

## Sex Differentiation in Phonological Space and Women Leading Sound Change

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 phonetic-level sound changes is linked to sex differentiation in the use of phonological space.

Labov (1972:304) 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 females consistently exhibit greater between-vowel dispersion than males. Their more dispersed phonological space predicts that women will tend to lead sound changes that involve the maintenance of phonetic-level distinctions, of which one example is vowel shifts. This is indeed the case, as reported by Labov (2001:284): “all ... [vowel] chain shifts examined so far are dominated by women.” Conversely, the limited use of phonological vowel space by males predicts an exception to the principle, viz., that males will lead sound changes that involve the further reduction of phonetic-level distinctions, such as vowel mergers.

I establish a link between phonological space and vowel mergers by examining the phonetic distance between the front vowels /æ/ and /i/ and the merger of /ɛn/ and /ɪn/. I use the acoustic vowel formant measurements and impressionistic reports of the degree of /ɛn/-/ɪn/ merger published in *The Atlas of North American English* (Labov et al. 2006) for 44 male and 263 female speakers from the Eastern New England, West, and Midland dialect areas. The phonetic distance between the peripheral vowels is shorter for the males, and the males also lead the merger of the lax vowels. Furthermore, phonetic distance significantly contributes to a regression analysis of the degree of merger (the other significant contributor being social class).

The establishment of a connection between phonological vowel space and linguistic change 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 phonetic-level distinctions, while males lead sound changes that involve the reduction of phonetic-level distinctions.

### References

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