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Lunyole Phonology Statement

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3 Document History Log

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First draft. Author: Enoch Wandera Namulemu.

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5 INTRODUCTION

5.1 Name of the Language and its speakers

Lunyole is a Bantu language spoken by people called Banyole. These people who are predominantly farmers, also like to call themselves *Abalya lwoba* “mushroom eaters” and their language Lunyole or *Olunyole* or even *Olulya lwoba*. A Lunyole myth says that Munyole and Nanyole his wife, together with his brother Nanyumba, who are the ancestors of the speakers of this language migrated from Bunyifa in Kenya. While Munyole settled in the present day Bunyole and became the great grandfather of the Banyole, his brother Nanyumba moved on and settled in Busoga.

5.2 Geography

The Banyole live in a small strip of land in the eastern district of Butaleja in Uganda. Their neighbors are: the Bagwere (a Bantu group) in the north, the Jopadhola, (a Luo group) in the south, the Bamasaba (a Bantu group) in the east and the Basoga (another Bantu group) in the west. The Banyole were forced to fight a bitter war with the Jopadhola when the latter were coming in to settle in their present homeland but have enjoyed good relationship with the three other neighbors as evidenced, for example, by intermarriage between them. This has influenced the dialect issue of Lunyole very much.

5.3 Demography

According to the 2002 population and housing census of Uganda, the population of people resident in Bunyole was 161,178 people¹. However it is estimated that about 200,000 people within and outside the language area speak Lunyole. Many Banyole have migrated to other parts of Uganda where they have maintained their identity. Besides, some Banyole remained in towns where they work during the time of the mentioned census of 2002. Such factors suggest a higher estimate of people who speak Lunyole, i.e. 200,000. The Ethnologue suggests the same figure.

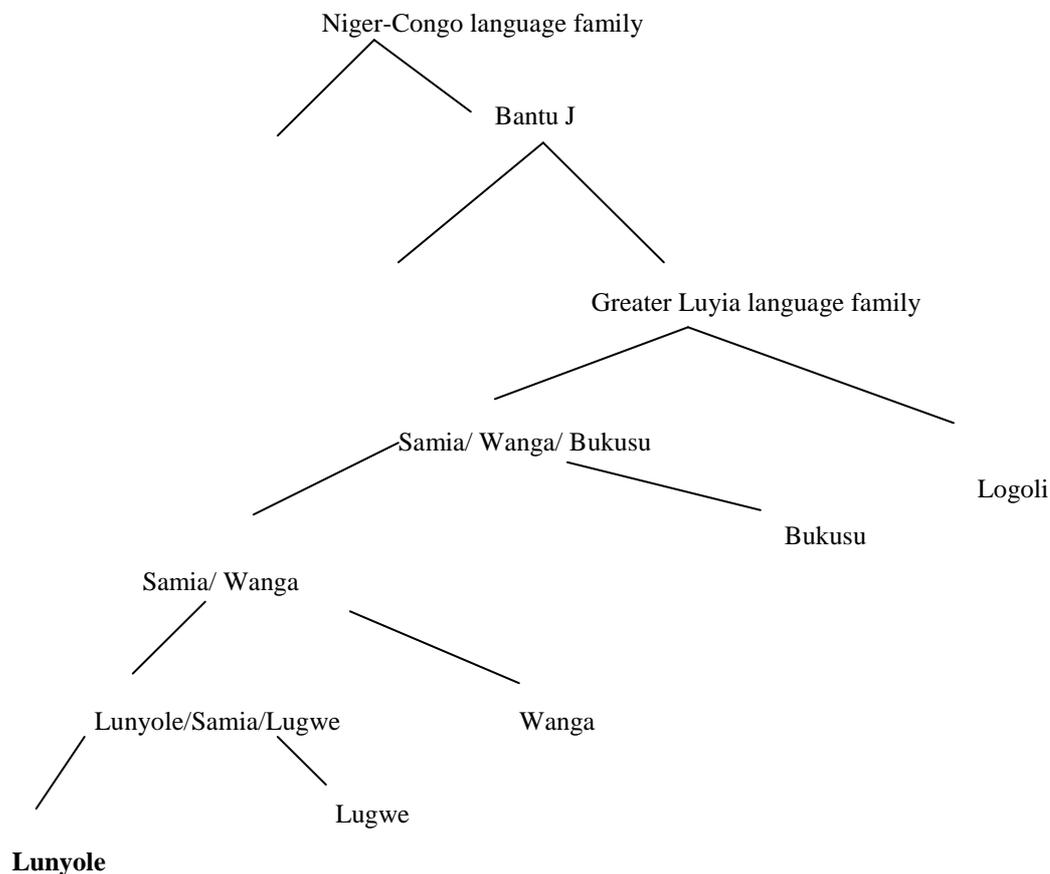
5.4 Language family

Lunyole belongs to the Bantu J language group of the Niger-Congo language family. In Uganda, the language is related to other so-called eastern Bantu languages such as Luganda, the largest Bantu language group, Lusamya, Lugwe, Lugwere and Lusoga. It shares a lexical similarity of approximately 80% with Lusamya, 82% with Lugwe, and 66% with Luganda (Ladefoged, Glick and Crifer 1971, 71). Lunyole is also related to the Luhya family of languages in Kenya and is said to have a lexical similarity of 61% with Lunyore, one of the Luhya languages of Kenya. However, as a mother tongue speaker of Lunyole, who has interacted with some Banyore and

¹ Figure obtained from the records at Busolwe Sub County offices.

investigated the issue of lexical similarity between the two languages, my assessment is that the percentage in lexical similarity in the two languages could be much less than what Ladefoged put it.

Most speakers of Lunyole enjoy limited bilingualism with Luganda, a major Bantu language group in Uganda. For decades since colonial days, Luganda has been the language of wider communication used both in schools and in the church. The Luganda Bible is currently being used in churches and other Luganda literature in schools especially in “mother tongue” literacy. Hence Luganda has had a lot of influence on Lunyole. Such influence and the intermarriage with other language groups have caused Lunyole to have many loan words from her Bantu neighbors. The following family tree is a modification of one in Hinnebusch, Nurse and Mould (1981, 213) showing the place of Lunyole among the Niger-Congo language family:



The Niger-Congo language family tree showing Lunyole.

5.5 Socio-linguistic situation

The major dialects of Lunyole are Lumenya that is widely spoken, Luhadyo, Lusabi, and Luwesa. However there is another dialect of Lunyole in the east at the border with the Bamasaba and Bagwere. This dialect of Lunyole has some influence of Lumasaba and Lugwere.

There are both phonological and lexical differences in the dialects mentioned above. For example, there is a difference in voicing between Lumenya and Luwesa. Where Lumenya and other dialects have [k], Luwesa has [g] e.g. *ohugega* 'to carry' is *ohukeka* in Luwesa. Similarly where Lumenya and others have [h], with the exception of the [h] sound in the infinitive of the verb *ohu-*, Luwesa has [s] e.g. *ehibange* "traditional cooking pot for preparing millet bread" is *esibange* in Luwesa. The difference here is in the point of articulation.

There are also some lexical differences between the dialects. For example *ohwagaana* "to meet" in Lumenya is *ohusaanya* in Luhadyo. Likewise *amahohooli* "sisal" in Lumenya and other dialects is *amahumbeeri* in Luwesa. However, in this lexical variation none of the words in one dialect mean something else in the other dialects. For this reason, Banyole have agreed to use Lumenya dialect, which is widely spoken, to write the language.

5.6 Previous Phonological Analysis

Several attempts have been put forth to analyze Lunyole with the purpose of developing an orthography for the language. *A note on Lunyole* by H.F. Morris was published as an article in the Uganda Journal, no. 27 (1963). *Lunyole of the Bamenya* by Thilo C. Schadeberg was also published in the Journal of African Languages (1974). *The velar Nasal in Nyole* by Carol Eastman was published in *Annales Aequatoria* 10 (1989). Meanwhile in 1936 one Higenyi Wayisire a native speaker of the language wrote the first orthography guide for Lunyole but there are no extant copies. In 1977, Dan Mubene and Higenyi Gabuni published *Ehitabo ehidaayi mu Lulimi Olunyole* 'First book in Lunyole Language'. In 1994 Michael A. White and the Lunyole Language Association (LLA) published the *Lunyole-English Word Lists* which included four pages about the Lunyole orthography.

Using all the previous research as foundation, Ron Moe an SIL Linguistics Consultant, Scot Homer and Doug Wicks both SIL Linguists together with the LLA, made further investigation of the phonology of the language and came up with a tentative orthography which has been under going testing in the community.

5.7 The purpose of this analysis

Lunyole is at present a language which is still undergoing development under the auspices of SIL International. The ultimate goal of the development of the language is translation of the Bible and literacy work, especially mother tongue instruction in primary schools, so that Banyole children can also benefit from the

current government policy on education. This policy encourages mother tongue instruction during the first four years of primary education.

The previous research was not exhaustive and several phonological issues were not resolved. These include among others the issue of labialization on /f/ and /β/, word juncture especially reduplicated words and tone.

Besides, this study is also aimed at providing a written phonology statement for the Lunyole language so that it can be a foundation for those who will in future do further linguistic study of this language and other languages related to it.

In a nutshell therefore, this analysis is aimed at making a descriptive investigation into the phonetic and phonological system of Lunyole, attempting to give a thorough explanation of the basic Nyole sound system and the ulterior phonological (morphophonemic, phonemic, and allophonic) processes that shape these sounds. The findings are basically meant to help in the standardization process of the Lunyole orthography.

5.8 Methodology

As a mother tongue speaker of Lunyole, the author is the major source of data used in this Phonology Statement. Much of the data and information herein has been taken from his phonology paper that was presented for credit at Nairobi Evangelical Graduate School of Theology where he was a student from 2003-2004 doing graduate studies in Translation. In addition, some phonological information was picked from the work done by SIL linguists: Ron Moe, Scot Homer, and Doug Wicks during the process of developing the tentative Lunyole orthography which has been under going testing in the community. This data was gathered with the help of the author who was then their Language Assistant. Some information has with permission been adopted from the analysis made by Doug Wicks in his thesis presented to The Faculty of the School of Intercultural Studies Department of Applied Linguistics & TESOL, Biola University.

However, the final analysis and interpretation of all the data has been solely done by the author based on a wordlist consisting of 1000 short words. He is therefore responsible for any errors that one may come across in this Phonology Statement.

6 SEGMENTS

6.1 Inventory of Phonemes

6.1.1 Consonants

There are 22 simple consonant phonemes (see Chart 1). However, with only a few exceptions, these consonants can be prenasalized, labialized, or palatalized. Prenasalized consonants may be either labialized or palatalized, but not both. Voiceless consonants are not prenasalized. Palatals are not palatalized and labials are not labialized, with one possible exception (see Chart 2). All modifications by the three processes have been interpreted as distinct phonemes.

	Bilabial	Labio-dental	Alveolar	Palatal	Velar	Glottal
Plosives	p, b		t, d		k, g	
Affricates				tʃ, dʒ		
Fricatives	β	f, v	s, z			h
Nasals	m		n	ɲ	ŋ	
Trills			r			
Laterals			l			
Approximants	w			j		

Chart 1: Inventory of simple consonant Phonemes

The phonemes /v/ and /z/ are found only in words borrowed from Luganda or English which are transcribed using the Lunyole system of writing. The phoneme /ʃ/ is questionable and I have, like Morris (1963), Eastman (1974) and Schadeberg (1989) not included it in the consonant phoneme inventory though Doug Wicks (2006) has. This is because in Lunyole the phoneme /ʃ/ behaves more as a secondary articulated phoneme than a primary phoneme. The vowels that come after it are invariably long and at morpheme boundaries the sound is clearly a palatalized voiceless glottal fricative [h^j]. Nevertheless within a root, it is not [h^j] but [ʃ], as with the word [ʃa:la] *hyala* ‘wife.’ Both [l] and [r] are allophones of the phoneme /l/.

Prenasalization will be marked by /m/, /n/ or /ŋ/ depending on the point of articulation: /m/ on bilabials /n/ on alveolars and /ŋ/ on the velars. Palatalization will be marked by /j/ and all labialization will be marked with a /w/. However to allow for the account of the palatal nasal /ɲ/ palatalized /n/, will be marked with /i/ and will orthographically be written *ni*.

Looking at the inventory of phonemes in chart 1, one would expect the /k^j/ and /g^j/ to appear in chart 2. The phonemes /k^j/ and /g^j/, orthographically written *ky* and *gy* respectively in Luganda and Lugwere, represent the underlying palatalized velar plosives i.e. *ki* + V > *ky* and *gi* + V > *gy*. Luganda and Lugwere, which like Lunyole are both Bantu languages, have these phonemes. In these languages, *ki-* and *gi-* are noun class prefixes marking subject, object and possession i.e. class 4 and 7

respectively. This however is not the case with Lunyole. Lunyole instead has *hi-* and *ji-* (see Lunyole noun class concord in appendix). It therefore logically follows that we have no /ky/ and /gy/. Instead, in Lunyole we have the palatal voiceless affricate [tʃ] and the voiced palatal affricate [dʒ]. However, the sounds /k^j/ with /tʃ/ and /g^j/ with /dʒ/ are virtually realized as similar sounds.

