The African American Vowel Configuration (AAVC) has been identified in field sites such as Columbus, Ohio (Durian, Dodsworth, & Schumacher 2010) and Milwaukee, Wisconsin (Purnell 2010). Similar to the Southern Vowel Shift (SVS), the AAVC appears to be more extensive in certain areas of the South (Fridland 2003; Koops & Niedzielski 2009, 2011) than others, with considerable intra-community individual variation. The AAVC consists of the raising of the front lax vowels without diphthongization, lowering of the front tense vowels, centralization of BOT, BUT raising, and resistance to back vowel fronting (Kohn & Farrington 2011; Koops & Niedzielski 2011). Although it has been correlated with the use of other AAE features such as word final stop devoicing (Koops & Niedzielski 2009) and composite measures of AAE morphosyntactic and phonological features (Kohn & Farrington 2011), information regarding its social distribution is largely anecdotal. Class background appears to correlate with participation in this shift (Purnell 2010), but endocentric orientation is also a factor (Kendall & Wolfram 2009).

We explore the full vowel systems of 12 college-aged African American participants from two communities located ten miles apart in Piedmont North Carolina in order to identify the role of African American community density in the distribution of this pattern. Six of the participants come from Orange County, North Carolina, and six come from Durham County, North Carolina. In addition, we compare these speakers to an age-stratified sample of six African Americans from Wake County, North Carolina. Orange County is 74.4% white and 11.9% black, Durham County is 42% white and 38% black, and Wake County is 70.2% white and 19.6% black (US Census 2010). These counties are similar in that they are all located in the Piedmont region of NC and have major research institutions, but vary greatly in the population and community density of African Americans.

Over 3000 vowels were extracted for analysis. Multiple linear regressions were run using Lobanov normalized F1 and F2 Hz values as the dependent variable, and with phonetic environment and duration as the linguistic independent variables. Social variables in the model include community of origin, class background, and gender. The results of this analysis suggest that within the sample population, community background significantly correlates with extent of the participation in the AAVC. Participants from Durham County show a more extreme variety of the AAVC than those from Orange County or Wake County, even when controlling for class background. Although traditional analyses often focus on uniting features of AAE, this analysis demonstrates that AAE vowel patterns differ across local communities. Even within a single dialect region, factors such as population density and demographic composition are significant factors in the distribution and extent of the AAVC.