

THE TONAL PATTERNS OF NOUNS IN ISOLATION IN THE LWISUKHA DIALECT OF LUYIA

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This paper describes the tonal system of nouns uttered in isolation in the Lwisukha dialect of Luyia, a Bantu language of Kenya. The nouns analysed in this paper were uttered by 12 respondents. Each noun was uttered three times by each respondent. Each utterance was analysed for pitch and tone, within the framework of the Autosegmental Phonology Theory (APT). Based on the number of syllables in the stems of the nouns studied, the paper identified thirty-nine tone patterns in total based on two broad categories, namely level and contour tones. To the level-tone category belong the low, the high, and the downstepped high tones identified in this study, while to the contour-tone category belongs just the falling tone. Regarding the nominal prefix indicating grammatical number, the tone was either low (in tables 1-12 cases) or high (in tables 13-39).

ABBREVIATIONS

APT	Autosegmental Phonology Theory
C	Consonant
H	High tone
HL	Falling tone
⁺ H	A downstepped high tone
L	Low tone
OCP	Obligatory Contour Principle
V	Vowel
V:	Long vowel

SYMBOLS

σ	Syllable
ˊ	High tone
ˋ	Low tone
ˆ	Falling tone
ˑ	Downstepped high tone

1. INTRODUCTION

Lwisukha is a dialect of the Luyia language of Kenya. It is spoken in the Shinyalu and Lurambi sub-counties of Kakamega County, by approximately 403,000 people, according to the Kenya National Bureau of Statistics (2019). The dialect has already been described from a syntactic angle by Mebo (1989), who studied the Lwisukha noun phrase. However, to date no systematic study on the tonology of nouns in the Lwisukha dialect has been done¹, yet tone is a phonological phenomenon that contributes greatly to the interpretation of lexical and grammatical structures of tone languages. Therefore, there is a gap to be filled on the noun tonology of Lwisukha. This paper deals only with the tone pattern of nouns, following Snider's (2015) advice that "one needs to analyse data by considering the grammatical category, the syllable profile of the stem and stem type of the nouns because only when the environments are the same, that one can be sure that two different surface melodies are different underlyingly" (p. 44). The focus will be specifically on nouns uttered in isolation. The paper's aim is to identify all the possible tone patterns conditioned by the Lwisukha syllable structure.

Such a focus is of interest because patterns of Lwisukha nouns vary according to the number of syllables in their stems. Thus, nouns with a low or high tone on the prefix with different syllable profiles in the stem (e.g. CV and CVCV) will produce different tonal patterns depending on whether a) they contain a *monosyllabic* stem, b) they contain a *disyllabic* stem, c) they contain a *trisyllabic* stem, and d) they contain a *more-than-three-syllable* stem.

2. BASIC LWISUKHA PHONOLOGY

Lwisukahas 9 vowels: /i, ɪ, e, ε, a, u, ʊ, ɔ, o/. They are divided into short vowels and long vowels. Short vowels are indicated as single vowels [i, ɪ, e, ε, a, u, ʊ, ɔ,

¹However, studies have been done on the tonology of nouns in some other Luyia dialects: Mutonyi (2000) on Lubukusu, Savala (2005) on Lwitakho, Paster & Kim (2011) on Lutiriki, Odden (2011) on Lulogooli, Marlo & Steimel (2015) on Luwanga, and Everhart et al. (2015) on Lubukusu.

o]. For example, in the noun *mú-rwî*, ‘head’, [u] and [î] are short vowels. Long vowels are indicated as a sequence of two identical vowels: [ii, ɪɪ, ee, εε, aa, uu, ɔɔ, ɔɔ, oo]. For example, in the noun *mù-hiinziri*, ‘worker’, [ii] is a long vowel.

There are 25 consonants in Lwisukha: /p, t, k, m, n, ɲ, ŋ, β, f, s, x, h, ts, ʃ, tʃ, r, l, ɾ, w, j, mb, nd, nz, ŋg, ɲʃ/. Lwisukha syllables are open. The six syllable types that are found in Lwisukha are: V, V:, CV, CV:, CCV, and CCV:. The V syllables are short vowels that form syllables on their own. They can be found in both monosyllabic and polysyllabic words. For example, in the noun *ì-sà*, ‘watch, time, clock’, [ì] is a V syllable. For their part, the V: syllables can be found in monosyllabic words and polysyllabic words in Lwisukha. For example, the word *àà*, ‘an exclamation used to show surprise’, is a V: syllable. A majority of words in Lwisukha have the CV-type of syllable, which can be found in any position in a word. Examples are the two syllables in the noun *mù-rî*, ‘root’. The CV: syllables are also found in words of any number of syllables. That is the case of the [mùù] syllable in the noun *mùù-ndù*, ‘a person’. An example of the CCV syllable is [nwà] in the noun *mú-nwà*, ‘mouth’, and an example of the CCV: syllable is [lwáá] in the noun *lwáá-nà*, ‘childishness’.

