

VOWEL DISPERSION AS A DETERMINANT OF WHICH SEX LEADS A VOWEL CHANGE

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One of the established principles of linguistics is “that women are generally the innovators in linguistic change” (Labov 1990:205). Labov goes on to say that it is unclear how differences between sexes can account for this pattern (*ibid.*). In this paper, I argue that sex differentiation in vowel changes is linked to sex differentiation in vowel space dispersion.

Women have more dispersed vowel spaces than men. This sex difference was first noted by Labov (1972:304), who observed that “men are more ‘closed-mouthed’ than women, and use more contracted areas of phonological space.” Since then, a number of phonetic studies have established empirically that women typically exhibit greater between-vowel dispersion than men.

Women are also known to lead vowel chain shifts (Labov 2001:284). Recent work on a vowel chain shift in Midwest United States (Jacewicz et al. 2006) has linked women leading the shift to their pronunciation: “women [lead] the vowel change by producing longer and clearer vowel variants” (p.311). Longer vowel productions are less schwa-like (Van Bergem 1993), that is, they are farther away from the centre of the vowel space. In other words, they are more dispersed.

If vowel dispersion is connected to vowel changes for women, then it must also be connected to vowel changes for men. Specifically, the more contracted vowel space of men predicts that men lead sound changes that involve further reduction of the distance between vowels, such as vowel mergers. This prediction is contrary to the principle of sound change introduced in the first paragraph, that women are the innovators in linguistic change.

I test the hypothesized link between vowel dispersion and vowel mergers with *The Atlas of North American English* (Labov et al. 2006). The atlas provides impressionistic merger data for 762 speakers, and formant data for 439 of those speakers. I confirm the hypothesis in three steps. First, I show that the male speakers are leading the seven vowel mergers that are not part of a chain shift. Second, I show that the female speakers have a more dispersed vowel space (although normalization eliminates the sex difference). Third, I show that vowel dispersion correlates with merger state for all seven of the male-led mergers, even after normalization.

The establishment of a connection between vowel dispersion and vowel changes allows for a refinement of the principle of sound change by making a distinction between female-dominated sound changes and male-dominated sound changes. Specifically, these results suggest that women lead sound changes that involve the maintenance of inter-vowel distances, while males lead sound changes that involve the reduction of inter-vowel distances.

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