

## Matches and mismatches between the grammatical tonal change domain, the featural foot, and the morphosyntactic word in Guro (South Mande)

Guro, a richly tonal South Mande language of Côte d'Ivoire,<sup>1</sup> presents challenges for a Match Theory (Selkirk 2011; Elfner 2018), the most recent development of Prosodic Hierarchy (e.g. Selkirk 1981, 1996; Nespor & Vogel 1986). The Match Theory proposes that the prosodic categories starting from the word level are grounded in syntactic constituent structure and should be directly derived from the latter. For this reason, no mismatch between prosodic and morphosyntactic constituents is expected.

Guro shows two different types of prosodic domains which are correlated to the lexical level and so are expected to match the morphosyntactic word: the so-called 'featural' foot (Green 2015; Vydrin 2020) and the domain of the morphological tonal change (which has certain grammatical functions). Contrary to the predictions by the Match Theory, the two prosodic domains neither exactly match the morphosyntactic word, nor perfectly align with each other, although there is a statistical tendency for all the three units to match.

Guro has a system of five contrasting tones: (H – high, M – mid, L – low, F – falling, R – rising) which mark every syllable and fulfill numerous lexical and grammatical functions. It also has [+ATR] vowels *i, e, u, o*, [-ATR] vowels *ɪ, ɛ, v, ɔ*, a neutral vowel *a*, and nasal vowels *ĩ, ɛ̃, ũ, ɔ̃, ǎ* (Kuznetsova 2007). Guro, like other Mande languages, is deprived of metrical stress and exhibits the foot as a featural rather than a metrical prosodic unit. Segments and tones within the foot manifest closer phonetic and phonological interdependencies than across the foot boundaries: tonal, vocalic, and consonantal combinations are very restricted. The foot can have a structure of (C)VCV (usually (C)VLV), (C)VV, and (C)V. Certain segments within the foot are prone to phonetic or phonological reduction, loss, and assimilation to other segments.

The domain of grammatical tonal change in nouns (Kuznetsova 2021) is also either mono- or disyllabic. There are two main types of changes: tonal lowering (to L) or a so-called 'mobile' paradigm, where a tone remains mid after the last mid tone of the preceding word or becomes high after high / rising tone or low after low / falling tone. Nouns have several tonal classes defined, most importantly, by the intersection of (a) the length of the tonal change domain and (b) the particular types of tonal change in each syllable within the tone change domain.

Consider different types of alignment between the monomorphemic morphosyntactic word, the foot (marked with parentheses "( )"), and the tonal change domain (marked with braces "{ }"):

(1) full match between all three: (12) *yíli* [yíli] 'tree' → H {(yíli)} / M {(yīli)} / L {(yìli)};

(2) match between the foot and the tonal domain, but mismatch with the word: *fālāli* [flāli] 'a Guro mask personifying joy' → H {(fālā)}li / M {(fālā)}li / L {(fālā)}li;

(3) mismatch between all three: *sóbálá* [sóblá] 'mongoose' → H {s(ò)lá} [sóblá] / M {s(ò)lá} [sòblá] / L {s(ò)lá} [sòblá].

The third type (attested in few words) presents a so-called bracketing paradox (Sproat 1988), as the boundaries ('brackets') of the two disyllabic prosodic domains associated with the lexical level in Guro intersect. This is the most challenging case also for the Match Theory.

There are, however, other exceptional cases which show that the featural foot and the domain of the tonal change are not entirely mutually independent prosodic domains either. For example, a word *bāwòlò* 'mango' shows two parallel developments in modern Guro:

(4a) *bāwòlò* > (*bāq̄*)lò [māq̄lò], where the first two syllables form a CVV foot characterised by consonantal loss and vowel assimilation typical of such feet;

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<sup>1</sup> This study is based on the fieldwork conducted by the author in Abidjan, Côte d'Ivoire, in 2006-2008, with later additions collected online in different periods up to 2021.

(4b)  $b\bar{q}w\acute{o}l\acute{o} > b\bar{q}(w\acute{o}l\acute{o})$  [māwóló], where the last two syllables form a CVLV foot undergoing phonetic reduction to a monosyllable [CLV].

These two variants have different tonal morphology:

(5a)  $(b\bar{q}\grave{q})l\acute{o} \rightarrow H \{(b\acute{q}\acute{q})\}l\acute{o} / M \{(b\bar{q}\grave{q})\}l\acute{o} / L \{(b\grave{q}\grave{q})\}l\acute{o}$  (a regular disyllabic tonal class, where the first tone is mobile, while the second one is low);

(5b)  $b\bar{q}(w\acute{o}l\acute{o})$  [māwóló]  $\rightarrow H \{b\acute{q}\}(w\acute{o}l\acute{o})$  [máwóló] / M  $\{b\bar{q}\}(w\acute{o}l\acute{o})$  [māwóló] / L  $\{b\grave{q}\}(w\acute{o}l\acute{o})$  [màwóló] (an exceptional type of tonal class, where the first mobile tone is not matched to the following low tone).

The type in (5b), attested only in this word, is exceptional because the second syllable tone does not become or remain low, as expected of the regular model (cf. with *sóbálá* and *bāq̄ló* above). Instead, it assimilates with the high tone of the last syllable. In this way, however, the bracketing paradox in the variant *bāwóló* becomes resolved. Other exceptional cases showing the resolution of the bracketing paradox will also be discussed in the talk.

In sum, instead of a strict alignment between different prosodic and morphosyntactic domains relevant for wordhood in Guro, predicted by the Match Theory, we rather observe a complex system of correlated domains with partial mutual alignment. Such a system might be better described by a multifactorial constituency model, where different wordhood criteria manifest partial convergence and the “word” is defined as a domain where the maximal degree of convergence (in a statistical sense) occurs (e.g. Tallman 2020).

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