

The margins of tonality: a case from Alaskan Athabascan

The suprasegmentalization of glottal features -- movement of coda laryngealization to stem nuclei -- is the historical basis for an important class of Athabascan tonal patterns, resulting in high tone in some languages and low in others, with loss of laryngeal features on coda consonants in tonal languages. In this language family, other languages (such as Ahtna) retain coda ejectives and do not show lexical tone from this source. These facts convincingly point to coda laryngeal setting as a causative factor in tonogenesis (Leer 1979, Krauss 2005).

Following Gussenhoven (2004), I assume that a language can be called "tonal" but demonstrate a low density of tonal marking. Among the low-toned languages, some are densely marked (Navajo) and some very sparsely marked (Lower Tanana). Due to redundant morphology, minimal pairs in all these languages are relatively few in number. It is reasonable to ask how a line might be drawn that appropriately separates the sparsely marked language from the non-tonal language. Could the phonetics of Athabascan tone provide any answers?

In addition to coda ejectives, historical coda glottal stop is involved in Athabascan tonogenesis, and examples of this pattern are well represented in historical reconstruction (Krauss 2005). In Lower Tanana, while historical coda ejectives are not retained, glottal stop is present in codas where other tonal languages have replaced it entirely with a tone contrast on the preceding vowel. In Lower Tanana, syllables ending in glottal stop bear low tone, as do syllables that historically, but not synchronically, ended in ejectives. In Ahtna, which has never been classed as tonal and has both coda ejectives and coda glottal stop, vowels preceding glottalic coda consonants are found to be markedly creaky in an acoustic analysis (Tuttle to appear). The question arises: should Lower Tanana be called tonal, or is the continued presence of the coda glottal stop enough to edge it out of the tone-language club?

The present study applies a quantitative acoustic approach to natural connected speech in Lower Tanana (a group of texts recorded by the author). Syllables with synchronic glottal stop are observed separately from syllables with tone that are not closed by glottal stop. Correcting for intonational patterns (Tuttle 1998), these syllables show the same relative pitch patterns as those that are low-toned but contain no synchronic glottalic consonant. They are not, however, creakier than any other syllables. Onset ejectives do cause statistically significant creakiness in this language, however, as they do in Ahtna.

Both Ahtna and Lower Tanana remain on the margins of tonal marking - Ahtna, perhaps, could be called "pre-tonal," like Proto-Athabascan. Lower Tanana seems paused in the middle of tonogenesis, applying a pitch distinction instead of phonetically motivated voice quality to glottal-stop-closed syllables but keeping the consonants. Pitch, which is not a direct effect of coarticulation with glottal consonants in Athabascan languages (Kingston 2005) has displaced voice quality in glottal-final syllables. Looked at from the Athabascanist point of view, the phonetics support the traditional distinction between Lower Tanana (tone) and Ahtna (no tone), but I suggest that the comparison remains a useful, microtypological case for discussion of where the "tonal" boundary should be drawn.

References

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