Noun Tonology in Kuria

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1. Introduction

The purpose of this study is to present a tonal description of nouns in Kuria, an Eastern Bantu language spoken in south-west Kenya and northern Tanzania. Although it is referred to by its speakers as Igikúryá, it will be referred to here simply as Kuria. Guthrie (1967) classifies Kuria as E43, that is, the third language in zone E, group 40. In this classification, Kuria is most closely related to Logooli (E41), Gusii (E42), Zanaki (E44), Nata (E45), Ngorimi and Simbiti. Nurse and Philippson (1980) show that Kuria is in the Lacustrine group of languages, in the subgroup of East Nyanza, where it is closely related to Ngurimi, Suba, Ikizu, Shasi, Zanaki and Nata.

The study focuses on the tonal patterns of nouns in isolation. Not much emphasis has been given to infinitive forms in class 15 because of its dual nominal and verbal nature. It has been my desire for some time now to analyze phrasal tonology in Kuria but since some of the most significant evidence of phrasal tonology will derive from an examination of phrases consisting of a verb plus a noun, I found it necessary to examine and analyze the tonal behavior exhibited in nouns outside the scope of such phrases first, details of verbal tone assignment having been set forth in Odden (1987) and Mwita (2008). I will show that the complex tonal alternations found in Kuria nouns are predictable on the basis of a small inventory of tonal melodies made up of high and low tones, together with a set of rules. Data for this paper was collected from the *Kuria-English Dictionary* (Muniko et al 1996). I looked at all the entries in the dictionary and wrote down the tones for all the words that I knew from that collection.

This paper is divided into several sections. Section 1 provides a general introduction to the study. Section 2 gives the structure of the noun and provides a list of the Kuria noun classes. In Section 3, preliminary information as regards the basics of Kuria tone is presented. Section 4 presents a detailed examination of the surface tone patterns in monosyllabic, bisyllabic, trisyllabic, quadrisyllabic, pentasyllabic and sexisyllablic stems. Section 5 offers a brief conclusion which among other things notes the theoretical issues which came up in the course of this investigation.

2. Structure of the Kuria Noun

In order to understand the nominal tone system, a description of the noun classes will be provided first. Nouns in Kuria, as in other Bantu languages, are divided into classes (see Table 1). The general structure of Kuria nouns is exemplified in (1):

(1) o – mo – kari

AUG CLASS PREFIX ROOT
omo[kári] "woman"

As shown in (1), the noun in Kuria, like those of other Bantu languages, canonically consists of three parts: the pre-prefix or augment, the class prefix and the root which will consist of one or more syllables. All nouns have an augment except the locatives in classes 17 and 18 which have a zero morph (Ø). The shape of the augment is always predictable from the shape of the noun class prefix, that is, it is always a copy of the vowel in the class prefix. All noun classes have a class prefix representing one of the twenty classes except class 9 which has a zero morph. Table 1 presents the augment and class prefix structure and an example of all 20 noun classes.

Table 1: Kuria Noun Classes

Class Number	*Augment*	*Class Prefix*	*Example*	*Gloss*
1	o-	-mo-	omokári	"woman"
2	a-	-βa-	aβakári	"women"
3	o-	-mo-	omoté	"tree"
4	e-	-me-	emeté	"trees"
5	i-	-ri-	iriiγí	"egg"
6	a-	-ma-	amaγí	"eggs"
7	e-	-ke-	eγeénto	"thing"
8	i-	-βi-	iβiínto	"things"
9	e-	-Ø-	eβatá	"duck"
9a	eN	-Ø-	eembeγo	"seed"
10	i-	-či-	ičiβátá	"ducks"
10a	i-	-či-	ičiimbéγo	"seeds"
11	o-	-ro-	oroβáγɔ	"hedge"
12	a-	-ka-	aγačúβa	"small bottle"
14	o-	-βo-	oβokáánɔˈ	"sesame seed"
15	o-	-ko-	oγosɔˈma	"to read"
16	a-	-ha-	ahasé	"a place"
17	Ø	ko-	γuusúkúúri	"in/at school"
18	Ø	mo-	moónse	"inside"
19	i-	-hi-	ihiβéγo	"small seeds"
20	u-	-γu-	uγučúβa	"big bottle"

The noun class system found in Kuria involves pairs of classes which encode the singular and plural for a given noun, that is, the nouns in singular will get their plural in another class.

