

A Stratal OT Perspective on Sound Change

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The classical explanation for exceptionless neogrammarian sound change and for the phenomenon of phonologization by secondary split (the persistence of allophones when their conditioning factors change) relied on a sharp separation of phonology and phonetics. In a paradoxical marriage of synchronic structuralism to diachronic neogrammarianism, sound change was located outside of the linguistic system that it transforms.

This picture is at odds with structural explanations for sound changes. In particular, it makes inexplicable the fact that sound change never subverts phonological universals, and it does not account for the interactions of sound changes with already existing phonological processes and constraints of the language through blocking and repair. It also fails to explain why secondary split sometimes does not happen, and allophones instead just adopt to their new conditioning environment.

But the most fundamental objection to the structuralist view of sound change comes from a growing body of evidence for the independence of the structural notion of CONTRASTIVENESS (unpredictable distribution) and the perceptual notion of DISTINCTIVENESS, conflated in traditional phonemics. Phonemes are contrastive and distinctive, allophones are non-contrastive and non-distinctive, but the other two combinations exist as well. Contrastive but nondistinctive elements are documented in NEAR-MERGERS (Labov 1994), cases where speakers reliably produce a slight contrast, but cannot distinguish it, either in their own speech or in the speech of others, e.g. *source* and *sauce* in New York. Elements that are non-contrastive but distinctive — predictable but perceptually salient — are what have been called QUASI-PHONEMES (Ebeling 1960, Korhonen 1969).

(1)

	contrastive	non-contrastive
distinctive	phonemes	quasi-phonemes
non-distinctive	near-merged	allophones

Studies of ongoing sound change show that allophones become phonologized as quasi-phonemes *before* they actually become contrastive, and that phonemes merge via a stage at which they are non-distinctive.

I argue that these properties of sound change can be explained and mutually reconciled in Stratal OT, a constraint-based version of Lexical Phonology. A Stratal OT phonology is a hierarchy of serially related modules, each of which is a parallel constraint system of the classical OT type. It provides a principled characterization of quasi-phonemes independently of the post hoc information that they are phonologized when another sound change occurs.

In the proposed model, phonologization occurs when a constraint ranking spreads from the postlexical phonology into the lexical phonology, driven, I conjecture, by a bias for assigning structure as early as possible. The lexical phonology assigns categorical (hence perceptually salient) feature values, operates within the word domain, and interacts with the morphology. The phonologization becomes overt — the non-contrastive quasi-phoneme turns into a contrastive phoneme — when the postlexical constraint system changes in such a way as to mask the lexical conditioning. Conversely, when conditioned allophones are created in the postlexical constraint system, they disappear when their conditioning environments are lost, and no secondary split occurs.