

Prolog: Version 1

This is the first public version of *Introduction to Logoori Phonology and Morphology*, a description of aspects of the Logoori language. The intent is to say how words are formed, including details of pronunciation, and give basic information about usage in sentences. Most obviously missing from this work are chapters on syntax and semantics. Such information is dispersed here in the relevant sections on morphology.

This is the product of a data-gathering project with various speakers, which started three times. The first start was my absolute introduction to the language, working with Umbisa Gusa for three weeks in my Structure of Bantu class in 1987. The second was a period working with Rose Kamwesa between 2005 and 2011, with the collaboration of Mike Marlo for the first year. The third was an NSF project which included a section on Logoori, starting in 2014 and continuing past the period of funding to the present: Editon Mulera, who provided most of the data presented here, has participated in this part of the project since that time. The primary goal was to elicit data which covered the obvious areas of the language that would need to be covered (given what I already knew about Logoori and Bantu languages), and to discover the myriad non-obvious areas of the language also would also need to be covered. It was found as a result of those elicitations that there is quite substantial variation in the language, much more than I had encountered in e.g. Kerewe, and more like the level of variation found in Makonde.¹ Therefore, this work is a “sum of individual grammar fragments”, that is, it reports the replicable facts that I have uncovered, not just the patterns (if any) that are universal to all or most speakers, but also is not uniform in coverage of individuals. It serves as the foundation for a later, more generalized, and shorter report which reports the “main trends” in the language.

The work model which I followed was to focus on a specific subject matter, to the point that I could write a section in a relevant chapter, for example the form of demonstratives in the chapter on noun class agreement; in so doing, I would discover lacunae and inconsistencies, return to elicitation on the topic later, until I could reasonably call that chapter finished for the moment: then move on to the next chapter. At the very end, I revisited all of the chapters to (attempt to) integrate any new-found facts relevant to older chapters. This was the intended model, but the actual implementation involved much more cycling back and forth between chapter topics. The main aspects of noun class morphology were manageable relatively early on, segmental phonology took much longer and was, naturally interleaved between investigation of the noun class system and verb inflection. And of course an account of verbal tone, which required many years to gather the data, required a lot of probing into syntax and semantics (and since certain tense distinctions are only prosodically realized, controlling the system of inflectional distinctions required a theory of verbal tone).

Data from some speakers was collected long-distance over multiple sessions via questionnaire, but other data was collected via face-to-face and generally free-form interviews, perhaps for weeks or in some cases a number of years. As much as is possible I have attempted to probe all known features of the language with all speakers, but this

¹ In Logoori – as in Makonde – the greatest variation is in the tone system, and is generally phonological rather than morphological.

was often not possible. For example, the two-H tone patterns associated with object prefixes in some tenses was not a known feature when long-distance interviews with speakers in Kenya were conducted (sessions of script-reading run by Kelvin Alulu), and I have limited information from those speakers on the pattern (in particular, whether those who did not use it *could* nevertheless use it). The H-erasure pattern of the bare-future tense was unknown until the end of 2017, so it is unknown what the distribution of that pattern is across speakers. As a general rule, patterns discussed here are attested in the data gathered from Editon Mulera and possibly other speakers, but patterns not employed by EM are specifically notated in terms of which speakers have it. Being a first version, this product is a very rough draft, no doubt full of inconsistencies, spelling and grammatical errors, incorrect and empty cross-references (“see section X”). Future drafts are envisioned, to address deficiencies of writing and analysis. It is unclear to what extent it will be possible to address data lacunae. Although the intent of the project is to describe the language in sufficiently non-technical terms that non-linguists can understand what I am saying, I have no doubt that early versions of this work will be hard to make sense of for non-linguists and probably non-Banuists.

In an attempt to make this work more accessible to speakers of the language who are not linguists, I have constructed a brief overview of some important aspects of Logoori pronunciation, in the paper entitled ‘The Problem of Writing about the Logoori Language’ available online at <https://Languagedescriptions.github.io/Logoori/WritingtheLogoorilanguage>. There are features of Logoori pronunciation which require special symbols for writing, and speakers of the language are often not aware of these properties. The online paper tries to explain about tone and tone marking, vowels qualities, and the problem of “ny”: the document gives both written examples and recorded examples, so that you can compare the pronunciation of *váámíga* ‘they strangled’ versus *váámíga* ‘they strangled me’, or *kígórí* ‘bite it!’ addressed to one person versus *kígórí* ‘bite it!’ addressed to a group – these are words showing the importance of tone, and of the difference between the vowels [i, u] versus [ɪ, ʊ] in the language. Ultimately, I will deposit various items regarding Logoori at <https://Languagedescriptions.github.io/Logoori> (which is where this grammar book is made available)

The present version of the grammar is the “full” version, focusing on complete documentation. It is consequently a bit long, especially for a casual reader. A separate summary version of the work is or will be produced, which provides just the essential details and some illustrative examples.

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I would like to thank the many speakers of Logoori who have aided me in this research project: Rose Kamwesa, Editon Mulera, Beatrice Khisa, Molsworth Luvaha, Norah Mungasia and Bridget Mugesia who endured hours of obscure in-person questioning, and

Ronnie Kisato, Richard Lugwili, Francis Aziavula, Enid Keseko, Splendour Yonge Isigi, Paul Mulehi, Lung’afa Igunza, Bathwell Adegü and Franklin Inzuga who endured pages of obscure long-distance script-reading. Editon Mulera deserves special thanks not only for his deep and consequently invaluable insights into Logoori, but also for his tireless patience in answering my hundred thousand questions, for years and years. I would also like to thank Kelvin Alulu for enduring many hours of administering many pages of obscure long-distance script. I would especially like to thank Editon Mulera for his extraordinary endurance and commitment to this project, and for his remarkable analytic insights into the language, not to mention putting me in contact with numerous speakers of the language. Finally, I would like to thank Umbisa Gusa for initially introducing me to the language, briefly: and then, for locating a speaker of Logoori for me in Seattle (Editon Mulera) when the project re-started in 2014.