Table 2: Noun Class Pairings

Class Number	*Singular*	*Gloss*	*Pairs*	*Class Number*	*Plural*	*Gloss*
1	omoónto	"person"	↔	2	aβaánto	"people"
3	omoté	"tree"	↔	4	emeté	"trees"
5	iriiγéna	"stone"	↔	6	amaγéna	"stones"
					amatwí	"ears"
7	eγeénto	"thing"	↔	8	iβiínto	"things"
9	eβatá	"duck"	↔	10	ičiβátá	"ducks"
					ičiimbáγɔ	"hedges"
11	oroβáγɔ	"hedge"				
12	aγačúβa	"small bottle"				
15	uγutwí	"ear"				
				19	ihičúβa	"small bottles"

3. The Basics of Kuria Tone

Before describing the type of forms in Kuria nominal tonology, we will briefly outline the main characteristics of Kuria tonology. These are described in detail in a previous study that I carried out (see Mwita 2008).

3.1 Underlying and Surface Tones

I assume that the underlying tonal distinction in Kuria is one of High vs Ø, that is, low tones are underspecified underlyingly, being introduced at a later stage in the phonology by a rule of Default L Insertion. Consequently, Kuria has two basic surface tones, High (H) and Low (L) (Whiteley 1955, Odden 1987, Cammenga2004, Mwita 2008). The following conventions have been used to mark these surface tones; High tone is marked by an acute accent (´) and Low tones are left unmarked as illustrated in (2).

(2) a. oko[róma] "to bite" class 15
L L H L

b. oko[βérékerá] "to call" class 15
L L HH L H

3.2 Contour Tones

I will consider each mora or vowel to be a tone bearing unit (TBU). When only one of two consecutive vowels in a long syllable is marked for tone, the syllable bears a contour. The rising contour (LH) is common in long syllables in Kuria.

(3) a. omoónto "person" class 1
L H

b. aβaánto "people" class 2
L H

When both vowels bear the same tone marking, the syllable is pronounced with the same pitch.

(4) a. uku[βíímá] "to measure"(HH) class 15
b. oγo[káraaŋá] "to fry" (LL) class 15

3.3 Downdrift

Downdrift is a phenomenon which lowers the pitch of a high tone after a low tone. The presence of a low tone between two high tones triggers a downward shift in tonal register. The process of downdrift is considered to be automatic, that is, given any sequence of tones, every high after a low is always a step lower that the preceding high.

(5) /o – ko – βereker – a/ → oko[βérékerá] "to call"
a – im – call – fv

The tones in (5) are graphically represented in Figure 1 below.

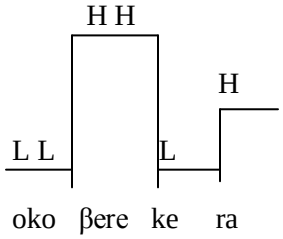


Figure 1: Downdrift

3.4 Downstep

Downstep is another phenomenon found in Kuria. It is similar to downdrift. Downstep is a kind of register lowering that can be defined as a drop in pitch which occurs on the second of two adjacent high tones. The second tone is therefore produced at a pitch lower than the first one, without reaching the level of a low tone. The downstep is conditioned by a floating low tone occurring between two high tones (Yip 2002). A downstepped high is always non-initial in Kuria, that is, it never occurs word or phrase-initially. It is marked by a raised exclamation mark before a high note that it marks (!H).

(6) /o – ko – tɛrɛk – a/ → oγo[tɛ́ré!ká] "to brew"
a – im – brew – fv

The rising and falling of tones in (6) is graphically represented in Figure 2 below.

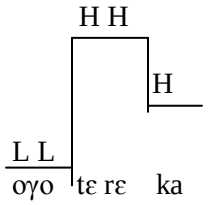


Figure 2: Downstepped high

One characteristic of a downstepped high is that it sets a new pitch ceiling for all subsequent high tones.

