

Unnatural Classes and Phonological Generalization in Dialect Formation

According to Labov et al. (2006), the Northern Cities Vowel Shift has its origins in a koineization: Western New York State, the apparent birthplace of the NCVS, was settled by groups migrating from New England as well as New York City. These settling groups had widely varying patterns of short-*a* tensing, including both the phonemically split short *a* native to New York and the nasal tensing pattern found in New England. Therefore—the hypothesis goes—in a community where these two incompatible systems of short-*a* tensing were both present in the founding populations, the short-*a* system underwent koineization to the simplest possible pattern, becoming tense in all environments.

It is not, however, immediately clear why this simplified pattern should be that of generalized short-*a* tensing. There is evidence that the nasal system is the default short-*a* pattern in American English (e.g., Ash 2002; Friesner & Dinkin to appear). Why then would contact between a pair of short-*a* systems that **includes** the nasal system produce a separate, and typologically more marked, third system? The purpose of this paper is to present a phonological model which explains how general short-*a* raising might arise from such a combination.

In a nasal system, short-*a* is a single phoneme: acquirers of the language need only learn a regular rule to be able to produce the tense and lax allophones of short-*a* correctly. In the New York split system, tense and lax short-*a* are separate phonemes without a consistent systematic relationship, and must be learned as such. A child acquiring English in a community where both the New York system and the nasal system were prevalent would have to acquire short-*a* as one phoneme with two allophones: most short-*a* words the child encountered would appear with both tense and lax short-*a* in the speech of the community, indicating to the child that tense and lax short-*a* are merely variable realizations of a single phoneme. Such a child, hearing the same lexical items as sometimes tense and sometimes lax, would therefore perceive short-*a* tensing as a variable rule.

The environments in which tensing is variable in the community—namely, the environments in which tensing occurs in a nasal system but not the New York system, or vice versa—do not comprise a natural class. A child attempting to acquire short-*a* tensing as a variable rule with the distribution it has in such a community would therefore need to acquire a rule that applies in a haphazard and phonologically unmotivated collection of environments. I argue that a child attempting to acquire such a rule would not be able to successfully acquire the unnatural class of environments it applies in, but might instead overgeneralize and end up with a variable rule for tensing short-*a* in **all** environments. And that is a short step from the categorical tensing seen in the Inland North today.

This analysis has implications for the theory of markedness of phonological rules, and argues against Exemplar Theory (e.g., Pierrehumbert 2002) in its strong formulations.

References

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