I owe a debt of thanks to Michael Marlo of the University of Missouri, through whose auspices this project was made financially and infrastructurally possible. That support was manifested primarily through NSF Grant BCS-1355750, but also through innumerable mechanisms of the University of Missouri which I never fully understood. Beyond an invaluable infrastructural contribution, Mike has contributed substantially in the earliest data-gathering phase when we worked together for a year with Rose Kamwesa, and ever since then by discussing all sorts of facts of Luyia linguistics.

Finally, a note about the peculiar structure of this work – two volumes. Volume I can be considered the “executive summary” of Logoori structure, stating what the major trends are, and giving fewer examples. It is, in fact, a substantial reduction of Volume II (this volume), which is a repository for all of the reportable facts and supporting data (it still does not contain all of the data, which exceeds 140,000 data items as of this writing). One can read Volume I to get the big picture, and Volume II to get the details. However, Volume I will only be written after Volume II is finished.

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Introduction to Logoori Phonology and Morphology

David Odden

The purpose of this work is to describe the Logoori language, based on work carried out (non-continuously) from 2004 to the present. This work is being continuously revised, and there is no planned end-point to this research, though it is possible that at some point part of this project will be officially published. Its main focus is phonology and morphology, with less attention paid to syntax. As an appendix to this work, collected lexical material will also be provided, either physically included in this file, or with a link to such data (online, with associated sound files).

Logoori is one of the Luyia languages, which are a set of about 18 related languages of Kenya and Uganda, including Bukusu, Tiriki and Wanga among others. It is generally said that the language is spoken in Maragoli (EvoRogoori), which roughly corresponds to Sabatia and Vihiga constituencies within Vihiga county, covering about 80 sq. miles. EvoRogoori is located approximately between the equator and $.15^{\circ}$ N latitude, 34.6° to 34.8° E longitude, and includes the towns of Kitulu, Majengo, Mbale, Chavakali, Mudete, and other locations. Maps of Vihiga and Sabatia constituencies from the Kenyan Independent Electoral and Boundaries Commission will give you a sense of where the various parts of EvoRogoori are. The southern end of EvoRogoori is approximately the Maragoli Forest, in Vigulu and Chagenda wards, which lies on the equator, about 10 miles from the major Lake Victoria port city of Kisumu.



The population in the area is around 220,000 (it is reported in Ethnologue that there are about 600,000 speakers of Logoori). Since there has not been a census in Kenya which records language knowledge, the number of Logoori speakers is known only very roughly. It is known that many Logoori speakers do not live in traditional Maragoli, and there has been substantial migration in the modern era so that communities of Logoori speakers live throughout Kenya and even in Uganda and Tanzania (not to mention recent expatriates who have moved throughout the world).

According to their traditional history, as reported generally for the Kenyan Luhya people in John Osogo (1967) *A history of the Baluyia*, the Logoori are the descendants of an individual, Mulogoli, whose ancestors migrated from what is now Western Uganda near Lake Albert, passing to the north of Lake Victoria. Muhindira is said to be the grandfather of Mulogoli, Suba and Mugusii, the latter two being the reputed ancestors of the Suba and Gusii people (not linguistically classified as Luhya). Mulogoli moved south with Mugusii, but later backtracked towards the Maragoli hills/forest, living in a cave in Vigulu in the southern part of evoRogoori, and had four sons Saali, Kizungu, Kirima and Maabi, who define the four main clans of the Logoori.

1. Logoori, Luhya and Bantu languages

The majority of the languages which are spoken in a stretch from Cameroon to Kenya and on to South Africa are members of the Bantu language family, which means that we believe that millenia ago, there was a single ancestral language (which we call “Proto-Bantu”), and each of the contemporary Bantu languages ultimately descends from that language. We also have evidence that “Proto-Bantu” is the descendant of an even earlier language which also gave rise to such languages as Igbo, Akan, Temne, Bambara and Zande. As speakers of this Proto-Bantu language migrated to the east and south and settled in different locations, the language that they spoke changed. One of the earlier historical branches within Bantu is the group of languages spoken around the Great Lakes in the northeastern Bantu zone, especially around Lake Victoria. We believe that “Great Lakes Bantu” represents one of the offshoot languages of Proto-Bantu (there are no doubt numerous intermediate languages between Proto Bantu and Great Lakes Bantu, but we will just move quickly to Great Lakes Bantu which is a clearly established predecessor of the contemporary languages).

Some examples of contemporary languages descended from Great Lakes Bantu are Ganda, Haya, Hunde, Kerewe, Rwanda, Kuria, Gusii, Jita and the various Luhya languages. Although it is clear that the Luhya languages are related to each other and are also related to languages like Kuria, Jita and Ganda, the exact relationship is not at all clear. When we claim, for example, that Bukusu and Gishu are “particularly close”, this is based on studying both languages in sufficient detail that we can delimit a few differences between the languages. When we say that Bukusu and Nande² are “somewhat

² Nande is a language spoken in the DRC, and is not at all related to the Nilotic language Nandi.

close”, this again means that there are similarities (they are, after all, Bantu languages), but there are more than just a few differences between Bukusu and Nande. That is, many more changes to the earlier language were made in differentiating Bukusu and Nande, whereas not many linguistic changes have been added in differentiating Bukusu and Gishu.