3. TONE PATTERNS IN LWISUKHA NOUNS

3.1 Nouns with a low tone on the prefix

This section deals with nouns that have a low tone on the prefix but have stems that have different tone patterns due to the number of syllables they contain.

3.1.1 Nouns with a low tone on the prefix attached to a monosyllabic stem

This category of nouns comprises those which have a low tone on the stem (Table 1) and those which have a falling tone on the stem (Table 2).

Table 1: A low tone on the prefix and on the stem syllable

Singular		Plural	
	Gloss		Gloss
ì-sà	‘watch, clock, time’	tsiì-sà	‘watches, clocks, times’

ì-ŋʝì	'housefly'	tsìì-ŋʝì	'houseflies'
ì-ndà	'stomach, belly, womb'	tsìì-ndà	'stomachs, bellies, wombs'

There are low tones on the prefixes [ì] in the singular and [tsìì] in the plural. The stems *-sà*, *-ŋʝì* and *-ndà* also have low tones. That is, the nouns in Table 1 have a [L.L] tone pattern.

Table 2: A low tone on the prefix and a falling tone on the stem syllable

Singular		Plural	
	Gloss		Gloss
ì-swā	'termite'	tsì-swā	'termites'
mù-rî	'root'	mì-rî	'roots'

The nouns in Table 2 have a low tone on the singular prefixes [ì] and [mù] and their plural equivalents [tsì] and [mì]. The stems *-swā* and *-rî* have a falling tone. This means that the nouns in Table 2 have a [L.HL] tone pattern.

3.1.2 Nouns with a low tone on the prefix attached to a disyllabic stem

This category of nouns comprises those that have a low tone on both syllables of the stem (Table 3), those with a high tone followed by a low tone in the stem (Table 4), those with a low tone followed by a falling tone in the stem (Table 5), and those with a high tone followed by a downstepped high tone in the stem (Table 6).

Table 3: A low tone on the prefix and a low tone on both syllables in the stem

Singular		Plural	
	Gloss		Gloss
mù-hèjì	'adulterous person'	Bà-hèjì	'adulterous people'
mù-lòtʃì	'witch'	Bà-lòtʃì	'witches'
mù-lìmì	'farmer'	Bà-lìmì	'farmers'

The nouns in Table 3 have a low tone on the prefix [mù] and on its plural counterpart [Bà]. The stems *-hèji*, *-lòtʃi* and *-limi* have a low tone on both their syllables. Thus, these nouns have a [L.L.L] tone pattern.

Table 4: A low tone on the prefix and a high tone and a low tone in the stem

Singular		Plural	
	Gloss		Gloss
lì-xútù	‘tortoise’	mà-xútù	‘tortoises’
mù-kátì	‘bread’	mì-kátì	‘loaves of bread’
kù-xónò	‘a big hand’	mì-xónò	‘big hands’

The nouns in Table 4 have a low tone on the prefixes [lì], [mù] and [kù] and on their plural counterparts [mà] and [mì]. The stems *-xútù*, *-kátì* and *-xónò* have a high tone on the stem-initial syllable and a low tone on the stem-final syllable. Thus, these nouns have a [L.H.L] tone pattern.

Table 5: A low tone on the prefix and a low tone and a falling tone in the stem

Singular		Plural	
	Gloss		Gloss
mù-xwààtsî	‘in-law’	Bà-xwààtsî	‘in-laws’

The nouns in Table 5 have a low tone on the prefixes [mù] and [Bà]. The stem *-xwààtsî* has a low tone on the stem-initial syllable and a falling tone on the stem-final syllable. The other nouns with this tone pattern are *Bà-kùùxû* ‘grandmothers’ and *Bà-kùùkâ* ‘grandfathers’. These nouns have a [L.L.HL] pattern. However, the singular forms *kùùxû* ‘grandmother’ and *kùùkâ* ‘grandfather’ have no noun prefix. Thus, the singular nouns have a [L.HL] tone pattern.

Table 6: A low tone on the prefix and a high tone and a downstepped high tone in the stem

Singular		Plural	
	Gloss		Gloss

mù-kí ⁺ sí	'a member of the Abagusii tribe'	Bà-kí ⁺ sí	'members of the Abagusii tribe'
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In Table 6, there is a low tone on the prefixes [mù] and [Bà] while the stem *-kí⁺sí* has a high tone on its stem-initial syllable and a downstepped high tone on its final syllable. “Downstepped” means that the high tone concerned is realized at a lower pitch than the preceding high tone. And in this case, the downstepped high tone is motivated by the unlinked low tone between two high tones on the syllable [kí] and [sí]. So, the noun mù-kí⁺sí has a [L.H.⁺H] tone pattern. It is the only one that was found in this study.

