How vowel sonority affects the prosodic structure of Shingazidja

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Well-know examples of interaction between segments and prosodic structure are sonority-driven stress systems. A famous example is the New Guinean language Takia, described by Ross (2002, 2003) and analysed in the *Stringent Markedness* model by de Lacy (2007). In this language, stress aligns with the rightmost syllable with [a] ([araˈtam] ‘you [pl.] bite us’, [ˈabi] ‘garden’), otherwise with the rightmost [e] or [o] ([ifuˈno] ‘s/he hit you’, [niˈemi] ‘your [pl.] legs/feet’), otherwise with the rightmost syllable ([tuˈbun] ‘his/her grandparent’) – de Lacy (2007: 281). In this paper, I will discuss another kind of interaction between stress and sonority, mediated by tone: in the Bantu [G44a] language Shingazidja, sonority does not attract stress, but rather combines with stress and/or tone in order to generate prominence.

Shingazidja, which is spoken on Ngazidja, the largest island of Comoros, is famous for its tone system (Tucker & Bryan 1970; Cassimjee & Kisseberth 1989, 1998; Philippson 2005; Patin 2007, 2016). In this language, a high tone shifts unboundedly to its right (the system is privative: /H/ vs. Ø), unless an underlying tone-bearing unit blocks it. This shift of the tone leads to the deletion of every even-numbered tone (OCP). In (1a) for instance, the tone of the noun *mabawá* ‘wings’ shifts to the penult of the adjective *mailí* ‘two’, and the tone of the adjective is then deleted. In (1b), however, the tone of the adjective is free to appear because the tone of the noun has been deleted due to the presence of the tone from the verb *tsi(w)óno* ‘I saw’ (NB: tone-bearing units are underlined).

(1) a. ma-bawa ma-íli ‘two wings’ (/ma-bawá/, ‘wings’; /-ilí/ ‘two’)

b. tsi-(w)ono ma-báwa ma-ilí ‘I saw two wings’

In addition to tone, Shingazidja also has stress (Patin 2016). Stress, which has length and intensity as physical correlates, falls on the penult, as it is the case in many Eastern Bantu languages (Downing 2010). It has phrasal properties, such that the penult of a Phonological phrase is (usually) longer and more intense than the penults of phrase-internal prosodic words (2). In the following paragraphs of this abstract, penultimate stress is indicated by the diacritic ‘ˈ’, even when it is associated to a non-prominent syllable.

(2) mi-ˌpíra mi-ˈráru ‘three balls’ (/mi-pírá/, ‘balls’; /-ráru/ ‘three’)

When a tone surfaces on the stressed penult, this latter syllable is metrically strong and lengthened (i.e. ‘prominent’), while the final vowel is significantly reduced, sometimes even deleted (e.g. when preceded by a voiceless fricative): e.g. *ʤándʑe* ‘crab’ [ˈʤáːⁿʣᵉ], *kóma* ‘constipation’ [ˈkóːmᵃ]. This pattern is illustrated by the words *tsámbu* ‘fruit’ [ˈtsáːmɓᵘ] and *hájnwa* ‘mouth’ [ˈʰáːɲwᵃ] in the top part of Figure 1.

However, when a tone surfaces on the final syllable (or the antepenult, a situation which I will not discuss in this abstract), prominence will vary according to the intrinsic sonority of vowels. There are five phonemic vowels in Shingazidja (Patin et al. 2019): /i e a o u/ (nasal vowels sometimes appear in loanwords from Arabic and French, as well as in ideophones and interjections). When the vowels of the penultimate and final syllables are identical, prominence is equally distributed between the two syllables: e.g. *ɗoŋgó* ‘clay soil’ [ˈɗoˑŋgóˑ], *ŋgayá* ‘stone’ [ˈᶮgaˑyáˑ]. This pattern is illustrated by the words *lulú* ‘pearl’ [ˈluˑlúˑ] and *ŋgamá* ‘chasm’ [ˈᶮgaˑmáˑ] in the top-middle part of Figure 1. It may seem puzzling to discover that tone has the same acoustical correlates as stress in Shingazidja, in addition to F_0,

but this configuration is far from being surprising in Eastern Bantu languages, where tone systems tend to evolve towards stress-accent systems (see for instance Philippson 1998).

