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### **Citation**

Schadeberg, T. C. (1989). Tone and history of Nyamwezi verb forms with complex final tones. *Afrika Und Übersee*, 33-42. Retrieved from <https://hdl.handle.net/1887/8820>

Version: Not Applicable (or Unknown)

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**Note:** To cite this publication please use the final published version (if applicable).

## Tone and History of Nyamwezi Verb Forms with Complex Final Tones\*

by Thilo C. Schadeberg

Using the analysis of the remarkable tonal shape found in a group of Nyamwezi verb forms as a point of departure, we are led to two observations that have a wider bearing than the description of Nyamwezi alone. First, we are able to suggest a new understanding of the tonal shape of the Imperative, as it occurs in many Bantu languages and has even been reconstructed for Proto-Bantu, and we shall do this without having to invoke the notion of "polar tone". Secondly, it will appear that the tonal analysis of these verb forms is not purely phonological but implies also a specific morphological reanalysis. This then leads to a hypothesis concerning the origin of these verb forms that is rather unusual in the area of historical typology or "grammaticalization".

### 1. The Tone of the Past and the Perfect in Nyamwezi

Before addressing the specific tonal properties of these forms, I present two general tone rules of Nyamwezi.

The first of these I call "High Tone Shift" (HTS). It says that any high tone is realized not on the mora to which it inherently belongs, but on the following mora. (Certain complications arising in the context of long and double vowels are omitted in this statement.) The examples in (1a) are infinitives without an object concord marker (hereafter called "object concord"; see also the list of abbreviations at the end of this article). In this paradigm only the root, that is the first mora of the verb stem, is tonally distinctive; a high tone of a root is realized on the second mora of the stem. The examples in (1b) are infinitives with an object concord, which can be underlyingly low, as is °*kv-*, or high, as is °*βá-*; in the latter case High Tone Shift makes the high tone surface on the following root mora.

- |                        |            |                       |           |
|------------------------|------------|-----------------------|-----------|
| (1) a. <i>kv-lol-a</i> | to look at | <i>kv-βon-á</i>       | to see    |
| <i>kv-gal-úl-a</i>     | to turn    | <i>kv-laβ-úl-a</i>    | to hurt   |
| <i>kv-zun-il-ij-a</i>  | to agree   | <i>kv-kum-il-ij-a</i> | to praise |

- |    |                     |                 |                     |                 |
|----|---------------------|-----------------|---------------------|-----------------|
| b. | <i>ku-ku-lola</i>   | to look at you  | <i>ku-ku-βóná</i>   | to see you      |
|    | <i>ku-ku-gabula</i> | to turn you     | <i>ku-ku-láβúla</i> | to hurt you     |
|    | <i>ku-βa-lóla</i>   | to look at them | <i>ku-βa-βóná</i>   | to see them     |
|    | <i>ku-βa-gábula</i> | to turn them    | <i>ku-βa-láβúla</i> | to praise them. |

The second general tone rule — I prefer to think of it as a structure condition — is called “Extension Assimilation”:

EA: In verb forms, all tone bearing positions between the root and the Final have the same tone as (the first tone bearing element of) that Final.

The tone bearing units between the root and the Final are in most cases derivational affixes called “Extensions” (E); they are all tonally non-distinctive and generally of the shape -VC-. The “Final” is a suffix of the shape -(V(C))V that is found in all verb forms and contributes to the marking of the verb form for tense, mood and aspect.

The effect of the EA-structure condition is illustrated in (2). The Future forms in (2a) have a Final *-a* with low tone, and the Remote Past forms in (2b) have a Final *-á* with high tone; the intermediate positions, i. e., the extensions, have the same tone as the Final. The “underlying” tone figures in the left column are marked with the symbol ° and are subject to the rule of High Tone Shift resulting in the forms in the right hand column.

