

## **An exploratory study of front vowels in Raleigh, NC**

In contrast with dialects of the U.S. urban North and rural South, urban Southern vernaculars remain nearly untouched by acoustic methods, in part because urban centers are relatively new in the South. This gap has repercussions for two central variationist questions. First, what is the social and temporal distribution of the Southern Vowel Shift (Labov 1991, 1994), thus far documented chiefly among rural speakers? Second, how do African American and Anglo vowel systems differ, and what do Southern urban AAE varieties offer the convergence/divergence debate surrounding AAE? In particular, is there support for Thomas' (2007) hypothesized African American Shift, wherein front lax vowels shift upward? The few extant quantitative studies of Southern urban vowels (Baranowski 2007; Fridland 2001, 2006; Thomas & Coggshall 2007) indicate complex ethnic patterns both of back vowel fronting and front vowel raising.

This study addresses these questions in the context of Raleigh, North Carolina, a quickly growing urban center with a longstanding African American population. The front lax vowels (BIT, BET, BAT, BAN) and the BOAT vowel are investigated in a corpus of 75 individual sociolinguistic interviews collected during the past year. The corpus is balanced for ethnicity, sex, age, and class. Interviewees and interviewers were matched for ethnicity. F1 through F3 were measured at five points in each vowel token's timecourse; all formant measurements were normalized via conversion to Barks and subtraction of Z1 and Z2 from Z3.

Based on ANOVAs that included preceding and following phonetic context and the aforementioned social parameters as factors, African American (AA) speakers show significantly fronter midpoints for BET ( $p=.005$ ) and BIT ( $p<.05$ ). Working class AA speakers have fronter BIT midpoints than middle class AA speakers, but there is no class distinction for BIT among Whites. AA speakers also show higher BAT midpoints ( $p<.01$ ). Consistent with previous findings that AA speakers do not participate in back vowel fronting to the same extent as White speakers, the BOAT midpoint is significantly fronter for Raleigh White speakers ( $p=.000$ ). These results indicate strong ethnic differences, but only the results for BAT are clearly consistent with Thomas' hypothesized African American Shift. Notably, ethnicity shows no significant effect on vowel height for BET or BIT.

However, both the BET and BAT midpoints are significantly lower for younger speakers of both ethnic groups. In addition, older White speakers, both middle and working class, show evidence of lowered BEET and BAIT nuclei relative to the corresponding lax vowel midpoints. Older AA speakers do not show this pattern. These results may suggest that the Southern Vowel Shift was more robust among White speakers relative to AA speakers, but is now waning for both ethnic groups. More generally, the results are evidence for a front vowel system that is sensitive to age and ethnicity, and not fully described by current hypotheses concerning the urban South.

## References

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