(Im)possible opacity patterns in containment theory

Phonological opacity (Kiparsky 1973, Baković 2011) is the pervasive phenomenon that phonological processes apply where they are not longer motivated (so-called counter-bleeding e.g. in vowel harmony triggered by a vowel which is deleted on the surface) or fail to apply even where they should receive input by another process (so-called counter-feeding as in vowel harmony which applies to lexical, but not to epenthetic vowels). Opacity has been a central argument for ordered phonological rules and a major challenge for fully parallell Optimality Theory (McCarthy 2007).

In this talk, we investigate which types of opacity can and which cannot be modeled in a version of OT employing the Containment Hypothesis (Prince & Smolensky 1993, van Oostendorp 2007, 2008), i.e., the assumption that all phonological representations from the input remain accessible to output constraints even if they are not overtly pronounced (as in segmental deletion or featural neutralization). More concretely we evaluate the predictions of a containment-based approach where all markedness constraints exist in two versions: one restricts the phonetically pronounced structure and a generalized version is sensitive to all phonological structure, including underlying structure that remains phonetically uninterpreted (Trommer2011, 2015, Zimmermann & Trommer 2014).

We show that this approach, while allowing to capture many of the classical opacity data, systematically excludes specific patterns which are apparently unattested such as counterbleeding of local assimilation processes by epenthesis of intervening segments. Rule-based accounts consequently overgenerate since they allow in principle all imaginable orderings of attested phonological processes.

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