MEGAN L. RISDAL. An acoustic and articulatory study of coarticulatory vowel nasalization in two dialects of English. (Under the direction of Professor Jeff Mielke.)

While coarticulatory vowel nasalization is recognized as a universal phonetic effect, previous acoustic and articulatory studies clearly indicate that it is a phonologically-encoded property of vowels in American English. As such, phonological vowel nasalization serves as a phonetic cue to the following nasal consonant and, in diachronic terms, subjects it to possible reanalysis and phonologization. The present study undertakes an acoustic examination of dialectal variation in this phenomenon among speakers of African American and European American English. Speakers of African American English have been observed to delete coda nasal consonants while maintaining nasality on tautosyllabic vowels (e.g., “ban” becomes “ba’”) which is suggestive of the transference of nasality from consonant to vowel. Results of an acoustic study tentatively support the hypothesis that African American speakers exhibit a greater degree of vowel nasalization in CVN syllable environments as compared to European American speakers. In support of the acoustic analysis, preliminary results from pilot data collection of aerodynamic information (oral and nasal airflow) and ultrasound tongue imaging are discussed in light of their potential to inform dialectal differences in coarticulatory vowel nasalization. Because the process of sound change involving the nasalization of vowels adjacent to nasal consonants is typologically common, the variation observed in the acoustic analysis has the potential to provide insight into processes of sound change.