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# Enhancing Speech Science through Collaboration: Investigating Perception of a Variable Speech Signal

*A Build & Broaden Project  
at North Carolina A&T and Penn State*

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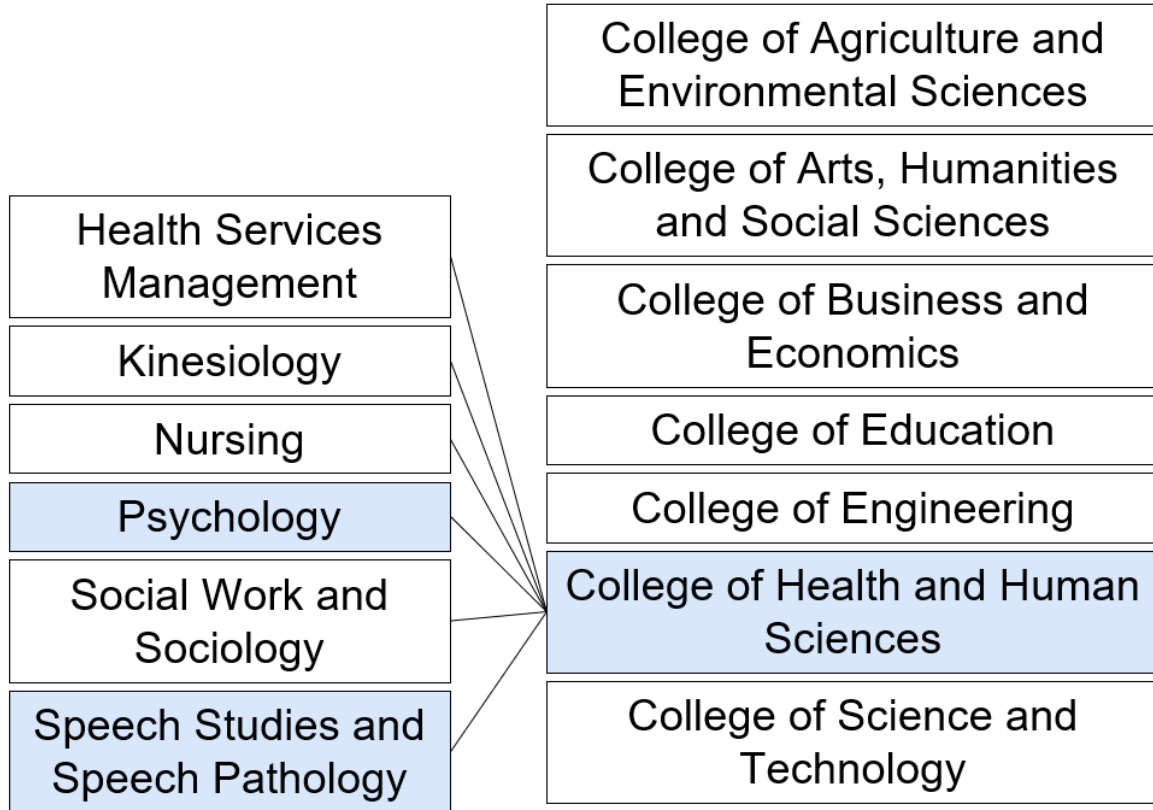
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SHORT REPORT

**Compensation for visually specified coarticulation in liquid–stop contexts**

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**Abstract** The question of whether speech perceivers use visual coarticulation information in speech perception remains unanswered, despite numerous past studies. Across different coarticulatory contexts, studies have both detected (e.g., Mitterer in *Perception & Psychophysics*, 68, 1227–1240, 2006) and failed to detect (e.g., Vroomen & de Gelder in *Language and Cognitive Processes*, 16, 661–672, doi:10.1080/01690960143000092, 2001) visual effects. In this study, we focused on a liquid–stop coarticulatory context and attempted to resolve the contradictory findings of Fowler, Brown, and Mann (*Journal of Experimental Psychology: Human Perception and Performance*, 26, 877–

the same visual information was accompanied by an ambiguous auditory precursor, suggesting that these effects are weaker and less robust than auditory compensation. We discussed why this might be the case and examined implications for accounts of coarticulatory compensation.

**Keywords** Coarticulation · Speech perception · Audiovisual speech

After decades of research, the question of how listeners demonstrate stable perception despite variability in the acoustic



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### Specific scientific goals

- How do human listeners cope with variability in the speech signal?
- Dialect variation, competing sources
- Implications for accessibility and inclusivity of speech recognition systems

## Building diversity at SBS

### Capacity building at A&T

- Provide on-campus resources for speech/language research
- Increase utilization of existing speech laboratory
- Support junior faculty in psychology and speech programs

### Training

- Engage students from diverse backgrounds in speech/language research
- Connect student orgs at NC A&T and PSU

### Collaboration

- Initiate collaborations between A&T faculty and faculty with related interests at PSU