3.1.3 Nouns with a low tone on the prefix attached to a trisyllabic stem

This category of nouns comprises those with a low tone on three syllables of the stem (Table 7), those with a high tone and two low tones in the stem (Table 8), those with a falling tone on the stem-initial syllable followed by a high tone and a low tone in the rest of the stem (Table 9), those with a high tone followed by a low and a falling tone in the stem (Table 10), and those with a high tone followed by a downstepped high tone and a low tone in the stem (Table 11).

Table 7: A low tone on the prefix and a low tone on all the three syllables of the stem

Singular		Plural	
	Gloss		Gloss
ì-tʃɛŋʒèlè	'bell'	tsì-tʃɛŋʒèlè	'bells'
ì-tʃilìfì	'bull'	tsì-tʃilìfì	'bulls'
mù-kùlitsì	'seller'	Bà-kùlitsì	'sellers'

The nouns in Table 7 have a low tone on the prefixes [ì] and [mù] and [tsì] and [Bà]. The stems *-tʃɛŋʒèlè*, *-tʃilìfì* and *-kùlitsì* also have low tones on all their syllables. We are thus dealing with an [L.L.L.L] tone pattern.

Table 8: A low tone on the prefix and a high tone followed by two low tones in the stem

Singular		Plural	
	Gloss		Gloss
mù-ńóìlòlò	'chain'	mì-ńóìlòlò	'chains'
ì-súkùlù	'school'	tsì-súkùlù	'schools'
mù-mílòŋǝ	'a person of the Vamilonje clan'	Bà-mílòŋǝ	'people of the Vamilonje clan'

In Table 8, there are low tones on the prefixes [mù], [ì] and [mì], [tsì] and [Bà]. The stems *-ńóìlòlò*, *-súkùlù* and *-mílòŋǝ* have a high tone on the stem-initial syllable and a low tone on the penultimate and the final syllables. So, the nouns in Table 8 illustrate a [L.H.L.L] tone pattern.

Table 9: A low tone on the prefix and a falling tone, a high tone, and a low tone in the stem

Singular		Plural	
	Gloss		Gloss
ì-sòkóónì	'market'	tsì-sòkóónì	'markets'
ì-rìpóótì	'report'	tsì-rìpóótì	'reports'
ì-fílìŋǝ	'shillings'	tsì-fílìŋǝ	'shillings'

In Table 9, there is a low tone on the prefixes [ì] and [tsì]. The stems *-sòkóónì*, *-rìpóótì* and *-fílìŋǝ* have a falling tone on the stem-initial syllable, a high tone on the penultimate syllable and a low tone on the final syllable. These nouns have a [L.HL.H.L] tone pattern.

Table 10: A low tone on the prefix and a high tone, a low tone and a falling tone in the stem

Singular		Plural	
	Gloss		Gloss
mù-Bísààndû	'orphan'	Bà-Bísààndû	'orphans'

In Table 10, there is a low tone on the prefixes [mù] and [βà]. The stem *-bísààndû* has a high tone on the stem-initial syllable, a low tone on the penultimate syllable and a falling tone on the final syllable. Thus, Table 10 illustrates a [L.H.L.HL] tone pattern. However, only one noun was found to have it.

Table 11: A low tone on the prefix and a high tone, a downstepped high tone, and a low tone in the stem

Singular		Plural	
	Gloss		Gloss
mù-xú ⁺ lúúndù	‘priest, leader, first-born’	βà-xú ⁺ lúúndù	‘priests, leaders, first-borns’
mù-tá ⁺ láákwà	‘cypress tree’	mì-tá ⁺ láákwà	‘cypress trees’
ì-kí ⁺ láási	‘glass’	tsì-kí ⁺ láási	‘glasses’

In Table 11, there is a low tone on the prefixes [mù] and [ì] and [βà] [mì] and [tsì]. The stems *-xú⁺lúúndù*, *-tá⁺láákwà* and *-kí⁺láási* have a high tone on the stem-initial syllable, a downstepped high tone on the penultimate syllable and a low tone on the final syllable. We are thus dealing with a [L.H.⁺H.L] tone pattern.

3.1.4 Nouns with a low tone on the prefix attached to a more-than-three-syllable stem

This category of nouns consists of those that have a low tone on all more than three syllables in the stem (Table 12).

Table 12: A low tone on the prefix and a low tone on all more than three syllables in the stem

Singular		Plural	
	Gloss		Gloss
ǰi-pìtǰipìtǰi	‘motorcycle’	βì-pìtǰipìtǰi	‘motorcycles’
mù-tǰèndìtǰèndì	‘a person who walks aimlessly’, ‘traveller’, ‘harlot’	βà-tǰèndìtǰèndì	‘people who walk aimlessly’, ‘travellers’, ‘harlots’

In Table 12 there are low tones on the prefixes [fì] and [mù] and [βì] and [βà]. The stems *-pitfipitfi* and *-tjènditjèndi* have a low tone on all the syllables. (Notice that the syllables [pì] and [tjì] are reduplicated in the stem *-pitfipitfi* while [tjè] and [ndì] are reduplicated in the stem *-tjènditjèndi*.) Hence, Table 12 illustrates an [L.L.L.L.L] noun tone pattern.

