

## **Effects of contextual confusability and interlocutor feedback on speaker phonetic production and production ease in a simulated-communication task**

Is language production organized for robust communication? Some accounts attribute evidence that speakers produce contextually more confusable words more clearly to production ease (Bard et al., 2000; Arnold, 2008) or comprehension processes that affect word-specific phonetic representations (Baese-Berk & Goldrick, 2009; Pierrehumbert 2001). This contrasts with accounts in which production is organized to take into account perceived communicative success of previous articulations (Jaeger 2013). Thus determining whether speakers' articulations reflect sensitivity to feedback from interlocutors and/or are entirely driven by production ease is crucial for distinguishing between these hypotheses about the architecture of the production system.

In a web-based simulated-communication task (N=60) speakers instructed partners to choose one word from among three visually displayed options. Partners were programmed but believable (based on post-experiment survey). In critical trials speakers uttered voiceless targets (e.g. pill) with or without a minimal pair distractor co-present (e.g. bill, see Baese-Berk & Goldrick, 2009). Speakers were randomly assigned to one of 3 groups. In the no feedback group trials ended with no indication of the partner's response. In the positive feedback group the partner always chose the correct word. In the mixed feedback group 5 critical trials ended with the wrong choice.

Target word VOTs have been measured for 27 of the speakers and analyzed using ME linear regression with effects for visual co-presence, feedback group, and their interaction. VOT times were longer for targets uttered with the co-present distractor ( $p < .01$ ). There were nominal but non-significant differences across feedback groups (positive < no < mixed feedback mean VOTs). Followup analyses found VOTs were independently affected by context above overall word duration lengthening ( $p < .01$ ). Further analysis found context did not affect speech onset latencies nor did latencies affect VOTs ( $p > .1$ ).

The results replicate existing findings using a web-based paradigm and further find that VOTs are selectively lengthened by context and not influenced by speech onset latencies. Nominal changes in overall VOT across feedback groups suggest speakers adjust articulations based on feedback. Both findings support the claim that speakers are sensitive to context and interlocutor feedback and argue against the claim that articulatory variation is solely driven by production ease.