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Phonological Competition Across Languages in Bilingual Spoken Word Recognition

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Spoken word recognition involves competition among phonologically related lexical candidates. In bilingual listeners, this competition may arise both within and across languages. We examined how within- and cross-language phonological competitors are activated during spoken word recognition in monolingual and highly proficient bilingual listeners. Participants heard words in Spanish or English while viewing a within-language competitor, a cross-language competitor, and two unrelated distractors. Eye movements were analyzed in 50-ms bins within a 0–2000 ms window relative to word onset, using log-ratio measures of competitor fixations relative to distractors. Time-course data were modeled using generalized additive mixed models. Both monolinguals and bilinguals showed robust within-language competition in Spanish and English. Cross-language competition, however, emerged only in bilinguals and only when processing their first language (Spanish), but not their second language (English). These findings indicate that bilingual lexical access reflects both language-nonselective activation and input-dependent modulation, highlighting dynamic constraints on cross-language competition during spoken word recognition.