A Comparative Study of Tone of West Ugandan Bantu Languages, with Particular Focus on the Tone Loss in Tooro

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1 Introduction

In Western Uganda, some closely related Bantu languages such as Ankole (J.13), Kiga (J.14), Tooro (J.12) and Nyoro (J.11) are spoken. These languages plus Haya (J.22) of Tanzania which is spoken to the south of Ankole are sometimes referred to as Kitara (using the old name of Bunyoro-Kitara kingdom) as a group. However, when we look at the tone system of these languages, we easily notice some striking differences. The most particular is the fact that Tooro has completely lost its original lexical tone distinction, where the penultimate syllable of the word is always high-pitched in isolation, whereas Haya, and also Ankole to a certain point, retains a relatively old system, in which the disyllabic -HL, -LH and -LL noun stems are differentiated. Nyoro which is spoken to the north of Tooro shows an intermediate stage; it has two patterns only, namely penultimate high-toned (…HL) and final high-toned (…LH) patterns.

Figure 1: Location of the languages dealt with in this paper

The aim of this paper is to try to explain how the Tooro system, which phonologically lacks tone, has come into being, by examining comparatively the tone system of each language itself and also by closely looking at the differences which exist among the Haya, Ankole and Nyoro systems (Kiga data insufficient) in order to look for phonetic reasons of the tone changes.

Generally speaking the tone system becomes simpler as we proceed from south to north. This may have relation to the fact that this group of Bantu languages is the northern most one of this area and to the north of it Nilotic languages like Acholi, Lango and Alur are spoken. In this paper, however, we

will look for internal causes of tone simplification, putting aside external factors of language contact.

2 Haya

The characteristics of Haya tone include the following.[1]

1. The Haya tone system is the oldest among these languages.
2. There are words which have no high tone (…ss).[2]
3. If a word has high tone, it appears only in one syllable underlyingly (…sśssss, …sśsss, …sśss, …sśs, …sś).
4. Underlying distinctions are kept phonetically in isolation.
5. High tone in the ultimate syllable is anticipated by one syllable, and high tone in the penultimate syllable is realized falling in isolation.
6. When the possessive adjective *-ange* "my" qualifies a noun, a syntactic H is inserted.

The Haya tone and its phonetic realization are illustrated from (2.1) to (2.5). The nouns are arranged according to the length of the stem. A hyphen is inserted between the prefix and the stem in isolation forms. The tone bearing unit is the syllable. The noun forms are given in two ways, one as pronounced in isolation and the other in the construction with the qualifying possessive adjective *-ange* "my" which comes after the head noun. We note that this noun phrase construction reveals the underlying tone patterning which gets behind in isolation. The underlying high-toned syllable is underlined.

We notice that the number of patterns increases in function of the length of the stem. The pattern of the type *ekí-laba* 7,8 "species of tree", which has an underlying H in the prefix, is rare.

2.1. one-syllable stem words

a.	omu-zi 3,4	root	cf. omuzí gwange 3 "my ~"
b.	omú-ti 3,4	tree	cf. omutí gwange 3 "my ~"

2.2. two-syllable stem words

a.	omu-nofu 3,4	flesh	cf. omunofú gwange 3 "my ~"
b.	eki-zíla 7,8	prohibition	cf. ekizilá kyange 7 "my ~"
c.	omu-kâma 1,2	king	cf. omukáma wange 1 "my ~"
d.	ekí-laba 7,8	species of tree	cf. ekílabá kyange 7 "my ~"

[1] See Byarushengo et al. (1976) and Kaji (2000) for more details.
[2] Here "s" stands for syllable.

2.3. three-syllable stem words

a.	omu-guruka 3,4	snare trap	cf. omuguruká gwange 3 “my ~”
b.	aka-ningíli 12,14	lute	cf. akaningilí kange 12 “my ~”
c.	omu-gurûsi 1,2	old man	cf. omugurúsi wange 1 “my ~”
d.	eki-kójozi 7,8	plantain	cf. ekikójozí kyange 7 “my ~”

2.4. four-syllable stem words

a.	eki-gendelelo 7,8	intention	cf. ekigendeleló kyange 7 “my ~”
b.	eki-kankabána 7,8	male bud of banana tree	cf. ekikankabaná kyange 7 “my ~”
c.	eki-ɲuːmaɲûmi 7,8	shadow	cf. ekiɲuːmaɲúmi kyange 7 “my ~”
d.	olu-julúluzi 11,10	species of tree	cf. olujulúluzí lwange 11 “my ~”
e.	eki-kálakamba 7,8	scale	cf. ekikálakambá kyange 7 “my ~”

2.5. five-syllable stem words

a.	em-puruːtulilo 9,10	loose knot	cf. empuruːtuliló yange 9 “my ~”
b.	aka-iʃeikogóto 12,14	tortoise	cf. akaiʃeikogotó kange 12 “my ~”
c.	VCV-CVCVCVCV̌CV	no examples	
d.	VCV-CVCVCV́CVCV	no examples	
e.	VCV-CVCV́CVCVCV	no examples	
f.	oku-búndaːmiliza 15	stooping (to serve tea)	cf. okubúndaːmilizá kwange 15 “my ~”

3 Ankole

The Ankole system basically remains the same as the Haya system, but has moved one step or two toward tone simplification. The characteristics of Ankole tone include the following.

