

"Trique tonal coarticulation and the seeds of distributional asymmetries  
in tonal phonology"

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It is broadly understood that synchronic phonological alternations can evolve from tendencies observed in the coarticulation of speech sounds (Ohala 2001, Beddor 2009). In a parallel way, tone sandhi, tonal alternations, and distributional asymmetries in tonal phonology may have their roots in processes of tonal coarticulation (Zhang & Lai 2010). Two adjacent tones,  $T_a$  and  $T_b$ , may influence each other where they overlap at their temporal boundaries to such an extent that, diachronically, a change in tonal category occurs. Yet, just which tone exerts a stronger coarticulatory influence on the other in such pairs? Is the pattern anticipatory or perseveratory? and what predicts the directionality?

In this talk, I investigate these questions by examining the coarticulation between tonal pairs in Itunyoso Trique, a Mixtecan (Oto-Manguean) language spoken in Oaxaca, Mexico. The language is notable for its large tonal inventory (9 tones) and the asymmetrical tonal distribution, where more contrasts surface on final syllables than on non-final syllables (DiCanio 2008, 2010). Words with one of four different tones were placed in the middle of natural, three word sentences of the structure VSO. The adjacent syllables contained one of six possible tones. Two prosodic contexts were examined: tonal coarticulation between two prominent syllables (V+S) and tonal coarticulation between a prominent and non-prominent syllable (S+O). Acoustic recordings of eight speakers were examined (4 male, 4 female).

I find that stressed syllables both induce greater anticipatory coarticulation than unstressed syllables and resist perseveratory coarticulation, even when durational factors are examined. While the literature on tonal coarticulation has shown that both anticipatory and perseveratory coarticulatory effects may occur within tone languages, the results here argue that the strength of such effects is mediated by prominence. Word-final, prominent syllables are more likely to influence neighboring syllables than non-prominent syllables; and anticipatory effects are more common than perseveratory ones. These findings relate directly to the distribution of tone in Trique, where only a subset of the tonal contrasts occurs in non-prominent syllables and the final syllable constrains the possible set of tones in such syllables as well. Generally speaking, the work here suggests that processes which give rise to tonal change or neutralization are (a) observed synchronically in phonetic processes of tonal coarticulation and (b) directionally sensitive to the location of prominence. The findings offer an explanation for the directionality and strength of tonal coarticulatory effects and are consistent with some recent work on the role of prosodic prominence in determining coarticulation in Tianjin Chinese (Zhang & Liu 2011).

References

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