4. Surface Tone Patterns

The representation of surface tone patterns will be guided by data from monosyllabic, bisyllabic, trisyllabic, quadrisyllabic, pentasyllabic and other polysyllabic stems.

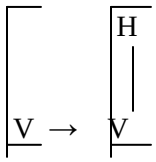
4.1 Monosyllabic Stems

The Kuria language has quite a large collection of words with monosyllabic stems. The unifying point for all these words is that they have a high tone on the only syllable or mora on the stem.

(7) a.	omo[té	"tree"	class 3
b.	omo[twɛ́	"head"	class 3
c.	eme[té	"trees"	class 4
d.	eme[twɛ́	"heads"	class 4
e.	eγe[kwé	"a thousand"	class 7
f.	eke[βé	"wrong doing"	class 7
g.	iki[γwí	"wasp"	class 7
h.	iβi[kwé	"thousands"	class 8
i.	iβi[βé	"wrong doings"	class 8
j.	iβi[γwí	"wasps"	class 8
k.	ii[nswí	"fish"	class 9
l.	ee[ndá	"stomach"	class 9
m.	oro[ká	"beard"	class 11
n.	oro[kwé	"firewood"	class 11
o.	oβo[tá	"bow"	class 14
p.	oβo[sɛ́	"flour"	class 14
q.	uγu[twí	"ear"	class 15
r.	aha[sé	"place"	class 16

As noticed in the examples in (7), the surface tone of the augment and the class prefix is L in all cases yet in Proto-Bantu the preprefix was high toned (Kisseberth and Odden 2003). Only one tone assignment rule seems to apply in monosyllabic stems; that of assigning the primary high tone on the stem.

(8) Insertion of H to V1



4.2 Bisyllabic Stems

The majority of nouns in the Kuria language submit to a tonal analysis which is quite similar to that given to verbs. Nouns with bisyllabic stems are the most numerous in the language and they fall into one of the following five tone classes.

(9) [CV́CV or V́CV

(a) eke[náma	"thigh"	class 7
(b) ama[γéna	"stones"	class 6
(c) ee[hɛ́kɛ	"a grain"	class 9
(d) omo[óro	"a river"	class 3
(e) oβo[óri	"a cattle corral"	class 14

Majority of the words with bisyllabic stems fall into this pattern. There is no tonal difference between the CVCV and the VCV shapes. Only one tone rule seems to apply for the data in (9), that is, that of assigning a high tone to the first vowel of the stem.

The examples that follow in (10) do have a different tonal pattern. Both syllables in the stem have a high tone.

(10) [CV́CV́ or V́CV́[1]

(a) iγu[rúkí	"a ram"	class 5
(b) ičі[βátá	"ducks"	class 10
(c) eke[hóná	"a fool"	class 7
(d) ee[ndɔ́βɔ́	"a fishing hook"	class 9

Words with this pattern are very few. A rule of High Tone Spread applies to spread the tone from the first to the second vowel of the stem.

(11) High Tone Spread

(spreads iteratively)

Kuria is a language that has both short and long vowels. The examples that follow have long vowels on the first syllable of the stem.

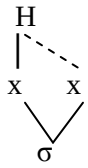
(12) [CV́V́CV

(a) omo[sááni	"a friend"	class 1
(b) oro[sááhɔ	"diarrhea"	class 11
(c) eke[hóóre	"skull, oath"	class 7
(d) iγi[túúmbe	"a stool, chair"	class 7
(e) iβi[tɔ́ɔ́kɛ	"bananas"	class 8

[1] Following the examples in (9) and (10), it is realized that whether the stem is C- or V-initial has no bearing on the realization of the tones.

In the examples in (12), the primary high tone is assigned to V1 and then the Intrasyllabic High Tone Spread rule occurs to spread the H tone from the first vowel of the stem to the second one within the same syllable. The Intrasyllabic High Spread Rule is formalized in (13).

