## Piece-based overwriting if post-syntactic: the view from Datooga nominal expressions

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**Introduction.** Grammatical tone phenomena consist of tonological operations which only obtain in a specific morphological or syntactic environment. They can lead to the replacement of their target's underlying tone by a context-specific pattern, an effect called *tonal overwriting*. In Datooga (tcc, ge-me1237; Southern Nilotic, Nilo-Saharan), two such alternations are found in the nominal domain: ① when they are modified, nouns uniformly surface with their final syllable High-toned (Modificational Hight Tone; MHT; (1)); ② when they appear in the nominative, nouns uniformly display a HLH melody (Nominative Melody; NH), whose exact shape in turn depends on the nature of their modifier (2b-c), even leading to non-local effects (2c).

(1)	qari	nda majda nadrda					
	eye	calf lion					
	'eye	e of the lion's cub'	(Kießling 2007: 178)				
(2)	a.	Unmodified noun: nominative HHH					
		qwá-ràt <b>gátmó:dá</b> hê:jda					
		SBJ.3-tie woman.NOM bull.ABS					
		'The woman tied the bull.'	(Kießling 2007: 170)				
	b.	Adjective: nominative HLL, initial H on the modifier					
		qw-àːt <b>gátmò:dà má</b> nàŋ <del>j</del> á:tà à: ùhù:dạ					
		SBJ.3-take woman.NOM little.NOM hind.leg.ABS and head.ABS					
		'The little woman (=second wife) takes the hind leg and the head.'					
			(Kießling 2007: 181)				
	c.	Quantifier and complex nominal head: nominative HLH, initial H on the modifier					
		gài-gá-fká <b>ó:rɨờ:gá</b> síːdà <b>sê:n</b> à: sìːiè:nádígá	i				
		FUT-SBJ.3-come(PL) sons.NOM person.ABS all.NOM with husbands.ABS					
		háwé:gá:-scí sè:n					
		daughters.ABS-3SG.POSS all.ABS					
		'All the sons of the man and all the husbands of his daughters will come.'					

(Kießling 2007: 183)

In her analysis of similarly structure-dependent tonal overwriting effects in the Dogon languages, Mc-Pherson (2014) argues in favour of a process-like approach to these patterns, since they do not straightforwardly correspond to the realization of morphosyntactic features (as in the Datooga MHT) and may be non-local (as in the Datooga NM). In this talk I demonstrate that both properties can also be derived in the more restrictive item-and-arrangement approaches (e.g. Anderson 1992; Wolf 2007), provided that the syntax feeds the morphophonological computation. **The Datooga MHT: a phonological solution.** The crucial observation about this alternation is that it only affects the last syllable of the head noun, which invariably corresponds to a single element, the "secondary suffix", appearing as *-da* in the singular and *-ga* in the plural (Kießling 2000). Moreover, the MHT strictly correlates with the presence of overt material to the right of the head noun, since Datooga nominal expressions are strictly noun-initial (Kießling 2007), and it is insensitive to the tonal make-up of the element which appears to the immediate right of the head noun, surfacing both before High- (3a) and Low-toned syllables (3b):

(3)	a.	báné:gá d <b>é:</b> dà	-	_	b.	ùhùːda	á d <b>ì</b> lgwà <del>j</del> â:ndạ
		meat cow				head	termite.hill
		'cow's meat'				'termi	te mound'

(Kießling 2007: 174)

(Kießling 2007: 186)

I propose that the MHT is the result of the interaction between the **underlying rising contour (LH)** specification of the "secondary suffix" and its prosodic environment: when it is edge-adjacent, as in unmodified nouns (4a), a boundary Low tone forces a L realization, but when it is not edge-adjacent, as in modified nouns (4b), H surfaces due to rising contour simplification, a tonological operation commonly found in other Southern Nilotic languages (Creider 1982). This lexical encoding straightforwardly derives the item-specific property of the alternation as well as its independence from a clear contextual

trigger. It is also supported by cross-dialectal data, as surface rising contours are found in other Datooga varieties (Rottland 1982: 155).



(4)

Crucially, the relevant environments can only be determined *after prosodification and structure-building have happened.* **The Datooga NM: a morphosyntactic solution.** The crucial observation about this alternation is that the nominative melody displays a dual behaviour: while HL always surfaces on the material to the left of the head noun's secondary suffix, the final H shifts further to the right in the presence of a nominal modifier. I propose that this is because the "nominative melody" is in fact the combination of **two exponents**: an (H)(L) prefix, and an (H) suffix. Assuming that case morphology corresponds to the presence of KPs in the syntax (Bittner and Hale 1996; Lamontagne and Travis 1987) and that modifiers are introduced at the DP level in Datooga (see Kouneli 2019 for a similar analysis of nominal modification in the closely related language Kipsigis), Datooga nominal expressions can then take one of the following configurations:



The presence of a single D in (5a) derives that all D-related material, i.e. the secondary suffix and  $(\widehat{H})$ , should appear together (see Kouneli 2021 for a similar analysis of the secondary suffix in Kipsigis), which is borne out for unmodified nouns. The presence of two D heads in the structure of modified nominals (5b) allows for both the secondary suffix and  $(\widehat{H})$  to appear in different positions within the nominal expression, again borne out for all modified nouns. The structure in (5b) also predicts that any expression moving to the topmost SpecDP should not be able to interact with  $(\widehat{H})$ , correctly ruling in (2b) and (2c): in both cases,  $(\widehat{H})$  associates to material corresponding to the syntactic complement of the topmost D, i.e. the nominal modifier. Note that under this approach, the only difference between (2b) and (2c) resides in the size of the XP sitting in the topmost SpecDP: while it corresponds to the head noun in the former case, it contains more material in the latter case, creating the appearance of a non-local effect:

(6) a. gátmò:dà mánàŋ (= (2b))  $\longrightarrow$  [KP  $(H \cup [DP [DP gatmo:da] [D, (H) manaŋ]]]$ 

b. ó:rjò:gá sí:dà sê:n (= (2c))  $\longrightarrow [_{KP} \bigoplus L [_{DP} \text{ orrjo:ga si:da}] [_{D'} \bigoplus \text{ se:n}]]]$ 

Crucially, the domains relevant for the association of  $\widehat{\mathbb{H}}(\mathbb{L})$  and  $\widehat{\mathbb{H}}$  can only be determined *after all structure-building operations (including* phrasal *movement) have applied*. **Discussion.** Under the analysis advocated here, both the MHT and the NM in Datooga are amenable to the mere linearization and concatenation of exponents, demonstrating the viability of a floating tone analysis even in cases which fulfill some of McPherson's (2014) criteria. Also important is the fact that both overwriting alternations appear to mirror the syntactic derivation, an architectural consequence of models in which syntax feeds the morphophonological component (e.g. Distributed Morphology (DM); Halle and Marantz 1993 *et seq.*). This also provides further support to recent approaches which aim to include tonal morphology within the realm of such models (e.g. Rolle 2018; Pak 2019; Pak 2020). **Selected bibliography.** Kießling, R. (2007). The "marked nominative" in Datooga. - Kouneli, M. (2019). The syntax of number and modification: an investigation of the Kipsigis DP. - McPherson, L. (2014). Replacive grammatical tone in the Dogon languages.