

Cross-language Phonological Overlap in Young Bilingual Children

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Adult and young bilinguals co-activate their languages in different degrees, even in entirely monolingual tasks/contexts (Spivey & Marian, 1999; Von Holzen, Fennell, & Mani, 2018). Previous research has used cognate words as stimuli. Cognates are translations overlapping in their phonological form (e.g., English “chocolate” /tʃɒklət/ and the Spanish “chocolate” /tʃokolate/). Thus, the reported effects can be solely attributed to the activation of the language in which the label was presented. In addition, words sharing the onset across translations (e.g., “bib” /bɪb/ and in Spanish “babero” /baβero/) might be easier to process than words that across translations do not share the onset (e.g., “dog” /dɒg/ and in Spanish “perro” /pero/). Thus, in the current work, we study phonological cross-linguistic effects on word recognition in the developing bilingual lexicon using as stimuli words that minimally share their overt phonological form (i.e., non-cognates whose translations onsets are different, e.g., “dog” and “perro”). With that aim, we presented three-year-old Catalan-Spanish bilinguals with the visual word paradigm adapted for children (Chow, Aimola-Davies, & Plunkett, 2017) where children saw four pictures, and later, an absent target was named in Catalan. Two images had names phonologically related to the target, and two had names phonologically unrelated. A logistic growth curve analysis of fixations showed that children looked more at the phonologically related images than phonologically unrelated images. These results suggest that young bilinguals activate phonologically related competitors in their familiar languages even when no overt phonological overlap is presented.

References

- Chow, J., Aimola Davies, A., & Plunkett, K. (2017). Spoken-word recognition in 2-year-olds: The tug of war between phonological and semantic activation. *Journal of Memory and Language*, 93, 104–134. <https://doi.org/10.1016/j.jml.2016.08.004>
- Spivey, M. J., & Marian, V. (1999). Cross talk between native and second languages: Partial activation of an irrelevant lexicon. *Psychological Science*, 10(3), 281–284. <https://doi.org/10.1111/1467-9280.00151>
- Von Holzen, K., Fennell, C. T., & Mani, N. (2018). The impact of cross-language phonological overlap on bilingual and monolingual toddlers’ word recognition. *Bilingualism*, 22(3), 476–499. <https://doi.org/10.1017/S1366728918000597>