1. As far as the system is concerned the Ankole tone system is the same as the Haya system.
2. There are words which have no high tone (…ss).
3. If a word has high tone, it appears only in one syllable underlyingly (…sśssss, …sśsss, …sśss, …sśs, …sś).
4. Underlying distinctions are generally kept in isolation except in one pattern. That is, although when a word’s penultimate syllable is long and H-toned, this H is realized as F (falling) like Haya, when a word’s penultimate syllable is H-toned but short, this underlying H is realized as H, and not F like Haya, thus confusing the …HL pattern with the …LH

patterns in isolation. Both become …HL. See (3.6) for examples of H-toned long penultimate syllables.

5. In the noun phrase construction with the possessive adjective *-an/e* "my", a syntactic H is inserted only when the noun has no high tone, thus avoiding low flat configurations.
6. In a number of words high tone is lost in comparison with Haya.

3.1 one-syllable stem words

a. omu-zi 3,4 root cf. omuzí gwanɟe 3 "my ~"
b. omú-si 3,4 vein, nerve cf. omusí gwanɟe 3 "my ~"

3.2. two-syllable stem words

a. omu-hara 1,2 daughter cf. omu-harᵃ́ wanɟe 1 "my ~"
b. ama-ríra 6 mourning cf. amarirᵃ́ ganɟe 6 "my ~"
c. omu-kᵃ́ma 1,2 king cf. omukᵃ́ma wanɟe 1 "my ~"

3.3. three-syllable stem words

a. aka-gobora 12,14 elephant tusk cf. akagoborᵃ́ kanɟe 12 "my ~"
b. eci-tentére 7,8 young hen cf. ecitenteré canɟe 7 "my ~"
c. oru-tongᵃ́na 11,10 index finger cf. orutongᵃ́na rwanɟe11 "my ~"
d. aka-tᵃ́doba 12,14 hand-made lamp cf. akatᵃ́doba kanɟe 12 "my ~"
e. ebí-runɟire 8 sauce cf. ebírunɟire byanɟe 8 "my ~"

3.4. four-syllable stem words

a. aka-hungabebe 12,14 termite cf. akahungabebé kanɟe 12 "my ~"
b. oru-to:ɲerᵉ́ra 11,10 drizzle cf. oruto:ɲererᵃ́ rwanɟe 11 "my ~"
c. aka-samuɲíga 12,14 skunk cf. akasamuɲíga kanɟe 12 "my ~"
d. eci-gungúniro 7,8 threshed corncob cf. ecigungúniro canɟe 7 "my ~"
e. eci-síɟisiro 7,8 small clay pot cf. ecisíɟisiro canɟe 7 "my small ~"

3.5. five-syllable stem words

a. oku-si:tagirira 15 crashing with feet
cf. okusi:tagirirᵃ́ kwanɟe 15 "my ~"
b. VCV-CVCVCVCV́CV no examples
c. VCV-CVCVCVCV́CV no examples
d. VCV-CVCVCV́CVCV no examples
e. VCV-CVCV́CVCVCV no examples
f. en-tᵃ́:gurukane 9,10 crossroads cf. entᵃ́:gurukane yanɟe 9 "my ~"

3.6. words with a H-toned long penultimate syllable

a. eci-ɟî:ko (*eci-ɟí:ko) 7,8 spoon cf. eciɟí:ko canɟe "my ~"

b. eci-tô:ma (*eci-tó:ma) 7,8 bark cloth cf. ecitó:ma canɟe "my ~"
c. e-tû:tu (*e-tú:tu) 9,10 sweat cf. etú:tu yanɟe "my ~"

4 Tooro

The characteristics of Tooro tone include the following.

1. Tooro has lost its lexical tone.[3] All nouns are pronounced with high tone on the penultimate syllable in isolation (..sśs).
2. H tone in isolation disappears when the noun is followed by the possessive adjective *-ánge* "my", which has a high tone.