The problem that we face in saying how the Luhya languages relate to each other is that we do not have a comprehensive database of language facts that would allow us to say in what ways Logoori is similar to or different from e.g. Tsootso, Isukha, or Bukusu, not to mention Gusii, Soga and Suba.³ In part because of these lacunae in our knowledge, and in part because of the nature of Logoori, the position of Logoori within Luhya is particularly unclear. Some linguistic works have assigned Logoori to a subgroup that includes Kuria, Gusii, Suba, Zanaki and so on – also including Idakho, Isukha and Tiriki, making them be separate from the rest of Luhya. One of the reasons for this uncertainty is that language similarity can be measured on at least three fronts. One is whether languages use the ‘same word’ for something. For instance, the root word ‘black’ is approximately *-mwaamu* in Tiriki, Isukha, Idakho, Nyore and approximately *-mali* in Bukusu, Wanga, Kisa, Nyala East, Khayo; ‘fish’ is approximately *-nyeni* in Marama, Kabras, Nyala, Khayo, and Marachi but approximately *-suzi* in Logoori, Nyore, Idakho, Isukha, Tiriki. The second relates to grammar: are the various ways of constructing verbs the same, or do they differ? The third regards specific rules of pronunciation that have historically been added, in accounting for the actual pronunciations of words.

An example of such an added rule of pronunciation can be seen in a common word for ‘hand’ or ‘arm’. First, compare the form of the word in most of the Luhya languages. In these example the letter [x] is a velar fricative like the *ch* sound of German, often spelled *kh*.

Bukusu	kúmuxono
Wanga	omuxóno
Marama	omuxono
Kisa	muxono
Kabaras	omuxono
Nyala East	omuxono
Nyala West	muxono
Nyore	omuxono
Xayo	muxono
Marachi	omuxono
Itaxo	mùxónò
Isuxa	muxono
Tiriki	múxóno

This word also appears in a number of other Bantu languages

³ The point of the broader Luhya languages project which this study is a part of is precisely to fill that gap in our understanding of Luhya language structure and lexicon.

Nyoro	omkono
Kerewe	omukono
Nkore	omkono
Ganda	omukono
Kamba	mokono
Nilamba	mokono
Ruguru	gumkono
Swahali	mkono
Ila	mukono
Nyanja	nkono
Yao	nkono
Zulu	umk ^h ono

Within Luhya, the word has the consonant [x] and outside of Luhya it generally has the consonant [k]. Systematic comparison between Bantu languages allows us to posit that the original root noun was *-kono*, and that *k* changed pronunciation to *x* in the Luhya languages. This sound change is known as “Luhya Law”: *k, t* become [x, ɾ] (also, *b, d, g* becomes [p, t, k]).

However, the Logoori word for hand is [ʊmókóno] – Logoori can be distinguished from all of the other Luhya languages, in that Logoori apparently has not undergone the pronunciation change known as “Luhya Law”, where original *k* becomes *x* (*kh*) and original *t* becomes *r* (distinct from *l*). One might infer from this that Logoori split off from the other other Luhya languages much earlier, before the pronunciation innovation “Luhya Law” took hold. The issue is a bit more complicated, though, because according to Brown (1972), northern dialects of Gishu (Lumasaaba) also do not exhibit the effect of Luhya Law, yet Gishu is extremely similar to Bukusu. Bukusu and southern Gisu are mutually intelligible;⁴ however, we do not actually know how similar the northern and southern dialects of Gishu are – we cannot consult grammatical descriptions of northern Gishu. Rather than claiming that northern Gishu and Logoori inexplicably split off from the rest of Luhya, we could alternatively posit that Gishu and Logoori underwent the changes $*k,t \rightarrow \chi, r$ which introduced new sounds, but then after northern Gishu and Logoori developed as distinct languages, the “opposite” sound change was added, that $*\chi, r \rightarrow k, t$. The sound change was reversible, because earlier *k* always became *χ* and *χ* always came from *k*. We know from the study of loan words in Logoori that Logoori also adopted a “spontaneous voicing” strategy where $*p,t,k \rightarrow b,d,g$, which even affects modern loanwords (e.g. *ebóósta* ‘the mail’ ← *post*).

Having said that Logoori has [k] instead of [x] in words like *ʊmókóno*, I should mention that the 1940 Logoori grammar manuscript posits the existence of “kh” and “rh” in the “guttural dialects”, giving *lukhui* ‘firewood’ as an example. I was skeptical about this, having never encountered any speaker with [x] except marginally (an Isukha-Logoori bilingual speaker who said [mwíísuxa] rather than [mwíísuka], but used [x] only for that word). Then work commenced with Franklin Inzuga in 2022, who systematically

⁴ I base this on research by one of my students, Nasiombe Mutonyi, a speaker of Bukusu, who collected data from a speaker of (southern) Gishu, whereby I can see the virtual identity of the languages. Additionally, he reported that it was easy to understand the Gishu speaker, and that there were just a few differences in the languages.

produces a [x]-like version of what is [k] for other dialects, as well as leniting /g/ to [ɣ] (a feature attested with many other speakers). The moral of this story is that one must be very cautious about making claims about the whole language, and all claims made herein are “as far as I know”.

The goal of this work is to provide such a description of Logoori, which may be useful in a more systematic comparison of the various Luhya languages. Each of the Luhya languages needs a comprehensive *description*, which is a prerequisite for a comprehensive *comparison*.

