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Proceedings of the Annual Meeting of the Cognitive Science Society

Title

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Permalink

<https://escholarship.org/uc/item/08m5h9s5>

Journal

Proceedings of the Annual Meeting of the Cognitive Science Society, 31(31)

ISSN

1069-7977

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Publication Date

2009

Peer reviewed

An Exploration of Dialect-Driven Modulation of Spoken Word Recognition

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Abstract: Zevin and Farmer (2008) recently demonstrated that inter-category similarity among perceived minimal pairs (pin, pen, pan) generates systematic curvature in arm movements when participants categorize acoustic variants of them. The curvature of the arm movements is reflective of the competition implied by the perceptual space of participants, given their production and comprehension history (i.e., a Northeastern dialect), and the competitor present on the screen (a pin vs. a pen). In the current study, we conduct the same experiment at a Mid-Southern university to explore if, as that perceptual space changes, the curvature of the arms consistently shifts in relation. We conduct a similarity judgment task, a production study, and the same categorization experiment across a diverse range of individuals. Modulation of the arm-movement dynamics in the response space is indicative of the shape of the perceptual space, confirmed by individual differences measures extracted prior to participation.