In this section, the common core of which is a **low tone on the prefix**, twelve tone patterns have been identified: two of them, namely L.L (L)² and L.HL (LHL), are associated with monosyllabic stems; four, namely L.L.L (L), L.H.L (LHL), L.L.HL (LHL), and L.H.[↑]H (LH[↑]H), are associated with disyllabic stems; five, namely (L.L.L.L (L), L.H.L.L (LHL), L.HL.H.L (LHLHL), L.H.L.HL (LHLHL), and L.H.[↑]H.L (LH[↑]HL), are associated with trisyllabic stems; while only one, L.L.L.L.L (L), is associated with more-than-three-syllable stems.

3.2 Nouns with a high tone on the prefix

This section deals with nouns that have a high tone on the prefix but have stems displaying different tone patterns due to the number of syllables they contain.

3.2.1 Nouns with a high tone on the prefix attached to a monosyllabic stem

This category of nouns comprises those with a low tone on the stem syllable (Table 13), those with a falling tone on it (Table 14) and those with a downstepped high tone on it (see Table 15).

Table 13: A high tone on the prefix and a low tone on the stem syllable

Singular		Plural	
	Gloss		Gloss
xáá-nà	'a small child'	rwáá-nà	'herders'
mwáá-mì	'chief, leader'	βáá-mì	'chiefs, leaders'
líí-nù	'tooth'	míí-nù	'teeth'

²The parentheses around the tones mean that the obligatory contour principle (OCP) applies to them. And when it does, the OCP forbids any two adjacent identical autosegments to follow each other, causing such identical tones to be merged.

The nouns in Table 13 have a high tone on the prefixes [xáá], [mwáá] and [líí] and on their plural counterparts [rwáá], [Báá] and [míí]. The stems *-nà*, *-mì* and *-nù* have a low tone. Thus, the nouns have a [H.L] tone pattern.

Table 14: A high tone on the prefix and a falling tone on the stem syllable

Singular		Plural	
	Gloss		Gloss
mú-rwî	'head'	mí-rwî	'heads'
lí-swî	'hair'	má-swî	'hair'
lí-rû	'banana leaf'	má-rû	'banana leaves'

In Table 14 there are high tones on the prefixes [mú], [lí] and [mí], [má] and a falling tone on the stems *-rwî*, *-rû* and *-swî*. So, the tone pattern in the nouns in the table is [H.HL].

Table 15: A high tone on the prefix and a downstepped high tone on the stem syllable

	Gloss
múú- [↓] nú	'salt'
Búúú- [↓] ǰé	'honey'

The nouns in Table 15 have a high tone on the prefixes [múú] and [Búúú] and a downstepped high tone on the stems *-[↓]nú* and *-[↓]ǰé*. We are thus dealing with a [H.[↓]H] tone pattern.

3.2.2 Nouns with a high tone on the prefix attached to a disyllabic stem

This category of nouns comprises those which have a low tone on both syllables of the stem (Table 16), those with a high tone and a low tone in the stem (Table 17), those with a low tone and a falling tone in the stem (Table 18), those with a high tone and a falling tone in the stem (Table 19), those with a falling tone and a low tone in the stem (Table 20), those with a downstepped high tone and a low tone in the stem (Table 21), those with a downstepped high tone and a high tone in the stem (Table 22), those with a downstepped high tone and a falling tone in the

stem (Table 23), and those with two downstepped high tones in the stem (Table 24).

Table 16: A high tone on the prefix and a low tone on both syllables of the stem

Singular		Plural	
	Gloss		Gloss
mú-sàjì	‘blood’	mí-sàjì	‘blood’
í-ndàrà	‘infant’	tsí-ndàrà	‘infants’
í-ndàBù	‘white’ (one)	tsí-ndàBù	‘white’ (many)

The nouns in Table 16 have a high tone on the prefixes [mú], [í] and [mí], [tsí]. The stems *-sàjì*, *-ndàrà* and *-ndàBù* have a low tone on the stem-initial syllable and a low tone on the final syllable. So, the tone pattern displayed in the Table 16 is [H.L.L].

Table 17: A high tone on the prefix and a high tone followed by a low tone in the stem

Singular		Plural	
	Gloss		Gloss
mú-xáli	‘wife, woman’	βá-xáli	‘wives, women’
rú-rímì	‘tongue’	tsí-nímì	‘tongues’
í-mbúrà	‘goat’	tsí-mbúrà	‘goats’

In Table 17 there are high tones on the prefixes [mú], [rú], [í] and [βá], [tsí]. The stems *-xáli*, *-rímì* and *-mbúrà* have a high tone on the stem-initial syllable and a low tone on the final syllable. So, the nouns in Table 17 have a [H.H.L] tone pattern.