(13) Intrasyllabic High Spread Rule



The difference between the High Tone Spread and the Intrasyllabic High Spread Rule is that the former occurs iteratively and is not restricted to particular syllable types but the later spreads only once to the next vowel within the same syllable . Another pattern of the bisyllabic verbs is the CV́V́C V́ form. This contrasts with the pattern in (12).

(14) [CV́V́CV́

(a) omo[γááká	"an elder"	class 1
(b) omo[hóóró	"game", "play"	class 3
(c) eγe[séésé	"a wound"	class 7
(d) eke[róóŋgwé	"a flute"	class 7
(e) ama[sááná	"bushes"	class 6

In the examples in (14), three rules apply. First, there is a primary H tone insertion on the first vowel of the stem. This is followed by a rule called Intra-Syllabic High Tone Spread which applies within a long syllable. When the first vowel in the syllable receives a high tone it tends to spread to the second vowel so as to avoid a falling contour. The third rule that applies is the High Tone Spread.

Some nouns in class 9 have a high tone on the second syllable of the stem. These have the pattern [CVCV́.

(15) [CVCV́

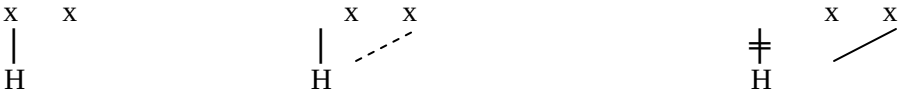
(a) e[βatá	"duck"	class 9
(b) e[βeté	"ring"	class 9
(c) e[βomú	"bomb"	class 9
(d) e[sahí	"cane"	class 9
(e) e[tará	"lamp"	class 9

If our argument from the start that the primary high tone in Kuria nominals is usually assigned to the first mora of the stem then the examples in (15) indicate that the high tone has shifted from the first vowel to the second one. To ascertain that the stems are well marked in (15) above, I give the plural forms of these nouns in (16).

(16) a. iči[βátá	"ducks"	class 10	
b. iči[βété	"rings"	class 10	
c. iči[βómú	"bombs"		class 10
d. iči[sáhí	"canes"		class 10
e. iči[tárá	"lamps"		class 10

My speculation is that the tone pattern in (15) may have been borrowed since most of the words in this pattern are borrowed from Kiswahili. To account for this pattern, the initial tone assignment rule applies followed by High Tone Spread then Tone Shift which disassociates the high tone from the first vowel of the stem (see 17).

17) a. Input b. High Tone Spread c. Tone Shift



Kisseberth and Odden (2003) have noted that in the bisyllabic stems, four tone patterns are reconstructable to Proto-Bantu: HH, HL, LL and LH. As seen above,in Kuria only three of these patterns were seen, that is, HH, HL and LH. This shows that Kuria has historically reduced the number of patterns.

4.3 Trisyllabic Stems

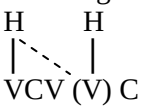
The trisyllabic nouns fall into six tonal classes. The syllable type has a bearing on where the high tones are placed on the stem.

(18) [CV́V́CV́CV́

(a) ama[kúúmbátí	"tobacco"	class 6	
(b) eγe[séémbésé	"beer'		class 7
(c) iγi[twááŋgéró	"mortar"		class 7
(d) omo[ráámbókó	"hunger"	class 3	
(e) oβo[tááŋgátí	"leadership"		class 14

To be able to account for the tone pattern in (18), there is need to posit that two primary high tones are assigned, one to V1 and another to V4. After the assignment of primary tones, the Intra-Syllabic High Tone Spread rule applies to spread the high tone from the first to the second vowel of the stem. This is followed by a rule of Doubling which spreads the H tone one step to the right. This yields high tones on the whole word. The Doubling Rule is formulated in (19).

(19) Doubling Rule



This rule requires that you spread a linked H one vowel to the right when there is another primary high tone on the right.

Another pattern in the trisyllabic stems is the [CV́V́CV́CV one.

(20) [CV́V́CV́CV (a) omo[sááγánɛ "girl" class 1

(b) omo[hóóhéra	"drizzle"		class 3
(c) omo[sɔ́ɔ́γɔ́rɔ	"rustling"		class 3
(d) eγe[táámbára	"handkerchief"	class 7	

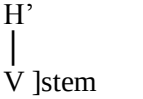
In these examples, the first two syllables have high tones but the last syllable has a low tone. This pattern is similar with the one shown in (18), the difference being the last syllable which in this case has a low tone.

