PERCEPTUAL LEARNING OF SPEECH SOUNDS:
A BIAS FOR 'ZIPPERS' OVER 'SIPPERS'?

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Despite huge variability in the incoming acoustical information, listeners efficiently map speech sounds into appropriate categories. Perceptual learning has been proposed as a cognitive mechanism that can account for this acoustic variation by updating a listener's existing phonetic categories using clues from the lexical context (Norris, McQueen & Cutler, 2003). Perceptual learning of speech is especially relevant in multicultural contexts, including urban centers across Canada. Listeners are exposed to accented speech and novel pronunciations of different interlocutors in their day-to-day lives, and must accommodate these productions in order to successfully communicate.

While perceptual learning may assist in the processing of dialect and accent differences (Kraljic, Brennan & Samuel, 2008; Crista et al., 2012) and non-canonical speech (Kraljic, Brennan & Samuel, 2008b) across the lifespan (White & Aslin, 2011; Trude et al., 2013; Witteman et al., 2013), little is known about whether some pronunciations are easier to perceptually learn than others. The present study investigates whether a bias for perceptually learning typologically more prevalent devoiced fricatives over voiced fricatives exists by exposing listeners to sentence stimuli with sentence-final voiceless [s] and voiced [z] items (e.g. 'He couldn't handle any more dinner, but there might be room for *dessert*'). A lexical decision task follows the exposure phase, measuring participants recalibration of [z] and [s]. Stimuli were produced naturally by one speaker, without synthesizing the placement of the critical fricatives [z] or [s] (see Weatherholtz, 2015). We predict listeners will learn the typologically more common devoicing pattern better than the voicing pattern (e.g. [dɛzɹt] → [dɛsɹt] will be learned better than [ɛpɪsoʊd] → [ɛpɪzoʊd]). This project contributes to our understanding of which attributes of the speech signal facilitate perceptual learning.

Word Count: 277