Table 18: A high tone on the prefix and a low tone followed by a falling tone in the stem

Singular		Plural	
	Gloss		Gloss
mwé-tjìtsî	‘teacher’	βé-tjìtsî	‘teachers’

Bwé-tjĩtsĩ	‘teaching profession’		
Bwĩ-lolĩ	‘pride’		

The nouns in Table 18 have a high tone on their prefixes. As for their stems, they have a low tone on the initial syllable and a falling tone on the final one. So, the tone pattern in Table 18 is [H.L.HL].

Table 19: A high tone on the prefix and a high tone and a falling tone in the stem

Singular		Plural	
	Gloss		Gloss
mú-múrwĩ	‘inside the head’	mú-mírwĩ	‘inside the heads’
mú-lásê	‘molasses’	mí-lásê	‘molasses’
í-hájwâ	‘axe’	tsí-hájwâ	‘axes’

The nouns in Table 19 have a high tone on the prefixes [mú], [í] and [mú], [mí], [tsí]. The stems *-múrwĩ*, *-lásê* and *-hájwâ* have a high tone on the stem-initial syllable and a falling tone on the final syllable. We are thus dealing with a [H.H.HL] tone pattern.

Table 20: A high tone on the prefix and a falling tone followed by a low tone in the stem

Singular		Plural	
	Gloss		Gloss
mú-háàndà	‘road, street’	mí-háàndà	‘roads, streets’
mú-káàndà	‘a person from Uganda’	Bá-káàndà	‘people from Uganda’
jí-húùBì	‘thief’	Bí-húùBì	‘thieves’

In Table 20 there are high tones on the prefixes [mú], [jí] and [mí], [Bá], [Bí]. The stems *-háàndà*, *-káàndà* and *-húùBì* have a falling tone on the stem-initial syllable and a low tone on the final syllable. Unlike in the nouns discussed earlier in Table 2, 5, 9, 10, and 19 with a falling tone on a short vowel the falling tone in these nouns is found on a long vowel. Thus, Table 20 illustrates a [H.HL.L] tone pattern.

Table 21: A high tone on the prefix and a downstepped high tone and a low tone in the stem

Singular		Plural	
	Gloss		Gloss
lí- ⁺ kúnià	‘sack’	má- ⁺ kúnià	‘sacks’
jí- ⁺ xúlià	‘food’	bí- ⁺ xúlià	‘food’

In Table 21, there are high tones on the prefixes [lí], [jí] and [má], [bí]. The stems -⁺kúnià and -⁺xúlià have a downstepped high tone on the stem-initial syllable and a low tone on the final syllable. Thus, the nouns have a [H.⁺H.L] tone pattern.

Table 22: A high tone on the prefix and a downstepped high tone and a high tone in the stem

Singular		Plural	
	Gloss		Gloss
í- ⁺ xúBú	‘squirrel’	tsí- ⁺ xúBú	‘squirrels’
múú- ⁺ mbáǰí	‘builder’	Búú- ⁺ mbáǰí	‘builders’

The nouns in Table 22 have a high tone on the prefixes [í], [múú] and [tsí], [Búú]. The stems -⁺xúBú and -⁺mbáǰí have a downstepped high tone on the stem initial syllable and a high tone on the final syllable. Therefore, these nouns have a [H.⁺H.H] tone pattern.

Table 23: A high tone on the prefix and a downstepped high tone and a falling tone in the stem

Singular		Plural	
	‘Gloss’		Gloss
jí- ⁺ túúngû	‘onion’	Bí- ⁺ túúngû	‘onions’
jí- ⁺ háánwā	‘gift’	Bí- ⁺ háánwā	‘gifts’
rí- ⁺ lóórô	‘dream’	má- ⁺ lóórô	‘dreams’

The nouns in Table 23 have a high tone on the prefixes [jí], [rí] and [Bí], [má]. The stems -⁺túúngû, -⁺háánwā and -⁺lóórô have a downstepped high tone on the

stem-initial syllable and a falling tone on the final syllable. This means that the nouns in Table 23 have a [H. ⁺H.HL] tone pattern.

Table 24: A high tone on the prefix and two downstepped high tones in the stem

Singular		Plural	
	Gloss		Gloss
lí- ⁺ pwóó ⁺ ní	‘sweet potato’	má- ⁺ pwóó ⁺ ní	‘sweet potatoes’
xá- ⁺ jáá ⁺ jí	‘a small boy’	rú- ⁺ jáá ⁺ jí	‘small boys’
mú- ⁺ péé ⁺ rá	‘a guava tree’	mí- ⁺ péé ⁺ rá	‘guava trees’

In Table 24 there are low tones on the prefixes [lí], [xá], [mú] and [má], [rú], [mí]. The stems -⁺pwóó⁺ní, -⁺jáá⁺jí and -⁺péé⁺rá have two downstepped high tones. One downstepped high tone is on the stem initial syllable and the other on the final syllable. Hence, these nouns have a [H. ⁺H. ⁺H] tone pattern.

