The Influence of Regional Vowel Shifts on Front Vowel Perception

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As part of a project exploring the influence of regional variation on perception, a web-based vowel categorization task was administered to 265 participants from 4 fieldsites in three linguistically diverse regions: Memphis, TN, Blacksburg, VA, Reno, NV and Syracuse, NY. The current paper presents the results of this task for the high- and mid-front vowel continua.

The mid-front classes are realized quite variably across the major U.S. dialects, with Southerners showing widespread Southern Vowel Shift related /e/ centralization and Northern Cities Shift affected Northerners showing widespread backing/lowering of /ɛ/. Though still affected by regional shift patterns, compared to a highly differentiated mid-front vowel system, there is more variability within regions in high-front vowel production.

Results for the /e~ɛ/ continuum showed significantly different perceptual behavior across regional groups, with both Southern groups hearing a significantly later crossover toward /ɛ/. Clearly, mid-front vowel distinctions establish different perceptual representations compared to Northern and Western speakers, suggesting that dialect exposure to shifted variants does create perceptual patterns skewed by regional norms. However, differing degrees of regional shift participation showed greater influence than generalized regional distinctions when examining perceptual behavior along the high-front continuum. While Memphians show a traditionally aligned /i~ɪ/ similar to Northerners and Westerners, the Western Virginia participants are from an area more affected by the high front reversal in the Southern Vowel Shift. Regression analysis suggests that such intra-regional differences were a factor in predicting categorization decisions. Only Virginians showed significantly different categorization patterns compared to other fieldsites, including TN. Taken with the results from the /e~ɛ/ continuum, the results for /i~ɪ/ suggest that differences in community norms play a role in what vowel category listeners believe they are hearing. In addition, decidedly local norms, not generalized regional norms seem to play the most important role in shaping our perceptual system.