4.1. one-syllable stem words

omú-twe 3,4 head cf. omutwe gwánge 3 "my ~"
omú-ti 3,4 tree cf. omuti gwánge 3 "my ~"

4.2. two-syllable stem words

omu-kázi 1,2 woman, wife cf. omukazi wánge 1 "my ~"
oku-gúru 15,6 leg cf. okuguru kwánge 15 "my ~"

4.3. three-syllable stem words

omu-gurúsi 1,2 old man cf. omugurusi wánge 1 "my ~"
omu-sigázi 1,2 male youth cf. omusigazi wánge 1 "my ~"

4.4. four-syllable stem words

omu-role:rézi 1,2 bishop cf. omurole:rezi wánge 1 "my ~"
aka-sirimúko 12,14 downhill slope cf. akasirimuko kánge 12 "my ~"

4.5 five-syllable stem words

obu-juna:nizíbwa 14 responsibility cf. obujuna:nizibwa bwánge 14 "my ~"
en-konkomerézi 9,10 woodpecker cf. enkonkomerezi yánge 9 "my ~"

5 Nyoro

The characteristics of Nyoro tone include the following.

1. Nyoro has two tone patterns underlyingly regardless of the length of the word (…sśs, …sś), namely H either in the penultimate or ultimate syllable. The underlying High tone is realized falling in isolation.

[3] Tone still fulfills grammatical functions in Tooro. See Kaji (2009).

2. There are no low flat words (…ss).
3. The underlying H is realized as F in isolation.[4]
4. High tone anticipation is remarkable.[5]
5. The underlying H and the anticipated H remain H even when followed by the possessive adjective *-ánge* "my", which has a high tone.

5.1. one-syllable stem words

a.	omú-tî 3,4	tree	cf. omútí gwânge 3 "my ~"
b.	obû-ne 14	liver	cf. obúne bwânge 3 "my ~"

5.2. two-syllable stem words

a.	eki-gérê 7,8	foot	cf. ekigéré kyâge 7 "my ~"
b.	ama-zîga 6	tears	cf. amazíga gânge 6 "my ~"

5.3. three-syllable stem words

a.	obu-horókô 14	chicken lice	cf. obuhoróko bwânge 14 "my ~"
b.	omu-gúrûsi 1,2	old man	cf. omugúrúsi wânge 1 "my ~"

5.4. four-syllable stem words

a.	e-ɲamunúngû 9,10	porcupine	cf. eɲamunúngú yânge 9 "my ~"
b.	oru-kanakâna 11,10	dewdrop	cf. orukanakána rwânge 11 "my ~"

5.5. five-syllable stem words

a.	aka-gongabahárâ 12,14	wagtai.	cf. akagongabahárá kânge 12 "my ~"
b.	eki-tabujúgûta 7,8	species of civet	cf. ekitabujúgúta kyânge 7 "my ~"

6 Comparison of Haya, Ankole, Nyoro and Tooro

There are several patterns of tonal correspondence among Haya, Ankole and Nyoro, but the following three from (6.1) to (6.3) with examples of two-syllable stem nouns are the most numerous. Note that whereas the original patterns -HL and -LH are kept differentiated in Nyoro, the -LL pattern has received high tone on the penultimate syllable, a default position in Bantu (?). The result is that there are only two patterns in Nyoro, namely the -HL pattern and the -LH pattern.

[4] In some words this falling is hardly heard.
[5] The exact nature of high tone anticipation remains to be determined.

		Haya	Ankole	Nyoro	Tooro	
6.1.		-HL	-HL	-HL	-HL	
	a.	amazîga 6	amazíga 6	amazîga 6	amazíga 6	tears
	b.	olulîmi 11,10	orurímі 11,10	orulîmi 11,10	orulímі 11,10	tongue
	c.	embûzi 9,10	embúzi 9,10	embûzi 9,10	embúzi 9,10	goat
6.2.		-LL	-LL	-HL	-HL	
	a.	omumiro 3,4	omumiro 3,4	omúmîro 3,4	omumíro 3,4	throat
	b.	ekiŋoŋi 7,8	ekiŋoŋi 7,8	ekiŋôŋi 7,8	ekiŋóŋi 7,8	bird
	c.	eŋama 9,10	eŋama 9,10	eŋâma 9,10	eŋáma 9,10	meat
6.3.		-LH	-LH	-LH	-HL	
	a.	etá:ba 9	etá:ba 9	etá:bâ 9	etá:ba 9	tobacco
	b.	ebitʃwánta 8	amatʃwánte 6	ebitʃwántâ 8	ebitʃwánta 8	spit
	c.	emé:za 9,10	emé:za 9,10	emé:zâ 9,10	emé:za 9,10	table

As for patterns with an original high tone before the antepenultimate syllable, we note that high tone has moved to the penultimate syllable of the word. This also confirms the fact that Nyoro has only two patterns, …HL and …LH.