2. Variation

There is considerable diversity in the Logoori language. One example is that for some people, the word ‘people’ is *vaandɔ*, but others say *avaandɔ* using the so-called augment *a-*. The word for ‘conga drum’⁵ may be pronounced as *ɪsúgúti* or *ɪsúgúdi*, and an individual may (or may not) use both forms. Some people use the word *vóombi* ‘both (people)’, and some do not. In this work, I present the facts of the language as I have encountered them, not discriminating between one form or the other based on a perception that one form is ‘true Maragoli’, nor that it is used by more people. I thus include the noun *ekébóoko* ‘hippopotamus’ even though it is borrowed from Swahili: I include it because since this is a word used to talk about hippopotamuses in Logoori, and the purpose of the work is to report how the language is, not how someone might wish it to be.⁶ I will report on the grammar of noun plus number using constructions like *mia móoja* ‘100’ which is taken from Swahili, since this is a construction that people do use when speaking Logoori. There are very many factors which could govern variation, such as geography and age, and a systematic sociolinguistic study of this variation would be necessary to know why speakers use one form versus the other.

It is commonplace and, I maintain, correct for descriptive linguistic works to eschew strong commitments to particular correlations between linguistic form and sociologically relevant correlate. I have a few vague impressions of the relationship between social fact and linguistic form – a good example is the linguistic distinctiveness of the Logoori language in North Maragoli compared to South Maragoli – but I refrain from trying to characterize which speakers tend to use a particular verb tense, apply vowel harmony, retain the augment, or expand monosyllabic noun roots like *engo*, *luku*, *gutu* with epenthetic final [i], since such claims require a focused sociolinguistic investigation with a much wider range of speakers.

Apart from possible geographic correlates of language difference, I expect there to be demonstrable age-related language differences, beyond the expected lexical attrition associated with cultural change over time. The status of the language has changed over the years, in part because of greatly increased mobility and consequent mixing of older regional dialects, and partly because English and Swahili have become very important to modern life in Kenya.

⁵ More accurately, a specific dance where a particular drum is played. ‘Conga drum’ is simply the most similar drum for which there is a word in English.

⁶ The historically original noun *íngóvó* ‘hippopotamus’ is not as widely known among speakers, no doubt because hippopotamuses are very scarce in the area.

Because the population density of western Kenya is extremely high especially in Maragoli, it has proven necessary for many Logoori to leave the area in search of farmland – this has led to Logoori communities in Tanzania and Uganda, as well as many Logoori dispersed throughout Kenya. Because the Logoori diaspora is substantial, families which left Evorogoori can still maintain the language. Again, lacking a systematic sociolinguistic study of the language, I have nothing to say about any special linguistic features of diaspora Logoori. I can only offer the specific facts of data collected from individuals, and leave for the future any controlled and in-depth research into linguistic correlates of age, geography, or other factors.

Certain variable features are frequent enough to deserve comment, and I will comment on such variation at appropriate points, for instance on the realization of word-final historical **e, *o* as *ɪ, ʊ* for certain speakers; accompanying lexical materials will attempt to note the range of pronunciations encountered for collected words. I have observed the following wide-spread though often sporadically-instantiated phonological differences:

Word-final /e o/ may become [ɪ ʊ], when not preceded by [e, o], for example [ɪtíiro, títíiro] ‘centerpole’, [romillo, romillo] ‘gullet’, [násáaye, násáayi] ‘God’, [í!ngóróve, í!ngórovɪ] ‘pig’.

Voicing of voiceless stops: EM *ipóosta* ~ BK *ibóosta* ‘post office’, *isúgúdi* ~ *isúgúti* ‘sp. dance; drum for *sukuti* dance’ (originally an Isukha dance, and in that language the word is pronounced with *k, t*). This extends to optional contextual variation in the cl. 7 prefix for some speakers.⁷

Tone differences: although there is a fair degree of agreement in the underlying tone of probably-native words, there is substantial variation in the tone of loans, especially nouns (since verbs only offer a two-way choice). For instance, we find pairs like EM *vm’feneesi*, BK *m’feneesi* ‘jackfruit’. In addition BK produces *m’fénési*. This variation is not particularly surprising, since the jackfruit is a recent introduction and is not ubiquitous. We also find variants in non-loans such as ‘rabbit’ (EK, BK) *kí’fwóoyó*, (RL, EM, RO, PM) *íkí’fóoyo*, (FA, EM) *kífóoyo*, and ‘termite’ (BK) *rifwéé’déré*, (FA, EM) *rí’fédére*. The particular lexicalized tones of these words are compatible with the attested lexical tone patterns of all speakers, thus the variation can be characterised as differences in choices that are consistent with a range of tone possibilities found for these speakers. There are quite-substantial dialect differences in the grammatical tone patterns associated with verb conjugation.

Vowel quality (likewise) and quantity (*mséve* / *mséeve* ‘Kikuyu (derog.)’, *rikáá’fúóri* / *rikáá’fóri*), *ikááyóóngo* / *ikáyóóngo* ‘weed sp.’ especially the penultimate syllable of loanwords. The distinction between [i,u] versus [ɪ,ʊ] is tenuous and difficult to perceive for some speakers, but clearer for others.

A distinction between dental [ɲ] (written here as *n*) and palatal [ɲʲ] has emerged for some speakers, but is uniformly palatal [ɲʲ] for others.

Some speakers have a clear tense-lax mid vowel distinction between [e,o] (IPA [ɛ, ɔ]) and tensed [ɛ̟, ɔ̟], for others this variation is not found or is infrequent.

⁷ This alternation is the synchronic residue of Dahl’s Law.

The liquid, conventionally spelled “l”, varies phonetically. While most speakers phonetically manifest that sound, when singleton, as [ɾ], it is noticeably different in the speech of FI, where it is most often [l].

There are differences in patterns of agreement, so while some speakers allow both *marwá mari* and *marwá gari* for ‘how much beer’, others allow only *marwá gari*. Voicing of the cl. 7 noun prefix /ki/ is optionally allowed before a voiceless consonant, for some speakers, e.g. *keségese* ~ *geségese* ‘roof peak’; *kehénene* ~ *gehénene* ‘tailbone’.

