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## **Lusoga**

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## Introduction

Lusoga is an interlacustrine Bantu language spoken in the Eastern part of Uganda in the region of Busoga, which is surrounded by the Victoria Nile in the west, Lake Kyoga in the north, the River Mpologoma in the east and Lake Victoria in the south. According to the 2002 census, this language is spoken by slightly over 2 million people (UBS 2006: 12).

There are four main language varieties spoken in Busoga, i.e. Lutenga, Lulamooigi, Lusiginhi and Lower Lunyole. Of the four, Lutenga is the variety generally known as Lusoga. Preliminary findings from a recently concluded fieldwork study of the varieties spoken in Busoga show that Lulamooigi and Lusiginhi border the Nilotic languages of Lango and Adhola respectively and it is possible that the varieties grew out of this relationship. Lower Lunyole, a variety bordered by Lutenga and Lake Victoria in the south of Busoga, is the most distant of all. Although there is considerable argument for not considering Lunyole as part of Lusoga, it is worth noting that Lunyole is the language of one of the 11 chiefdoms that make up the royal houses of the Busoga kingdom. This house is headed by the clan chief known as Nanhumba who hails from the Busoga county of Bunhole.

Lutenga has developed naturally as the region's lingua franca and it is the variety closest to Luganda: it is estimated that both languages have a lexical similarity of between 82% and 86% (Lewis, Simons & Fennig 2013). A considerable number of Lusoga texts have been produced both formally and informally, most notably by institutions like the Cultural Research Center (CRC) and personalities like Cornelius Gulere, but the majority of these productions do not provide well-founded linguistic descriptions of Lusoga. These publications continue to base their description on the Luganda orthography because it was the official language of instruction in the region (Ladefoged, Glick & Criper 1972: 87-99). Lusoga only featured for the first time in the Ugandan language policy in 2005 (NCDC 2006: 5). In spite of its role as a medium of instruction in Primary Education for seven years now, Lusoga is still an oral language and remains largely undocumented (Nabirye & De Schryver 2010: 327-328).

Although there has always been some research on Lusoga (Yukawa 2000; Steeman 2001; Van der Wal 2004), the real interest in the language surged after its official recognition in 2005. Examples include an update of the Lusoga orthography, the first monolingual Lusoga dictionary and a number of scientific linguistic descriptions of Lusoga (Namyalo et al. 2008; Nabirye 2008, 2009a-b, 2010; De Schryver & Nabirye 2010; De Schryver & Nabirye 2011, 2013). The description of the Lusoga sound system presented here is one of such efforts. It can be situated in the context of extensive fieldwork conducted in January 2012 when sound recordings were made in the 11 Busoga counties that make up Busoga; a total of 39 speakers were involved. However, the sound inventory presented here only represents the Lusoga variety spoken in Buwaabe (N 0° 36' 05", E 33° 39' 49") in Bugweri county, Iganga district. The recordings used in this illustration

are those of a 40-year-old Lutenga speaker born in Buwaabe. At this stage it is too early to comment on any regional pronunciation differences between varieties.

### Consonants

The consonant chart below lists the Lusoga sounds which have been found to contrast phonologically in the Lutenga variety. The sounds between brackets have been attested in the language, but they are very rare. They have not been included in any of the numerical counts in this paper.

	Bilabial	Labio-dental	Dental	Alveolar	Palatal	Velar	Glottal
Plosive	p b p <sup>w</sup> p <sup>j</sup> (b <sup>j</sup> ) <sup>m</sup> p <sup>m</sup> b <sup>m</sup> p <sup>w</sup> ( <sup>m</sup> b <sup>w</sup> ) <sup>m</sup> p <sup>j</sup> ( <sup>m</sup> b <sup>j</sup> )		ṭ ḍ (t <sup>w</sup> ) ḍ <sup>w</sup> ḍ <sup>j</sup> ( <sup>n</sup> ṭ) <sup>n</sup> ḍ <sup>n</sup> ḍ <sup>w</sup> <sup>n</sup> ḍ <sup>j</sup>	t d t <sup>w</sup> d <sup>w</sup> t <sup>j</sup> d <sup>j</sup> <sup>n</sup> t <sup>n</sup> d <sup>n</sup> t <sup>w</sup> <sup>n</sup> d <sup>w</sup> <sup>n</sup> t <sup>j</sup> <sup>n</sup> d <sup>j</sup>	c ɟ   <sup>n</sup> c <sup>n</sup> ɟ	k g k <sup>w</sup> g <sup>w</sup>  <sup>ŋ</sup> k <sup>ŋ</sup> g <sup>ŋ</sup> k <sup>w</sup> <sup>ŋ</sup> g <sup>w</sup>	
Nasal	m m <sup>w</sup> m <sup>j</sup>		ɱ ɱ <sup>w</sup> ɱ <sup>j</sup>	n n <sup>w</sup> n <sup>j</sup>		ŋ (ŋ <sup>w</sup> )	
Lateral flap				ɺ ɺ <sup>w</sup> ɺ <sup>j</sup>			