		Haya	Ankole	Nyoro	Tooro	
6.4.		…HLL	…HLL	…LHL	…LHL	
	a	enkókola 9,10	enkókora 9,10	enkókôra 9,10	enkokéra 9,10	elbow
	b.	omutábani 1,2	omutábani 1,2	omutábâni 1,2	omutabáni 1,2	son
	c.	omusígazi 1,2	omusígazi 1,2	omusígâzi 1,2	omusigázi1,2	male youth
6.5.		…HLLL	…HLLL	…LLHL	…LHL	
	a.		oruzíramere 11,10	enzirámîra 9,10	enzirmíra 9,10	python
	b.		ekikálakamba 7,8	ekigaragâmba 7,8	(ekikaraká:ta 7,8)	scale

There are other types of correspondence among Haya, Ankole and Nyoro, like those listed from (6.6) to (6.9) though their examples are not numerous. The examples in (6.6) are a different development from those in (6.1) in which Nyoro reflexes are -HL. Also, the examples in (6.7) show a different development from those in (6.2) in which Nyoro reflexes are -HL. The examples in (6.8) and (6.9) indicate that it is rather Ankole which has deviated from the normal development. It is of particular interest to note that in (6.8) Ankole has lost H in words in which Haya and Ankole have H. We also note that in all these examples Nyoro reflexes are the -LH pattern.

		Haya	Ankole	Nyoro	Tooro	
6.6.		-HL	-HL	-LH	-HL	
	a.	ekijîko 7,8	ekiɟîːko 7,8	ekijíːkô 7,8	ekigíːko 7,8	spoon
	b.	engâta 9,10	engáta 9,10	engátâ 9,10	engáta 9,10	headpad
	c.	ekitêbe 7,8	ekitébe 7,8	entébê 9,10	entébe 9,10	chair

		LL	-LL	-LH	-HL	
6.7.						
	a.	olugino 11,10	engino 9,10	engúnû 9,10	engúnu 9,10	gum
	b.	omuguwa 3,4	omuguha 3,4	omugúhâ 3,4	omugúha 3,4	rope
	c.	olubaːo 11,10	rubaːho 11,10	rubáːhô 11,10	rubáːho 11,10	board, plank, timber

		-LH	-LL	-LH	-HL	
6.8.						
	a.	omuhára 1,2	omuhara 1,2	omuhárâ 1,2	omuhâra 1,2	daughter
	b.	ekigéle 7,8	ekiɟere 7,8	ekigérê 7,8	ekigêre 7,8	foot, sole
	c.	empúnu 9,10	empunu 9,10	empúnû 9,10	empúnu 9,10	pig

		-LH	-HL	-LH	-HL	
6.9.						
	a.	engége 9,10	enɟéɟe 9,10	engégyê 9,10	engége 9,10	tilapia
	b.	ekiʃúʃu 7,8	ekiʃúʃu 7,8	ekisúsû 7,8	ekisúsu 7,8	bark
	c.	eikópo 5,6	ekikópo 7,8	ekikópô 7,8	ekikópo 7,8	cup

7 Step from Nyoro to Tooro

As we confirmed in the previous section, Nyoro has only two patterns: …HL and …LH. Only one step is necessary to arrive from the Nyoro stage at the Tooro stage, which always has high tone in the penultimate syllable in isolation, namely merger of the …HL and …LH patterns. This merger must have happened by changing the …LH pattern to the …HL pattern. This may happen without much difficulty if we consider the phonetic realizations of these two patterns. The …LH pattern, which is realized as …HF in isolation in Nyoro, is sometimes heard as …HL, and in fact it is …HL in Ankole. The …HL pattern is realized as …HF in isolation in Nyoro but sometimes heard as …HL and it is …HL in Ankole in isolation when the H-toned syllable is a short one.

8 Summary by way of conclusion

In Haya, with the oldest system, the underlying …LH and …HL patterns are differentiated even in isolation, but the difference between their respective phonetic realizations ...HL and ...FL is slight (see for example, 2.2.b. *eki-zíla* 7,8 "prohibition" and 2.2.c. *omu-kâma* 1,2 "king"). In Ankole, these two patterns are differentiated underlyingly as in Haya, but when the penultimate H-toned syllable is short they are pronounced in the same way in isolation (see for example 3.2.b. *ama-ríra* 6 "mourning" and 3.2.c. *omu-káma* 1,2 "king").

In Nyoro we note one big change, namely that all the patterns except the …LH have become …HL (except some exceptions). In particular the …LL pattern has become …HL (cf. 6.2), with the result that Nyoro has only two patterns, which are …HL and …LH. The Tooro state can be reached by one step from Nyoro by changing the underlying …LH to …HL. This change must have been realized without much difficulty if we consider the subtlety of the phonetic difference between these two patterns, namely …FL and …HF in Nyoro and the sameness in Ankole, both being …HL

9 References

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