How then do we account for the phoneme k in Lunyole and why then can't it be palatalized? How do we move from /k/ to /h/? First of all one would expect to see the phoneme /h/ as a velar in the table of the inventory of phonemes as in Wicks (2006). It was also labeled as a velar fricative represented as /x/ by Morris (1963). However, I find this rather misleading because when /h/ occurs between vowels, it sounds more of a glottal, though it might be hard to identify the actual point of articulation in this particular case. Hence I have treated /h/ as a glottal. Historically however, /h/ used to be a velar and what was /*k/ in proto Bantu (Hyman, 2003) is /h/ in Lunyole. However, the phoneme /k/ remains in Lunyole, but it is primarily found in borrowed words e.g. *ekoona* 'corner' (borrowed from English) *ekongo* 'hand piano' (akogo borrowed from Ateso); and also as a result of phonological processes i.e. N + /h/ > /k/ (see 10.2.3 for details).

The total consonant inventory including the modifications by prenasalization, labialization and palatalization is contained in chart 2 below. With the exception of the allophone [r] and its corollaries, prenasalized, palatalized and labialized consonants have been interpreted as single complex consonants because each one of them is found in the basic roots and affixes of Lunyole words. Each of these occur word initially followed by a vowel and word medially between vowels.

	Bilabial	Lab. Dent	Alveolar	Palatal	Velar	Glottal
Plos. v/less voiced	p p ^w p ^j b b ^w b ^j m ^b m ^b ^w m ^b ^j		t t ^w t ^j d d ^w d ^j n ^d n ^d ^w n ^d ^j		k k ^w g g ^w ŋ g ^w	
Affr. v/less voiced				tʃ tʃ ^w dʒ dʒ ^w n ^d ʒ n ^d ʒ ^w		
Fric. v/less voiced	β β ^w β ^j	f f ^w v	s s ^w s ^j z			h h ^w h ^j
Nasals	m m ^w m ^j		n n ^w n ^j	ɲ ɲ ^w	ŋ ɲ ^w ɲ ^j	
Trill			r r ^w r ^j			
Appr. Lateral Central	w		l l ^w l ^j	j		

Chart 2: A full inventory of consonant Phonemes

6.1.1.1 Consonant Sequence

Unambiguous consonant sequences do not occur in Lunyole. Because of this the affricates, prenasalized, palatalized, and labialized consonants have been interpreted as single complex consonants.

[è ^m bágó] ‘hoe’	[óhùb ^w à:gá] ‘to break’
[é ^m b ^w à] ‘dog’	[é ^m b ^j à] ‘fruit seed’
[ǎʒúlúlú] ‘dilute’	[t̪̥à:yí] ‘tea’
[é ⁿ d ^j àŋá] ‘pocket’	[òhúláŋ ^j á] ‘to sieve by winnowing’

6.1.1.2 Contrasts

The following table shows phonetically similar segments and how Lunyole consonant phonemes contrast in either identical environment (CIE), analogous environment (CAE) complementary distribution (CD) or are in a free variation.

Segment	Minimal Pair	Gloss	Contrast	Environment
p and p ^w	/pí/ /p ^w í/	‘short’ ‘Dawn’	CIE	Word-initial
p and p ^j	/óhùpàpá/ /óhùpàp ^j à/	‘to hurry up’ ‘to cause to hurry up’	CAE	Word-medial
p and b	/èpúlí/ /ébùlí/	‘sorcery charm’ ‘teapot’	CAE	Word-medial
p ^w - b ^w	/òhúp ^w á ⁿ gúhá/ /óhùb ^w ágúhá/	‘to dash off’ ‘make a cricky noise’	CAE	Word-medial
p ^j - b ^j	/óhùp ^j á:tùlá/ /óhùb ^j á:tùlà/	‘to crash’ ‘to give birth to twins’	CIE	Word-medial
b - b ^w	/èbá/ /èb ^w á/	‘the big one’ ‘sore’	CIE	Word-final
b - b ^j	/èbá:lá/ /éb ^j à:lá/	‘bar’ ‘fingernail’	CIE	Word-medial
b - ^m b ^j	/ébá/ /é ^m b ^j á/	‘the big one’ ‘fruit seed’	CIE	Word-final
b - β	/óhùlòβá/ /òhúlóbá/	‘fish with a hook’ ‘tether an animal’	Identical CIE	Word-medial
β - β ^j	/óhùβù:sá /óhùβ ^j ù:sá/	‘to ask’ ‘to treat’	CIE	Word-medial

m - m ^w	/òm ^w ímá/ /èmi : má/	‘bad habit’ ‘bad habits’	CIE	Word-medial
m - ^m b	/èj ^m úmá/ /éj ^m u: ^m bà/	‘behind’ ‘house’	CAE	Word-final
m - n	/émù ⁿ dú/ /énù ⁿ dù/	‘gun’ ‘smoldering bark cloth’	CIE	Word-medial
f - v	/óhùfùgá/ /óhùvùgá/	‘to drive’ ‘to produce a sound’	CIE	Word-medial
t - t ^w	/óhùt ^w e : rá/ /óhùt ^w èrà/	‘to lay eggs’ ‘to beat up’	CAE	Word-medial
t - t ^j	/óhùt ^j á/ /óhùt ^j á/	‘to put’ ‘to fear’	CIE	Word-final
t - ṭ̥	/òhúṭ̥á : má/ /òhúṭ̥á : má/	‘to worsen’ ‘to become bent’	CIE	Word-medial
t - d	/ètá : lá/ /èḍá : lá/	‘lamp’ ‘ladder’	CIE	Word-medial
d - d ^j	/òhúdólá/ /òhúd ^j ó : lá/	‘to thrash’ ‘to get plenty’	CIE	Word-medial
d - ⁿ d	/òhúdá : dá/ /óhùḍà ⁿ dá/	‘to charm’ ‘form ladle from a leaf’	CIE	Word-final
d ^w - ⁿ d ^w	/éd ^w àyá/ /é ⁿ d ^w àyé/	‘cock’ ‘diseases’	CAE	Word-medial
d - n	/édù : sú/ /énùsù/	‘swollen lamp’ ‘shilling’	CAE	Word-medial
d - l	/òhúdú : lá/ /òhúlúlá/	‘to despise’ ‘to ferment’	CAE	Word-medial
d - r	/èd ⁿ gú/ /ér ⁿ gù/	‘harp’ ‘swamp’	CAE	Word-medial
ṭ̥ - s	/òhúṭ̥á : má/ /òhúsá : má/	‘to become bent’ ‘to be fatty’	CAE	Word-medial
ḍ̥ - ⁿ ḍ̥	/òhúḍ̥á ḍ̥á/ /óhùḍ̥à : ⁿ ḍ̥á/	‘to be dirty’ ‘to joke’	CIE	Word-medial
ḍ̥ ^w - ⁿ ḍ̥ ^w	/èḍ̥ ^w álá/ /é ⁿ ḍ̥ ^w álá/	‘watery tuber’ ‘watery tuber’	CIE	Word-medial
s - s ^w	/óhùsàlá/ /òhús ^w álá/	‘to cut’ ‘to be ashamed’	CAE	Word-medial

s - h	/óhùsàlá/ /òhúhálá/	'to cut' 'to dry'	CIE	Word-medial
s - s ^j	/óhùsàlá/ /òhús ^j álá/	'to cut' 'to whip'	CAE	Word-medial
s - z	/ésà:sà/ /èsázá/	'palm leaves' 'county'	CAE	Word-medial
n - ŋ	/óh ^w ànúlà/ /óh ^w àŋúlà/	'bring indoors' 'to split'	CAE	Word-medial
n - l	/òhúnú:lá/ /òhúlúlá/	'to snatch' 'to ferment'	CAE	Word-medial
l - l ^w	/àmálá/ /ámàl ^w à/	'intestines' 'millet beer'	CAE	Word-final
l - l ^j	/òmúló/ /ómùl ^j ó/	'poking stick' 'fruits that birds eat'	CAE	Word-final
ⁿ d̥z - ɲ	/èɲá ⁿ d̥zà/ /éɲà:ɲá/	'sea, lake' 'tomatoes'	CAE	Word-final
ɲ - ɲ ^w	/óhùɲá/ /óhùɲ ^w á/	'to get cooked' 'to drink'	CAE	Word-final
ɲ - ŋ	/óhùɲá/ /óhùŋá/	'to get cooked' 'to give'	CIE	Word-final
ɲ - n ⁱ	/óhùɲá/ /òhún ⁱ ǎ/	'to get cooked' 'to defecate'	CIE	Word-final
ɲ - j	/óhùɲǎɲá/ /òhújájá/	'to chew' 'to grab, scramble'	CAE	Word-final
k - k ^w	/èká:ká/ /èk ^w α:k ^w á/	'satchel' 'a specific part of meat'	CIE	Word-medial/ Word-final
k - g	/éhìbú:kà/ /éhìbúgà/	'insect' 'town, city'	CAE	Word-final
g - g ^w	/òmúgá/ /ómùg ^w á/	'garden' 'new migrant'	CAE	Word-final
g - ^ɲ g	/ègέ/ /è ^ɲ gέ/	'termite' 'misery'	CIE	Word-final
g - ^ɲ g ^w	/ègέ/ /è ^ɲ g ^w έ/	'termite' 'leopard'	CIE	Word-final
g - ŋ	/òhúgó:sá/ /óhùŋò:sá/	'to endear' 'to levy tax'	CAE	Word-medial

ŋ - ŋ ^w	/óhùŋàbá/ /òhúŋ ^w á:bá/	'go out of control' 'to curse'	CAE	Word-medial
ŋ - ŋ ^j	/òhúlɔ:ŋá/ /òhúláŋ ^j á/	'to castrate' 'to sieve'	CAE	Word-final
h - h ^w	/òhúhájá/ /òhúh ^w ájá/	'to lack' 'to take everything'	CIE	Word-medial
l - r	/βálíré/ /làŋí/	'warm' 'good'	CD	[l] comes word initially and after back vowels, [r] only comes after front vowels [i] and [e]
l ^j - r	/ér ^j á/ /àmál ^j á/	'marriage' 'marriages'	CD	[l ^j] comes word initially and after back vowels, [r ^j] only comes after front vowels [i] and [e]
β - w	/óhùβòná/ ~ /óhùwòná/	'to see' 'to see'	Free variation	When they occur before [+back] vowels i.e. [o] and [u]
β ^w - w	/òβ ^w ó:βá/ ~ /òwó:βá	'mushrooms'	Free variation	All environments

6.1.1.3 Consonant allophony

Lunyole exhibits cases of allophonic variations in consonant phonemes. The common ones are complimentary distribution and free variation relationship. In this section we bring forth the relationship bearing in the allophony, the environments where it occurs and also give some examples.

6.1.1.3.1 Complementary distribution

The structure of Lunyole has showed that the phoneme [l] and [r] does not occur in the same environment. It is impossible to find any minimal pairs in which one word differs from the other only because we have [l] instead of [r] in the same position.

The phonetically similar segments [l] and [r] were therefore found to be in complementary distribution with each other, and are therefore allophones of a single phoneme. [l] comes word initially and after back vowels, [r] only comes after front vowels [i] and [e]. E.g. /βálíré/ ‘hot’

/lànǵí/ ‘good’

The following Allophonic rule has therefore been formulated:

/l/ → [r] / i, e... [òhúlírá] ‘to cry’; [eráfú] ‘ripe banana’

[l] / elsewhere. [lerá] ‘put on lap’

When the two phonemes are palatalized, they will behave likewise. [l^j] comes at word initially and after back vowels and [r^j] comes after front vowels [i] and [e]

Hence: /l^j/ → [r^j] / i, e ... [ohú^jír^já] ‘to scrub’

[l^j] elsewhere. [óhul^já] ‘to eat’

The structure of Lunyole has also showed that the sound /f/ is labialized by many speakers when pronounced in certain environments. Consequently, the labialized voiced labio-dental fricative /f^w/ has not been interpreted as a distinct complex consonant but rather as an allophone of [f]. [f] comes before both the close front and front back unrounded vowels i.e. /i/ and /u/, while /f^w/ occur before mid-open vowels i.e. /e/, /a/, and /o/.

Hence /f/ → [f^w] / _ e, a, o

[óhù^wf^wá] ‘to die, death’

[ámà^wf^wáf^wà] ‘wondering jew’

[òhú^wf^wáf^wágáná] ‘to loose direction’;

[óh^wè^wf^wéb^já] ‘to take on laziness’;

[òhú^wf^wódógólá] ‘to blaspheme’;

[éhì^wf^wòf^wó] ‘lung’

/f/ elsewhere e.g. [èf^wúhó] ‘mole rat’;

[èf^wírí^mbí] ‘whistle’

6.1.1.3.2 Free variation

Voiced bilabial fricative [β] has been found to be in a free variation relationship with [w] when they occur before [+ back] vowels i.e. [o] and [u].