Fricative	β β <sup>w</sup> β <sup>j</sup>	f v (f <sup>w</sup> ) (v <sup>w</sup> ) ɱf ɱv (ɱv <sup>w</sup> )	s z s <sup>w</sup> z <sup>w</sup> <sup>n</sup> s <sup>n</sup> z <sup>n</sup> s <sup>w</sup> ( <sup>n</sup> z <sup>w</sup> )	(ʃ)	ʎ	(h)
Approximant	w			j		

	IPA Transcription	Orthography	Gloss
p	ðkùpàpà	okupapa	‘to hurry’
b	bà:bá	bbaabba	‘father’
t̪	ðkùt̪ipà	okuthipa	‘to be very tight’
ɖ	ðmùsù:ɖà	omusuudha	‘malaria’
t	ðkútà:ɽà	okutala	‘to get ready to fight’
d	ðkúdà:ɽà	okudala	‘to be jolly’
c	ðkùcá	okukya	‘to stop to become day’
ʃ	ðkùʃá	okugya	‘to go’
k	ðkùkà:wà	okukaawa	‘to be sour’
g	ðkùgà:wà	okugaawa	‘to go bad (of food)’
p <sup>w</sup>	p <sup>w</sup> ì:p <sup>w</sup> ì:p <sup>w</sup> ì	pwipwipwi	‘very early in the morning’
t̪ <sup>w</sup>	ě:ɱkùt̪ <sup>w</sup> á	enkuthwa	‘medicine man’s walking stick’

d <sup>w</sup>	òβùd <sup>w</sup> á	obudhwa	‘intelligence’
t <sup>w</sup>	òkùt <sup>w</sup> á:ɽà	okutwala	‘to take’
d <sup>w</sup>	èɽd <sup>w</sup> á:ɽi:ɽò	eidwalilo	‘hospital’
k <sup>w</sup>	òkùk <sup>w</sup> à:jà	okukwaya	‘to make noise (of paper, leaves, plastic)’
g <sup>w</sup>	òmùg <sup>w</sup> á:g <sup>w</sup> á	omugwagwa	‘stupid person’
p <sup>j</sup>	ècíkèp <sup>j</sup> à	ekikepya	‘rag; worn-out piece of cloth’
b <sup>j</sup>	àgùb <sup>j</sup> é	agubbye	‘he/she has become dirty’
d <sup>j</sup>	òmùtè: <sup>j</sup> gè: <sup>j</sup> á	omutengeedhia	‘nurse/assistant’
t <sup>j</sup>	òkùt <sup>j</sup> á	okutya	‘to fear’
d <sup>j</sup>	òkùgùd <sup>j</sup> à	okugudya	‘to bite/affect severely’
m <sup>p</sup>	è: <sup>m</sup> pàlá	empala	‘leopard’
m <sup>b</sup>	òkùkù: <sup>m</sup> bà	okukumba	‘to march’
n <sup>t</sup>	è: <sup>n</sup> túpà	enthupa	‘bottle’
n <sup>d</sup>	è: <sup>n</sup> dá	endha	‘far/away’
n <sup>t</sup>	è: <sup>n</sup> tá	enta	‘finger measurements’
n <sup>d</sup>	è: <sup>n</sup> dà	enda	‘stomach/pregnancy’
n <sup>c</sup>	è: <sup>n</sup> có	enkyo	‘tomorrow’
n <sup>f</sup>	è: <sup>n</sup> fó	engyo	‘splinters from a clay pot’
n <sup>k</sup>	ě: <sup>n</sup> kàtà	enkata	‘head cushion’
n <sup>g</sup>	è: <sup>n</sup> gà	enga	‘type of tree/stick’
m <sup>p<sup>w</sup></sup>	è: <sup>m</sup> p <sup>w</sup> i:gùɽú	empwigulu	‘owl’