3.2.3 Nouns with a high tone on the prefix attached to a trisyllabic stem

This section of nouns comprises those which have a low tone on all the three syllables of the stem (Table 25), those which have a high tone followed by a low tone on two syllables of the stem (Table 26), a falling tone followed by a low tone and another falling tone in the stem (Table 27), a falling tone followed by a high tone and a low tone in the stem (Table 28), a downstepped high tone followed by a high tone and a low tone in the stem (Table 29), a high tone followed by a downstepped high tone and a low tone in the stem (Table 30), a downstepped high tone followed by a high tone and a falling tone in the stem (Table 31), a high tone followed by a downstepped high tone and a falling tone in the stem (Table 32) and finally those which have two downstepped high tones in the stem (Table 33).

Table 25: A high tone on the prefix and a low tone on all the three syllables of the stem

Singular		Plural	
	Gloss		Gloss
mwí-tsùxùlù	‘grandchild’	Bí-tsùxùlù	‘grandchildren’

ǃí-t̀s̀ùx̀ùl̀ù	'a small grandchild'	rwí-t̀s̀ùx̀ùl̀ù	'small grandchildren'
kwí-t̀s̀ùx̀ùl̀ù	'a big grandchild'	mí-t̀s̀ùx̀ùl̀ù	'big grandchildren'

The nouns in table 25 have a high tone on the prefixes [mwí], [ǃí], [kwí] and [Bí], [rwí], [mí]. The stem *-ts̀ùx̀ùl̀ù* has a low tone on all the syllables. So, the nouns in Table 25 illustrate a [H.L.L.L] tone pattern.

Table 26: A high tone on the prefix and a high tone followed by two low tones in the stem

Singular		Plural	
	Gloss		Gloss
mú-tírìtǃí	'a Tiriki person'	Bá-tírìtǃí	'Tiriki people'
lí-kánìsà	'church'	má-kánìsà	'churches'
í-kàràtǃí	'garage'	tsí-kàràtǃí	'garages'

The nouns in Table 26 have a high tone on the prefixes [mú], [lí] and [í] in singular and [Bá], [má] and [tsí] in the plural. The stems *-tírìtǃí*, *-kánìsà* and *-kàràtǃí* have a high tone on the stem initial syllable followed by a low tone on the penultimate and the final syllables. We are thus dealing with a [H.H.L.L] tone pattern.

Table 27: A high tone on the prefix and a falling tone followed by a low tone and a falling tone in the stem

	Gloss
Bú-táàmàànú	'problem'

The noun *Bú-táàmàànú* 'problem' in Table 27 has a high tone on the prefix [Bú]. The stem *-táàmàànú* has a falling tone on the stem initial syllable followed by a low tone on the penultimate syllable and a falling tone on the final syllable. Only one noun has this tone pattern in this study. Thus, Table 27 illustrates a [H.HL.L.HL] tone pattern.

Table 28: A high tone on the prefix and a falling tone followed by a high and a low tone in the stem

Singular		Plural	
	Gloss		Gloss
í-káàsúkù	‘parrot’	tsí-káàsúkù	‘parrots’
mú-líìṅJééètì	‘blanket’	mí-líìṅJééètì	‘blankets’

The nouns in Table 28 have a high tone on the prefixes [í], [mú] and [tsí], [mí]. The stems *-káàsúkù* and *-líìṅJééètì* have a falling tone on the stem initial syllable followed by a high tone on the penultimate syllable and low tone on the final syllable. Therefore, these nouns have a [H.HL.H.L] tone pattern.

Table 29: A high tone on the prefix and a downstepped high tone followed by a high and a low tone in the stem

Singular		Plural	
	Gloss		Gloss
mwí- [↓] ṅjééréèsà	‘a European person’	Bá- [↓] ṅjééréèsà	‘European people’
mú- [↓] sókótò	‘a type of cigarette’	mí [↓] sókótò	‘a type of cigarettes’

In Table 29 there are high tones on the prefixes [mwí], [mú] and its plural counterpart [Bá] and [mí]. The stems *-[↓]ṅjééréèsà* and *-[↓]sókótò* have a downstepped high tone on the stem initial syllable followed by a high tone on the penultimate syllable and a low tone on the final syllable. The noun *lú-[↓]swáhílì* ‘Kiswahili language’ has a similar tone pattern to the nouns in Table 29. Hence, these nouns have a [H.[↓]H.H.L] tone pattern.