Hence: [β] ~ [w] / _V [+ back]

[ohuβona] ~ [ohuwona] ‘to see’
[ohuβunga] ~ [ohuwunga] ‘store in
granary’
[β] elsewhere
[ohuβala] ‘to count’
[ohuβega] ‘to shave’
[ohuβiha] ‘to announce death of someone’

It also follows that the labialized bilabial fricative [β^w] is in the same relationship with [w], though it is difficult to distinguish the two phonemes especially when they occur between vowels. This however stems from the fact that phoneme [β] and [w] are in a free variation when they occur before [+back] vowels. However, phonemes [β^w] and [w] are only in a free variation relationship when they occur between vowels [a], [e], [i] and [o]

In the following examples, the underlying phoneme is /β^w/, but appears to be realized as [w]. However it becomes apparent on the surface when the phoneme is prenasalized [ᵐβ^w] and in this case is realized by [b^w]. For example:

[òhúβ^wíhá] or [òhúwí:há] ‘to cover’ → [ᵐb^wíhá] ‘I cover’
[òhúβ^wégá] or [òhúwé:gá] ‘to be obese’ → [ᵐb^wégá] ‘I become obese’

Besides, in Lunyole when two vowels meet at a morpheme boundary and the first vowel is [+round], labialization occurs. For example, if a noun class prefix and in this case a class 14 prefix **obu-** is joined to a vowel-initial root the **u** of the prefix disappears and the consonant /β/ is labialized and the following vowel is lengthened. This morphophonemic change that occurs make the [β^w] become apparent:

/oβu/ + /ama/ → [oβ^wa:ma] * [owa:ma] ‘secrets’
/oβu-/ + /ere/ ‘roughly milled’ → [oβ^were] ~ [owe:re] ‘roughly milled flour’
/oβu-/ + /iβi/ ‘thief’ → [oβ^wi:βi] ~ [owi:βi] ‘theft’
/oβu-/ + /oβa/ ‘mushroom’ → [oβ^wo:βa] ~ [owo:βa] ‘mushrooms’

Hence [β^w] ~ [w] /_ a, e, i, o

And [w] elsewhere

However, the main rule with /β^w/ in this case is: /β^w/ → /b^w/ /_ N

Chat 3: Phoneme distribution in syllables

phoneme	i	e	a	o	u	a:	e:	i:	o:	u:
p	x	x	x	x	x	x	x	x	x	x
p ^w	x	x	x	x	x					
p ^j	x	x	x	x	x					
b	x	x	x	x	x	x	x	x	x	x
b ^w	x	x	x	x	x					
b ^j	x	x	x	x	x					
^m b	x	x	x	x	x	x	x	x	x	x
^m b ^w	x	x	x	x	x					
^m b ^j	x	x	x	x	x					
t	x	x	x	x	x	x	x	x	x	x
t ^w	x	x	x	x	x					
t ^j	x	x	x	x	x					
d	x	x	x	x	x	x	x	x	x	x
d ^w	x	x	x	x	x					
d ^j	x	x	x	x	x					
ⁿ d	x	x	x	x	x	x	x	x	x	x
ⁿ d ^w	x	x	x	x	x					
ⁿ d ^j	x	x	x	x	x					
k	x	x	x	x	x	x	x	x	x	x
k ^w	x	x	x	x	x					
g	x	x	x	x	x	x	x	x	x	x
g ^w	x	x	x	x	x					
ⁿ g	x	x	x	x	x					
ⁿ g ^w	x	x	x	x	x					
tʃ	x	x	x	x	x	x	x	x	x	x
tʃ ^w	x	x	x	x	x					
dʒ	x	x	x	x	x	x	x	x	x	x

\widehat{d}_3^w	x	x	x	x	x					
$^n\widehat{d}_3$	x	x	x	x	x					
β	x	x	x	x	x	x	x	x	x	x
β^w	x	x	x	x						
β^j	x	x	x	x	x					
f	x	x	x	x	x	x	x	x	x	x
f^w		x	x	x						
v	x	x	x	x	x	x	x	x	x	x
s	x	x	x	x	x	x	x	x	x	x
s^w	x	x	x	x	x					
s^j	x	x	x	x	x					
z	x	x	x	x	x	x	x	x	x	x
h	x	x	x	x	x	x	x	x	x	x
h^w	x	x	x	x	x					
h^j	x	x	x	x	x					
m	x	x	x	x	x	x	x	x	x	x
m^w	x	x	x	x	x					
m^j	x	x	x	x	x					
n	x	x	x	x	x	x	x	x	x	x
n^w	x	x	x	x	x					
n^i	x	x	x	x	x					
η	x	x	x	x	x	x	x	x	x	x
η^w	x	x	x	x	x					
η^j	x	x	x	x	x					
r	x	x	x	x	x	x	x	x	x	x
r^w	x	x	x	x	x					
r^j	x	x	x	x	x					

l	x	x	x	x	x	x	x	x	x	x
l ^w	x	x	x	x	x					
l ^j	x	x	x	x	x					
w	x	x	x	x	x	x	x	x	x	x
j	x	x	x	x	x	x	x	x	x	x

6.1.2 Vowels.

There are five phonemic vowels in Lunyole and ten phonetic representations in the vowel phoneme inventory as in the table below:

	Front Unrounded	Central	Back Rounded
Close: short	i		u
Long	i:		u:
Mid: short	e		o
long	e:		o:
Open: short		a	
long		a:	

6.1.2.1 Position of segments:

In Lunyole, apart from the high vowels [i] and [u] which only occur word medially between consonants and word finally after consonants, the rest of the vowels [e, a, u] occur word initially followed by a consonant, word medially between consonants and word finally after consonants. The language allows consonants to occur word initially followed by a vowel and word medially between vowels. Chart 3 below demonstrates the distribution of vowels in a syllable.

	v		c	v		c	v#
--	---	--	---	---	--	---	----

i				x			x
e	x			x			x
a	x			x			x
o	x			x			x
u				x			x
i:				x			
e:				x			
a:				x			
o:				x			
u:				x			

Chart 4. Vowel Distribution in Syllables:

6.1.2.2 Ambiguous vowels and their interpretation

The ambiguous high vowels [i], [u] and approximants [w] and [j] are interpreted as vowels and consonants respectively whenever they occur in normal vowel or consonant positions.

[éjⁿdì] ‘another (thing)’ [éwù:mǎ] ‘fork’

However, as stated in 5.1.1 above, to allow for the account of the palatal nasal /ɲ/, [i] will in a special way function as a consonant in palatalizing [n] and will phonetically be marked /nⁱ/ and orthographically written **ni** while the palatal nasal /ɲ/ will orthographically be represented by **ny**.

Consequently, the ambiguous vowel sequence which follow palatalized [n] have been interpreted as vowel glides. The two vowels share the same tone. These ambiguous vowel sequences are: [ie], [ia], [io] and [iu]. The following are examples of words with palatalized [n].

[òhùnⁱágú:há] ‘to be frail’ [óhùnìnⁱá] ‘cause to climb’

[òhùnⁱónⁱófúlá] ‘use prematurely’ [émìnⁱèḡí] ‘star’

[óhùgùnⁱùsá] ‘cause to fall upside down’

Long vowels have been interpreted as single complex segments. These ambiguous vowel sequences occur only word medial. As for the glides, they occur both word medial and word final.

[ábà:ná] ‘children’ [épù:sì] ‘cat’
[òh^wínⁱángúhá] ‘to scream’ [óhùnì:nⁱá] ‘cause to climb’

Meanwhile, there is evidence of only one diphthong /ai/ occurring in Lunyole. It only occurs in borrowed words from neighboring languages and also in non Nyole names.

[mǎidò] ‘ground nuts’ [ǎidà] ‘Aidah’
[nǎikòté] ‘bore hole’ [ǎirínì] ‘Irene’
[èngáitó] ‘shoe(s)’

Following this pattern therefore, ambiguous vowels in Lunyole have been interpreted as one segment wherever they occur.

6.1.2.3 Vowel sequence

There is a phonetic range for mid-vowels, but there is no phonemic distinction. The language depicts lengthening and some limited diphthongization specifically in borrowed words and non Nyole names. Hence each vowel may be pronounced long or short. The lengthening in some cases is typical of Proto-Bantu languages (Nurse and Phillipson 2003:48):

1. Vowels are naturally long both before prenasalized consonants and also following palatalized and labialized consonants as in
/épu:^mbà/ ‘house’ /óhùd̪zà:^{d̪}zá/ ‘to crack jokes’
/òhúd^jó:lá/ ‘plentiful’ /óhùb^já:tùlà/ ‘give birth to twins’
/èk^wá:k^wá/ ‘part of meat on front limb’ /òhúŋ^wá:bá/ ‘to curse’
2. Underlying representations, as in sequences
/òhúlírá/ ‘to cry’ /óhùlì:rá/ ‘to use as sauce’
/óhùṅòsá/ ‘to cool’ /óhùṅò:sá/ ‘to levy tax’
/óhútésá/ ‘to move something’ /óhùtè:sá/ ‘negotiate’
/òhúmérá/ ‘germinate’ /óhùmè:rá/ ‘to get drunk’
/èkáká/ ‘yellow fever’ /èká:ká/ fisherman’s basket
3. Morpheme boundary vowel concatenation as in
/βá + alá/ → [βá:lá] ‘they lay a bed’
/βá + ósì/ → [βó:sì] ‘all of them’
/βá + ésá/ → [βé:sá] ‘they are playing a board game’

4. After the word has undergone some morphophonemic changes after affixing some morphemes e.g. the applicative morpheme –ir and the perfective morpheme –ire with its corollaries caused by labialization and palatalization as in:

/ly + ir/ → [lí:rá] ‘eat with’
/loma + eye/ → [lómè:jé] ‘said’
/hola + ire/ → [hòlì:ré] ‘did’

As has already been mentioned, there is only one diphthong /ai/ which is only found in words from other languages and foreign names as in

[mǎidò] ‘groundnuts’ [dǎimàⁿdí] ‘diamond’
[nǎikòté] ‘borehole’ [aida] ‘Aidah’
[abigairi] ‘Abigail’ [aisa] ‘Aisha’.

6.1.2.4 Vowel contrast

The following table shows how Lunyole vowels contrast in either identical environment (CIE) or analogous environment (CAE). Complementary distribution (CD) and free variation in vowels does not occur in Lunyole.

Segment	Minimal Pair	Gloss	Contrast	Environment
i - i:	/éhìtà/ /éhì:tà/	‘gourd’ ‘something deadly’	CIE	Occurs word-medial only
i - e	/éhiré/ /éhèré/	‘a night’ ‘frog’	CAE	Word-medial
e - e:	/òhúmérá/ /òhùmè:rá/	‘to germinate’ ‘to get drunk’	CAE	Occurs word-medial only
e - α	/èpétá/ /épàtà/	‘ring’ ‘hinge’	CAE	Can occur word-initial, word-medial and word-final.
α - α:	/òmání/ /ómà:ní/	‘liver of a bird’ ‘strength’	CAE	Word-medial
α - o	/èmbágó/ /émbògò/	‘hoe’ ‘buffalo’	CAE	Word-medial
o - o:	/òhúdólá/ /òhúdó:lá/	‘to thrush’ ‘to become wet’	CIE	Word-medial
o - u	/èsóló/	‘animal’	CAE	Word-medial

	/ésùló/	‘water fountain’		
u - u:	/òhúsúlá/	‘to treat barrenness’	CIE	Word-medial
	/òhúsú:lá/	‘to uproot’		

In Lunyole there is no allophonic process in vowels.

6.1.2.5 Vowel harmony

Lunyole exhibits what Aoki (1968) calls ‘partial’ vowel harmony. In this case a vowel assimilates in certain features to another vowel. In Lunyole this occurs when a high vowel of a suffix morpheme is affixed on the root of a verb with mid-vowel [e] or [o]. This is particularly evident in the applicative constructions in Lunyole. When the applicative suffix *-ir* is affixed on roots in which the preceding vowel in the word root is a mid-vowel, the *-ir* assimilates to *-er* otherwise it remains the same seen in the examples given below.

	Vowel	Word root	Applicative form
High vowels	/i/	<i>lir</i> ‘cry’	[òhùlírírá] ‘to cry for’
	/u/	<i>hul</i> ‘grow’	[óhùhùlírá] ‘to grow up at’
Mid-vowels	/o/	<i>hol</i> ‘work’	[óhùhòlérá] ‘to work for’
	/e/	<i>emb</i> ‘sing’	[óh ^w è ^m bérá] ‘to sing for’
Low vowel	/a/	<i>saj</i> ‘cut’	[óhùsájírá] ‘to cut grass with’

Chart 5. Vowel harmony

	V	V:
V	X	X
V:	X	X

6.1.2.6 Rules affecting vowels

6.1.2.6.1 Labialization and Palatalization

In Lunyole, like in many other languages, there are a number of natural processes in which vowels condition the consonants around them. The most common are labialization and palatalization.

(i) Labialization

When two vowels meet at a morpheme boundary and the first vowel is [+round], labialization occurs. If the first vowel is word-initial it becomes a labial [w], and if it is preceded by a consonant then the consonant is labialized.

For example, in Lunyole when the second-person singular prefix /o-/ is joined with the first person singular possessive root *ange* the /o/ becomes a labial /w/.

/o/ + /ange/ → [wa:^hge] ‘mine’

Hence: [o] → [w] / _V

And in Lunyole verbs, when the infinitive prefix *ohu-* is joined to a vowel-initial root *emba*, the vowel *u* of the prefix disappears and the consonant *h* is labialized.

/ohu/ + /emba/ → [oh^we:^mba] ‘to sing’

Similarly, when a noun class prefix that has a final vowel *u* is joined to a vowel initial root, the vowel *u* of the prefix disappears and the consonant preceding it is labialized as in:

/omu/ (class 1) + /ana/ → [óm^wà:ná] ‘child’

Hence: [u] → [w] / _V

In each of these cases the following vowel is lengthened.

(ii) Palatalization

The environment in which consonants are conditioned by vowels to become palatalized is when they are adjacent a front vowel i.e. [i] or [e]. In Lunyole therefore, when two vowels meet at a morpheme boundary and the first vowel is *i* or *e* [+front], the preceding consonant is palatalized. And if the first vowel is word-initial, it becomes a glide [j]. For example when the noun class prefix *e-* (class 9) is joined with the first person possessive root *ange*, the /e/ becomes a palatal [j].