m <sup>b</sup> w	è: <sup>m</sup> b <sup>w</sup> á	embwa	‘dog’
n <sup>d</sup> w	ńṅâ: <sup>n</sup> d <sup>w</sup> ı:ıḷè	nnhandhwile	‘I have introduced’
n <sup>t</sup> w	è: <sup>n</sup> t <sup>w</sup> ı:gà	entwiga	‘giraffe’
n <sup>d</sup> w	ê: <sup>n</sup> d <sup>w</sup> áııḷé	endwaile	‘diseases’
ŋ <sup>k</sup> w	ě: <sup>ŋ</sup> k <sup>w</sup> à: <sup>m</sup> bı	enkwambi	‘type of bird’
ŋ <sup>g</sup> w	ðβùwà: <sup>ŋ</sup> g <sup>w</sup> á	obuwangwa	‘traditions/customs’
m <sup>p</sup> j	è: <sup>m</sup> p <sup>j</sup> à:ká	empyaka	‘new’
m <sup>b</sup> j	nàmù: <sup>m</sup> b <sup>j</sup> á	Namumbya	‘Kisoga name’
n <sup>d</sup> j	ðkùjð: <sup>n</sup> d <sup>j</sup> á	okuyondhia	‘to clean’
n <sup>t</sup> j	ðkũ: <sup>n</sup> t <sup>j</sup> à	okuntya	‘to fear me’
n <sup>d</sup> j	è: <sup>n</sup> d <sup>j</sup> â: <sup>n</sup> gà	endyanga	‘bag/pocket’
m	àmàtá	amata	‘milk’
ŋ	ðmùṅá	omunha	‘gecko lizard’
n	nàtá	nata	‘I put’
ŋ	dàŋá	daŋa	‘jackfruit fibres’
m <sup>w</sup>	ðm <sup>w</sup> â:nà	omwana	‘child’
ŋ <sup>w</sup>	ðkùŋ <sup>w</sup> á	okunhwa	‘to drink’
n <sup>w</sup>	ðmùn <sup>w</sup> á	omunwa	‘mouth’
ŋ <sup>w</sup>	ŋ: <sup>w</sup> áııḷı	ŋŋwali	‘crested crane’
m <sup>j</sup>	ðkútè: <sup>m</sup> jà	okutemya	‘to blink’
ŋ <sup>j</sup>	ðm <sup>w</sup> ǎgà: <sup>ŋ</sup> jà	omwagaanhia	‘gap/space’

n <sup>j</sup>	ðkùn <sup>j</sup> ðlà	okuniola	‘to wring’
ɪ	ěɪβè:ɪɛ	eibeele	‘breast’
ɪ <sup>w</sup>	ècígê: <sup>n</sup> dè.ɪɛ.ɪ <sup>w</sup> à	ekigendelelwa	‘aim/goal’
ɪ <sup>j</sup>	èɪɪ <sup>j</sup> á	eilya	‘marriage’
β	ðkùβà:ɪà	okubala	‘to count’
f	ðkùfà:wð	okufaawo	‘to become extinct’
v	ðkùvà:wð	okuvaawo	‘to leave’
s	ðkùsà:là	okusaala	‘to make a hissing sound’
z	ðkùzà:ɪà	okuzaala	‘to give birth; to reproduce’
ʃ	ʃi:ɪjá	shiiya	‘bah’
ɣ	ɣà:ɪɛ	ghale	‘there’
h	àhà	aha	‘aha’
β <sup>w</sup>	ðβ <sup>w</sup> â: <sup>n</sup> gà	obwanga	‘face’
f <sup>w</sup>	ðkùf <sup>w</sup> à:wð	okufwawo	‘to become extinct’
v <sup>w</sup>	ðkùv <sup>w</sup> à:wð	okuvwawo	‘to leave’
s <sup>w</sup>	ðkùs <sup>w</sup> á:ɪá	okuswala	‘to be ashamed’
z <sup>w</sup>	ńz <sup>w</sup> ɪ:ɪɛ	nzwile	‘I have found’
β <sup>j</sup>	èβ <sup>j</sup> â: <sup>n</sup> dà	ebyanda	‘long span of time’
ɱf	è: <sup>m</sup> fúmð	enfumo	‘fables’
ɱv	è: <sup>m</sup> vú	envu	‘grey hair’
<sup>n</sup> s	è: <sup>n</sup> sà	ensa	‘sweatiness’
<sup>n</sup> z	ě: <sup>n</sup> ziɪɛ	enzilo	‘soot’

$\text{ᵐ}_V^w$	sé: $\text{ᵐ}_V^w$ í:ɿ̀è	senvwile	‘moved forward’
$\text{ᵐ}_S^w$	è: $\text{ᵐ}_S^w$ é:ɿ̀á	enswela	‘housefly’
$\text{ᵐ}_Z^w$	à: $\text{ᵐ}_Z^w$ í:ɿ̀è	anzwile	‘he/she has found me’
w	ðkùwé:ɿ̀à	okuwela	‘to patch’
j	ðkùjá	okuya	‘to get ready (of food); to get burnt’

While the Upper Lunyole consonant system consists of 62 consonants (Namulemu 2006), Lusoga has 81. The size of this consonant inventory is to be qualified as large in the knowledge that the mean consonant inventory size is 22.7 (Maddieson 2011).

Lusoga has plosives at 5 places of articulation with a clear phonemic distinction between a dental and alveolar place of articulation. This is evidenced by near minimal pairs like [èbĩ̀tèpèlè] ‘fried cookies’ vs. [èbítèlèkè] ‘parcels’ and [ðmúsà:ɿ̀à] ‘man’ vs. [ðkùsà:ɿ̀à] ‘to shake a liquid in a container’.

