

## On the nature of Final and Initial Vowels in Niger-Congo Languages

It is a known fact that Bantu verbs contain a form-final morpheme, often called the Final Vowel (FV), which typically alternates between /i/ and /a/. This morpheme has been suggested to be an exponent of a variety of functional heads such as Mood, Aux, Neg, etc. Using Sesotho as the main example, I propose instead that the FV should be analyzed as a 'dissociated morpheme' in the framework of Distributed Morphology (see Halle and Marantz, 1993, among others), i.e. a morpheme inserted in the morphological module of grammar. Under the view advocated here, the FV is adjoined to each functional head, as has been suggested for Theme Vowels in Romance languages (Oltra-Massuet & Arregi 2005, Massuet, 1999). I also propose that the exponents of the FV alternate between a toneless open (default) vowel /a/ and a high-toned null exponent /H/ (i.e. a floating tone). Whenever, the form-final exponent of the FV adopts the latter of the two values, an epenthetic vowel [i] is inserted at the ends of PhWDs due to a constraint against closed syllables, thus creating the surface impression that the FV alternates between /i/ and /a/. In verb-medial positions, on the other hand, the alternation between the exponents of the FV (adjoined to the T°) escaped notice because the null exponent often has no overt realization. However, when the exponent of the form-medial FV is /a/, it is observed under certain conditions. Specifically, I suggest that whenever the exponent of the verb which has raised into T is inserted lower in the structure (i.e. at the foot of the chain in VP), the FV surfaces adjoined to the T-node, even though T° itself is phonologically empty. The specific forms illustrating this phenomenon are the Imperfective Positive Disjoint (i.e. lacking a lexical complement) form and the Perfective Negative form (1b and 1e).

I further propose that the FV alternates between these two exponents based on the accumulation of marked features on a given head. In Sesotho the relevant marked features are [+perfective], [+negative] and a feature for now referred to as [+subordinate]. When a FV is adjoined to an unmarked head, it takes a default exponent /a/; if the head is singly marked, the exponent is switched to the /H/; if the head is double marked, the exponent is switched back to the toneless /a/ and so on.

### 1. Examples:

- a. Imperfective Positive with Lex. Compl.:* (ng) (tsamay-**a**) (~~tsamay~~-**a**) (motse-ng)  
 1SG T-FV V-FV village-LOC  
 SURFACE FORM: ke tsamaya motseng
- b. Imperfective Positive w/out Lex. Compl.:* (ng) (~~tsamay~~-**a**) (tsamay-**a**)  
 1SG T-FV go-FV  
 SURFACE FORM: ke a tsamaya
- c. Imperfective Negative:* (h-**a**) (ng-0-**H**) (tsamay-**H**)  
 NEG-FV 1SG-M-FV go-FV  
 SURFACE FORM: ha ké tsamáyé
- d. Perfective Positive:* (ng) (~~tsamay~~-**H**) (tsamay -il-**H**)  
 1SG T-FV go- ASP-FV  
 SURFACE FORM: ke tsamáyilé
- e. Perfective Negative:* (h-**a**) (ng-0-**H**) (~~tsamay~~-**a**) (tsamay-0-**a**)  
 NEG-FV 1SG-M-FV T-FV go-ASP.NEG-FV  
 SURFACE FORM: ha ké a tsamaya

<i>f. "Present Subjunctive":</i>	(ng-0- <b>H</b> ) (tsamay- <b>H</b> )
	1SG-M-FV go-FV
SURFACE FORM:	ké tsamáyé
<i>g. "Past Subjunctive":</i>	k-0- <b>a</b> tsamay- <b>a</b>
	1SG-M-FV go-FV
SURFACE FORM:	ka tsamaya

Interestingly, Igbo, a non-Bantu Niger-Congo language, may show a very similar alternation but with a twist. Every Igbo word has a vocalic prefix which I will call the Initial Vowel (IV) to maintain terminological consistency with the Bantu analysis. I propose that we can account for the tonal patterns in the Igbo verb if we assume that in Igbo the IV alternates between an H-toned (or toneless) open (default) vowel /a/ (or [e], due to harmony) and an L-toned null exponent. Just like in Sesotho, the exponent of the IV is toggled between these two values based on the accumulation of marked features on the head to which it is adjoined. In case of Igbo, the unmarked (default) exponent is the L-toned /0/. If the functional head to which the IV adjoins is singly marked, the value of the exponent switches to /a/; if the functional head is double-marked, the value of the IV exponent switches to the L-toned /0/; etc. A basic set of examples with an H-toned verb *ri* 'eat' is provided in (2). Although the vital details of how the particular forms are put together and linked with the tonal elements have to be omitted here due to the lack of space, note that the low floating tone associated with the IV in Positive Imperfective (2a) and the Negative Perfective (2d) forms is responsible for the low tone of the following morpheme (correspondingly, the verb root and the incorporating negative perfective auxiliary).

## 2. Examples:

- a. Positive Imperfective:* anyi 0-rì ji  
we IV-eat yam  
"We eat/ate yams"
- b. Negative Imperfective:* anyi é-rī-ghí ji  
we IV-eat-NEG yam  
"We did/do not eat yams"
- c. Positive Perfective:* anyi é-rī-é-lá ji  
we IV-eat-IV-PERF yam  
"We have eaten yams"
- d. Negative Perfective:* anyi é-rī-0-bè-ghì ji  
we IV-eat-IV-PERF.NEG yam  
"We have not eaten yams."

I believe that this account, if further substantiated, could potentially provide an intriguing point of diachronic and synchronic comparison between Igbo-type and Sesotho-type (Bantu) languages.

**REFERENCES:** Halle, Morris & Alec Marantz. 1993. 'Distributed Morphology and the Pieces of Inflection.' In *The View from Building 20*, ed. Kenneth Hale and S. Jay Keyser. MIT Press, Cambridge, 111-176. M. I. O. Massuet. 1999. On the notion of theme vowel: a new approach to Catalan verbal morphology. MIT MA Thesis. **Oltra-Massuet, I. and Arregi, K.** 2005. "Stress-by-structure in Spanish." *Linguistic Inquiry* 36.43-84.