

A Quantitative Study of the Acquisition of Variable Vowel Systems Among African American Children

The Detroit variety of African American English is currently undergoing a sound change where /u/ and /ʊ/ are increasingly fronted (Anderson, 2000; Anderson and Milroy, 1999). This system parallels the vowel system of Southern Anglo English, although it is distinct from other varieties of AAE, including Southern varieties. This paper examines the vowel system of four African American children: two preschoolers and two kindergarteners, all four are girls. Additionally, one child in each grade is classified as lower class and the other is middle class. Measurements were also taken from the primary caregivers in order to make relevant comparisons based on the generation of the speaker. The data was taken from an on-going study of African American children in Detroit (Washington and Craig, 1998). The interviews were conducted in the child's home during play activities with both an African American female interviewer and with the child's female primary caregiver. Eight – ten tokens of /u/ and /ʊ/ were selected for acoustic analysis and F1 and F2 frequencies were recorded. The tokens were selected so that the vowels occurred in multiple environments to reduce the effects of coarticulation. In order to measure /u/ and /ʊ/ fronting, the vowels were compared to an anchor vowel, /a/. This enables comparisons that are relevant to each speaker since /a/ is not currently undergoing change in Detroit.

Although there does not appear to be a significant age effect among the children, results of the acoustic analysis indicate an age difference between the children and the caregivers. All four of the children show more fronting than their adult counterparts for both /u/ and /ʊ/. The caregivers, with the exception of one, have backed variants of /u/ and /ʊ/, with very little overlap in the F2 space of the test and anchor vowels. The children show much more fronting, with the test vowels occurring in front of and overlapping with the F2 space of the anchor vowel. This is evidence that the current sound change in Detroit seems to progress further with each generation. When judged by class, there appears to be some class effect in that the middle class children show more fronting than their lower class peers. Anderson, Nguyen and Milroy (2002) show that the sound change initiates in the lower class. The children in this study are acquiring the new Detroit vowels as opposed to the vowels to which they are exposed on a regular basis—the vowels of their primary caregivers. These results imply that children may be a driving force in the transmission of a sound change: they may acquire the new variant as a primary representation and normalize its use, even when the variant is not prominent in the speech of a caregiver.

Key Words: Acquisition, African American English