Table 30: A high tone on the prefix and a high tone followed by a downstepped high tone and a low tone in the stem

Singular		Plural	
	Gloss		Gloss
í-ká [↓] níísà	‘church’	tsí-ká [↓] níísà	‘churches’
mú-ká [↓] lááni	‘clerk’	Bá-ká [↓] lááni	‘clerks’

The nouns in Table 30 have high tones on the prefixes [í] and [mú] and [tsíí] and [Bá]. The stems *-ká⁺níisà* and *-ká⁺lááni* have a high tone on the stem-initial syllable followed by a downstepped high tone on the penultimate syllable and a low tone on the final syllable. Thus, Table 30 illustrates a [H.H.⁺H.L] tone pattern.

Table 31: A high tone on the prefix and a downstepped high tone, a high tone and a falling tone in the stem

Singular		Plural	
	Gloss		Gloss
jí- ⁺ táámhájá	'cloth, handkerchief'	Bí- ⁺ táámhájá	'clothes, handkerchiefs'

In Table 31 there are high tones on the prefixes [jí] and [Bí]. The stem *-⁺táámhájá* has a downstepped high tone on the stem-initial syllable, a high tone on the penultimate syllable and a falling tone on the final syllable. The noun *kí-⁺lííkálí* 'truth' has a similar tone pattern to the noun *jí-⁺táámhájá* 'cloth, handkerchief'. This noun has no singular or plural form. So, these nouns have a [H.⁺H.H.HL] tone pattern.

Table 32: A high tone on the prefix and a high tone, a downstepped high tone and a falling tone in the stem

Singular		Plural	
	Gloss		Gloss
mú-kó ⁺ jáánû	'a disorganized person'	Bá-kó ⁺ jáánû	'disorganized people'

The nouns in Table 32 have a high tone on the prefixes [mú] and in the plural equivalent [Bá]. The stem *-kó⁺jáánû* has a high tone on the stem-initial syllable followed by a downstepped high tone on the penultimate syllable and a falling tone on the final syllable. So, the noun *mú-kó⁺jáánû* has a [H.H.⁺H.HL] tone pattern. It is the only one that was found in this study.

Table 33: A high tone on the prefix and a high tone and two downstepped high tones in the stem

Singular		Plural	
	Gloss		Gloss
í-ká ⁺ láá ⁺ mú	‘pencil’	tsí-ká ⁺ laa ⁺ mú	‘pencils’
mú ⁺ súú ⁺ ngú	‘a white person’	Bá ⁺ súú ⁺ ngú	‘white people’
í-pá ⁺ ráá ⁺ fú	‘ice cream’	tsí-pá ⁺ ráá ⁺ fú	‘ice creams’

In Table 33 there are high tones on the prefixes [í] and [mú] and [tsí] and [Bá]. The stems *-ká⁺laa⁺mú*, *-mú⁺súú⁺ngú* and *-pá⁺ráá⁺fú* have two downstepped high tones. There is a high tone on the stem-initial syllable followed by a downstepped high tone on the penultimate syllable and another downstepped high tone on the final syllable. We are thus dealing with a [H. H. ⁺H. ⁺H] tone pattern.

3.2.4 Nouns with a high tone on the prefix attached to a more-than-three-syllable stem

This section has nouns with a high tone followed by a low tone on all the three syllables in the stem (Table 34), those that have a high tone on two syllables followed by a low tone on two syllables in the stem (Table 35), those that have a high tone followed by a falling tone and a low tone in two syllables of the stem (Table 36), those that have a high tone followed by a downstepped high tone and a high and a low tone in the stem (Table 37), those that have a high tone followed by a downstepped high tone and a high and a falling tone in the stem (Table 38) and lastly those that have a high tone on two syllables of the stem followed by a downstepped high tone and a low tone in the stem (Table 39).

Table 34: A high tone on the prefix and a high tone and a low tone on all the three syllables in the stem

Singular		Plural	
	Gloss		Gloss
mú-tjérùmàni	‘a German’	Bá-tjérùmàni	‘German people’

In Table 34 there are high tones on the prefixes [mú] and [Bá]. The stem *-tjérùmàni* has a high tone on the stem-initial syllable followed by a low tone on the second syllable of the stem, the penultimate syllable and the final syllable.

The noun *lú-tjérùmàni* ‘German language’ has a similar tone pattern to the nouns in Table 34. Thus, these nouns have a [H.H.L.L.L] tone pattern.

Table 35: A high tone on the prefix and two successive high tones followed by two successive low tones in the stem

	Gloss
í-Búsútààni	‘in Sudan’

The noun *í-Búsútààni* in Table 35 has a high tone on the prefix [í]. The stem *-Búsútààni* has a high tone on the stem-initial syllable and the second syllable followed by a low tone on the penultimate and the final syllables. Only one noun was found (by this study) to have this tone pattern, that is [H.H.H.L.L].