When the vowels are distinct, prominence will align with the most sonorous vowel. If the stressed penultimate vowel is a closed vowel and the final vowel an [a], for instance, this latter vowel will be much longer and more intense than the former: e.g. *ʦidʒá* ‘I came’ [ˈʦidʒáˑ], *ɗuká* ‘store’ [ˈɗukáˑ]. This pattern is illustrated by the words *ɲifá* ‘cracks’ [ˈɲifáˑ] and *ɲumɓá* ‘houses’ [ˈɲuᵐɓáˑ] in the bottom-middle part of Figure 1. Conversely, if the stressed penultimate vowel is an [a] and the final vowel a closed vowel, the former vowel will be the most prominent: e.g. *ʈasí* ‘morning [ˈʈˢaˑsí], *ɓamɓú* ‘present’ [ˈɓaˑᵐɓú]. This pattern is illustrated by the words *nazí* ‘coconut’ [ˈnaˑzí] and *wafú* ‘deads’ [ˈwaˑfú] in the bottom part of Figure 1.

Data shows that mid vowels dominates close vowels but are dominated by /a/, as expected, but also that front vowels are slightly more prominent than back vowels. In the talk, I will discuss these parameters and others (e.g. the impact of some onsets), and explore the consequences of these data on the *Stringent Markedness* model.

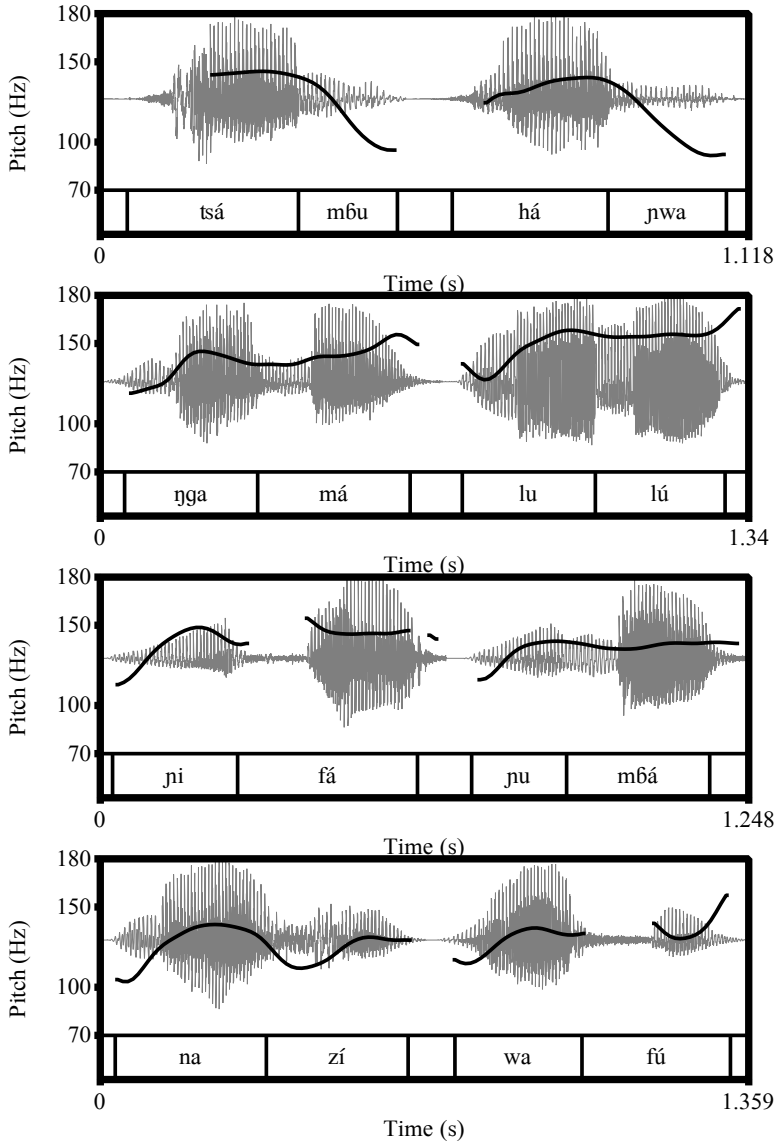

Figure 1