

Phonetic vs. contextual cues in communication between merged and unmerged speakers

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Herzog’s principle states that mergers expand at the expense of distinctions (Labov 1994). One explanation posited for the spread of merger is that merged speakers have communicative advantages (Labov 1994, 2010; Herold 1990). For instance, unmerged speakers’ reliance on phonetic cues may lead to misunderstandings when communicating with merged speakers. Merged speakers, however, must rely primarily on contextual cues, as merged items are essentially homophonous for merged speakers; weighting contextual cues over phonetic cues in cross-dialectal communication could allow for fewer misunderstandings. However, evidence that reliance on contextual cues results in communicative advantages and ultimately in the spread of merger has been primarily anecdotal and has not been empirically tested.

This study investigates the role of phonetic and contextual information in communication between merged and unmerged speakers in an attempt to shed light on the mechanisms underlying the spread of merger. Participants were divided into low-back merged and unmerged groups based on their responses to a survey administered after the experiment. Participants took part in a *Listening in Noise* task (e.g., Nygaard, et al. 1994). Stimuli consisted of 54 sentences derived from 18 minimal or near-minimal pairs (e.g., stock/stalk) placed into 3 different sentence contexts: ambiguous, contextually /ɔ/-biased or contextually /ɑ/-biased.

/ɑ/-biased	I need a vegetable <i>stock</i> for the soup
/ɔ/-biased	There is a celery <i>stalk</i> on the counter
Ambiguous	The word <i>stock/stalk</i> appeared six times

Mean Subtlex frequency measures were balanced across /ɑ/ and /ɔ/ words. Each participant heard only one sentence per minimal pair. Sentences were recorded by a low-back merged speaker who realizes the merged phoneme closer to [ɑ] and were then mixed with pink noise. The same sound clip of each target lexical item was spliced into both the /ɔ/-biased and /ɑ/-biased sentences for ambiguous, /ɔ/-biased, and /ɑ/-biased sentences for that pair, resulting in 3 different sentences with a phonetically identical target lexical item spliced into each. Orthographic transcriptions of each sentence were collected from each participant.

Initial results suggest that, while unmerged speakers misidentify /ɔ/ words produced by a merged speaker as containing /ɑ/ more often than merged speakers, overall normalized error rates of target words do not significantly differ between merged and unmerged speakers. Further, unmerged and merged speakers appear to be equally influenced by contextual predictability. These findings are confirmed by mixed effects models. Results call into question whether spread of merger can be attributed to communicative advantages stemming from a merged system.

References

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