Ladefoged & Maddieson (1996: 20-23) suggest that dental plosives tend to be laminal with tongue contact on both the teeth and the anterior part of the alveolar ridge, while alveolar plosives tend to be apical with tongue tip contact in the middle of the alveolar ridge. The palatograms in figures 1-6 show that this also appears to be the case in Lusoga.



**Figure 1** (Colour online): Palatogram of the dental plosive in [aṭa]. The bulk of the occlusion is against the rear of the upper teeth.



**Figure 2** (Colour online): Palatogram of the alveolar plosive in [ata] with well defined contact on the alveolar ridge only.



**Figure 3** (Colour online): Palatogram of the voiced dental plosive in [aḏa] showing tongue contact with the back of the upper teeth and the anterior portion of the alveolar ridge. Dental contact is asymmetrical in the midsagittal plane.



**Figure 4** (Colour online): Palatogram of the voiced alveolar plosive in [ada] with contact on the alveolar ridge only.



**Figure 5** (Colour online): Palatogram of the dental nasal in [aṇa] showing tongue contact with the back of the upper teeth and the anterior portion of the alveolar ridge.



**Figure 6** (Colour online): Palatogram of the alveolar nasal in [ana] with contact on the alveolar ridge only.

At all places of articulation the plosive pairs are distinguished in terms of voicing. This is witnessed by (near) minimal pairs like : [ḏkùpìkà] ‘to put pressure into something’ vs. [kùbìkà]

‘to relay bad news; [èbĩtèpè.ɪ̀] ‘fried cookies’ vs [èbĩdègè.ɪ̀] ‘chains’; [ðkútà.ɪ̀] ‘to get ready to fight’ vs. [ðkúdà.ɪ̀] ‘to be jolly’; [ðkùcá] ‘to stop; to become day’ vs. [ðkùfá] ‘to go’; [ðkùkà:wà] ‘to be sour’ vs. [ðkùgà:wà] ‘to go bad (of food)’.

Voiceless plosives have a small Voice Onset Time (< 30 msec in the recordings provided with this illustration), while the voiced plosives have considerable prevoicing. The palatal plosives [c] and [ɟ] are typically realized as affricates [tʃ] and [dʒ]: [cà:βàzĩ:ᵑgà] ‘title for the Busoga king’ and [ðkùfá] ‘to go’. The glottal stop only occurs as the strong onset of word-initial vowels: [ʔĩ̀nàifè] ‘queen of Busoga’. The occurrence of a glottal stop often gives rise to a significant creaky voice quality on the preceding and following vowels especially in the context of low tones.

The labial, dental, alveolar and velar plosives also occur with labialization and these are contrastive with the plain plosives: there are clear minimal pairs for [b] (e.g. [è:ᵐbʷá] ‘dog’ vs. [è:ᵐbá] ‘jaws’), [t] (e.g. [ðkùtʷá:ɪ̀] ‘to take’ vs. [ðkútà.ɪ̀] ‘to get ready to fight’), [d] (e.g. [è:ᵐdʷáɪ̀] ‘diseases’ vs. [è:ᵐdà] ‘stomach/pregnancy’), [k] (e.g. [ðkùkʷà:jà] ‘to make noise (of paper, leaves, plastic)’ vs. [ðkùkà:jà] ‘to make bitter’), and [g] (e.g. [ðmùgʷá:gʷá] ‘stupid person’ vs. [ðmùgá:gà] ‘type of tree’). There is no minimal pair for [p], [t] and [d] but there is evidence that they have labialized counterparts in similar phonetic environments: e.g. [pʷi:pʷi:pʷi] ‘very early morning’ vs. [ðkùpikà] ‘to put pressure into something’ and [ðβùdʷá] ‘intelligence’ vs. [ðβùdà] ‘dirtiness’. Furthermore, the voiceless and voiced alveolar plosives occur in phonemic contrast with the palatalized alveolar plosive: e.g. [ðkùtʰá] ‘to fear’ vs. [ðkùtá] ‘to put’ and [ðkùgùdʰà] ‘to bite severely’ vs. [ðkùgùdà] ‘to gulp’.

Finally, it should be mentioned that Lusoga has 19 prenasalized plosives. Prenasalized consonants in this paper have been considered as unitary segments for the following reasons (among others): (1) the overall duration of these sounds falls well within the range of what can be expected for a single sound; (2) the prenasalizations are always homorganic, so their phonetic realization is dependent on the place of articulation of the plosive; (3) if syllables are taken to start with a cluster consisting of two segments, the sonority hierarchy predicts that the segment with the lowest sonority (i.e. the plosive) occurs first; (4) Lusoga has minimal pairs contrasting prenasalized plosives with plain ones: e.g. [ðkùgù:ᵐbà] ‘to gather; to grow’ vs. [ðkùgùbà] ‘to become dirty’, [ðmùpù:ᵐtà] ‘surveyor’ vs. [ðmùtápùtà] ‘interpreter’, [ðkùwà:ᵐdà] ‘to spit’ vs. [ðkùwàdà] ‘to accuse falsely; try’, [è:ᵐkàtà] ‘head cushion’ vs. [kàtá] ‘almost’ and [ðkùsĩ:ᵑgà] ‘to win’ vs. [ðkùsĩgà] ‘to sow’; (5) Lusoga has minimal pairs contrasting prenasalized consonants with full nasal phonemes: e.g. [ðkù:ᵐpà] ‘to give me’ vs. [ðkùmà] ‘you light a fire’; (6) the prenasalized plosives participate in the same processes of labialization and palatalization as the plain plosives.