(21) [CV́CV́!CV́

(a) ama[táγí!tó	"mud", "clay"	class 6
(b) uβu[húkú!rú	"blindness"	class 14
(c) omo[sέγέ!ré	"a kick"	class 3
(d) eγe[tɔ́γɔ́!sέ	"white mushroom"	class 7
(e) iβi[néné!βú	"lips"	class 8

This pattern (21) has a downstepped high tone. The assumption is that two high tones are assigned to the stem. A number of rules apply to reach this output. First, the primary high tones (I and IV) are assigned but because there are only three moras on the stem the fourth H tone remains floating. The rule of Doubling then occurs to spread the high tone to V2. This is followed by L Tone Default. A new rule of Floating Tone Docking is needed to attach the floating H to the last mora on the stem. The last mora therefore receives a low and high tone and these form a contour. The rule of Contour Simplification deletes the high tone and leaves the last mora with a high tone but because the low tone has been left floating a downstep occurs. The Floating Tone Docking can be stated thus:

(22) Floating Tone Docking Rule

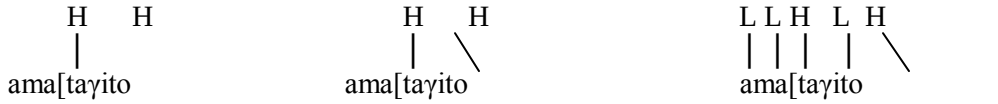


The rule requires that a floating high tone be linked to the last vowel on the stem. Another rule, Contour Simplification, has the effect of turning the LH contour into a high tone.

(23) Contour Simplification

The rule shows that when low and high notes are linked to one mora, the low is delinked so that it remains floating. Some of these steps are captured in the illustration in (24).

(24) Primary H Assignment Doubling L Tone Default



Floating Tone Linking Contour Simplification Output

Another pattern in the trisyllabic stems is [CV́CVVCV́. This pattern is possible because the Intrasyllabic High Tone Spread and the Doubling rules do not apply. Their environments are not met.

(25) [CV́CVVCV́

(a) ama[áɲiiŋgá	“blood”	class 6
(b) ee[háraaŋgá	“groundnut”	class 9
(c) oβo[káγaaŋgwé	“mouthbow”	class 14
(d) ee[ŋgósiirá	“hat”	class 9
(e) uβu[íkuuní	“cleanliness”	class 14

Other patterns of the trisyllabic stem are given in (26) and (27) below.

(26) [CV́CV́VCV

(a) iri[γɔ́nɛ́ɛ́ra	“a sack”	class 5
(b) omo[βáróósi	“a chief’s elder”	class 1
(c) aβa[hóréɛ́ru	“gentle people”	class 2
(d) ubu[síníínu	“ugliness”	class 14
(e) omo[sááŋgóra	“type of tree”	class 3

(27) [CV́V́CV́V́CV

(a) eme[róóŋgóóti	“sisal poles”	class 4
(b) aβa[hóómááni	“fishermen”	class 2
(c) eγe[tóótóóna	“type of tick”	class 7
(d) iri[kóónóóno	“elephant trunk”	class 5
(e) omo[rɛ́ɛ́rɛ́ɛ́γu	“a slack person”	class 1

4.4 Quadrisyllabic Stems

The quadrisyllabic stems are not very many in the Kuria language. They have varied patterns. I will explain the tone patterns in these stems starting with the simple ones first. The patterns from (28) to (32) have a straightforward analysis if we posit that there is only one primary high tone on the stem. The primary high tone is assigned to V1 then it spreads to the ultimate through the High Tone Spread rule.