- |        |                        |   |                   |                  |
|--------|------------------------|---|-------------------|------------------|
| (2) a. | ° <i>a-ku-gabul-a</i>  | → | <i>akvgabula</i>  | she will turn    |
|        | ° <i>a-ku-zumitj-a</i> | → | <i>akvzumitja</i> | she will agree   |
|        | ° <i>a-ku-láβul-a</i>  | → | <i>akvlabúla</i>  | she will hurt    |
|        | ° <i>a-ku-kúmitj-a</i> | → | <i>akvkumitja</i> | she will praise  |
| b.     | ° <i>u-a-gakól-á</i>   | → | <i>waagakwá</i>   | she has turned   |
|        | ° <i>u-a-zumitj-á</i>  | → | <i>waazumitjá</i> | she has agreed   |
|        | ° <i>u-a-láβól-á</i>   | → | <i>waalabúlá</i>  | she has hurt     |
|        | ° <i>u-a-kúmitj-á</i>  | → | <i>waakumitjá</i> | she has praised. |

We now turn to the forms of the Immediate Past. The forms with a low tone root are given in (3a), those with a high tone root in (3b). In each pair of forms, the first has a low subject concord (SC), and the second a high subject concord.

- |        |                          |    |                    |                               |
|--------|--------------------------|----|--------------------|-------------------------------|
| (3) a. | (° <i>yi-á-gol . . .</i> | →) | <i>yaagóloloka</i> | it (cl. 9) became straight    |
|        | (° <i>zi-á-gol . . .</i> | →) | <i>jaágólólóká</i> | they (cl. 10) became straight |

- b. (<sup>o</sup>σ-á-kúm . . . →) waakúmlíja she (cl. 1) praised  
 (<sup>o</sup>βá-á-kúm . . . →) βaákúmlíjaá they (cl. 2) praised.

Here we see that the tone of the extensions and the Final are not stable but rather depend on the tone of the subject concord. The examples in (4) show the same paradigm in a schematic way, prior to the application of High Tone Shift.

(4)	(SC °L)		(SC °H)
	SC - á - R - E - F		SC - á - R - E - F
a. (R °L)	L H L L L		H H L H H
b. (R °H)	L H H L L		H H H L H

The span E-F is low throughout when the subject concord is low, and ends in a high tone when the subject concord is high. It would be unrealistic, phonetically, to assume some kind of long distance assimilation between the subject concord and the Final, across a variable and potentially very large number of tone bearing elements. Note also that other morphemes may intervene: Between the TAM-marking formative and the root we may insert the Itive marker *-ka-* as well as object concords of all classes and persons, each bearing its own tone. I therefore propose that these verb forms have a copy of the tone of the subject concord (TC/SC) in post-final position. Since forms with a low subject concord have no trace of a high tone Final, I further assume that the Final is low *-a*. In this way, we can account for three out of the four tonal melodies shown in (4):

(5)	(SC °L)		(SC °H)
	R - E - F + TC/SC		R - E - F + TC/SC
a. (R °L)	L L L L		
b. (R °H)	H L L L		H L L H

The EA-structure condition states that the extensions are low when the Final is low. A low TC (a “floating” low tone) is absorbed without trace by a preceding mora bearing a low tone. A floating high tone combines with a preceding mora that bears a low tone and this results in a low-high contour.

It is the remaining form, the one with a high subject concord and a low root, which is problematic. We would expect the same L-H melody on the span E-F as is found with high tone roots. In fact, the melody is H-H when the preceding root is low. We are therefore led to formulate an extra “Complex Final” tone rule:

CF: A complex tonal melody on (the last vowel of) the Final, which arises from the absorption of a floating post-final tone, triggers a second application of the Extension Assimilation structure condition if root and extensions bear the same tone.

I would suggest that this rule is more realistic than may appear at first sight. I base this on the observation that verb stems in Nyamwezi (i.e., the combinations R-E-F), if they have a complex tonal melody, must have the first "step" between the root (R) and the extensions (E), and if there is a second step it must occur between E and the Final (F). There are only two exceptions to this generalization, both poorly understood: (i) Certain Optative forms have their only step between E and F, but in these forms the tone of the Root is neutralized to low. (ii) The Negative Past tense forms all have a step between the first and the second syllable of the Final, i.e., *-íle*, whether or not there is a step between R and E. In all other verb forms, however, CF in conjunction with EA ensures that the first tonal step in a verb stem occurs between R and E. In this sense, CF is not a true rule but another structure condition.

(6) Tone contours with verb stems (prior to High Tone Shift):

R-E-F	R-E-F	R-E-F	R-E-F
admissible: L L L L H H (L H L)		inadmissible: L L H	
H H H H L L H L H		(H H L)	

(Forms with a word-final sequence HL appear in parentheses because such forms would be indistinguishable from HH sequences, due to the operation of High Tone Shift.)

