

Against Antifaithfulness in Luo

Jochen Trommer
Institute of Linguistics
University of Leipzig

Alderete (2001) cites voicing alternations in Luo plural formation as compelling evidence for transderivational antifaithfulness (TAF) constraints. In this paper I show that a TAF analysis of Luo meets considerable empirical problems and argue for an alternative approach based on voicing underspecification and the interaction of standard faithfulness and markedness constraints. Alderete provides examples from Luo as in (1-a), in which the last consonant is voiced in the singular and unvoiced in the plural, and (1-b) in which the voicing contrast is the other way around (data from Tucker 1994). Since plural formation seems to revert the voicing feature of the singular form, Alderete argues that this effect can neither be due to a floating feature nor to a markedness constraint and must be captured by an antifaithfulness constraint which requires that singular and plural forms for specific affixes differ for voicing in some segment. However this analysis both fails to capture general restrictions on Luo plural formation and excludes well-documented data. Thus, there are no obstruent-final singulars which follow the [+vcd] → [-vcd] pattern in (1-a) (cf. the hypothetical forms in (2-a)), nor vowel-final singulars following the [-vcd] → [+vcd] pattern in (1-b) (cf. (2-b)). On the other hand there are vowel-final singular roots with unvoiced (3-a) and voiced (3-b) medial obstruents and obstruent-final roots with final unvoiced obstruents (3-c) which don't exhibit the voicing alternation. Furthermore in some roots voicing alternation involves voiceless obstruents and (voiced) glides (3-d). Quasi-minimal pairs as (3-c)/(3-d) make it highly unlikely that both types of alternation can be captured by paradigmatic constraints on output forms. The analysis I propose derives the Luo voicing alternations as a conspiracy of final devoicing and intervocalic voicing partially obscured by morpheme boundary effects and underspecification. I argue that the 3-way contrast among CVCV roots (1-a),(3-a,b) is due to a threefold distinction in underlying voicing along the lines of Inkelas (1995). If the second consonant is underlyingly [+vcd] or [-vcd], high-ranked MAX [vcd] ensures no voicing alternation (as in (3-a,b,c)). If the obstruent is unspecified for [vcd], the constraint Intervocalic Voicing (IVV), which requires that in a configuration vowel obstruent vowel the first vowel is the head of a harmonic voicing span (McCarthy 2004) comprising the three segments (VCV → (VCV)) leads to intervocalic voicing of the obstruent (4). This structure is blocked in plural forms by higher-ranked *SPREAD which disallows extension of a harmonic span across the morphological domain (here: the morpheme) of the head (5). A voiceless obstruent emerges due to the universal preference for voiceless obstruents (implemented here by *[-son+vcd]). In CVC roots there is only a two-way contrast in obstruent final voicing (sg. and pl. unvoiced, and sg. unvoiced, pl. voiced). This is due to the fact that roots ending in a voiced obstruent are generally excluded in Luo (Tucker, 1994:35) which derives from high-ranked *[+vcd]_{PW}. This enforces voicelessness on the final obstruent of a CVC root in the singular even if this is underlyingly specified [+vcd] (6). In the vowel-final plural form, *[+vcd]_{PW} is irrelevant and MAX [vcd] ensures voicing for such roots (7). If CVC roots have an underlyingly unvoiced final obstruent or one which is unspecified for voicing, this results

unvoiced in both singular and plural due to Max [vcd] and *[-son+vcd]. Intervocalic voicing in the plural is again blocked by *SPREAD. Alternations involving glides (3-d) can be derived from roots underspecified for [+/-son] resulting in voiced stops as the unmarked syllable-final and glides as the unmarked intervocalic segments. Alderete argues against an analysis invoking final devoicing by adducing suffixless possessive forms where a similar voicing alternation leads to monosyllabic forms with a final voiced obstruents (e.g. *yath* - *yadh* (poss.), ‘palm’). I show that these forms are derived by prosodically conditioned shortening from an alternative set of possessive forms which have suffixes (e.g. *yadh-e*, ‘his palm’) and follow strictly the patterns in the singular/plural alternations. The suffixless possessive forms can hence be interpreted as the effect of simple transderivational faithfulness.

- (1) a. okebe (sg.) okepe (pl.) ‘tin can’ (2) a. *bad (sg.) bet-e (pl.)
 b. arip (sg.) arib-e (pl.) ‘milky way’ b. *coko (sg.) cog-e (pl.)
- (3) a. cupa (sg.) cup-e (pl.) ‘bottle’
 b. ɲudi (sg.) ɲud-e (pl.) ‘neck of meat’
 c. ip (sg.) ip-e (pl.) ‘tail’
 d. lep (sg.) lewe (pl.) ‘tongue’

(4) **Input:** ki[**COR** -son]i (sg.)

	*+vcd] _{PW}	MAX [vcd]	*SPREAD	IVV	*[-son+vcd]
a. kiti				*!	
b. kidi				*!	*
☞ c. k(<i>idi</i>)					*

(5) **Input:** ki[**COR** -son]-e (pl.)

	*+vcd] _{PW}	MAX [vcd]	*SPREAD	IVV	*[-son+vcd]
☞ a. kit-e				*	
b. kid-e				*	*!
c. k(<i>id</i> -e)			*!		*

(6) **Input:** arib (sg.)

	*+vcd] _{PW}	MAX [vcd]	*SPREAD	IVV	*[-son+vcd]
☞ a. arip		*			
b. arib	*!				*

(7) **Input:** arib-e (pl.)

	*+vcd] _{PW}	MAX [vcd]	*SPREAD	IVV	*[-son+vcd]
a. arip-e		*!		*	
☞ b. arib-e				*	*
c. ar(<i>ib</i> -e)			*!		*

REFERENCES

- Alderete, John. 2001. Dominance effects as transderivational anti-faithfulness. *Phonology* 18: 201–253.
 Inkelas, Sharon. 1995. The consequences of optimization for underspecification. In: *NELS* 25. 287–302.
 McCarthy, John. 2004. Headed spans and autosegmental spreading. Ms., UMass, ROA 685-0904.
 Tucker, Archibald. 1994. *A Grammar of Kenya Luo (Dholuo)*. Köln: Köppe.