Table 36: A high tone on the prefix and a high tone, a falling tone and two successive low tones in the stem

	Gloss
í-Bútânzànià	‘in Tanzania’

In Table 36 there is a high tone on the prefix [í]. The stem *-Bútânzànià* has a high tone on the stem-initial syllable followed by a falling tone on the second syllable and a low tone on the penultimate and the final syllables. Thus, the noun *í-Bútânzànià* has a [H.H.HL.L.L] tone pattern. It was the only one that was found in this study.

Table 37: A high tone on the prefix and a high tone, a downstepped high tone, a high tone and a low tone in the stem

Singular		Plural	
	Gloss		Gloss
í-ŋgú ⁺ rúmáni	‘liver’	tsí-ŋgú ⁺ rúmáni	‘livers’
í-Bú ⁺ ŋJéréésà	‘in Europe’		

In Table 37, there are high tones on the prefixes [í] and [tsí]. The stem *-ŋgú⁺rúmáni* has a high tone on the stem-initial syllable followed by a

downstepped high tone on the second syllable and on the penultimate one and a low tone on the final syllable. So, the tone pattern in Table 37 is [H.H.⁺H.H.L].

Table 38: A high tone on the prefix and a high tone, a downstepped high tone, a high tone and a falling tone in the stem

Singular		Plural	
	Gloss		Gloss
lí-kú ⁺ jákújî	‘butterfly’	má-kú ⁺ jákújî	‘butterflies’
í-ní ⁺ nínínî	‘star’	tsí-ní ⁺ nínínî	‘stars’

The nouns in Table 38 have a high tone on the prefixes [lí], [í] and [má], [tsí]. The stems *-kú⁺jákújî* and *-ní⁺nínínî* have a high tone on the stem initial syllable followed by a downstepped high tone on the second syllable and high tone on the penultimate syllable and finally a falling tone on the final syllable. That is, the nouns in Table 38 have a [H.H.⁺H.H.HL] tone pattern.

Table 39: A high tone on the prefix and two successive high tones, a downstepped high tone and a low tone in the stem

	Gloss
í-Búsó ⁺ mááli	‘in Somalia’

The nouns in Table 39 have a high tone the prefix [í]. The stem *-Búsó⁺mááli* has a high tone on the stem-initial syllable and the second syllable followed by a downstepped high tone on the penultimate syllable and a low tone on the final syllable. So, the noun *í-Búsó⁺mááli* has a [H.H.HL.L.L] tone pattern. It was the only one that was found in this study.

In this section, the common basis of which is a **high tone on the prefix**, twenty-seven tone patterns of Lwisukha nouns have been identified: three of them, H.L (HL), H.HL (HHL) and H.⁺H (H⁺H), are associated with monosyllabic stems; nine, H.L.L (HL), H.H.L (HL), H.L.HL (HLHL), H.H.HL (HL), H.HL.L (HL), H⁺.H.L (H⁺L), H⁺.H.H (H⁺H), H.⁺H.HL (H⁺HL) and H.⁺H.⁺H (H⁺H⁺H), are associated with disyllabic stems; nine, H.L.L.L (HL) H.H.L.L (HL), H.HL.L.HL (HLHL), H.HL.H.L (HLHL), H.⁺H.H.L (H⁺HL), H.H.⁺H.L (H⁺HL), H.⁺H.H.HL (H⁺HL), H.H.⁺H.HL (H.⁺HL) and H.H.⁺H.⁺H (H⁺H⁺H), are associated with trisyllabic stems;

six, H.H.L.L.L (HL), H.H.H.L.L (HL), H.H.HL.L.L (HL), H.H.[↑]H.H.L (H. [↑]HL), H.H.[↑]H.H.HL (H.[↑]HL) and H.H.H.[↑]H.L (H.[↑]H.L), are associated with more than three-syllable stems.

4. CONCLUSION

This paper set out to identify tonal patterns displayed by the various types of Lwisukha nouns uttered in isolation. In total it has identified thirty-nine of them. The majority of nouns (27 out of the 39) were found to have a high tone on the prefix and a low tone on the word-final syllable. On the other hand, (22 of the 39) end in a low tone, 11 in a falling tone, 5 in a downstepped high tone, and only 1 ends in a high tone. Further, both level and contour tones were identified. The level tones consist of low, high and downstepped high tones. In most cases the downstepped high tone occurs on the first syllable of the stem. Some nouns were found to have two downstepped high tones, both on the penultimate syllable and the final syllable of the stem. Regarding contour tones, only the falling tone was found.

Some tones were found to occur only in one word. They were still said to form a pattern, which, on the face of it, may seem surprising, because there is possibility that there are more such words in Lwisukha, which happened not to be part of the sample of 520 nouns collected for the present patterns of study. This means that further research into the tone patterns of Lwisukha is necessary. This could be part of a comparative research that would involve other, neighbouring Luyia dialects, starting with Lwitakho, which, going by Itebete's (1974: 89) observation, differs from Lwisukha in tone and vowel length.

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