The CF-structure condition operates in the Immediate Past, the Recent Past, the Sequential Past, the Perfective and the Past Perfective; these are all the affirmative Past and Perfective tenses with the exception of the Remote Past for which examples have been given above in (2b).

(7) a. Recent Past:

*yaagólolokaga*  
*waakúmilijaga*

*jaágólólókágá*  
*baákúmilijagáá*

b. Sequential Past:

*na-yigololoka*  
*na-akumilija*

*na-zigolólóká*  
*na-βakúmilijaá*

- c. Perfective:
 

<i>ɣɔlɔlɔkɪlé</i>	<i>zɪgɔlɔlɔkɪlé</i>
<i>ɣkɔβɔlékɪlé</i>	<i>zɪkɔβɔlékɪlé</i>
- d. Past Perfective:
 

<i>ɣaagɔlɔlɔkɪlé</i>	<i>jaagɔlɔlɔkɪlé</i>
<i>ɣaakɔβɔlékɪlé</i>	<i>jaakɔβɔlékɪlé</i>

In the Immediate, the Recent and the Sequential Past, the Final is a low tone °-a, and the CF-structure condition applies to the forms with a high subject concord and a low root. By contrast, the Final is °-ile in the two Perfective tenses, i.e., its first tone bearing unit is high, and the CF-structure condition applies to the forms with a high subject concord and a high root. The “derivation” of the forms in the right column of (7c) could look as in (8); “grounding” and “simplification” are general conventions that are not further discussed here.

(8)	°zɪ-gol.ɔlok-ile+´	°zɪ-kɔβ.ɔlek-ile+´
	H L    HLH	H H    HLH
EA:	H L <b>HH</b> HLH	H H <b>HH</b> HLH
Grounding:	H L <b>HH</b> <b>HLH</b>	H H <b>HH</b> <b>HLH</b>
CF:	H L <b>HH</b> HLH	H H <b>LLL</b> LH
Simplification:	H L <b>HH</b> HL	H H <b>LLL</b> H
HTS:	<b>L H LHHH</b>	<b>L H HL L LH</b>
	<i>zɪ gɔl ɔlɔk ɪlé</i>	<i>zɪ kɔβ ɔlek ɪlé</i>

## 2. The Polar Tone of the Imperative

The Nyamwezi Imperative forms are represented schematically in (9); the intermediate row shows the tone prior to the operation of High Tone Shift.

(9)	R -E -E -F	R -E -E -F
	L H H H	H L L H
	<i>lug-ul-ág-á</i> open!	<i>dit-il-ag-aá</i> pour!

The root has its own lexical tone, the tone of the extensions is the opposite of the tone of the root, and the Final has a high tone. In this form, the Imperative has been reconstructed for Proto-Bantu.

(10) \*R - °E - á (Meeussen 1962)



In this Swahili verb form, we find a post-final relative concord (RC) consisting of a pronominal prefix (PP) followed by *-o* (the so-called "o of reference"). In several other Bantu languages, we find that relative verb forms are marked with a tone copy of the subject concord in post-final position. In (13), we see a relative and an absolutive verb form from UMBundu, with the only difference being that the relative form carries a post-final tone copy of the subject concord.

- (13) UMBundu:  
*ovává átálá'lá . . .* water which is cold = cold water  
 °L H HHLL H  
 cf. *ovává átálála* the water is cold  
 °L H HHLLL

It is this highly specific similarity that gives rise to the hypothesis that the Nyamwezi verb forms with a post-final tone copy of the subject concord have their origin in relative verb forms. Additional support might be found in the fact that Nyamwezi does not have any specifically relative verb forms. Phonologically, the loss of a post-final relative concord, leaving behind just its tone, has many analogues in the development of grammatical category markers. More difficult to understand are the syntactic and semantic developments that have to be posited on the basis of this historical hypothesis.

The northern Swahili dialects and the southern relative of Swahili, the Comoro language Ngazija, appear to have forms attesting the transition from relative to absolutive verb forms. In both languages, there are relative verb forms that are marked by a post-final *-o* or a relative concord PP-*o*. The same marking also appears in certain absolutive verb forms. Nurse (1982: 101) claims that the Swahili dialects of Kenya have a kind of Present Continuous tense that is characterized by a post-final *-o* or PP-*o*; this tense, however, can only be formed from the verbs 'to come' and 'to go'.