/e/ + /ange/ → [ja:^hge] ‘it is mine’

Hence: [e] → [j] / _V

In the same way, when either of the noun prefixes *li-* (class 5), *hi-* (class 7), and *bi-* (class 8) are joined on the first person possessive root *ange*, the consonant in the prefix is palatalized and the /i/ is lost as in the example below.

/li/ + /ange/ → [l^ja:^hge] ‘it is mine’

Hence: [i] → [j] / _V

However, when palatalized consonants are followed by high vowels the palatalization on the consonant is not realized and instead vowel lengthening occurs. For example, when an applicative morpheme *-ir* is suffixed on *ly* which is the root for 'eat' for verb eat the palatalization on the [l] is lost.

/ly/ + ir → liira 'eat with'

6.1.2.6.2 Vowel Deletion

In Lunyole like in many of the African languages, when two vowels come together, one of the vowels is deleted – a process called vowel elision. In natural speech of Lunyole words tend to run into one another causing vowel elision. This usually occurs when a high vowel that is [-round] is joined to a vowel-initial morpheme as shown in the example below.

[si] + /ɑlomɑ/ is pronounced /sɑlomɑ/
'not' 'he speaks' 'he speaks not'

In the above the final vowel of the preceding word is deleted and orthographically it is replaced by an apostrophe.

Hence V → ø/ __V

6.1.2.6.3 Assimilation/ Coalescence

When two vowels are joined at a morpheme boundary a phonological process called assimilation or coalescence occurs. In Lunyole, when the first vowel is /a/ [-round] and the second is /o/ [+round], the first vowel assimilates to the second, which is lengthened, as shown in the following example.

/ga-/ C6 + /one/ 'all four' → [gò:nè] 'all four (C6)'

/ḍḍa/ (class 6) + /osi/ 'all' → [ḍḍó:sì] all of them (class 9)

And when the first vowel is /a/ [-high] and the second is /i/ [+high], the vowels coalesce and the result is a mid-vowel, which is lengthened, as shown in the following example.

/βa-/ C2 + /igula/ 'open' → [βé:gúlá] 'they open'

/βa/ (class 2) + /e^mba/ 'sing' → [βè:^mbá] 'they sing'

7. SYLLABLE AND WORD STRUCTURE

7.1 Syllable structure

Lunyole has an open syllable structure and it does not allow coda consonants. There are no consonant clusters, and vowels can stand alone as syllables. Because of this, there are two potential syllable structures: V or CV (see Bastin, 2003). When considering prenasalization and semivowels or glides, eight syllable patterns are possible, as shown in the table below where syllables in bold highlight the syllable pattern, VV denotes a long vowel, N denotes prenasalization, and G denotes a glide.)

Syllable pattern	Phonetic word	Orthographic representation	Gloss
V	[ama :d̥zi]	amaaji	‘water’
CV	[omusi ⁿ de]	omusinde	‘man’
CVV	[omusa: la]	omusaala	‘tree’
CGV	[ohut ^w i]	ohutwi	‘ear’
CGVV	[ed ^w a :liro]	edwaliro	‘health unit’
NCV	[e ^m basa]	embasa	‘axe’
NCGV	[e ^m b ^w a]	embwa	‘dog’
NCGVV	[e ⁿ d ^w a :si]	endwasi	‘disease’

7.2 Word structure:

There are two distinct rules in Lunyole that restrict how a word may be structured phonetically. First, close vowels [i] and [u] as well as long vowels are not found word-initially. Short vowels are found word-initially, word-medially and word-finally. However, though it appears that there are long vowels word-final they are not written in current orthography since there appears to be no ambiguity.

The following are the most common word patterns :

Monosyllabic words:

V /é/ ‘at’

Disyllabic words:

V.CV /èsé/ ‘me’

V.NCV /eⁿda/ ‘lice’

V.NCV.CV /e^mbeba/ ‘rat’

V.NCSV /e^mb^wa/ ‘dog’

CV.CV /ŋàńó/ ‘here’

Trisyllabic words:

V.CV.CV /étèmù/ ‘snake’

V.CVV.CV /òmú:tú/ ‘person’

CV.CV.CV /nálútú/ ‘green’

Quadrisyllabic words:

V.CV.CV.CV /ómùhàsì/ ‘a woman’

There are longer words than this but they take the same word pattern.

8. PHONEME DISTRIBUTION

8.1 Distribution in syllables

According to the analysis made (see appendix ...), the following limitations are found in the distribution of phonemes in a syllable.

- i) All the 21 consonants and their corollaries can occur in the on set of the CV syllable type.
- ii) All 5 vowels with their long counterparts occur in the nucleus of the CV syllable type while only [e], [a], [o] occur in V syllable type.

[é] ‘at’ [àlá] ‘an exclamation’
[òmú:tú] ‘a person’

8.2 Distribution in words:

All possible words in Lunyole can be summarized by the following rule:

$W \rightarrow (V)(C) V (C) (V)$

According to the rule a phonological word in Lunyole is formed from an optional vowel (V) followed by an obligatory consonant and vowel (CV) which is followed by a sequence of optional consonants and vowels in that order depending of the number of syllables of the word. The smallest word in Lunyole is one with (V) structure such as [e] ‘at’.

Three of the five vowels in Lunyole occur word initially position and these are [e], [a] and [o]. These vowels according to Lunyole morphology make up the noun class prefix or at least part of the prefix. Consonants never occur word finally in Lunyole. Every consonant has to be followed by a vowel without restriction.

8.2.1 Neutralization:

There is a neutralization of contrast in Lunyole found in the first consonant position of the root where they are preceded by a nasal.

[β] → [b]/m —
[òhúβálá] ‘to count’ [mbálá] ‘I count’
[w] → [b]/m —
[óhùwòṅá] ‘to tie’ [mbóṅá] ‘I tie’

9. TONE

Like is the case with most of the African languages south of the Sahara, Lunyole is a tonal language. The language exhibits register tone, rather than contour tone. Lunyole like most of the Bantu languages is highly agglutinative. Each noun or verb consisting of a root which in most cases is already disyllabic. Each noun is preceded by a class prefix which is a syllable of its own. Verbs on the other hand are preceded by the infinitive prefix *ohu-* while the imperative forms the verb stem. Lunyole words can be pentasyllabic or even longer. This is because an original verb root can be followed by several verb extensions such as the applicative, causative, subjunctive and aspect, and preceded by the negative, subject, tense, object prefixes: E.g. *S'onahagamundetereho* 'will you not bring it to him on my behalf'

The language has basically a two-tone system where each vowel may be high or low tone. Syllables with two moras, i.e. those with long vowels and pre-nasalized consonants, may on rare occasions bear a rising or falling tone. Lunyole exhibits a very light functional load with rare tonal lexical pairs and grammatical tone.

9.1 The Tone system of Lunyole

9.1.1 Nouns

Typical of Bantu languages, Lunyole noun morphology is straight forward. The nouns are categorized into twenty one noun classes. Like other Bantu languages, Lunyole nouns, which basically have disyllabic roots, generally consist of a noun class prefix and a root or stem though a few nouns belonging to class 1 and 9 may have no prefix. There are some few nouns with monosyllabic roots. The prefix may be of the shape V, VCV, or V(n).

Lunyole nouns exhibit a two-tone system and four common tone patterns: HH, HL, LH, and LL. However, in some few cases a rising or falling tone may occur. These four patterns are realized on the noun with its prefix. The prefix itself may take a H, L, LH or HL tone. There is no residual floating tone in Lunyole. Although most of the nouns have bisyllabic roots, there are a few nouns with monosyllabic and trisyllabic roots. The table below shows some examples of Lunyole nouns with monosyllabic, bisyllabic and trisyllabic roots:

Monosyllabic root	Bisyllabic root	Trisyllabic root
/àβá-tú/ 'people' 2-root	/áβà-βáhà/ 'messengers' 2-stem	/ámà-ǰǰà ⁿ ǰǰà:sì/ 'sound' 6-stem
/áβà-fú/ 'the dead' 2-root	/ámà-sávù/ 'fats' 6-stem	/ómù-pápà:lí/ 'pawpaw tree' 3-stem
/òmá-lá/ 'intestines' 6-root	/áhà-lòβó/ 'small hook' 12-stem	/òmú-hó:méró/ 'stuff' 3-stem

Monosyllabic root	Bisyllabic root	Trisyllabic root
/ámà-jí/ ‘water’ 6-root	/è ^m -bá:tí/ ‘duck’ 9- stem	/ómù-búlízí/ ‘preacher’ 3-stem
/è-gí/ ‘egg’ 5- root	/è ^m -bádí/ ‘lover’ 9- stem	[òlù-ńírírí/ ‘line’ 11-stem
/ámá-b ^w á/ ‘wounds’ 6-root	/mǎidò/ ‘groundnuts’ ø -stem	[òlù-pápúlá/ ‘paper’ 11-stem
/óm ^w -à:ná/ ‘child’ 1- root	/é-sì ^m bó/ ‘stick’ 9- stem	/òlù-ḍžégéré / ‘chain’ 11-stem

There are also rare cases where we may have quadrisyllabic roots such as:

/ámà-tʃàlà:tʃàlà/ ‘fats’ 6-stem	/ómù-sìgà:sìgà/ ‘pallet’ 3- stem
/é-gàlùbí ⁿ dì/ ‘spectacles’ 9- stem	/ólù-βòjò:βòjò/ ‘hullabaloo’ 11- stem

9.1.2 Verbs

The morphology of the Lunyole verb is in contrast to the nouns more complex. As already stated, the components of a Lunyole verb are the root, the inflection made up of a chain of prefixes which includes a subject, negative marker, tense and object and a number of suffixes that includes the applicative, causative, locative, and the perfective.

In its lexical form the Lunyole verb bears the infinitive prefix *ohu-* followed by a CV, CV.NCV, NCSV stem. Just as Kutsch Lojenga² says of all Bantu languages, ‘the final vowel *-a* which is not part of the basic root of the verb, does not carry distinctive underlying tone.’

Like the nouns, Lunyole verbs exhibit a two-tone system and four common tone patterns: HH, HL, LH, and LL. However, in some few cases a rising or falling tone may occur. These four patterns are realized on the verb root with its prefix. The prefix itself may take a LH or HL. Most of the verbs have either bisyllabic or trisyllabic roots. Some few verbs are monosyllabic others quadrisyllabic or even have longer roots. These however have reduplicated stems. The tables below show some examples of Lunyole verbs with monosyllabic, bisyllabic and trisyllabic roots quadrisyllabic and pentasyllabic roots:

² The writing and reading of tone in Bantu Languages.” *Notes on Literacy* 19(1): 1-9

Monosyllabic root

/óhùṅá/ ‘to become cooked’
/óhùṅá/ ‘to give’
/òhúl^wá/ ‘to delay’
/òhún^lá/ ‘to defecate’

Bisyllabic root

/óhùbòtá/ ‘to see’
/óhùbòná/ ‘to see’
/òhúmírá/ ‘to swallow’
/óhùl^jàhá/ ‘to defraud’

Trisyllabic root

/óhùp^játùl^á/ ‘to crash’
/óhùb^játùl^á/ ‘give birth to twins’
/òhùpálálá/ ‘to have diarrhea’
/òhúsómésá/ ‘to teach’

Examples of quadrisyllabic roots:

/óhùt^ᵒátá^ᵒgá/ ‘to loiter’
/óhùt^ᵒgálálá/ ‘to be speechless’
/òhúsú^ᵒgúnjálá/ ‘to become angry’
/òhúpúlúlúhá/ ‘to fly’

Examples of Pentasyllabic roots:

/óhùfùlúlúháná/ ‘to work hard’
/óhùgòhágòháná/ ‘get in abundance’
/òhúnjúmánjúmáná/ ‘smeared all over with’
/òhúfú^mbúhúlúlá/ ‘remove from embers’

9.2 Functional Load of Tone in Lunyole

There is a limited use of tone in Lunyole to signal contrasts in lexicon and grammar. While there is relatively little lexical tone in Lunyole (i.e., words that differ semantically based on a difference in tone only), grammatical tone plays a more significant role especially in distinguishing tense/aspect forms, marking a difference between a plain statement and re-affirming, signaling a relative clause and to a limited extent the different uses of the evidentiality marker *mbo*.

9.2.1 Lexical Tone contrasts

As mentioned above, these are relatively very few in Lunyole. From the available data, the following are the only lexical minimal pairs semantically based on a difference in tone only.

Word	Gloss	Word	Gloss
/ómùgà ^ᵒ gì/	‘gift for a visitor’	/òhúsí ^ᵒ ga/	‘to mortgage’
/òmúgà ^ᵒ gi/	‘medical personnel’	/óhùsì ^ᵒ ga/	‘to defeat’
/ésì ^m bó/	‘stick’	/òhúbá ^l á/	‘to count’
/èsì ^m bó/	‘maiden banana plantation’	/óhùbà ^l á/	‘to become warm’
/ómùsà:là/	‘tree’	/óhúbú ^ᵒ gá/	‘to be confused’
/ómùsá:lá/	‘wage’	/óhùbù ^ᵒ gá/	‘to keep in granary’
/épòsà/	‘type of medicinal plant’	/òhújú ^ᵒ gá/	‘to join’
/épòsá/	‘testimony in court’	/óhùjù ^ᵒ gá/	‘to be lonely’
/è ^m búlú/	‘tooth decay’		
/é ^m bùlù/	‘monitor lizard’		
/ómùsìṅá/	‘muscle’		
/ómùsìṅà/	‘deaf person’		

9.2.2 Grammatical Tone

A part from the lexical tone distinctions in nouns and verbs exemplified above, Lunyole also has tone contrasts in different areas of grammar. As stated above these include areas of tense/aspect, stating and re-affirming, relative clauses and the different uses of the evidentiality particle *mbo*.