A comparison with prenasalization of the plosives in the UPSID corpus (Maddieson 1984) reveals that 53 of the 451 languages included in UPSID (11.75%) have prenasalized plosives.

The total number of prenasalized plosives in Lusoga is exceptionally high in comparison to the UPSID mean (2.92).

Nasals occur at four places of articulation, i.e. labial, dental, alveolar and velar. The Lutenga variety does not have a palatal nasal which occurs in the other Lusoga varieties. The labial, dental and alveolar nasals contrast with a labialized counterpart: there are minimal pairs for [m] (e.g. [ðm<sup>w</sup>i:zè] ‘return him/her’ vs. [ðm<sup>i</sup>zè] ‘you have swallowed’), [ɲ] (e.g. [èçĩɲ<sup>w</sup>á] ‘bundle of firewood’ vs. [èçĩɲà] ‘gecko lizard’) and [ɳ] (e.g. [èçĩɳ<sup>w</sup>á] ‘ugly mouth’ vs. [èçĩ:ɳà] ‘hole’). Furthermore, the labial nasal occurs in opposition with a palatalized labial nasal: e.g. [ðkútè<sup>m</sup>à] ‘to blink’ vs. [ðkútè<sup>m̥</sup>à] ‘to cut’.

Geminate nasals also occur and these typically surface as the result of Meinhof’s Law (or the Ganda Law): “a nasal + voiced consonant sequence becomes a geminate nasal when the next syllable also begins with a nasal” (Hyman 2003: 52). Nouns in classes 9 and 10 (which take the prefix eN-) are especially affected: e.g. eN-[βa:<sup>m</sup>ba] > emmamba [ɛ̃m:<sup>à</sup>m̥bà] ‘meat’, eN-[ja:<sup>n</sup>ge] > ennhange [ɛ̃ɲ:<sup>à</sup>gè] ‘dove’, eN-[gɛ:<sup>r</sup>dɔ] > enɲendo [ɛ̃ɲ:<sup>ɛ</sup>r̥dò] ‘journeys’. Geminate nasals also surface with the first person singular morpheme (-N-), either as subject (e.g. N-[jɛ:<sup>r</sup>da] > nnhenda [ɲɲ:<sup>è</sup>dà] ‘I want’) or as object (e.g. [a] N [βi:<sup>r</sup>g] [a] > amminga [àm:<sup>ĩ</sup>gà] ‘he chases me’). Nasals are the only sounds in Lusoga which occur as singletons and geminates.

Lusoga has no trills, but it has an alveolar lateral flap in words like: [ɲ:<sup>w</sup>áɲí] ‘crested crane’, [ðmúwù:<sup>ɲ</sup>ù] ‘unmarried man’, [è:<sup>m</sup>p<sup>w</sup>ígù:<sup>ɲ</sup>ú] ‘owl’ and [ɛ̃βà:<sup>ɲ</sup>è] ‘stone’. The speaker who has read the words for this article displayed significant variability in the pronunciation of the lateral flap. Sometimes it is realized as an alveolar tap as in [èçĩβí:<sup>ɲ</sup>ĩ] ‘matchbox’, [ɛ̃βè:<sup>ɲ</sup>è] ‘breast’ and [ɛ̃:<sup>ɲ</sup>zĩ:<sup>ɲ</sup>ò] ‘soot’. In other instances it appears as an alveolar lateral approximant: [èid<sup>w</sup>á:<sup>ɲ</sup>ilò] ‘hospital’, [ðkùlòβà] ‘to refuse’. Alveolar lateral flaps are rare in languages of the world: UPSID lists 9 languages (2 %) with this sound. One of the better known examples is Japanese (Okada 1991). In Lusoga, the alveolar lateral flap occurs contrastively with a labialized flap: [ðkù:<sup>ɲ</sup>à] ‘to be late’ vs. [ðkù:<sup>ɲ</sup>à] ‘you grow up’, [èçíçɛ̃:<sup>r</sup>dè:<sup>ɲ</sup>è:<sup>ɲ</sup>à] ‘aim, goal’ vs. [èçíçɛ̃:<sup>r</sup>dè:<sup>ɲ</sup>è:<sup>ɲ</sup>à] ‘is intended’. In addition, it contrasts with a palatalized flap: e.g. [ðkù:<sup>ɲ</sup>á] ‘to eat’ vs. [ðkù:<sup>ɲ</sup>à] ‘you grow up’, [è:<sup>ɲ</sup>à] ‘marriage’ vs. [è:<sup>ɲ</sup>à] ‘later’.

