Voice Quality Variation and Gender in Washington, DC
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Previous studies have both directly and indirectly associated gender with particular voice qualities. Creaky voice, due to its characteristically low fundamental frequency, has been iconically associated with masculinity (Henton and Bladon 1988) and related stances like hardcore gang status (Mendoza-Denton 2007). Despite strong associations between voice quality and gender, social meanings are arbitrary and can be subverted. This paper, the first large-scale voice quality study of a U.S. community, identifies several non-iconic gender patterns and within gender differences based on ethnicity.

We draw on 32 sociolinguistic interviews with residents of Washington, DC, with speakers balanced for gender, age, and race. The voice quality of each syllable in approximately 8,500 intonational phrases was coded auditorily and double-checked by a second researcher. A regression reveals that nonmodal voice qualities (e.g. creaky, breathy, falsetto) are used more frequently by women than men (p<0.0001). We attribute the gender pattern in part to women’s greater tendency to produce reported speech (a speech activity occasioning higher rates of nonmodal voice). Creaky voice is the most commonly used nonmodal voice quality, and in contrast to previous work, it predominates in the speech of women (p<0.0001); an interaction between gender and race reveals that white women are primarily responsible for this pattern (p<0.0001). Falsetto is also more common in the speech of women (p<0.0001), due to its prevalence among African American women in particular (p<0.0001).

The high incidence of creaky voice among white women suggests that the indexical potential of creaky voice has expanded beyond its associations with masculinity. Moreover, while female speakers exhibit a tendency to phonate in nonmodal voice, the particular nonmodal voice qualities used depend on ethnicity, with white females preferring creaky voice and African American females, falsetto. In sum, even though voice quality indexes gender, it does so in non-iconic and culturally specific ways.