

UC Merced

Proceedings of the Annual Meeting of the Cognitive Science Society

Title

Feature-based generalisation in sound pattern learning depends on phonetic motivation

Permalink

<https://escholarship.org/uc/item/1q00v5s6>

Journal

Proceedings of the Annual Meeting of the Cognitive Science Society, 46(0)

Authors

Martin, Alexander

White, James

Publication Date

2024

Copyright Information

This work is made available under the terms of a Creative Commons Attribution License, available at <https://creativecommons.org/licenses/by/4.0/>

Peer reviewed

Feature-based generalisation in sound pattern learning depends on phonetic motivation

Alexander Martin

University of Groningen, Groningen, Netherlands

James White

University College London, London, United Kingdom

Abstract

It has been claimed that language learners are better at acquiring phonetically motivated phonological patterns compared to unmotivated patterns; this hypothesis is known as substantively biased phonological learning. We test this hypothesis by exposing French-speaking participants (n=120) to either a vowel harmony pattern (phonetically motivated) or a vowel disharmony pattern (comparable formal complexity but phonetically unmotivated) in an artificial language. Participants were trained with noun roots and a single suffix, but at test were required to add multiple suffixes to roots, including a novel suffix with a vowel unobserved during training. Although participants performed equally well when adding a single suffix, only those in the harmony condition generalized when adding two suffixes (including the held-out suffix). This work expands on previous research by showing feature-based generalization of harmony, but not disharmony, to novel affixes held out from training. It provides strong evidence for the substantively biased phonological learning account.