9.2.2.1 Tense/aspect

Lunyole has a tense system of three basic tenses – past, present and future. However, three basic tenses are further divided according to Nyole understanding of her time frame. This results into five more tenses. The past is further sub divided into four distinct past tenses: immediate, hodiernal, recent and distant past; and the future tense is sub divided into three distinct future tenses: immediate, near and distant future tenses making a total of eight distinct tenses. In some Lunyole verbs, since the hodiernal and recent past tenses are both marked by prefix **a-** and suffix **-ire** when the subject is third person singular or plural, the difference can only be marked by tone. This also goes in with general past tense (remote past) and present tense for third person plural only. The table below give some examples:

/gèmbíré/	‘He sang’ (recent past)
/gèmbìré/	‘He sang’ (hodiernal)
/βèmbíré/	‘they sung’ (recent past)
/βèmbìré/	‘they sung’ (hodiernal)
/jèmbíré/	‘it (a bird) sung’ (recent past)
/jèmbìré/	‘it (a bird) sung’ (hodiernal)
/d̂zèmbíré/	‘they (birds) sung’ (recent past)
/d̂zèmbìré/	‘they (birds) sung’ (hodiernal)
/βàsómá/	‘they are reading’ (now)
/βàsòmá/	‘they read’ (long ago)

9.2.2.2 Stating and re-affirming a statement

Lunyole registers a difference in tone when making an ordinary statement and affirming it as in the example below:

/ómùpí:rà g^wǎngè/ ‘my football’ (plain statement)

/ómùpí:rà g^wàngè/ ‘the football is mine’ (affirming)

9.2.2.3 Signaling a relative clause

Sometimes Lunyole does not use an independent relative pronoun to show a relative clause but rather is got from the context. Hence without a context it may be difficult to distinguish the meaning of the following clauses.

/òmúsíⁿdé àsá:ŋá/ ‘the man is slashing’

/òmúsíⁿdé àsá:ŋà/ ‘the man who slashes...’

9.2.2.4 The evidentiality marker *mbo*

The evidentiality marker (hearsay particle) *mbo* is used in Lunyole to convey different meanings. The different meanings can only be distinguished by tone as below:

/hùná^tì:né ^mbò/ ‘I understand we are going’

/hùná^tì:né ^mbó/ ‘we are going, aren’t we?’

/hùná^tì:né ^mbǒ/ ‘(don’t worry) we shall be going’

In all the above examples, if tone is *not* marked on the verb then the reader has to use punctuation or semantic contextual evidence to help distinguish the meaning, otherwise it is ambiguous. With the current orthography, these phrases are written identically, i.e., without tone marks.

9.3 Syllable Tone Contrasts

From the available data (see wordlist), there are two tones found to contrast on individual syllables in Lunyole as seen below:

Tones	Initial vowel	Mid	Final vowel
High	/ésé/ 'lines'	/òhúḽálá/ 'count'	/òmúgángí/ 'doctor'
Low	/èsé/ 'me'	/óhùḽàlá/ 'become warm'	/ómùgàngì/ 'gift to a visitor'

9.4 Tone Distribution

It appears there is a free distribution of tone – both the high and low tone may occur on any syllable in a word whether on the first or last syllable. The distribution of the rising tone appears to be rare. As stated more investigation on tone has to be done with a wider range of words.

9.5 Conclusion

According to the tentative orthography which has been undergoing testing, tone was by rejection of the Lunyole Language Association (LLA) not marked. From the testing exercise it was found out that some people especially beginners found difficulty in reading correctly. However, most people who can fluently read Luganda, a related language and at the same time the language of wider communication, find no difficulty in reading Lunyole without tone marking. Luganda does not mark Tone in her orthography. On the basis of this argument and the fact that Lunyole has a low functional load of tone, it has been resolved that tone will not be marked in the orthography.

10. MORPHOPHONEMICS

10.1 Morphophonemic processes

There are several important morphophonemic processes in Lunyole. They are affected by labialization, palatalization, and nasalization. Nasalization affects class 9 and class 10 nouns, and first person subject and object marking on verbs. At least two have no obvious phonological explanation. Changes on verbal suffixes, especially involving the perfective morpheme **-ire** (proto Bantu **-ile**), are extremely complex and have yet to be analyzed in such a way to provide plausible rules.

10.2 Word internal changes:

Morphophonemic changes occur in some sounds during the process of labialization, palatalization and nasalization.

10.2.1 Labialization

As we have seen in 5.1.2.6.1 above, when two vowels combine at a morpheme boundary and the first vowel is a [u] which is [+high] and [+round], the preceding consonant is labialized and the following vowel is lengthened.

This process is mainly found in Lunyole verbs where the infinite form *ohu-* is realized by *ohw-*. It is also found in nouns that fall under classes 1, 3, 11, 14, and 20 where the class prefix ends with the vowel [u]. The following are some of the examples of this process:

ohu + aga	→	[oh ^w a:ga] ‘to weed’
ohu + ega	→	[oh ^w e:ga] ‘to learn’
ohu + ola	→	[oh ^w o:la] ‘to arrive’
ohu + iŋula	→	[oh ^w i:ŋula] ‘to dish out food’
omu (class 1) + ana	→	[om ^w a:na] ‘child’
omu (class 3) + esi	→	[om ^w esi] ‘moon’
olu (class 11) + iga	→	[ol ^w iga] ‘a horn’
obu (class 14) + oba	→	[oβ ^w oβa] ‘mushrooms’
ogu (class 20) + ega	→	[og ^w ega] ‘a big heap’

10.2.2 Palatalization

Similarly, when two vowels combine over morpheme boundaries and the first vowel is [+high] and [+front] i.e. [i], the preceding consonant is palatalized and the following vowel is lengthened.

/emi/ + /esi/	→	emyesi [em ⁱ e:si] ‘months’ (class 4)
/ehi/ + /agi/	→	ehyagi [eɟa:gi] ‘granary’ (class 7)

/ebi/ + /alo/	→	ebyalo [eβ ^j a:lo]	‘countries’ (class 8)
/hi/ + /ange/	→	hyange [ʃa: ^ŋ ge]	‘my thing’ (class 7)’
/bi/ + /efe/	→	byefe [β ^j e:fe]	‘our things’ (class 8)
/li/ + /efe/	→	lyefe [l ^j e:fe]	‘it is our thing’ (class 5)

10.2.3 Nasalization (*Nasal + consonant*)

When a nasal joins a voiceless consonant, the nasal /N/ assimilates to the point of articulation of the following consonant and the nasal disappears. This rule is universal. In Lunyole it is evident in verbs when the first person singular prefix /N-/ combines with a voiceless consonant of the root of the verb, as in examples given below (see Hyman, 2003):

/N/ → Ø / _ [p] / pahul / ‘swindle’	N+/pahula/ → [páhúlá]	‘I swindle’
/N/ → Ø / _ [t] / tafut / ‘interpret’	N+/tafuta/ → [táfútá]	‘I interpret’
/N/ → Ø / _ [s] / sung / ‘request’	N+/sunga/ → [sù ^ŋ gá]	‘I request for’
/N/ → Ø / _ [k] / kakan / ‘tremble’	N+/kakana/ → [kàkáná]	‘I tremble’

However, when the same nasal prefix joins verbs with a root that begins with the voiceless fricative /h/, the /h/ is assimilated as a plosive at the point of articulation and the nasal is deleted. This process is shown in the examples below.

N + /hala/ → [kálá]	‘I dry greet’
N + /heesa/ → [ké:sá]	‘I greet’
N + /hina/ → [kìná]	‘I dance’
N + /hola/ → [kòlá]	‘I do’
N + /hula/ → [kùlá]	‘I grow’

And when the same nasal prefix is joined with verbs that begin with nasals /m/ or /n/, the prefix is not realized, as shown in the following examples.

N + /manya/ → [máɲá]	‘I know’
N + /nuula/ → [nú:lá]	‘I snatch’
Hence: N- + N → N	

This is difficult to account for historically and phonologically (see Schadeberg, 1989). However, when the nasal prefix is joined with verbs whose root begin with the velar nasal /ŋ/, the combination result is /p/, as in.

N + /ŋandiiha/ → [pá ⁿ dí:há]	‘I am writing’
N + /ŋeta/ → [pètá]	‘I negotiate a corner’
N + /ŋira/ → [pìrá]	‘I peel’
Hence: [ŋ] → [p] /N__	

When a nasal joins a voiced consonant that is [-plosive], nasalization is realized and the following consonant becomes a plosive or an affricate at the same point of articulation. In the examples below we see this occurring at each of three different points of articulation: bilabial, alveolar, and palatal.

- a. [l] → [d] / N_
[lima] ‘dig’ /N+lima/ → [ˠdima] ‘I dig’
- b. [β] → [b] / N_
[βoŋa] ‘tie’ /N+βoŋa/ → [ᵐboŋa] ‘I tie’
- c. [β^w] → [b^w] / N_
[β^we:ga] ‘gain weight’ /N+βwega/ → [ᵐb^wega] ‘I gain weight’
- d. [j] → [d͡ʒ] / N_
[jaβa] ‘to dig up’ /N+jaβa/ → [ˠd͡ʒaβa] ‘I dig up’

In some very rare cases, when a nasal joins a voiced plosive then Meinhof’s Law (also called the Ganda Law) that states that when a nasal is prefixed to a voiced consonant-initial stem the consonant is dropped and the nasal assumes its point of articulation, goes into effect. This is only true with some speakers and with just a few roots that begin with voiced velar plosive [g]

- olu + /gi^ɓgi/ → [olugi^ɓgi] ‘mountain’
e(n) + /gi^ɓgi/ → [eŋi^ɓgi] ‘mountains’
N + /genda/ → [ŋeⁿda] ‘I walk’

Otherwise, when a nasal joins a voiced consonant that is [+plosive] i.e. [b] [d] and [g], nasalization is realized and the following consonant maintains its nature as a plosive.

- olu + /gali/ → [olugali] ‘winnowing basket’
e(n) + /gali/ → [e^ɓg ali] ‘winnowing baskets’
olu + /gero/ → [olugero] ‘proverb’
e(n) + /gero/ → [engero] proverbs
olu + /guudo/ → [oluguudo] ‘road’
e(n) + /guudo/ → [e^ɓguudo] ‘roads’
olu + /booko/ → [olubooko] ‘a whip’
e(n) + /booko/ → [e^mboko] ‘whips’
ohu + /bond͡ʒa/ → [ohubond͡ʒa] ‘to knock against’
N + /bond͡ʒa/ → [ᵐbond͡ʒa] ‘I knock myself against’
ohu + /daŋa/ → [ohudaŋa] ‘to scoop’
N + /daŋa/ → [ˠdaŋa] ‘I scoop’
ohu + /de^mba/ → [ohudemba] ‘to become tied’
N + /de^mba/ → [ˠde^mba] ‘I become tied’

When a nasal prefix / N / which is the first person singular subject marker and prefix /eN/ for noun class 9/10 are attached to the root of a word, the

/N/ and the /eN/ morpheme will assimilate to the point of articulation of the following voiced consonant. This nasalization affects change on the following consonant as well. In some cases the nasalization is realized but the following consonant becomes a stop.

[l] → [d] / N_	[òhúlómá] ‘to speak’	→	[ⁿ dómá] ‘I speak’
[β] → [b] / N_	[óhùβègá] ‘to shave’	→	[^m bègá] ‘I shave’
[β ^w] → [b ^w] / N_	[òhùβ ^w é:gá] ‘gain weight’	→	[^m b ^w égá] ‘I gain weight’
[j] → [d̥ʒ] / N_	[òhúd̥ʒábá] ‘to dig up’	→	[ⁿ d̥ʒábá] ‘I dig up’

In other cases the first person singular nasal morpheme /N/ is deleted when it is combined with a voiceless consonant:

N → Ø / _ [p]	/òhúpá:há / ‘praise’	→	[pá:há] ‘I praise’
N → Ø / _ [t]	/òhútáfútá / ‘interpret’	→	[táfútá] ‘I interpret’
N → Ø / _ [s]	/óhùsùná / ‘get’	→	[sùná] ‘I get’
N → Ø / _ [k]	/óhùkàkáná / ‘tremble’	→	[kàkáná] ‘I tremble’
N → Ø / _ [f ^w]	/óhùf ^w á / ‘die’	→	[f ^w á] ‘I die’

10.2.4 Hardening/Consonant mutation

Certain Lunyole consonants undergo a morphophonemic “hardening” process when they are preceded by a nasal prefix in root-initial position. In Lunyole this morphophonemic change affects only first singular prefix which is a nasal /N/. The specific changes attested are: /l/ is realized as [d], /h/ is realized as [k], /ŋ/ is realized as [p], /β/ and /w/ are realized as [b]. The following examples illustrate this process:

/òhúlímá/	‘to speak’	/ ⁿ dímá/	‘I speak’
/òhúlérá/	‘to carry on lap’	/ ⁿ dérá/	‘I carry on lap’
/óhùhè:sá /	‘to greet’	/ké:sá/	‘I greet’
/óhùhù ^m bán ⁱ á/	‘to gather’	/kù ^m bán ⁱ á/	‘I gather’
/óhùṅá/	‘to give’	/pá/pé/	‘I give/give me’
/óhùṅà ^m bá/	‘to hold’	/pà ^m bá/	‘I hold’
/òhùβálá/	‘to count’	/ ^m bálá/	‘I count’
/óhùβù:sá/	‘to ask’	/ ^m bú:sá/	‘I ask’

/óhùwòŋá/	‘to tie’	/ ^m bòŋá/	‘I tie’
/òhúwí:há/	‘to cover’	/ ^m b ^w í:há/	‘I cover’
/òhújáβá/	‘to dig up’	/ ⁿ d̥žábá/	‘I dig up’
/òhújó:lá/	‘to scoop’	/ ⁿ d̥žó:lá/	‘I scoop’

In the first four examples above, the quality of the first consonant in the root of the verb changes when joined with the first-person singular nasal morpheme, and the nasal is deleted. Hence the rules for this morphophonemic processes is:

[l] → [d] /N_{...}

[òhúlómá] ‘to speak’ → [ⁿdómá] ‘I speak’

[h] → [k] /N_{...}

[óhùhòlá] ‘do’ → [kòlá] ‘I do’

[j] → [d̥ž] /N_{...}

[òhújáβá] ‘to dig up’ → [nd̥žábá] ‘I dig up’

[β] and [w] → [b] /N_{...}

[òhúβá:lá] ‘to count’ → [^mbá:lá] ‘I count’

[óhùwò:lá] ‘to segregate’ → [^mbó:lá] ‘I segregate’

In some cases the phoneme [n] is completely lost in the process. This morphophonemic change occurs when two nasals join. This is difficult to account for phonologically (see Schadeberg, 1989).

