Journal

ISSN

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Publication Date
2014

Peer reviewed

Memory representations as a window into the bilingual advantage

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Abstract: Research on the cognitive consequences of bilingualism suggests a bilingual advantage: early experience with more than one language predicts better inhibitory control of attention. The mechanisms responsible for this advantage, however, are not well understood. We ask whether depth and time-course of memory encoding may be responsible. We measured bilingual and monolingual adults' memory for non-linguistic stimuli processed during three tasks. The first paradigm, modeled after Richter and Yeung (2013), assessed participants' memories of stimuli processed during an attentional control task, providing a measure of attentional selection abilities. The second paradigm primed participants' recognition of faces at different durations, yielding a temporal measure of memory representations and their effect on stimuli recognition. The third, a false memory paradigm modeled after Koutstaal and Schacter(1997), measured spreading activation across the semantic networks of monolinguals and bilinguals. Results from all three paradigms provide insight into the mechanisms that underlie the bilingual advantage.