Features impinging on tone

David Odden

In this paper, I discuss 3 little-known cases of typologically unusual interactions between segmental properties and tone. The first case involves consonant / tone interaction in the Chadic language Kotoko, where certain classes of consonants trigger active phonological lowering of tone, from H to M, or from M to L. The language has multiple lowering processes, differing in what class of consonants triggers the lowering process and whether the trigger precedes or follows the tone in question. One of the unusual properties of the language is that despite the contrary phonetic tendency that implosives are strong pitch-raisers, implosives nevertheless behave as tone-lowerers for at least one tone rule (and not as tone lowerers for two other rules). An analysis of the pattern is given, following Bradshaw 1999's multiplanar model where consonant voicing and (L) tone are formally the same feature, but residing on different planes.

I then discuss segmental influences on tone in the Adamawa language Tupuri (spoken about 85 miles from where Kotoko is spoken). In this language, both consonant phonation and vowel height plan an active role in determining verbal tone alternations. I show that the language has 4 phonemic tone heights, and that verb tone is fully predictable from tense-aspect and segmental content. The imperative is inflected with a floating H tone, which can be lowered to L by a preceding voiced consonant, and is raised to Super-H when the stem-(final) vowel is a high vowel. I also show that raising of H to Super-H supercedes lowering to L. An account of these facts is also proposed, along lines similar to the multiplanar account of tone / consonant interaction in Kotoko, exploiting the idea that the [high] feature for vowels is the functional equivalent of the tone feature [raised]. Thus the more traditionally-stated change from [+upper,-raised] to [+upper,+raised] in the context of [+high] vowels is formally modeled as the spreading of the feature [high] from vowel place to the tone node, where is is interpreted as equivalent to [+raised]

Finally, I discuss the highly problematic case of Matsue and Kanazawa Japanese. Like many Japanese dialects, Matsue Japanese has a process of Initial Lowering that changes #HH* into LH*. Reapplication of this process is segmentally conditioned, so that multiple lowerings can take place on any number of high vowels, but only if the pitch rise can occur on a non-high vowel. In other words, in Matsue Japanese, there is antagonism between H tone and high vowels, whereas in Tupuri, high vowels enhance high tone. Despite the phonetic dissimilarity of the vowel / tone connection in Tupuri and Matsue Japanese, I show that assuming a multi-planar account of tone and vowel height, the Matsue L-spreading process is formally identical to a common Tone-Plateauing procecess where HLH becomes HHH: the essential difference is that the target and righthand trigger specifications are realized on the vowel height tier.