[h] → [k] /N_{...}

[óhùhè:sá] ‘to greet’ → [ké:sá] ‘I greet’

[ŋ] → [p] /N_{...}

[óhùŋá] ‘to give’ → [pá] ‘I give’

10.2.5 Unusual morphophonemics

11.2.5.1 Unusual morphophonemic change in nouns

Lunyole exhibits some nouns that exhibit unusual changes when they are in their plural form. However this morphophonemic change affects only a few nouns.

[òlùŋé] ‘rooster’ (class 11) → [épè] ‘roosters’ (class 10)
[ólùŋèrèrè] ‘type of plant’ → [épèrèrè]
[ólùŋǎ^mbò] ‘papyrus mat; → [épǎ^mbò] ‘papyrus mats’
[ólùŋá] ‘courtyard’ (class 11) → [ép^jà] ‘courtyards (class 10)
[olunáhá] ‘new one’ (class 11) → [p^jáhá] ‘new’ (class 9)

10.2.5.2 The third person singular prefix **a-** and perfective suffix **-ire**

Lunyole has two affixes, one a verbal prefix and another a verbal suffix, that exhibit unusual morphophonemic changes. These changes affect only the third person singular prefix /a-/ and the present and general past tense prefix when the verb root begins with a vowel e.g. the verb *ohwemera* ‘to tend animals’ where the root of the verb is *emer*. If a third person singular subject prefix marker /a-/ is prefixed on the root, the /a-/ changes to /g/ as in the examples below:

/a/ + /emera/ → [gèmérá] ‘he is tending animals’
/a/ + /aga/ → [gá:gá] ‘he is weeding’
/a/ + /eh^we:ha/ → [gèh^wé:há] ‘he is hiding himself’
/a/ + /e^mba/ → [gè^mbá] ‘he is singing’
/a/ + /iβa/ → [gè:βá] ‘he steals’
/a/ + /osa/ → [gò:sá] ‘he is washing’

The third person singular (3s) prefix **a-** also exhibits a morphophonemic change when joined with the general past tense (PST) prefix which is also **a-** when they are joined to another vowel, specifically a vowel initial root as in

/a/ + /a/ + /emba/ → [gè^mbá] ‘he sung’
3s + PST + sing

/a/ + /a/ + /soma/ → [gášomá] ‘he read’
3s + PST + read

/a/ + /a/ + /hol/ + /ire/ → [gàhòlírè] ‘he worked’
3s + PST-work-PRF

The rule in this case could be: [a] → [g] _V.

However this rule is difficult to account for phonologically and this is another area of Lunyole phonology that is worthy of further research.

Besides, the perfective (PRF) depicts a complex series of morphophonemic changes. The basic form of the perfective suffix is **-ire**, and yet this underlying form surfaces in ten other forms, as shown in the examples in the table below.

Verb root	Root + perfective	Word	gloss
βand	/βand/ + ire	[βandire]	'has flooded'
ηos	/ηos/ + ire	[ηosi:sə]	'has cooled'
amuly	/amuly/ + ire	[amuli:s ^j e]	'has sneezed'
η	/η/ + ire	[ηa:je]	'has given'
saal	/saal/ + ire	[sa:je]	'has given birth'
beer	/ βeer/ + ire	[βe:re:je]	'has assisted'
ly	/l ^j / + ire	[li:je]	'has eaten'
hangul	/hangul/ + ire	[ha ^ŋ gu:je]	'has sun-dried'
fw	/ f ^w + ire /	[fu:je]	'has died'
hool	/ hool/ + ire	[ho:je]	'plucked off'
Hw	/ h ^w / + ire	[ho:je]	'has paid bride price'
bon	/βon/ + ire	[we:ne]	'has seen'
asam	/asam/ + ire	[ase:me]	'has gaped'

The suffixes in the above examples may however not represent the perfective only. In some of the examples there may be a combination of others such as the applicative suffix *-ir*, and the causative *-ise* with the perfective *-ire*. A typical example is [ηosi:sə] which includes the element of a causative. Hence a more accurate gloss of *ηosiise* would be 'has caused to cool'.

This area of morphophonemic change on perfective verb endings, especially involving multiple extensions, will need further investigation, analysis and description.

10.3 Word boundary changes:

In natural speech of Lunyole words tend to run into one another causing vowel elision. The final vowel of the preceding word is deleted.

/ɲd̥ʒa/ + /od̥ʒe/ + /ama:d̥ʒi/

'come' 'go get' 'water' Is pronounced as: /ɲd̥ʒod̥ʒama:d̥ʒi/

Even through these words sound as one word when pronounced together, they are separate words when pronounced in isolation.

Besides, when two vowels are joined at a morpheme boundary assimilation or coalescence occurs. When the first vowel is /a-/ [-round] and the second is /o/ [+round], the first vowel assimilates to the second, which is lengthened.

/ga/ Class 6 + /osi/ 'all' → [go:si] 'all of them' (class 6)

And when the first vowel is /a-/ [-high] and the second is /i/ [+high], the vowels coalesce and the result is a mid-vowel, which is lengthened.

/βa/ (class 2) + /igula/ 'open' → [βe:gula] 'they open'

11 ORTHOGRAPHY

11.1 The Alphabet

The Lunyole alphabet will be as follows (in this order):

a b c d e f g h i j k l m n ŋ o p r s t u v w y z

This is the same as the Roman alphabet, except that letters **q** and **x** do not occur in Lunyole, and the special letter **ŋ** has been added. The letters **v** and **z** occur only in a few recently borrowed words. Lunyole also has other sounds and features which will be described below. Special symbols and combinations of letters are needed for these other sounds.

11.2 Consonants

11.2.1 Consonant chart

In the following chart each consonant is given as it is written in the orthography, followed by its International Phonetic Alphabet (IPA) representation in square brackets.³

	Bilabial	Labiodental	Alveolar	Palatal	Velar
Voiceless Plosive	p [p]		t [t]		k [k]
Voiced Plosive	b [b]		d [d]		g [g]
Voiceless Fricative		f [f]	s [s]		h [h]
Voiced Fricative	β [β]	v [v]	z [z]		
Voiceless Affricate				c [tʃ]	
Voiced Affricate				j [dʒ]	
Nasal	m [m]		n [n]	ny [ɲ]	ŋ [ŋ]
Flap			r [r]		
Lateral			l [l]		
Approximant	w [w]			y [j]	

Most consonants can be *prenasalized* (preceded by an **m** or **n**), *labialized* (followed by a **w**), and *palatalized* (followed by a **y**). The total consonant inventory is contained in the following chart:

³The chart is organized by point of articulation (where the sound is made) along the top axis, and manner of articulation (how the sound is made) along the vertical axis.

	Bilabial	Labio-dental	Alveolar	Palatal	Velar
Vcls Plos	p pw py		t tw ty		k kw
Vcd Plos	bb bbw bby mb mbw mby		d dw dy ndy nd ndw		g gw ng ngw
Vcls Fric		f fw	s sw sy		h hw hy
Vcd Fric	b bw by	v	z		
Vcls Affr				c cw	
Vcd Affr				j jw nj njw	
Nasal	m mw my		n nw ni	ny nyw	ŋ ŋw ŋy
Flap			r rw ry		
Lateral			l lw ly		
Approx	w			y	

11.2.2 Plain Consonants

11.2.2.1 Fricative **b** and plosive **b**

Lunyole has two “b” sounds—a *fricative* (soft) **b**, and a *plosive* (hard) **b**. The fricative **b** is much more frequent than the plosive **b**. The fricative **b** [β] shall be written **b** and the plosive **b** [b] shall be written **bb** (rather than writing the fricative **b** as **bh** and the plosive **b** as **b**) except when preceded by **m**.

ohubabuha ‘to burn slightly’ ohubbubuha ‘to be impetuous’
ohubumba ‘to mold’ ohubbolooga ‘to cry loudly’

11.2.2.2 Voiceless palatal affricate

The voiceless palatal affricate [tʃ] shall be written **c** (rather than **ch** as in English or **ky** as in Luganda).

coka ‘chalk’ ohucacaala ‘to laugh heartily’
cesule ‘crested hawk’ ohucakalanya ‘to con someone’

11.2.2.3 Palatal nasal

The palatal nasal [ɲ] shall be written **ny** (rather than **ɲ** or **ñ**).

enyama	‘meat’	enyumba	‘house’
enyanya	‘tomato’	enyanyaasi	‘pineapple’
ohunya	‘to become cooked’	ohunyooma	‘to despise’

11.2.2.4 Velar nasal

The velar nasal [ŋ] shall be written **ŋ** (rather than **ng’** or **ngħ**).

eŋali	‘jealous’	eŋani	‘grave’
eŋombe	‘cow’	ŋaŋuma	‘there is nothing’
ohuŋuma	‘to lack’	ohuŋamba	‘to catch’

11.2.2.4 The letters r and l

The letters **r** [r] and **l** [l] are *allophones* of the *phoneme*⁴ /l/. They are in complementary distribution. The allophone [r] is found only after the vowels **i** and **e**, and the allophone [l] after **a**, **o**, and **u**. However both are being written in the orthography due to the influence of other languages, primarily Luganda and English.

erya	‘marriage’	amalya	‘marriages’
erungu	‘swamp’	amalungu	‘swamps’
eriino	‘tooth’	hu liino	‘on the tooth’
ohulima	‘to dig’	alima	‘he digs’
ahirima	‘he is still digging’	alirima	‘he will dig’

11.2.3 Prenasalization

11.2.3.1 Prenasalized bb

The prenasalized plosive b [mb] shall be written **mb** (rather than **mbb**).

ohubbiita	‘to rear’	mbiita	‘I am rearing’
ohubbinga	‘to chase’	mbinga	‘I am chasing’

⁴ When a sound makes a difference in meaning, we say it is a phoneme. Allophones are variant sounds of one phoneme that are conditioned by their environment.

11.2.3.2 Prenasalized g

The prenasalized plosive g [ŋg] shall be written **ng** (rather than **ngg**).

ohugafuba	‘to be very weak’	ngafuba	‘I am very weak’
ohugaana	‘to refuse’	ngaana	‘I refuse’

11.2.3.3 Prenasalization, morphophonemic changes

Some sounds change when they are prenasalized.

