Language detection in the early stages of the bilingual lexicon

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Recent findings on the mechanisms of lexical access provide evidence that bilinguals are sensitive to the orthographic structure of their languages. Several studies on bilingual word recognition have demonstrated that if presented with language-specific sub-lexical cues, bilingual participants show reduced interference from the non-target language (e.g., Casaponsa, Carreiras, & Dunabeitia, 2014). As this challenges the widely accepted view of language non-selective lexical access, the BIA+ model (Dijkstra & van Heuven, 2002) has recently been extended by the introduction of sub-lexical language nodes (van Kesteren, Dijkstra, & de Smedt, 2015). Providing evidence for language-selective access, studies using nonwords with different degrees of cross-linguistic similarity showed a significant impact of language-specificity on participants’ rejection performance (e.g., Lemhöfer & Radach, 2009). Along with similar findings supporting the processing of language-specific sub-lexical cues, this has been taken as evidence that language detection in bilingual adults is not necessarily executed on the lexical level but can also happen based on sub-lexical information, i.e. at an earlier point in the recognition process.

The aim of the present study was to test the applicability of the BIA+ extended model by investigating the presence of sub-lexical language nodes in balanced bilingual children. Forty-six German-English third-graders, controlled for their nonword reading skills in both languages, performed two language-specific lexical decision tasks, which both contained English-like and German-like nonwords. Results revealed no impact of language-specificity on rejection performance in either language, which indicates that children did not make use of language-specific sub-lexical information. We interpret this as evidence that bilingual lexical access is initially language non-selective, and that sensitivity to language-specific orthographic structures first emerges over time. In contrast to adults, language detection in children seems to exclusively depend on lexical information, which argues for the absence of sub-lexical nodes in the early stages of the bilingual lexicon.
References:


