Prosodic licensing in Trique: Phonetics and phonology

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Phonologists have long known that a larger set of contrasts may surface in prosodically strong positions than in prosodically weak ones (Beckman, 1998; Trubetzkoy, 1939). The explanation for these distributional asymmetries is a matter of debate in modern phonological theory. Prosodic accounts argue that prominent positions within the word license a greater range of contrasts (Beckman, 1998; Bird et al., 2008; DiCanio, 2008; Gerfen, 2001; Harris, 1997; Howe and Pulleyblank, 2001). On the other hand, perceptually-driven accounts argue that contrasts are licensed in those positions where they are most perceptually-salient (Flemming, 1995, 2001; Silverman, 1997b,a; Steriade, 1997, 2001; Wright, 1996). Only the former view predicts patterns to surface in prominent positions which may be perceptually non-optimal. In this paper, I argue that the perceptually-driven account fails not only to explain the phonological distribution of tone and segments in Itunyoso Trique but also to explain the phonetics of strengthening in prominent syllables. Instead, positional prominence is responsible for licensing phonological and phonetic contrasts.

Itunyoso Trique is an Otomanguean language where the distribution of tone and segmental contrasts is largely asymmetrical (DiCanio, 2008). The language has fixed word-final stress, where final syllables both license a larger set of contrasts and permit non-final syllables to license similar contrasts through a process of licensing inheritance (Harris, 1997). For instance, geminates, glottalized sonorants, prenasalized stops, laryngeal consonants, vowel nasalization, and the nine contrastive tones are all restricted to final syllables in the language while non-final syllables may contain only plain consonants, oral vowels, and three contrastive tones. However, vowel nasalization, mid-vowels, and certain tones are licensed on non-final syllables if they surface on final syllables. Some examples of Itunyoso Trique words are given in Table 1.

Table 1: Morphological words of various sizes

Monosyllabic		Disyllabic		Trisyllabic	
nã^{4}	*sunbeam*	ku^{3}ʔndiʔ^{3}	*cactus fruit*	tʃi^{3}ri^{3h}kih^{4}	*grasshopper*
ʔjã^{31}	*scar*	ra^{3}ʔjãʔ^{3}	*mute*	tu^{1}ku^{1}ʔnah^{1}	*correct*
tʃo^{32}	*comal*	ka^{1h}tĩ^{1}	*thin*	ru^{3}ni^{3}ʔja^{2}	*tejocote fruit*

Apart from the asymmetry in phonological distribution, final syllables contain a number of phonetic correlates which make them distinct from non-final ones. First, preaspiration is restricted to final syllables in both monosyllabic and polysyllabic words. Second, onset consonants of final syllables have longer duration than non-final syllables. Third, vowels are obligatorily longer in final syllables than in non-final syllables. Vowel and preaspiration duration data are shown in Figure 1. A perceptually-driven account predicts preaspiration to only surface word-internally, not wordinitially, as it does in Trique. Both the phonological data and the phonetic patterns favor a *prosodic account* of licensing in Itunyoso Trique independent from constraints on optimal perceptibility.

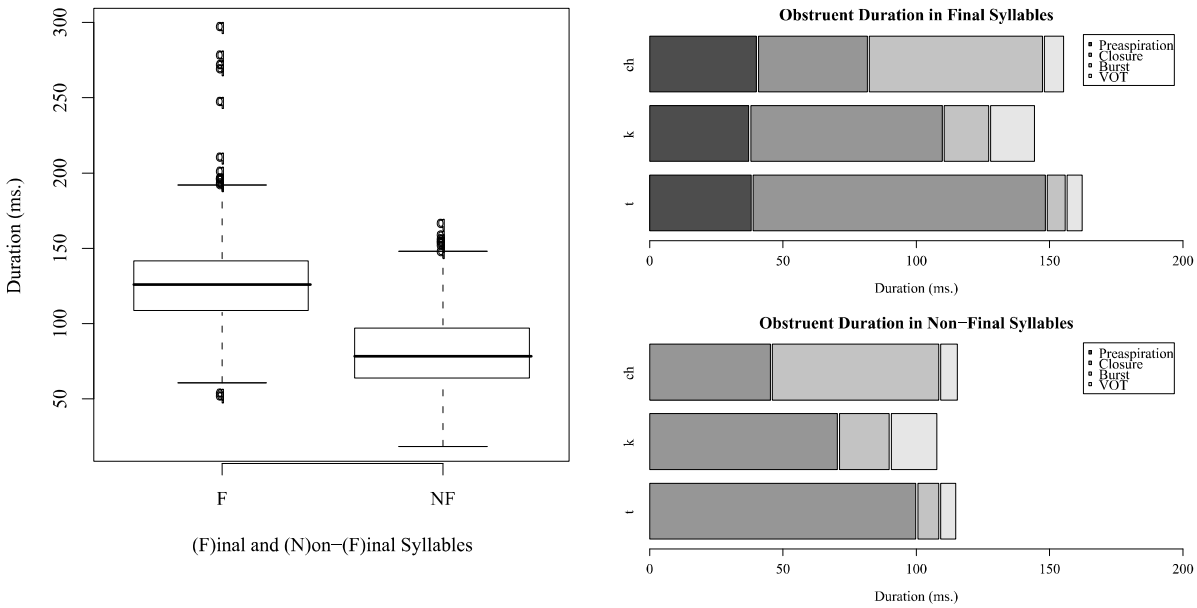

Figure 1. Vowel duration (left) and obstruent duration (right) measurements.

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