Counting ‘uhm’s: How tracking the distribution of native and non-native disfluencies influences online language comprehension

Disfluencies, like uh, have been shown to help listeners anticipate reference to low-frequency words. The associative account of this ‘disfluency bias’ proposes that listeners learn to associate disfluency with low-frequency referents based on prior exposure to non-arbitrary disfluency distributions (i.e., greater probability of low-frequency words after disfluencies). However, there is limited evidence for listeners actually tracking disfluency distributions online. The present experiments are the first to show that adult listeners, exposed to a typical or more atypical disfluency distribution (i.e., hearing a talker unexpectedly say uh before high-frequency words), flexibly adjust their predictive strategies to the disfluency distribution at hand (e.g., learn to predict high-frequency referents after disfluency). However, when listeners were presented with the same atypical disfluency distribution but produced by a non-native speaker, no adjustment was observed. This suggests pragmatic inferences can modulate distributional learning, revealing the flexibility of, and constraints on, distributional learning in incremental language comprehension.