Intersections between race, place, and gender in the production of /s/

Articulation of /s/ has been linked with gender identity in both production (e.g., Podesva & Van Hofwegen 2016, Hazenberg 2012) and perception studies (e.g., Strand 1999), with women producing a fronter /s/ than men, and a fronter /s/ being perceptually linked with femininity. However, this research has been conducted in largely White speech communities, and it remains an open question whether the same gendered patterns exist among People of Color. We explore /s/ variation in two African-American (AA) communities: Rochester, NY, an urban community in which AAs form a significant portion of the population; and Bakersfield, CA, a non-urban community in which AAs form a small minority. Examining balanced samples of 12 AA Bakersfieldians and 24 AA Rochesterians, we explore the social effects on /s/ Center of Gravity (COG). COG, a spectral measure, corresponds to frontness of articulation, such that a fronter /s/ results in a higher acoustic frequency and thus a higher COG.

We construct mixed effects linear regression models across 37272 /s/ tokens within and across the Rochester and Bakersfield samples. Results show that among Bakersfield AAs, there is no statistically significant gender difference for /s/ COG, a surprising finding in light of previous research. AA male Bakersfieldians, exhibit a much higher COG than male speakers in previous studies, exhibiting values on par with AA females in Bakersfield. Additionally, while a gender pattern exists in Rochester—such that AA female Rochesterians exhibit significantly higher COG values than AA male Rochesterians ($p<0.0001$, $t=5.316$)— the gender difference is not as wide as what has been found in previous community studies of /s/ production. Specifically, AA male Rochesterians' COG is not as low as male speakers in previous studies, and AA female Rochesterians' COG is not as high as female speakers in previous studies.

Situated within ethnographic context, the results suggest that patterns linking phonetic variables and gendered identities are specific to the communities under analysis, and may be influenced by different sociohistorical dynamics and constructions of race and place. While a backed articulation of /s/ has been linked with maleness and masculinity in multiple studies, it has also been linked to country identity in previous work in the California Central Valley (Podesva & Van Hofwegen 2016). Given the history of racial tensions in Bakersfield, it is possible that Bakersfield AA men avoid using a feature that is ideologically linked to countryness among White speakers in the region. However, in urban Rochester, a gender difference is likely driven by gendered personae like the Hood Kid and the Mobile Black Professional, which aren't as relevant or salient in Bakersfield. In Rochester, these personae are ideologically linked with masculinity and femininity resepctively, and also pattern with /s/ frontness, such that Hood Kids exhibit some of the backest /s/ means in the sample and Mobile Black Professionals exhibit some of the frontest. These findings illuminate the influence of race, place, and locally relevant social distinctions on the phonetic articulation of gender.

References

Hazenberg, E. 2012. *Language and identity practice: a sociolinguistic study of gender in Ottawa, Ontario.* St. Johns, NL: Memorial University of Newfoundland MA thesis.

Podesva, R. J. and J. Van Hofwegen. 2016. /s/exuality in Smalltown California: gender normativity and the acoustic realization of /s/. In *Language, Sexuality, and Power.* E. Levon and R. Beline Mendes eds. Oxford University Press. 168-188.

Strand, E. A. 1999. Uncovering the role of gender stereotypes in speech perception. *Journal of Language and Social Psychology* 18(1): 86-99.