The sound **l** becomes **dl** when a nasal prefix is attached, and is written as such:

ohuloma	‘to speak’	ndoma	‘I speak’
ohulima	‘to dig’	ndima	‘I dig’
olulimi	‘tongue’	ndimi	‘tongues’

The sound **h** becomes **kh** when a nasal prefix is attached, but the nasal is not realized nor is it written:

ohuhena	‘to finish’	kenire	‘I have finished’
ohuhoma	‘to plant’	koma	‘I am planting’
ohuhina	‘to dance’	kina	‘I am dancing’

The sound **ŋ** becomes **p** when a nasal prefix is attached, and is written as such:

ohuŋjira	‘to take’	pira	‘I am taking’
ohuŋja	‘to give’	pa	‘I give’
ohuŋjima	‘to hunt’	piima	‘I hunt’

The fricative **b** [β] becomes plosive **bb** [b] (but spelled **mb**) when a nasal prefix is attached, and is written as such:

ohubala	‘to count’	mbala	‘I count’
ohubuusa	‘to ask’	mbuusa	‘I ask’

The sound **bw** [β^w] is in free variation with **w** [w] when they occur between the vowels [a], [e] [i] and [o]. While the sound **bw** [β^w] is more prominent in nouns **w** is more prominent in verbs. Hence nouns will be written with **bw** and verbs with **w**. But when prenasalised it becomes [m^wb^w], written **mbw**:

obwama	‘secrets’	obwere	‘roughly milled flour’
obwoba	mushrooms	obwibi	‘theft’
Ohuweega	‘to become fat’	mbwega	‘I become fat’
Ohuweweta	‘to soothe’	mbweweta	‘I soothe’

The verbal root that begins with **w** [w] or **b** [b] becomes **bb** [b] when a nasal prefix is attached, written **mb**:

ohuboŋa	‘to tie’	mboŋa	‘I tie’
ohuwosa	‘to cause to rot’	mbosa	‘I cause to rot’
ohubona	‘to see’	mbona	‘I see’

The sound **y** [j] becomes **j** [dʒ] when a nasal prefix is attached, and is written **nj**:

ohuyaba	‘to dig up’	njaba	‘I dig up’
ohuyoola	‘to gather up and put in a container’	njoola	‘I gather up and put in a container’

11.2.4 Labialization

Labialization shall be written with a **w** (rather than **u**).

bbepwa!	‘crack!’	ehitiibwa	‘glory’
ehituutwa	‘bud’	edwaya	‘cock’
ekwaŋa	‘armpit’	ohugwira	‘to charge at’
olwiga	‘horn’	ehiiswi	‘bird’s nest’
ohwecweha	‘to disappear into’	ehijwere	‘dung beetle’
etemwa	‘cooking banana’	ewunwa	‘bull’
nalunywa	‘alcoholic’	ohuŋwaba	‘to curse’

Note that a labialized consonant (CwV) can contrast with a consonant-u-w sequence (CuwV):

ohwala	‘to make a bed’	ohuwaala	‘to skim’
ohwega	‘to learn’	ohuweega	‘to put on weight’
ohwiha	‘to come down’	ohuwiiha	‘to cover’

The sound **f** has been observed to be slightly labialized by some speakers in some environments. Hence **fw** has not been interpreted as a distinct complex

consonant but rather an allophone of the sound **f**. They are in complementary distribution. **fw** comes before **a, e,** and **o** while **f** occur before **i** and **u**.

ohufwa	‘to die’	amafwafwa	‘wondering jew’
ohwefwebya	‘to act in laziness’	efirimbi	‘whistle’
ohufwafwagana	‘to loose direction’	efuho	‘mole’

However, for official writing and for publications, **f** will be written rather than **fw** wherever it occurs in this orthography. Lunyole writer who wishes can write **fw** in informal writing such as in letters.

11.2.5 Palatalization

Palatalization shall be written with a **y** (except for the palatalized **n** [n^j], spelled **ni** — see below).

Note that a palatalized consonant (CyV) can contrast with a consonant-i-y sequence (CiyV).

ohupapya	‘to hurry someone’	lupiiya	‘money’
ohutya	‘to fear’	ehitiyo	‘spade’

11.2.5.1 The palatalized n

The palatalized n [n^j] shall be written **ni** (rather than **ny** which is being used for the palatal nasal [ɲ]). The **i** in this case is not a vowel, but part of the consonant (a semi-vowel).

ohuhumbaania	‘to gather’	ekeniemu	‘snail’
ohweniola	‘to entangle’	ohuguniusa	‘to turn upside down’

11.2.5.2 The palatal nasal and the palatalized n

Notice that the palatal nasal **ny** [ɲ] is a single consonant and is **not** one of the palatalized consonants. Also, the palatalized **ny** [n^j], written **ni**, is a complex consonant and **is** one of the palatalized consonants.

ekenyera	‘jaundice’	ekeniemu	‘snail’
enyanyaasi	‘pineapple’	ohuhumbaania	‘to gather’
koonyo	‘before’	ohweniola	‘to entangle’
enyundo	‘hammer’	ohuguniusa	‘to turn upside down’

12.3 Vowels

11.3.1 Vowel chart

There are only five *phonemic* vowels in Lunyole. In the following chart each vowel is given as it is written in the orthography, followed by its International Phonetic Alphabet representation [in square brackets].

	Front	Central	Back
Close	i [i]		u [u]
Mid	e [e ~ ɛ]		o [o ~ ɔ]
Open		a [a]	

Each vowel can be long or short, and each vowel can be high or low tone (see table below). The total vowel inventory, including length and tone, (see section 11.4 for a discussion of writing tone).

	Front	Central	Back
Close	i í ii íí íi ií		u ú uu úú úu uú
Mid	e é ee éé ée eé		o ó oo óó óo oó
Open		a á aa áá áa aá	

11.3.2 Vowel length

Vowels can be long or short, as can be seen from the following examples. Long vowels shall be written double.

ohulira	‘to mourn, cry’	ohuliira	‘to eat with’
ohutesa	‘to move something’	ohuteesa	‘to deliberate’
ohusala	‘to cut’	ohusaala	‘to give birth’
ohudola	‘to hit with a stick’	ohudoola	‘to get wet’
ohuhula	‘to grow’	ohuhuula	‘to uproot’

Vowels preceding a prenasalized consonant are always long, and shall not be written double. In the same way vowels following a labialized or palatalized consonant are always long, and shall not be written double.

omuganda (<i>not</i> omugaanda)	‘bundle’	ohutamba (<i>not</i> ohutaamba)	‘to work’
ahabindi (<i>not</i> ahabiindi)	‘small pot’	ebbumba (<i>not</i> ebbuumba)	‘pump’
omweso (<i>not</i> omweeso)	‘board game’	ehyaba (<i>not</i> ehyaaba)	‘palm (hand)’
ehyambi (<i>not</i> ehyaambi)	‘seat’	eryani (<i>not</i> eryaani)	‘sauce’

Note: The palatal nasal [ɲ] is written **ny**, but is not a palatalized consonant. A long vowel following **ny** shall be written double.

enyanyaasi	‘pineapple’	ohunyiiya	‘to cook’
enyeeni	‘fish’	ohunyooma	‘to despise’

11.4 Tone

Research that has been made reveals that there is relatively a limited use of tone in Lunyole to signal contrasts in lexicon and grammar. While there is relatively little lexical tone in (i.e., words that differ semantically based on a difference in tone only), grammatical tone plays a slightly bigger role especially in distinguishing tense/aspect forms, marking a difference between plain statements and affirming of those statements, signaling a relative clause and to a limited extent the different uses of the evidentiality marker *mbo*.

11.4.1 Lexical tone

As mentioned above, relatively few. These are some of the few if not the only words with tonal contrast in Lunyole. relatively very few in Lunyole. From the available data, the following are the only lexical minimal pairs semantically based on a difference in tone only.

Word	Gloss	Word	Gloss
------	-------	------	-------

ómùgàngì	‘gift for a visitor’	òhúsingá	‘to mortgage’
ómúgàngì	‘medical personnel’	óhùsìngá	‘to defeat’
ésìmbó	‘stick’	òhubálá	‘to count’
èsìmbó	‘maiden banana plantation’	óhubàlá	‘to become warm’
ómùsàalà	‘tree’	óhubúngá	‘to be confused’
ómùsáálá	‘wage’	óhubùngá	‘to keep in granary’
épòsà	‘type of medicinal plant’	òlúsú	‘cloth line’
épòsá	‘testimony in court’	ólùsú	‘odour’
èmbùlú	‘tooth decay’		
émbùlù	‘monitor lizard’		
ómùsíṅá	‘muscle’		
ómùsìṅà	‘deaf person’		

11.4.2 Grammatical tone

Grammatical tone plays a more significant role in Lunyole than lexical tone especially in distinguishing tense/aspect forms, marking a difference between a plain statement and re-affirming, signaling a relative clause and to a limited extent the different uses of the evidentiality marker *mbo*. In the following phrases, if tone is *not* marked on the verb then the reader has to use punctuation or semantic contextual evidence to help distinguish the meaning, otherwise it is ambiguous.

gèmbíre	‘He sang’ (recent past)
gèmbìré	‘He sang’ (hodiernal)
bèmbíré	‘they sung’ (recent past)
bèmbìré	‘they sung’ (hodiernal)
yèmbíré	‘it (a bird) sung’ (recent past)
yèmbìré	‘it (a bird) sung’ (hodiernal)
jèmbíre	‘they (birds) sung’ (recent past)
jèmbìré	‘they (birds) sung’ (hodiernal)
bàsómá	‘they are reading’ (now)
bàsòmá	‘they read’ (long ago)
ómùpí:rà g ^w ǎngè	‘my football’ (plain statement)

ómùpí:rà g ^w ànge	‘the football is mine’ (affirming)
òmúsí ⁿ dé àsá:ŋa	‘the man is slashing’
òmúsí ⁿ dé àsá:ŋa	‘the man who slashes...’
hùnátì:né ^m bo	‘I understand we are going’
hùnátì:né ^m bo	‘we are going, aren’t we?’
hùnátì:né ^m bǒ	‘(don’t worry) we shall be going’

According to this orthography tone is by rejection of the Lunyole Language Association (LLA) and the community not marked. From the testing exercise some people especially beginners find difficulty in reading correctly. However, most people who can fluently read Luganda, which is a related language and at the same time the language of wider communication, find no difficulty in reading Lunyole. Luganda does not mark Tone in her orthography. Besides, research has shown that Lunyole has a lower functional load of tone.

11.5 Word Junctures

11.5.1 Introduction to word junctures

Words within phrases tend to be spoken together without an intervening pause. When the second word begins with a vowel, this sometimes results in vowel *coalescence*, *assimilation* or *elision*⁵. Except for in cases of *phonological bridging*⁶, words shall be written separately. The reader is free to pronounce word *junctures*⁷ as they are said in normal (fast) speech, but as a rule, words will be written as if they were spoken slowly and clearly.

Orthography	Pronunciation	Meaning
Nja oje amaaji.	njojamaaji	‘Come go get water.’
Yisuha owiire.	yisuhowiire	‘Welcome from the night.’
Niiwe ani?	niwaani	‘Who are you?’

⁵*Coalescence* refers to the joining of two vowels which result in one or both changing to something else. *Assimilation* refers to one changing to the other. *Elision* refers to the loss of one of the vowels.

⁶ *Phonological bridging* refers to the phenomena when words are grammatically distinct but are phonologically joined.

⁷ A *juncture* is the place where two things come together.

11.5.2 Key factors for determining Word Junctures

There are four general key factors for determining word junctures.⁸ These key factors are *semantic*, *grammatical*, *phonological*, and the *interaction among the factors*, in that order of priority. These factors were examined in determining the word junctures in this orthography.

11.5.2.1 Affixes

11.5.2.1.1 Verb affixes

Tense/Aspect and Subject/Object Concord markers, and other verbal extensions, are affixes to the verb and written as such.

nahamuŋanga	‘I have just given it to him’	nahahisome	‘I will read it’
gahisoma	‘He read it (long ago)’	alihisoma	‘He will read it (distant future)’
alirwemba	‘He will sing it’	ohusoma	‘to read’
bamugulira	‘they bought for him’	hunabonane	‘we will see each other’
bamulamulula	‘they removed the curse’	yiibiha	‘it (bicycle) can be stolen’

11.5.2.1.2 Negative affixes

In Lunyole, there are four negativizers *si-*, *nasi-*, *ndi-* and *ta-* which are all written as prefixes to the verb. In cases where the negative marker comes before a vowel, the *i* on the negative marker will be elided and the following vowel lengthened.

ohutagula	‘to not buy’	ohuteega	‘to not learn’
ndigaaja	‘he did not come’	ndaatina	‘he didn’t go’
simanyire	‘I do not know	soomanyire	‘you don’t know’
nasibalime	‘they didn’t dig’	nasaalime	‘he didn’t dig
oyo simusinde	‘that is not a man	sinje Wandera	‘he is not Wandera’

11.5.2.1.3 Locative verbal clitics

Locative clitics *-ŋo*, *-ho*, *-mo*, and *-yo* found in the word-final position on the verb shall be written conjoined. These may be used in conjunction with each other: *-hoyo*, *-moyo*.

⁸ Taken from *Word Boundaries: Key Factors In Orthography Development* by Julia R. Van Dyken and Constance Kutsch Lojenga. Published in *Alphabets in Africa*, Nartell, 1993.

panga ohubitaho eyo	‘I can pass over’
nagulamo enjombe	‘I bought a cow out of it’
afumbirwahoyo	‘she is married there (for now)’
gadulumayo	‘he escaped from there’
bitaho	‘pass through on’
bitamo	‘pass through in’
bitaṅo	‘pass through (bypass)’

11.5.2.1.4 Evidentiality markers

The prefixes *po-* and *ko-* operate semantically as evidentiality markers. *Ko-* is from Luganda but is prevalent in Lunyole. There is one other evidentiality marker, *mbo* that is understood as a separate word

pogalomire	‘that is how he said it’
kogalomire	‘that is how he said it’
pwagwagamya	‘how he puts it back’
kwagwagamya	‘he is just taking it back’

11.5.2.1.5 Derivational suffixes

In Lunyole, derivational morphemes are affixed to the verb to transform verbs into nouns.

ohwemba	‘to sing’	omwembi	‘singer’
ohusoma	‘to read/study’	omusomi	‘student’
ohusomesa	‘to teach’	omusomesa	‘teacher’
ohusaala	‘to give birth’	omusaalisa	‘midwife’
ohwinula	‘to fish’	omwinusi	‘fisherman’

Bu-, Wu, and Ma-

The prefixes *bu-* and *wu-* attach to adjective roots to form adverbs. Similarly, the prefix *ma-* attaches to a verb to form an adverb. In cases where the prefix is added to a vowel initial root, vowel elision occurs. These constructions will be written without an apostrophe.

bulanji	‘well’	wangu	‘quickly’
alya malambaye	‘he eats while lying down’	alya memereeye	‘he eats while standing’

11.5.2.1.6 Class prefixes

Noun class markers are prefixed to the noun root and written as one word.

omuhasi	‘woman’	abahasi	‘women’
omuhira	‘tail’	emihira	‘tails’
egata	‘wheel’	amagata	‘wheels’
ehibala	‘fruit’	ebibala	‘fruits’

11.5.3. Independent Words

12.5.3.1 Auxiliaries

Verbal auxiliaries are written as separate words.

gaali atamusala	‘he had not cut him’
anaabe alima	‘he will be digging’
ng’aja ahirya	‘then he went and ate it’
abaaye aloma	‘he was saying’
anahaabe alwembire	‘he will have sung it’
huja huhumbira ahabindi	‘we will make a small pot for you’

11.5.3.2 Questions

Question roots and/or their prefixes are written as separate words

Ahola hi?	‘What is he doing (general)?’
Oja ŋeena?	‘Where are you going?’
Oloma otye?	‘What are you saying?’
Atiina nj’ani?	‘Who is going?’
Lwahiina olira?	‘Why are you crying?’
Ali huhola hiina?	‘What is he doing (right now)?’
Oli ŋe?	‘Where are you?’