The augment (a nominal prefix) is optionally deleted, under highly variable phonological circumstances, hence *vaandv* or *avaandv*.

The past tense prefix *-a-* may, according to speaker, either precede the negative marker *-ta-* or follow it, in negative relative tenses ([_{em}] *atáádééka* ~ [_{ml}] *yáátádeeka* ‘he who didn’t cook’). Speakers may allow the negative to be variably ordered with respect to the tense prefixes *-ri-* and *-ka-*.

Words originating from Swahili are (unsurprisingly) subject to considerable variation in pronunciation. The noun ‘padlock’, from Swahili *kafuri*, most often appears as *rikááfori* but in a significant number of instances appears as *rikáfori*, *rikáá’fóori*, *rikáá’fóori* and *rikáá’fóori* (individual speakers tend to be internally consistent in their choice). Similarly, *mfenesi* ‘jackfruit’ appears as *mfenesi*, *m’fénési*, *mfeneesi*, *m’feneesi*, and *mfé’néesi*; *kibiriti* ‘match’ is borrowed as *kibí’ríiti*, *kibí’ríiti*, *kí’bíiríiti*, *kibí’ríiti*, *kibí’ríiti* and *kibí’ríiti*, and *sungura* appears as *kisúú’ngóra*, *kí’súúngóra*, *kísúú’ngóra*, *kísúúngóra*.⁸

Discerning a ‘standard’ for the language (as might play a role in teaching materials) is, unsurprisingly, very difficult. In the face of observed variation in pronunciation, there are many glaring contradictions. The noun ‘knife’ can be pronounced as [ɔmɔvano, mɔvano, ɔmɔvano, mɔvano, ɔmbano] or [ɔmbano], which can correspond to an even greater range of spellings (*um’bano*, *ummbano*, *om’bano* for [ɔm’bano]). Written literature in Logoori is further discussed in §4. There is no systematic all-encompassing study of Logoori written literature from which one might discern standard writing practices. As a substitute, one might follow the practices of a single Bible translation, but writing practices are highly divergent across Bible translations. In short, the idea of a standard language, as applied to all of Logoori, is simply wishful thinking, and this work therefore treat all systematic variation as equal.

3. Speakers and elicitation

The bulk of the data comes from 14 speakers whom I have worked with (in chronological order of first contact). Year of birth gives some indication of the generation of the individual, and the two-letter abbreviation after the speaker’s name is the code which I use in making speaker-specific claims.

Rose Kamwesa (RK: b. 1953), grew up in Igakara, northwest of Majengo in South Maragoli

⁸ It is not certain that this word comes from Swahili.

Editon Mulera (EM: b. 1982), grew up in Chanzeywe, midway between Majengo and Luanda

Beatrice Khisa (BK: b. 1962), grew up in Mbale (Vihiga) and Kamkuywa (Bungoma)

Paul Mulehi (PM: b. 1957), grew up in Mahanga (near Chanzeywe)

Richard Lugwili (RL: b. 1962), grew up in Nadanya (Vihiga County)

Francis Aziavula (FA: b. 1977), grew up in Mautuma (Kakamega)

Enid Keseko (EK: b. 1993), grew up Kaimosi (Vihiga)

Splendour Yonge Isigi (SY: b. 1993), grew up in Elunyu (Vihiga): daughter of Paul Mulehi

Norah Mungasia (NM: b. 1982), Kakamega and various locations

Ronnie Kisato (RO: b. 1981), also Chanzeywe, and is a childhood friend of EM

Molsworth Luvaha (ML: b. 1975), Losengeli (near Mago)

Bridget Mugesia (BM: b. 1973), Losengeli and Nairobi

Lung'afa Igunza (LI: b.1990), Nairobi and Gavudia

Bathwell Adegü (BA: b. 1967), Changutsi (Vigulu near Maragoli Hills)

Franklin Inzuga (FI: b. 1962), Chamakanga

The geographical distribution of speakers in the data pool is not particularly “even”. Luvaha, Keseko, Yonge, Mugesia and Inzuga are from North Maragoli east of Mudete, and Mulera, Kisato, Mulehi, Kamwesa and Adegü are from South Maragoli, west of Majengo – in both areas, the individuals grew up within 3 miles of each other (Mulera & Kisato, and Mulehi & Yonge know each other; Adegü was Mulera’s school teacher).⁹ One of the fundamental problems that this study encountered is that the data-collection period for each speaker has been relatively short, except in the case of Mulera who has been part of the project continuously since 2014. Given the vast number of examples necessary to firmly establish the many facts of the language, some aspects of the grammar are more-broadly investigated (nominal morphology including associated modifiers), and some are under-studied (relative clause variants of verbs – not studied for most speakers). Data from Kamwesa, Mulera and Luvaha are both most extensive in terms of token-count and covers more areas of the language, compared to that from other speakers. For example, virtually all examples of negative relative clause verb forms come from Mulera and Luvaha. As observed in subsequent chapters, these speakers have different strategies for verb inflection. I obviously do not know which pattern is employed by the majority of speakers of Logoori. Because of the demographically limited range of our data, I eschew universal claims about the language: some patterns have only been investigated with one or two speakers, and I may report a regional or generational innovation that doesn’t hold for all or even most speakers of the language.

Regarding the method of data acquisition for this work, all data was gathered via some form of directed interview. In the case of data from Kamwesa, Mulera, Khisa, Mungasia, Luvaha and Mugesia, data was gathered during face-to-face sessions with myself, and in the case of data from Lugwili, Keseko, Aziavula, Yonge and Mulehi, data elicited via script written by me, administered and recorded in Kenya by Kelvin Alulu, and subsequently transcribed by me. Data from Kisato, Igunza, Adegü and Inzuga was

⁹ Mulehi, who is Yonge’s father, has lived in North Maragoli for years, but grew up in Chanzeywe.

self-recorded, following scripts provided by me, supplemented by data from Zoom interviews with Igunza. Data from Kamwesa was not (generally) recorded, instead exists in handwritten notepads.

