

L2 activation during L1 processing is constrained by L2 proficiency and exposure: Evidence from English–Afrikaans bilinguals

Robyn Berghoff and Emanuel Bylund

Abstract

Numerous studies have shown that the bilingual brain seldom switches off either of its two languages completely: even when operating in a context that is entirely monolingual, elements of the non-target language are still active (e.g., Kroll & Stewart, 1994; Spivey & Marian, 1999). The majority of studies of cross-language activation have focused on activation of the first language (L1) during second-language (L2) processing. Here, characteristics such as L2 proficiency have been found to reduce L1 activation during L2 processing. However, it is unclear whether such characteristics primarily predict L1 activation during L2 processing, or whether they also generalize to L2 activation during L1 processing and thus speak to cross-language activation in bilinguals at a more general level. The aim of the current study is to address this question, while also taking into account the effects of current L2 exposure. To do so, we implemented a visual world eye-tracking paradigm to detect L2 activation during auditory L1 word recognition. Twenty-four adult L1 English–L2 Afrikaans speakers were recruited. Data on participants' L2 exposure and proficiency were collected using a standardized language background questionnaire. In the task, participants heard the sentence "Click on the" + [TARGET OBJECT] while they viewed a screen on which four different objects were displayed. The target object (e.g., a lion, leeu in Afrikaans) appeared alongside one cross-language competitor with which the target overlapped phonetically (a drawer, laai in Afrikaans) and two irrelevant distractors (a nail, spyker in Afrikaans; and a pillow, kussing in Afrikaans). Participants' eye movements were tracked while they performed the task. The data were analysed using mixed-effects modelling. The results show that the extent to which participants looked at the cross-language competitor was modulated by L2 proficiency and current L2 exposure. The background variables' effects on L2 activation during L1 processing mirror those previously observed in studies of L1 activation during L2 processing, suggesting that cross-language activation is subject to similar influences regardless of the direction of the effect. The findings are discussed in terms of connectionist models of bilingualism (e.g., Li, 2009).

Keywords: cross-language activation; eye-tracking; visual world; proficiency; exposure

References

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