- (14) Tikuu:  
*venda(v)o* they are going  
*mashua eyao* the dhow is coming.

According to Möhlig (pers. comm.), these two sentences are more fittingly translated as 'there they are (going)' and 'here she comes, the dhow'. As for Ngazija, Lafon (1982: 167f.) describes a Present tense in which the subject concord is preceded by an element *nga-* and which also has a post-final *-o*.

## (15) Ngazija:

- a. [nga-wa-fua-o →] ngwafuao they are washing (cl. 2)  
 [nga-zi-enda-o →] ngaziendao they are going (cl. 10)
- b. ngami je suis (voici-moi)  
 ngilo le voici (cl. 5).

Lafon suggests that the post-final *-o* should be analysed as the relative concord in these forms since it co-occurs with the pre-initial element *nga-*, which in other forms (see (15 b)) has a clear “presentative” meaning. Thus, we could assume that these forms started out with the meaning ‘there they are who are washing’. Similarly, Nurse suspects that such forms could originally have been the answer to a question such as ‘who (is the one who) cultivated the farm?’; answer: ‘it is she who cultivated the farm’. This is a possible historical scenario, but it still leaves some problems.

First, one would like to find more examples of languages having tenses with a post-final segmental or tonal copy of the subject concord which are used specifically for “presenting” the subject as new information. As far as I am aware, North Swahili – cf. the Tikuu example in (14) – is the only such case in an East African Bantu language.

Secondly, the hypothesis is not particularly helpful in shedding light on the question why, in Nyamwezi, it should be just that particular set of Past and Perfective tenses and no others that have incorporated a former relative marking.

On the other hand, there seem to be good reasons for the fact that in North Swahili only the verbs ‘to come’ and ‘to go’ are affected by this development: These two verbs are proto-typical for expressing spatial arrangements holding between an event and the speaker and hearer, which is also one of the functions of the “presentative”, cf. French ‘voici’ and ‘voilà’.

In this connection it is worth noting that, in North Swahili, there are two absolutive (i. e., non-relative) TAM-marking formatives that end in *o* for which there exist related forms without final *o* in other dialects. These TAM-formatives are clearly derived from former auxiliary verbs; the connection with a post-final PP-*o* is evident. The situation in Ngazija (and in other Comoro languages) is less clear. Here too, we find a whole range of TAM-formatives that end in *o*; however, experts on these languages suggest that this *o* results from the coalescence of the Final *-a* of the former auxiliary with the initial

*o/u* of the following main verb, i. e., either the augment or the nominal prefix of the infinitive: *o-(h)u-* (D. Nurse and M. Lafon, pers. comm.).

(16) TAM-formatives with final *o*:

North Swahili:	Ngazija:
<i>-ndo-</i> cf. <i>-nda-</i>	<i>-endo-</i>
<i>-to-</i> cf. <i>-ta-</i>	<i>-tso-</i>
	<i>-djo-</i> cf. <i>-dja-</i>
	<i>-do-</i>
	<i>-dongo-</i>
	<i>-tsungo-</i>

In summary, a group of Nyamwezi verb forms has a particular shape that suggests their origin from relative verb forms. In North Swahili and in the Comoro languages, there exist formally relative verb forms which are on the verge of becoming absolutive. This de-relativization primarily affects auxiliaries, especially in North Swahili. Nevertheless, the pathway that could have led from the Swahili situation to the one found in Nyamwezi needs further illumination.

Note

\* This article is a revised version of a paper presented at the XXIV. Deutscher Orientalistentag, Cologne, September 24-30, 1988. I am grateful to Derek Nurse who read a draft of that paper and made valuable critical comments. The Nyamwezi data and their tonal analysis are the product of a joint research project with Clement Maganga, University of Dar es Salaam, sponsored by the Netherlands Organization for Scientific Research (NWO).

Abbreviations used in this article:

CF	Complex Final	PP	Pronominal Prefix
E	Extension	R	Root, Radical
EA	Extension Assimilation	RC	Relative Concord
F	Final	SC	Subject Concord
H	High (tone)	TAM	Tense-Aspect-Mood
HTS	High Tone Shift	TC	Tone Copy
L	Low (tone)		

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