I provide not only “acceptable” Logoori forms, elicited from speakers, but also negative data on acceptability which is likewise elicited, that is, the judgment that **yaakoki'dééká* is not correct for ‘he just cooked it’ (instead of *yaakoké'dééká* or *yaakoki'dééká*). Since this generally requires the interviewer (a non-speaker of Logoori) to propose a pronunciation or arrangement of morphemes and words, and ask if it acceptable, there is the possibility that the hearer did not attend to the exact utterance asked about. To guard against this, judgments of unacceptability which hinge on a specific phonological form (generally a fact of tone or vowel length) are only registered if they are accompanied by the speaker correctly pronouncing the target utterance, and rejecting such a form.¹⁰

4. Material on the Logoori language

The volume of indigenous written texts on Logoori is limited, but not negligible. It is unclear how many Bible translations exist, but there are at least three.¹¹ Within those versions, one can discern differences in spelling patterns, especially differences in indication of vowel length.

<i>older</i>	<i>newer</i>
makura	makula
uwi ikisukululwi	uwa ikisukululwi
yivula	yiivula
kigira	kijira
musaza weve	musaza weeve
makiriri	makiliri

There are a number of works on Logoori by Elisha Ugaada Ndanyi and Joseph Olindo Ndanyi, including *Proverbs and sayings with their translation* and the dictionary *Amang'ana go Lulimi lwo Lulogooli* plus the English version of the latter. To this can be

¹⁰ A partial exception is judgements of phonetically impossible geminates. A speaker can easily volunteer forms like *yáá'ddúyá* and *yáári'dúyá* ‘he beat it-5’, but gemination is not possible for all consonants, thus *yáári'góra* ‘he bought it’ exists, and not **yáá'ggóra*, owing to place of articulation (only coronal consonants geminate via this process). In a few instances, speakers actually pronounced the non-existent geminate and rejected the form, but often such judgments come in the form of the interviewer proposing a pronunciation which is simply rejected. Such judgments are included only when the speaker consistently recognizes and replicates the distinctions produced by the interviewer, and clearly indicates that the interviewer’s pronunciation *yáári'góra* is correct but **yáá'ggóra* is not.

¹¹ I am in possession of a full translation copyright 2008, 1986; a New Testament translation copyright 1954, 1967, 1972, 1996; the book of Mark from 1914, and an online extract of Genesis from a 1967 version. The first Bible translation was apparently carried out by Emory Rees, with a complete New Testament completed around 1928. Most of these translations, e.g. the 1967 full Bible, are not presently available. The first translated book of the New Testament, Mark, was compiled and published around 1914 by Emory Rees and Joel Litu as *Ivangeli ve Yesu Kristo Kuli ya Ng'olwa ni Marko*, which is currently available in reprint form.

added J. Ndanyi's book *The Maragoli*, an account of the Maragoli people, which contains culturally significant terminology in Logoori, especially lists of names. I obtained a copy of the story *Lialuka lia Vaana va Magomere* by Francis Imbuga (published in 1986 by Heineman Kenya), and the collection of stories by Kavetsa Adagala *Language and Literature in Primary Schools: Lulogooli Ne Tsing'ano Tsya Valogooli* (1979, published as *Institute of African Studies, U. Nairobi Paper 121*), as well as S. L. Sabwa *Ndayanza lulimi lwetu* (nd or publisher) and *Tsinyimbu tsyo Kwizominya Nyasaye* (2007, Evangel Publishing house). I also obtained copies of now-defunct reading primers from the TKK series, used in local schools, generously provided by Joseph Mulera and Bathwell Adegu. More recently, a series of books translating the national standard vernacular primers for Kenya under the CBC plan, entitled *Kusangaal'le Lologooli* translated by Benard Ininda Eneyia has been published.

Another significant work containing language material on Logoori is *The Bantu of North Kavirondo*, by Günter Wagner (1949, Oxford University Press), which contains important lexical information (for example a detailed analysis of kinship terms; the names of buildings or artifacts and their significance, gathered together into an appendix). It is reported that Wagner was working on a volume of Logoori texts, which seem to have disappeared, and at any rate were not published.

By way of linguistic publication, we have in addition to the dictionaries by the Ndanyis (the Logoori monolingual dictionary and the Logoori-English one) the publication by Stanley Godia, *Logooli (Kenya) Rules for Logooli Orthography* (1960), which presents spelling conventions for the language. The Godia conventions are followed to some extent in older works on the language, for example *zinguza* 'vegetables' is spelled *tsingutsa*, and *r* is to be written instead of *l* after *e*, *i* (following the rule of Luganda). More recent publications in Logoori tend in the direction of the present spelling, but without phonetic enhancements, marking of tone, vowel quality, and generally favoring *l* over *r*. The Logoori linguist Joyce Wangia has two publications on Logoori, (2008). 'Morphophonological Issues in Translation: The Lulogooli Bible' (*The Bible Translator*: 59, No. 1) and (2014) 'Tense, Aspect and Case in Bantu and significance in Translation: The Case of Lulogooli Bible' (*International Journal of English Language & Translation Studies*. 2(2), 138-146 Retrieved from <http://www.eltsjournal.org>). There also exists an old undated sketch of the language, 'A brief grammar of the Luragoli dialect, North Kavirondo, British East Africa'. Additionally, Wilson Gudahi has published (via the publisher Education in Store) a work entitled *The phonology of a Bantu dialect: Logoli language (research based applied linguistics)*. Though the portion which I have seen gives broad generalizations but no data, it does seem to correctly identify the fact that the language makes a distinction between [i] and [ɪ], [u] and [ʊ], which most sources on the language fail to note. Recently, a number of short works especially designed to promote use of the language have been promulgated online due to the efforts of Lung'afa Igunza and collaborators, via Maragoli Journal and Maragoli TV, and related electronic venues.