(28) [CV́CV́CV́CV

(a) uβu[tírímíku	“calmness”	class 14
(b) omo[óčókóro	“grandchild”	class 1
(c) iri[íɲáγéswa	“type of mushroom”	class 5
(d) ii[ɲákárúγa	“large pot for cooking”	class 9

(29) [CV́V́CV́CV́CV

(a) iγi[kúúndíkíryo "lid", "cock" class 7
(b) oβo[βáámbáráhe "thickness" class 14
(c) oro[γɔ́ɔ́nkɔ́rɔ́mɛ "a cockscomb" class 11

(30) [CV́V́CV́V́CV́CV

(a) oβo[sáámbáárúku "cheerfulness" class 14

(31) [CV́V́CV́CV́V́CV

(a) umu[βíítínáári "veterinarian" class 1
(b) oβo[tóótómááče "chicken-pox" class 14

(32) [CV́CV́CV́V́CV

(a) iri[kírímíínsi "small swelling on body" class 5
(b) iri[íɲánsááka "type of mushroom" class 5

The pattern in (33) suggests that there are two primary high tones assigned to these stems, one on V1 and the other on V4. Through doubling the high tone on V1 spreads to V2.

(33) [CV́CV́CVCV́

(a) ii[mbíríβirí "pellet of goat" class 9
(b) ama[áčíβoγá "type of vegetable" class 5
(c) iri[sɔ́rɔ́kɔβwɛ́ "black-eyed bulbul" class 5
(d) iri[tɔ́rátɔrá "the solon plant" class 5
(e) iri[síríβonó "castor-oil plant" class 5

The layout of the examples in pattern (34) shows that there are two primary high tones on V1 and V4 respectively. The second syllable, which has a long vowel, has low tones because the Doubling rule did not apply. Had the rule applied the result could have been a falling contour which this language does not allow.

(34) [CV́CVVCV́CV

(a) eγe[káraaŋgéro "frying pan" class 7
(b) ee[nsáraaγéna "a peeble" class 9
(c) iki[ímaahéro "mirror" class 7
(d) iri[táčaandíγi "spider" class 5
(e) ama[kóroonŋgóto "well used paths" class 6

4.5 Pentasyllabic and Six Syllable Stems

There are a handful of nouns scattered throughout the language which contain five or six syllables, most of them being compound words. For example, the noun *eγe[sááráβáríísya* "praying mantis" given in (35a) is a product of two words, namely *saará* which means "circumcise" and *aβaríísya* which stands for "boys".

(35) Pentasyllabic Stems

(a) eγe[sááráβáríísya "praying mantis" class 7
(b) ama[sééndéráánkɔ́ro "unpleasant things" class 6
(c) iri[hííŋgírámáβi "cowdung beetle" class 5
(d) iki[íɲásɔ́ɔ́nsɔ́re "a pied wagtail" class 7
(e) iβi[íɲáβóréέsa "tweezers" class 8
(f) iri[súúŋgáβóróóta "a bat" class 5
(g) iri[táárákímúra "a secretary bird" class 5

The tone pattern in the nouns in (35) can be accounted for by two rules: the first one assigns a primary high tone to the first mora or vowel in the stem and the next one, the High Tone Spread, spreads the high tone up to the penult. In (36), two different tone patterns emerge but since the examples are very few more data is needed.

(36) Six Syllable Stems

(a) iri[íɲákérááŋáni	"a type of snake"	class 5
(b) iri[íɲámbóγóβoγwe	"a nightjar"	class 5
(c) iri[íɲánkóróγoóto	"reddish mushroom"	class 5

5. Conclusion

A number of conclusions can be reached from this study. First, it has become clear that the Kuria noun has complex tonal patterns. In that way, this paper has served to bring to the fore complexities to be found in nominal tone. Two, I have shown that the complex tonal alternations found in Kuria nouns are predictable on the basis of a small inventory of tonal melodies made up of high and low tones, together with a small set of rules. Also, the surface tonal patterns seen in this paper open up a number of interesting questions. For example, the augment and the prefix in Kuria are invariably low toned on words in isolation as opposed to other Bantu languages such as Ekegusii. In Proto-Bantu, the pre-prefix was high toned. It has also been observed that Kuria has lost the LL pattern found in Proto-Bantu nouns in isolation. Tone marking for nouns in class 9 offers room for speculation especially because some of them have no stem initial high tone.

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