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Age Effects in the Acquisition of Phonological Variation

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Abstract

We report a series of artificial language learning experiments designed to test child and adult learners abilities to acquire three types of phonological variation. Previous work on experimental morphology (Hudson Kam & Newport 2005, 2009; Schuler, Yang & Newport, 2016) has found that young children turn inconsistent input into an invariant rule, while adults reproduce and match variation in their input. Here we investigate whether phonological variation of three different types (deterministic conditioning, unconditioned variation, and probabilistic variation) exhibits a similar age pattern. We find a clear effect of age in grammatically-conditioned variability, with the youngest children showing a strong tendency to regularize to the stem form, adults probability-matching, and intermediate-aged children learning correct conditioning but not matching the input probabilities. These results suggest, in accord with previous findings on morphology, that variation is not readily learned by young children and may instead be acquired as a separate process.