The primary source of contemporary semi-theoretical linguistic data on the language has been Elizabeth Leung's 1991 MA thesis from Cornell, *The tonal phonology of Llogoori: a study of Llogoori verbs* (published as *Working papers from Cornell Phonetics Laboratory*, 6). Another source of Logoori data is Ward Sample (1974) 'The applied extension with dative and benefactive implication in Llogooli' (*Mila: a biannual*

newsletter of cultural research 4. 12-22). The 1976 UCLA dissertation by Martin Mould, *Comparative grammar reconstruction and language subclassification: The North Victorian Bantu languages*, also provides some examples of Loroori elicited from a speaker. There are, in addition, a number of papers were written, deriving from field work on the language conducted at Pomona College and UCLA starting around 2015. Unfortunately, data from those projects have proven to diverge from data which I have gathered, to the point that I cannot comment on those differences.

5. Brief sketch of the language

This work follows a traditional organization of language description that starts with aspects of pronunciation then proceeds to formation of words, culminating in principles of phrase and sentence construction. However, principles of sentence construction impinge on pronunciation, for example certain modifiers cause assignment of H tone to the penultimate syllable of a preceding word, and most principles of pronunciation require analysis of word sub-parts to understand what the underlying form of a word is. One needs to simultaneously understand many parts of the language, in order to understand one part of the language. In order to fully understand how perfective verb inflection works, one has to know a bit about the class agreement system which implies knowledge of noun classes, one needs to know about the derivational morphological structure of verbs, and one needs to know about numerous phonological processes. This section sets for a few basic facts about the language which may assist the reader in reading sections which depends on information provided in later chapters.

This work contains at least the following chapters.

1. Introduction
2. Phonetics and Phonotactics
3. Segmental Phonology
4. Verbal Tonology
5. Nominal and Phrasal Tonology
6. Noun Classes
7. Class Agreement
8. Tense-Aspect Inflection
9. Stem Derivation

5.1. Phonetics

The essential information from Chapter 2 is the system of transcription used in this work. It provides some more detailed information about actual pronunciation, but most importantly it clarifies that data is often presented in an “as pronounced” form, and does not consistently normalize all phonetic details out of existence. Some speakers have developed palatalized consonants (e.g. *myóó'gó m'bisí* ‘raw cassavas’) from deletion of the augment *r*; there is velarization and unrounding of *w* after labials (*mwaakweeya* is sometimes phonetically [myaakweeya]). A salient feature of Loroori pronunciation is that *y* is typically a dental approximant, which is a very rare sound in the world’s languages.

One of the most significant challenges of the language is the phonetic realization of tone, owing to an array of low-level pitch adjustment rules which make it difficult to decide whether certain pitch patterns reflect phonological rules versus phonetic variation.

5.2. Segmental Phonology

Chapter 3 is very complex, because the segmental phonology of the language is very complex. When two morphemes are combined, their form often changes because of phonological rules, and this poses an organizational challenge for a grammar, in that one needs to be able to “undo” phonological rules in order to recognize that the *j* in *njeenyí* ‘I wanted it.₇’ is the same class 7 object prefix morpheme as *kí* in *vaakírími* ‘they have plowed it.₇’. This chapter lays out the various non-tonal rules modifying the pronunciation of morphemes. Illustrative examples of morphemes in relevant morphology chapters will then pool together both the basis unmodified morpheme (to the extent that an unmodified allomorph exists) along with forms which have undergone various phonological rules.

A significant portion of the segmental phonology regards how combinations of nasal plus consonant are modified. Certain prefixes (1s in verbs, cl. 9-10 in nouns and adjectives) end with a nasal /N/, which causes the following consonant to change. The main changes to the following consonant are hardening and voicing. The only NC sequences (where N is not syllabic [ṁ]) are N plus a voiced stop or fricative. Therefore, certain consonants (f, v, h, sh, r, y) harden to stops, and voiceless stops become voiced. By a special rule (Ganda Law), the consonants *g*, *r*, *y* delete after N if the following syllable begins with a nasal consonant. The preconsonantal nasal /N/ will delete under two circumstances: when the following voiceless fricative does not harden to a stop, and when immediately followed by another nasal.

It is somewhat difficult to tell whether certain roots begin with a vowel or with the glide *y*, for example see *kwáata* ‘to do surgery’ (*kw-* is the infinitive prefix) but also cf. the imperative *yata* ‘do surgery!’. This chapter analyzes this problem – some roots begin with a glide (*kovava* ‘to dig’) and some begin with a vowel; but *y* is inserted in certain contexts, roughly speaking, when there is no consonant at the beginning of that syllable. Insertion of *y* is very complicated, though, as we see by the fact that it always applies to certain kinds of morphemes (it always applies to a verb root in the imperative, where the vowel is word-initial), but only sometimes to others (it does not apply to the cl. 1 subject prefix *a*, cf. *adeechi* ‘he cooked’, but *y*-insertion *does* apply when /a/ is added to a vowel-initial root, as in *y-iiti* ‘he killed’).

There are inter-consonantal vowel deletions in the language, where CVC becomes CC, depending on the nature of the two consonants. There are 4 subtypes of such deletion: deletion of a vowel in rVC where C is any coronal consonant; deletion of V in the sequence /vVv/ (two occurrences of *v* separated by a high vowel); deduction of /zi/ before /s/; and deletion of the vowel in /mʊ/ regardless of the following consonant. Especially in the case of rVC-reduction, this gives rise to geminate consonants, which are not common in Bantu but are found in Ganda.