Lusoga has fricatives at 6 places of articulation: the labio-dental and alveolar fricatives are represented by a voiceless and voiced member each, while the labial and velar places have a voiced fricative only. There is substantial variability in the phonetic realization of the velar fricative [ɣ] which may range from palatal/prevelar [j] to outright uvular [ʁ]. Nevertheless, palatal and uvular realizations are not phonemic. Lutenga is the only Lusoga variety with a velar fricative. The glottal fricative is very rare. The plain alveolar fricatives contrast phonemically with their labialized counterparts: [ðkùs<sup>w</sup>á:<sup>ɲ</sup>á] ‘to be ashamed’ vs. [ðkùsà:<sup>ɲ</sup>à] ‘to make a hissing sound’ and [à:<sup>r</sup>z<sup>w</sup>ĩ:<sup>ɲ</sup>è] ‘he/she has found me’ vs. [ɛ̃:<sup>ɲ</sup>zĩ:<sup>ɲ</sup>ò] ‘soot’. Very exceptionally labialized labio-dental fricatives are heard, but they are not contrastive: [ðkùf<sup>w</sup>à:wò] and [ðkùfà:wò] ‘to

become extinct', [ðkùv<sup>w</sup>à:wò] and [ðkùvà:wò] 'to leave'. The labial fricative contrasts with a palatalized labial fricative: e.g. [èβ<sup>j</sup>â:<sup>n</sup>dà] 'long span of time' vs. [èβà:<sup>n</sup>dà] 'it hits'.

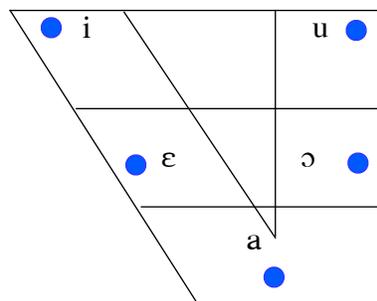
Lusoga also has 5 prenasalized fricatives which – just like the plosives – have been treated as unitary segments for reasons stated earlier. A few (near) minimal pairs are: [ðm<sup>w</sup>ê:<sup>m</sup>vù] 'ripe' vs. [ðm<sup>w</sup>é:<sup>v</sup>ù] 'educated' and [è:<sup>m</sup>vú] 'grey hair' vs. [ěrvù] 'ash'. Only 7 UPSID languages (1.55%) have prenasalized fricatives.

Lusoga has two approximants, i.e. [w] and [j].

A comparison of the Lusoga secondary articulations with languages in UPSID reveals that labialization occurs in 84 of the 451 UPSID languages (18.63 %). In this database, the number of labialized sounds varies between 0 and 29 with a mean of 4. Lusoga has 20 labialized sounds with a complete series of labialized stops and nasals, and an incomplete set in the fricatives. As far as palatalization is concerned, 35 of the UPSID languages (7.76%) have palatalized sounds with a mean of 5.2 and a range between 0 and 17. Lusoga has 13 palatalized sounds, none of which constitute a complete series.

## Vowels

Lusoga has 5 qualitatively different vowels with a phonemic length distinction. With this system, it has the most frequent vowel system in the world. In addition, Lusoga has three rising diphthongs which are not the result of morphophonology. Although there are some examples of diphthongs in Lower Lunyole, their occurrence is rare when compared to the other Lusoga varieties.



	<b>IPA Transcription</b>	<b>Orthography</b>	<b>Gloss</b>
i	ðkù.ɿimà	okulima	'to dig'
ɛ	ðkù.ɿlèmà	okulema	'to defeat'

<b>a</b>	ðkù:ɽàmà	okulama	‘to come back to life’
<b>ɔ</b>	ðkù:ɽðβà	okuloba	‘to refuse’
<b>u</b>	ðkù:ɽùmà	okuluma	‘to bite; to be painful’
<b>i:</b>	ècǐβi:ɽi:ɽi	ekibiliiti	‘matchbox’
<b>ɛ:</b>	ěiβè:ɽè	eibeele	‘breast’
<b>a:</b>	ěiβà:ɽè	eibaale	‘stone’
<b>ɔ:</b>	ðkùβð:ɽà	okuboola	‘to segregate’
<b>u:</b>	ðmùwù:ɽú	omuwuulu	‘unmarried man’
<b>aɪ</b>	átà:ɽè	ataile	‘he/she has put’
<b>ɛɪ</b>	ěɽà:mè	eilaame	‘a will’
<b>ɔɪ</b>	ècǐkð:ɽkð	ekikoiko	‘riddle’

### Prosody

Although a detailed study of Lusoga tone is still underway, preliminary findings indicate that Lusoga has two main tones H and L, and combinations thereof such as HL, and what appears to be a “reversive tone system” (meaning that it has diachronically inverted the tones of Proto-Bantu).

