Abstract

Transmission and persistence in sound change

This paper addresses two fundamental issues in language change. The first is the relationship between social and structural factors: To what extent is change across generations driven by social factors and to what extent by directly structural factors? The second is the how cross-generational transmission: To what extent is imperfect learning necessary to account for sound change?

Labov succinctly states the condition necessary for language change (2001:416): “Children must learn to talk differently from their mothers, and these differences must be in the same direction in each succeeding generation.” Labov, D’Arcy (forthcoming) and others focus heavily on social factors. We explore here a structural counterpart, namely that the input children receive (in some cultures) may be prosodically skewed, pushing pronunciation in the same direction over successive generations. Specifically, emphatic pronunciations of vowels in American English ‘warp’ the vowel space in particular directions. The tendency of caretakers of produce vowels emphatically in speaking to young children (de Boer & Kuhl 2003) suggests that cross-generational vowel change might follow that patterns of prosodic emphasis. If the prediction is correct, a younger generation’s non-emphatic vowels should correspond to the position in the acoustic space of emphatic realizations of the same vowels in an earlier generation. And change would be accomplished with children accurately perceiving input rather misperceiving; the input is simply skewed from the ‘normal’ production in adult-to-adult speech (Salmons et al. forthcoming).

This paper reports results of an extensive study testing this idea across three distinct dialects of American English, southeastern Wisconsin, central Ohio and westernmost North Carolina (see also Jacewicz et al., forthcoming). Results to date strongly support the prediction: the emphatic vowels of each successive generation led and determined the direction of the shift. This is illustrated in the figure below, which compares the realization of /ɪ/ over three generations, where A2 is the oldest (adults) and A0 reflects the speech of children, with emphatic (black symbols) realizations and non-emphatic realization (open symbols) plotted for each generation. The same pattern obtains across each of the three dialects and across all three generations.

We argue that directly structural factors in how vowels are pronounced and the input presented to learners should be accorded a position in change across cross-generational transmission of language alongside social factors. This view can help account for why certain changes persist over many generations and accounts for sound change without assuming imperfect learning in such cases.
References


