

Can phonotactic constraints inhibit segmental change? And if so, how?

Patrick Honeybone

In this talk I adopt the widespread assumption that phonotactic restrictions on the distribution of segments are imposed by constraints on phonological forms. For example, well-known phonotactic restrictions from English include the following:

- /t/ and /kn/ are forbidden as onset sequences
- /h/ is forbidden in codas
- morpheme-internal geminates are forbidden everywhere

All of these are straightforwardly formalisable as constraints: *ONSET-tl, *ONSET-kn, *CODA-h and *GEM. If we take this seriously (and assume that it reflects psychological reality), then such constraints must be understood to have histories of their own, and can be created and lost in diachrony (or at least can rise to prominence or fall into insignificance in the phonology of a language). For example, /kn/ once was possible in English onsets (in words like 'knee', 'knight', 'knave') but no longer is, and the constraint against /t/ as an onset was lost in the north of England when /kl/-initial forms became /t/initial (e.g., in Windhill, Yorkshire, as in /tlap/ 'clap', /tla:d/ 'cloud', as recorded in Wright's 'English Dialect Grammar').

With this assumption about phonotactics, I enter the controversial area of historical phonology which considers the extent to which such constraints, once they are active in a language, can be thought to affect other phonological changes: can phonotactic constraints inhibit segmental change? I consider a number of cases of phonological change (such as Scots TH-debuccalisation and the loss of unstressed vowels in English) in which it seems that a segmental change which is otherwise general in its phonological environment (or even occurs across-the-board) has been inhibited in one specific phonological environment. The changes involved are all lenitions or reductions - that is, changes of a type that generally follow a straightforward environmental patterning: occurring in 'weak' prosodic environments and potentially being inhibited in 'strong' environments. While generally obeying such environmental conditioning, the changes that I consider all have a strange environmental kink that is best understood as due to the impact of a phonological constraint - if the change had occurred in the environment in question, a phonotactic would have been violated. It thus seems that these changes have indeed been inhibited by the constraints, and that the languages have experienced phonotactic-induced prophyllaxis.

If this really is something that occurs in diachrony, an important conclusion follows: such change must occur in adults, or at least, past the point of initial acquisition. This, too, is a highly controversial issue in historical phonology – a common assumption is that change fundamentally occurs in first language acquisition. The changes that I consider do not fit well with that assumption, however. While certain aspects of phonotactics follow from universal principles or tendencies, such as the Sonority Sequencing Generalisation, specific phonotactic constraints, such as those in English mentioned above, are language-specific (this is shown all the more clearly in the fact that they are subject to change themselves). If we can indeed find cases where such language-specific constraints have inhibited an otherwise general change, this implies that the constraints are already active in the language at the point at which the changes are being innovated. For this to be possible, the changes must be added to speakers' phonology after the stage of initial language acquisition which fixed the phonotactic constraints. This is quite a fundamental result for Historical Phonology.