ècǐkómó	‘bangle’	ècǐkómò	‘the end’
óβùdð:ɽgð	‘soft mud’	ðbùdð:ɽgó	‘state of being a musician’
ðk <sup>w</sup> à:ɽà	‘to scratch’	ðk <sup>w</sup> â:ɽá	‘to have a certain size’
èns <sup>w</sup> ê:ɽà	‘cobra’	èns <sup>w</sup> é:ɽá	‘housefly’

### Transcriptions

#### English version

The North Wind and the Sun were disputing which was the stronger, when a traveller came along wrapped in a warm cloak. They agreed that the one who first succeeded in making the traveller take his cloak off should be considered stronger than the other. Then the North Wind blew as hard as he could, but the more he blew the more closely did the traveller fold his cloak around him. And at last the North Wind gave up the attempt. Then the Sun shone out warmly, and immediately the traveller took off his cloak. And so the North Wind was obliged to confess that the Sun was the stronger of the two.

### Orthographic version

Lunaku lulala, empewo dh'omu mambuka n'endhuba by'etaba mu kusindanwa okusobola okubona ani ku byombi asinga amaanhi. Byali bikaali awo, waidhawo omutabaazi eyali yeesuuliile ekigoye ekimusuuya.

Bano abaali mu ntaka dh'okusindanwa baasalawo okwikilizigania nti, anaasooka okuleetela omutabaazi oyo okwewembula ekigoye kye yeewembeleile ni aidha okuba asinze mwine.

Olwo, empewo dh'omu mambuka dhaatoolela dhaakunta n'amaanhi amabilivu; aye ye dhaakoma okufuuwa, omutabaazi ye yakoma okwezingila ekigoye kye. Enkomelelo ya byonabyona yali ya mpewo dha mu mambuka kuva mu luyookaano.

Olwo ni omusana gw'avaayo gwona gw'ayaka okwekansa. Amangu n'embilo, omutabaazi yebwikula ekigoye kye yali yeewembeleile.

Ekyavaamu, empewo dh'omu mambuka dhaalina okwemenha dhaikiliza nti, bwene omusana n'ogwali gudhisinga amaanhi.

### Phonetic transcription

ɽlúnàkù ɽlù.ɽlà.ɽlà ɛːᵐpèwò d̥d̥:mù màːᵐbùká | nèːᵐd̥d̥ùβà βʲɛːtábà  
 mù kùsɪːᵐdànˠá ðkúsóβóɽd̥ kúβòᵐnàʔáñɪ kù βʲòːᵐbɪ ʔàsɪːᵐgà:mǎːñɪ  
 | βʲáɽlɪ βʲikà:ɽlʲáwò wǎɽdàwó ðmùtàβà:zɪ ʔɛ̀jǎɽlɪ jè:sù:ɽlɪ:ɽlè ècígòjè  
 ècìmùsù:jǎ | bànòʔàbâ:ɽlɪ mǔ ˠtàkˠà d̥d̥:kùsɪːᵐdànˠá βâ:sáɽlʲáwò kˠi:kɪɽlɪ  
 zígànʲǎ ˠtɪ ánǎ:sò:kà ʔðkúɽlè:tèɽl ɰmùtàbà:z ɰjò ðkˠê:wèːᵐbùɽl ɛ̀cígˠè c  
 é jè:wêːᵐbèɽlɛ̀ɽl | nǎɽdàʔðkùβáʔ ʔàsɪːᵐzè mˠɪ:né | ʔòɽlʲɛːᵐpèwò d̥d̥:mù  
 màːᵐbùká d̥d̥:tò:ɽlè.ɽlʲádǎ:kûˠtánâ:mâːñɪ àmáβɪtɪɽlɪvù | ʔǎjèjè  
 d̥d̥:kòmǎ ʔðkúfù:wǎ ʔðmùtàβá:zɪ jè jákòmǎ ʔðkˠê:zɪːᵐgɪɽlʲǎ ècígójècɛ̀  
 | ɛːᵐkòmèɽlè.ɽlʲǎ jǎbʲò:mábʲò:ná jǎ:ɽlɪ jǎːᵐpèwò d̥d̥ mù màːᵐbùkˠá

kùvàmù ɬùjòːxà:nò | ʔùɬʷô nĩ ʔòmùsáná gʷá:vǎ:jò gʷô:ná  
 gʷà:jáká ʔòkʷê:kàːsà | ʔəmǎːᵑgù nêːᵑbĩɬù ʔòmútʰàβá:zi jě:βːi:kúɬ  
 ècígʷè cè jáɬi jè:wêːᵑbèɬěɬè | ʔècà:và:mú ẽːᵑpèwò ɖômù màːᵑbùká  
 ɖǎɬinǎ ʔókʷê:mèᵑá ɖǎkiɬizǎ ʔi bʷê:nè ʔòmùsà:ná  
 nò:gʷâɬi gúɖisíːᵑgà:mǎ:nĩ

## References

CRC. <http://www.crcjinja.org/>.