Oyo nj'omwina? 'What is that one?'

Onahatiine njaali? 'When will you go?'

Note that *lwahiina* ('why') and its complement *olwohuba* ('because') are formed by combining an associative marker and a question word or verb. In these cases, the two forms combine to make one word.

11.5.3.3 Complementizer

The complementizer *ti* is written as a separate word. Subject markers may be affixed to them.

ng'aloma ati 'and he said that'

abasaaye bamuloma baati 'her parents said to her that...'

olwohuba ti 'it is because that'

nenda ti some 'I want to study'

11.5.3.4 Locatives written as separate words

The locatives *nano*, *eyo*, *ano*, and *era* are written as separate words.

gatunda eyo 'he sold a portion of what is there'

afumbirwa ano 'she is married there (to the one who lives there)'

hutiine era 'let's go yonder'

bita eyo 'pass through there'

bita ano 'pass there'

alimira era 'he digs yonder'

11.5.3.5 Demonstratives

Demonstratives are written as separate words.

omuhasi ono 'this woman'

abahasi bano 'these women'

embusi yino 'this goat'

omuhasi oyo 'that woman'

abahasi abo	‘those women’
embusi eyo	‘that goat’

11.5.3.6 Prepositions

Locative prepositions *hu*, *mu*, *ɲa*, *ɲaasi wa*, and *e* are written as separate words. There are a few exceptions, specifically when the locative preposition and its noun have become linked both semantically and phonologically. In such cases, they are written conjoined, e.g., *mwigulu* (not *mu egulu*) ‘in heaven.’ When the preposition is used with the associative marker the apostrophe is used.

hu teebe	‘on the chair’
mu moni w'emotoka	‘in front of the vehicle’
tiina ewa Hire	‘go to Hire’s place’
ɲaasi w'ehitabo	‘under the book’
ɲa hitabo	‘near the book’
e Busolwe	‘at Busolwe’
tiina mu w'Enoka	‘go into Enoch’s place’
ɲaasi w'emeesa	‘under the table’

11.5.3.7 Adjectives

Adjectives are written as separate words. They are never joined to the nouns they modify, therefore the apostrophe is never used. Adjectives with compound stems are written as one word.

eɲombe emali	‘black cow’
omuhasi omutono	‘small woman’
ahagesigesi	‘small and intelligent’
omusaaja omubba	‘big man/fat man’
omuutu omulaɲi	‘good person’
musirusiru	‘stupid or foolish’

11.5.3.8 Evidentiality markers

Mbo and *nago* are evidentiality markers that are written as separate words.

mbo niuwe	‘I understand it is you’
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embwa nago eriiye amaagi nj'eyo	'that (definitely) is the dog that ate the eggs'
mbo oliye emere	'(is it true) you have eaten food'
ehitabo nago kehi nasomire	'that (definitely) is the book I read'

11.5.3.9 Possessive pronouns

Possessive pronouns are written as separate words with a few exceptions. The examples below are ambiguous due to a difference in tone. The reader should distinguish the difference because one is a complete clause while the other is incomplete.

omweṅa wange	'my bride' (or 'the bride is mine')
embusi yefe	'our goat' (or 'the goat is ours')
egaali yiye	'his bicycle' (or 'the bicycle is his')

11.5.4 Compounds

Compounds are words that are formed by combining stems. These stems are written conjoined and are understood as one word. There are compounds that combine different stems, and compounds that reduplicate stems. All are written without a word break.

11.5.4.1 Compound verbs

Compound verbs are formed by reduplicating the verb stem, and are written as one word.

mbonabona	'I suffer'
ohwendulayendula	'to search quickly'
napwanguhahupwanguha	'I dashed out'
ohudambadambana	'to lack'

11.5.4.2 Compound adverbs

Lunyole has compound adverbs that are formed by reduplicating a stem. These forms will be written as single words though other forms like *lwosilwosi* violate the spelling rule on when to use /l/ and /r/.

pola	'slowly'	polapola	'very slowly'
cwi	'finished'	cwicwicwi	'completely finished'

pwi	'early'	pwipwipwi	'very early'
mangu	'quickly'	mangumangu	'very quickly'
lwosi	'all' (class11)	lwosilwosi	'everything'

11.5.4.3 Compound nouns

Compound nouns can be made by reduplicating stems or by combining different stems.

ohuhalehale	'old way'
omutulanyumba	'woman who has ever got married but divorced to enter another marriage'
omufunagohe	'housewife (literally, one who blows the ashes)'
omutongapindi	'coward (one who dips in peas)'

11.5.4.4 Possession

The possessive forms of intrinsically important relationships are joined to the noun and are understood as independent words.

seefe	'our father'	nyineefe	'our mother'
latawo	'your father'	mbojooyo	'your sister/brother'
meriwo	'your friend'	omugandawe	'his brother'

11.5.5 Independent words written conjointly

Some grammatically independent words are written conjointly due to phonological bridging. When the final vowel of a word is joined in context to the initial vowel in the following word, either vowel elision or vowel coalescence occurs. In cases where the first word is of two syllables or less (more commonly just a single syllable) an apostrophe is used to show where the vowel change has occurred. The vowel that follows an apostrophe is pronounced long. Joining does not occur, however, on verbs, auxiliary or typical, but does occur on the copula

11.5.5.1 The copula

In Lunyole the copula will be written as a separate word. When the copula precedes vowel initial words, it will be joined to the word with an apostrophe.

Underlying Form	Surface Form	Gloss
nje ono	nj'ono	'it is this'
ce hino	ce hino	'it is this'
ngo guno	ngo guno	'it is this'
ali husoma	ali husoma	'he is reading'
to tuno	to tuno	'they are these (diminutive)'
ba aŋo	b'aŋo	'be there'
nga gala	nga gala	'are these (big)'

11.5.5.2 Ni and Nga

The words *ni* and *nga* are conjunctions that can appear with verbs to form adverbs. These are written as separate words. When *ni* and *nga* are used with vowel initial verbs, they are to be joined with an apostrophe.

Underlying Form	Surface Form	Gloss
ni gagota	ni gagota	'when he got lost'
ni alira	n'alira	'while crying'
nga baloma	nga baloma	'and they said'
nga olu balomire	ng'olu balomire	'as they (the group) have said'

11.5.5.3 Associative Marker

The associative marker is written as a separate word. When associative markers are used with vowel initial nouns, they are to be written with an apostrophe.

Underlying Form	Surface Form	Gloss
lugesi lwa embwa	lugesi lw'embwa	'the dog's trick'
muzeyi wa bbaabba	muzeyi wa bbaabba	'the father of my father'
owooya wa embwa	owooya w'embwa	'the dog's fur'

11.5.5.4 Naye, ne and nindi

The words *naye*, *ne* (a shortened form of *naye*) and *nindi* are adverbs. These will be written as separate words.

Surface Form

Gloss

Nahamuhooye ne gandiho oluganda.	‘I would have married her but she is related to me.’
Hunatiine, ne ese si nalome.	‘We shall go but I will not say anything.’
Nahulangire naye si wajire.	‘I called you but you did not come’
Nindi onahagobole ejo.	‘Again, you will come back tomorrow’

11.6 Proper Names

Proper names should be capitalized. Place names should be written according to their official spellings. One’s name should be written according to the desire of the individual.

11.7 Borrowed Words

All languages borrow words from other languages. Over time these words become as much a part of the language as any other word. Sometimes the borrowed word retains its original pronunciation. In this way new sounds, such as **v** and **z**, are introduced into the language. In other cases the pronunciation of the borrowed word is adapted to fit the phonology of the second language. In either case, borrowed words should be spelled the way people normally pronounce them when speaking Lunyole.

Borrowed form	Lunyole form	Gloss
amasavu	amasavu	‘fats’ (from Luganda)
zaabbu	ezaabbu	‘gold’ (from Luganda)
amasanyalaze	amasanyalase	‘electricity’ (from Luganda)
bus	ebbasi	‘bus’ (from English)
rupee	erupiya	‘money’ (from Hindi)

11.8 Ideophones

Ideophones are words which represent sounds. Typical of Bantu languages, there are many ideophones in Lunyole. Often they do not follow the same *phonological* (sound) rules as other words. They may contain sounds or combinations of sounds that do not otherwise occur in the language. These will be written the way they are pronounced.

nyau	[ŋ ^j á ^w]	‘meow (the sound of a cat)’
ŋwe	[ŋ ^w ε]	When you say, ‘ŋwe’ you are provoking someone to a fight.
kulukulu	[ekulukulu]	The sound a turkey makes, and the Lunyole word for turkey.

11.9 Punctuation

11.9.1 Period

The period shall be used to mark the end of a sentence.

Anatiine gaalima omutyere. ‘He will go and cultivate rice.’

11.9.2 Comma

The comma shall be used to mark an obligatory pause within a sentence.

Ni bamwenduye, nga bamulengera ‘When they looked for her, they saw her
ŋamugulu era. far up.’

11.9.3 Question mark

The question mark shall be used to mark the end of a question.

Onagule esaati yino? ‘Will you buy this shirt?’

11.9.4 Quotations

A direct quote shall be introduced by a comma and begin with double quotation marks. It shall be closed by a period or question mark and final double quotation marks.

Galomire ati, “Tiina mu ndalo.” S/he said, “I am going to the garden.”

A quote within a quote shall be enclosed by single quotation marks.

Mugoya galomire ati, “Bbaabba Mugoya said, “My father told me, gandomire ati, ‘Mwana wange, ‘Work hard son,’ and so I do.” hola n’amaani,’ keesi pokola.”

11.9.5 Apostrophe

There are small independent words of two syllables or less that are joined by an apostrophe at the point where two vowels would normally come together. In each case, the apostrophe takes the place of the first vowel and the vowel immediately following the apostrophe is then pronounced long.

11.9.6 Exclamation mark

An exclamation mark at the end of a sentence may be used:

- to express strong feelings, and with exclamations and interjections
- to show that a speaker is shouting, or that a noise is loud
- at the end of a forceful command

11.9.7 Paragraph breaks

Paragraph breaks should be used by indentation throughout a text to group sentences that relate to a single topic or idea. A paragraph break should be used to mark a shift in thought, or to mark a change in speaker in a dialogue.

11.9.8 Emphasis

Emphasis can be marked in various ways. In handwriting and on a typewriter it can be marked by underlining: Nahuhubbe! ‘I will beat you!’; using CAPITAL letters: NAHUHUBBE!; or lengthening a vowel to three or more vowel letters: Nahuhubbee!

On a computer emphasis can also be marked by italics: *Nahuhubbe!* or bold face: **Nahuhubbe!** Emphasis can also be expressed by adding a word such as *nyo* ‘very,’ or by using an exclamation mark.

11.9 Dialect Differences

Lunyole does not have major dialect differences. However, there are differences in the words people use and in the way certain words are pronounced. The LLA recognizes the freedom of individuals to write words as they pronounce them.

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Appendix - Lunyole noun class concord

Noun Class	Noun Prefix	Adjective	Sub.Rel.	Enumerative	Possessive	Subject	Object
1	omu-	mu-	o-	mu-	o-	a-	mu-
2	aba-	ba	a-	ba-	ba-	ba-	ba-
3	omu	mu	o-	mu	gu-	gu-	gu-
4	emi-	mi-	e-	e-	ji-	ji-	ji-
5	e-	e-	e-	e-	li-	li-	li-
6	ama-	ma-	a-	a-	ga-	ga-	ga-
7	ehi-	hi-	e-	hi-	hi-	hi-	hi-
8	ebi-	bi-	e-	bi-	bi-	bi-	bi-
9	e(n)-	(n)-	e-	(n)-	yi-	e-	yi-
10	e(n)-	(n)	e-	e-	ji-	ji-	ji-
11	olu-	lu-	o-	lu-	lu-	lu-	lu-
12	aha-	ha-	a-	ha-	ha-	ha-	ha-
13	otu-	tu-	o-	tu-	tu-	tu-	tu-
14	obu-	bu-	o-	bu-	bu-	bu-	bu-
15	ohu-	hu-	o-	hu-	hu-	hu-	hu-
16	∅a	∅a-	a-	∅a	∅a-	∅a-	∅a-
17	hu-	hu-	o-	hu-	hu-	hu-	hu-
18	mu-	mu-	o-	mu-	mu-	mu-	mu-
20	ogu-	gu-	o-	gu-	gu-	gu-	gu-
21	aga	ga-	a-	ga-	ga-	ga-	ga-
23	e-	e-					