Bantu harmony locality variation is autosegmental

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This paper presents a novel approach to representational limitations on phonological locality and activity, using an exploration of harmony microvariation across three Bantu languages: Mbunda (K.15; Gowlett 1970), Ndendeule (N.101; Ngonyani 2004), and Chewa (N.31; Downing & Mtenje 2017). All of these languages display height harmony via vowel lowering, spreading from root-initial to non-initial syllables, with non-alternating low vowels: e.g. Chewa [phík-il-a] 'cook'-APPL.-FV. vs. [tsék-el-a] 'close'-APPL.-FV. Though low /a/ is invariably non-alternating, it displays differing harmony activity and visibility in word-medial positions, as illustrated in (1). In Mbunda, /a/ is both active and visible – making it a lowering harmony trigger and visible harmonic blocker of high harmony, always being followed by non-high vowels. Ndendeule /a/ is both inactive and invisible – a fully neutral non-trigger and transparent non-target, being followed by both high and non-high vowels. Chewa illustrates a mixed pattern where low vowels are inactive non-triggers like Ndendeule *but* visible as in Mbunda – making Chewa /a/ a neutral blocker which always takes high vowels.

(1) **/a/-height harmony in/activity and in/visibility across three Bantu languages**

a) Mbunda (K.15) harmonic blocking /a/:

tumam-el-	'sit'-APPL.	*active*	/u...a...i/	→	[u...a...e]	
okam-el-	'become thin'-APPL.	*visible*	/o...a...i/	→	[o...a...e]	

b) Ndendeule (N.101) transparent /a/:

hiɣal-il-	'become white'-APPL.	*inactive*	/i...a...i/	→	[i...a...i],	not *[i...a...e]
koβal-el-	'stumble'-APPL.	*invisible*	/o...a...i/	→	[o...a...e],	not *[o...a...i]

c) Chewa (N.31) neutral blocking /a/:

chinga-il-	'welcome someone'-APPL.	*inactive*	/i...a...i/	→	[i...a...i],	not *[i...a...e]
polam-il-	'stoop'-APPL.	*visible*	/o...a...i/	→	[o...a...i],	not *[o...a...e]

The data in (1) illustrate a ternary division in neutral targets' activity/visibility – distinguishing harmonic blocking, neutral blocking, and transparent segments – but existing approaches to harmony locality typically equate phonological activity/visibility, predicting only two of the three types above (cf. Sandstedt 2018: §1.3; Nevins 2010: ch. 3). The patterns in (1) have therefore resisted a unified analysis and remain a classic problem for theories of the representation and assimilation of vowel features. In this paper, I present a new, unified representational account of these data using Contrastive Hierarchy Theory (CHT).

CHT assumes the hierarchical organisation of featural contrasts with cross-linguistically varying feature scope. An abstract example is provided in Fig. 1 which assumes two features [F] and [G] which do not co-occur, producing three segments /x, y, z/. In this version of CHT (Sandstedt 2018; cf. Iosad 2017), contrastivity for the feature [F] is defined by bearing an **F** feature-node on which [F]-specifications depend, producing a ternary contrast in feature specifications which predicts the ternary harmony neutrality types in (1). These are 1) contrastively specified **F**[F] /x/ (e.g. visible and active harmony triggers/harmonic blockers – the Mbunda-type), 2) contrastively non-specified **F**[ ] /y/ (e.g. visible but inactive harmony targets/neutral blockers – the Chewa-type), and 3) non-contrastively underspecified ∅ /z/ (e.g. invisible and inactive transparent segments – the Ndendeule-type). I provide a unified simple licensing approach to Bantu height harmony (Iosad 2017: 52–54; Walker 2005) wherein the low vowel locality variation in (1) falls out from the varying featural configurations illustrated in Fig. 1. This account provides both an economic theory of phonological representations and a principled harmony methodology which highlights the role representations play in phonological patterning.

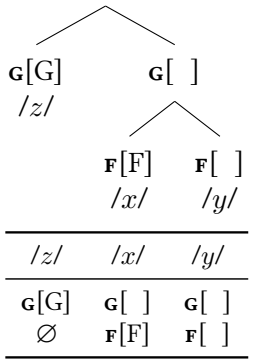

Figure 1: Ternary **F**[F], **F**[ ], and ∅ distinctions in a privative contrastive feature hierarchy