DE SCHRYVER, G-M. & NABIRYE, M. (2010). A Quantitative Analysis of the Morphology, Morphophonology and Semantic Import of the Lusoga Noun. *Africana Linguistica* 16, 97-153.

GULERE, C. <http://mak.academia.edu/CorneliusGulere/Following>.

HYMAN, L. M. (2003). Segmental Phonology. In Derek Nurse and Gérard Philippson (eds.). *The Bantu Languages*. Routledge Language Family Descriptions. London: Routledge.

LADEFOGED, P., GLICK, R. & CRIPER, C. (with an introduction by C.H. Prator and additional material by L. Walusimbi) (1972). *Language in Uganda*. Ford Foundation Language Surveys 1. London: Oxford University Press.

LADEFOGED, P. & MADDIESON, I. (1996). *The Sounds of the World's Languages*. Oxford: Blackwell.

LEWIS, M. P., SIMONS, G. F. & FENNIG, C.D. (eds.) (2013). *Ethnologue: Languages of the World, Seventeenth edition*. Dallas, TX: SIL International. <http://www.ethnologue.com/language/xog>

MADDIESON, I. (1984). *Patterns of Sounds*. Cambridge: Cambridge University Press. Consulted via <http://web.phonetik.uni-frankfurt.de/upsid.html>

MADDIESON, I. (2011). Consonant Inventories. In Matthew S. Dryer and Martin Haspelmath (eds.). *The World Atlas of Language Structures Online*. Munich: Max Planck Digital Library, chapter 1. <http://wals.info/chapter/1>.

NABIRYE, M. (2008). *Compilation of the Monolingual Lusoga Dictionary*. Unpublished M.A. Dissertation. Kampala: Makerere University.

NABIRYE, M. (2009a). *Eiwanika ly'Olusoga. Eiwanika ly'aboogezi b'Olusoga n'abo abenda okwega Olusoga* [A Dictionary of Lusoga. For Speakers of Lusoga, and for Those Who Would Like to Learn Lusoga]. Kampala: Menha Publishers.

NABIRYE, M. (2009b). Compiling the First Monolingual Lusoga Dictionary. *Lexikos* 19, 177-196.

NABIRYE, M. (2010). Dictionary Compilation for Mother-tongue Speakers of Bantu Languages. In Ruiping Zhu (ed.). *Chinese Lexicographic Research 2*: 584-599. S.I.: Chinese Social Sciences.

NABIRYE, M. & DE SCHRYVER, G-M. (2010). The Monolingual Lusoga Dictionary Faced with Demands from a New User Category. *Lexikos* 20, 326-350.

NABIRYE, M. & DE SCHRYVER, G-M. (2011). From Corpus to Dictionary: A Hybrid Prescriptive, Descriptive and Proscriptive Undertaking. *Lexikos* 21, 120-143.

NABIRYE, M. & DE SCHRYVER, G-M. (2013). Digitizing the Monolingual Lusoga Dictionary: Challenges and Prospects. *Lexikos* 23, 297-322.

NAMULEMU, E. W. (2006). *Lunyole Phonology Statement*. SIL International. <http://lunyole.webonary.org/files/Lunyole-Phonology-Statement.pdf>

NAMYALO, S., WALUSIMBI, L., BUKENYA, G., MASAKALA, M. W., NABIRYE, M. & KIINGI, F. (2008). *A Unified Standard Orthography of Eastern Interlacustrine Bantu Languages*. Monograph Series 68. Cape Town: The Centre for Advanced Studies of African Society.

NCDC (2006). *THEMA. The Newsletter of the Thematic Primary Curriculum. Issue 1. August 2006*. Kampala: National Curriculum Development Centre.

OKADA, H. (1991). Illustrations of the IPA: Japanese. *Journal of the International Phonetic Association* 21, 94-96.

STEEMAN, S. (2001). *Kintu: An Annotated Edition of a Lusoga Play*. Unpublished M.A. Dissertation. Leiden: Leiden University.

UBS (2006). *The 2002 Uganda Population and Housing Census, Analytical Report, Population Composition*. Kampala: Uganda Bureau of Statistics.

VAN DER WAL, J. (2004). *Lusoga Phonology*. Unpublished M.A. Dissertation. Leiden: Leiden University.

湯川, 恭 [Yukawa, Yasutoshi] (2000). ソガ語動詞アクセント試 [Soga-go dooshi akusento shiron / A Tentative Tonal Analysis of Soga Verbs]. *Journal of Asian and African Studies* 60: 249-290.