Theoretical Implications of Depressor Consonants

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This paper will examine three aspects of the phonology of depressor consonants in two different Bantu subgroups, the Nguni languages of Southern Africa and the Mijikenda dialect cluster spoken in coastal East Africa:

(1) Depressor consonants may "block" the spread or shift of a H tone to a targeted mora/syllable.

(2) Depressor consonants may trigger surface forms with two or more non-contiguous High tones even though there is only one underlying H tone specification.

(3) Repairing syllables with a depressed onset and H toned nucleus is local and directional (repair is by delaying the rise of pitch until late in the syllable or until the next syllable).

1. "Depressors and autosegmental blocking." One of the cornerstones of the theory of autosegmental representations was the idea that association lines do not "cross". The treatment of depressor consonants in a derivational model of phonology incorporating autosegmental representations typically involves claiming (a) depressor consonants are associated with Low tone and (b) a H tone may not spread past a depressor consonant due to the No-Crossing Principle. The insufficiency of this account will be demonstrated on the basis of Kigiryama. Specifically, we will show that H tone sometimes crosses a depressor and sometimes fails to cross a depressor. Instead of relying on a No-Crossing account, an explanation of the blocking and non-blocking effects of depressor consonants in Kigiryama will be given on the basis of constraint interaction within Optimality Theory.

2. "Depressors and non-contiguous H tones." Traditional autosegmental representation as well as the notion of "headed spans" developed by McCarthy in the OT framework involve the idea that a single tonal feature may be realized over any number of contiguous moras, but if a feature is realized over two non-contiguous moras then there must be two separate tonal specifications. The behavior of depressor consonants in both Nguni and Mijikenda show that this story is inadequate unless one wishes to claim that depressor consonants lead to the creation of High tones (not a particularly appealing claim given the assumed antagonism between depressors and High tone). Optimal Domains Theory, on the other hand, allows for domains where any given mora in the domain may or may not actually manifest the feature in question (depending on the interaction of constraints that define the extent of the domain and the realization of features). Thus ODT allows an underlying H tone to trigger one domain, but with the H tone realized on non-contiguous moras. The motivations for domains where one or more moras in the domain do not realize the feature is based on evidence quite independent of depressor consonants. Nevertheless, such domains also provide for an account of the relevant depressor behavior.

3. "Depressor consonants and the theory of "possible repairs". The power of Optimality Theory derives in large part from the hypothesis that it is a theory about universal constraints, and that there is no need for a theory of possible repairs. According to OT, an offending structure can be avoided or repaired by any phonological action available to GEN. Although this position solves the "conspiracy" problem, there is a nagging question: are *all* repairs really available? if we never see a certain sort of repair, but always another, is this really just an artefact of having a limited body of languages attested?

The only repairs that we have observed to a situation where a H tone is or would be located on a depressed syllable is a delay in the realization of the H tone. If the delay in the rise in pitch is limited to the syllable, then we would usally regard the matter as an essentially phonetic one. When the delay is so extreme that the H tone is not heard until the following syllable, then we talk about a tone shift induced by a depressor consonant. To avoid a depressed H tone syllable, we have not observed leftward shift, or even the simple deletion of the H tone. Furthermore, when the syllable in question is itself followed by a depressor, we do not even observe a long-distance delay. Thus given CaDáDaCa (where D=depressor and C=non-depressor) you will not get *CaDaDaCá (nor *CáDaDaCa nor *CaDaDaCa). These observations raise some fundamental issues concerning phonological theories like OT which do not limit repairs in any fashion.