Logoori has both regressive and progressive vowel height harmony. Regressive harmony is fairly easy to analyze, in that the vowels /i ʊ/ becomes [e,o] when the following syllable contains the vowels *e*, *o*. An interesting complication is that certain

consonants (f, sh, ch, j) block the rule; post-consonantal glides do as well, although simple onsets with *y* do not block harmony. Progressive harmony is a bit more difficult to analyze. In the case of the applied extension /ɪr/, that vowel analogously lowers after /e,o/. Final vowel suffixes (deverbal adjectives, subjunctive, variants of the perfective) alternate between *ɪ* and *e*, but the conditions for the alternation are quite variable. The question then arises, is the final suffix /ɪ/ which lowers under certain circumstances (similar to but not the same as those for lowering of prefixal and extensional vowels), or is the suffix /e/ which raises in complementary circumstances.

Another major problem in the segmental phonology of the language is vowel hiatus resolution. Vowel sequences generally are eliminated by certain rules, either glide formation or vowel deletion. Whether or not the first vowel becomes a glide or deleted depends in part on what the first vowel is (i,u versus ɪ,ʊ versus a), and whether the sequence comes about within a word, or between words in a phrase. A related problem is that the merger of vowel sequences sometimes results in a short vowel, and sometimes gives a long vowel – most generally, the vowel is lengthened, but the result is short in certain phrasal conditions (when the second vowel is the augment of a verbal subject prefix – and then there may be lengthening when other factors are present).

A full understanding of these phonological processes requires some understanding of the morphological system which combines prefixes, roots and suffixes, but examples of each process are presented in such a way that, for example, examples of vowel fusion involving the future prefix /ra/ are presented together, and examples of vowel fusion involving the past prefix /ka/ are also presented together.

5.3. Verbal tone

Chapter 4 on verbal tonology looks at how tone patterns are used as a part of the system of verbal tense marking, serving as a prelude to chapter 8. Because of the rich system of verb inflectional morphology, there are dozens of surface forms for an individual verb, where the tone pattern is part of what defines the form. There is, for instance, a difference between the remote past and the hodiernal perfective past tenses, which is marked not only by the selection of different prefixes and suffixes (the main focus of chapter 8), but also by the pattern of tone on the stem. There is also a purely tonal difference between the 2nd singular subject form of a given verb and the class 1 headless relative form of the same tense – *rw-ó!chóóra* ‘when you will draw’ versus *ʊchóó!rá* ‘the one who will draw’. The complexity of the system is explicable in terms of a lexical distinction between H and L roots, a system of rules of middling complexity which relate basic verb tone to an interaction between lexical tone and a handful of tense-determined melodic patterns; then the actual tonal realization of a verb involves a further set of rules, such as one shifting H tone from the class 1 relative prefix /ó/ to whatever follows. Individual speakers may differ in their versions of these rules, thus matters of variation significantly expand the complexity of the verbal tone system.

Chapter 5 finishes the discussion of tonology with an analysis of noun tone patterns and tone sandhi rules pertaining to noun phrases (such as how possessive phrases are marked with a certain tonal melody): this chapter depends lightly on the class-agreement information given in chapter 7.

Chapter 6 sets forth the noun class system, explaining the markers at the beginnings of nouns such as *mɔ*, *mi*, *va* and so on. The specific class indicates whether the noun is singular or plural, and can provide other information about meaning, for example *mɔ*- as the Cl. 1 marker indicates that the noun is a singular human, and its plural generally replaces *mɔ* with *va*. Certain classes have specialized meaning, such as *ka*- ‘cl. 12’ which means ‘small N’, *kɔ*- ‘cl. 17’ which means ‘on N’. This chapter introduces the noun classes of Logoori and their basic nominal shape; chapter 7 extends the exposition to agreements, where numbers, adjectives, possessives, quantifiers, demonstratives and subject and object markers on verbs have usually-similar markers to indicate what class they are agreeing in (as well as indicating some cases where agreement may be suspended).

Finally, chapter 9 looks at productive patterns of derivation, officially introducing affixes such as the passive, applied, reciprocal and causative which will by this point be recognized since they have appeared in numerous phonological discussions in preceding chapters.

Since basic morphological structure plays a very important role in understanding the language, here is a brief synopsis of morphological structure. Most words are composed of a “stem” of sorts which conveys basic lexical meaning, plus grammatical markers. In nouns and adjectives, exemplified by *ikí'fóóyó* ‘rabbit’ the former would include the root *fooyo* meaning ‘rabbit’, plus the prefixes *ɪ-ki*, which are noun class markers. Verbs are more complicated, in that they will include markers for the subject, the tense, possibly the object, a basic root meaning of the verb plus “extensions” which add meanings such as ‘for ___’, ‘make ___ do’, ‘each other’, and then a marker known as the ‘final vowel’ which is related to tense marking. Thus *va-ra-ka-ké-deek-er-an-e* ‘they will cook it for each other’ contains the morphemes *va* ‘Cl. 2 subject prefix’ (=they), *-ra-* and *-ka-* which are markers of the future tense, *-ki-* ‘Cl. 7 object prefix’ (=it), *-deek-* ‘cook’, *-ir-* which is the applied extension (=for), *-an-* which is the reciprocal extension (=each other), and *e*, the subjunctive final vowel which is used in certain future tenses. The combination of a root, any ‘extensions’ which follow, and the final vowel marker taken together are the stem. Because of the special relationship between the object prefix and the stem, an additional unit is called on, the Mstem (“Macrostem”), thus *-kédeekerani* would be the Mstem for this word, although it is not a word itself.