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Phonological Representations in Spanish-English Bilinguals: Unitary or Dual Sets?

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Abstract

Languages vary in the acoustic properties of their phonemes. For example, the English b is acoustically similar to the Spanish p. It is unclear whether bilinguals have separate phonological representations for each language, or one set that is used universally. If separate, we predict bilinguals will respond differently to a given acoustic stimulus depending on which language-specific representations they access. Bilingual subjects participated in an English or Spanish context, with a monolingual English group as control. Subjects viewed pairs of pictures with names differing only in their initial phoneme (e.g. bear & pear, or beso & peso) and heard auditory stimuli consisting of a phoneme (e.g. p). Subjects were instructed to click the image whose name begins with the phoneme they heard, and mouse data was recorded. If mouse trajectory varies as a function of language context, this would provide evidence that bilinguals possess separate phonological representations for each language.