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 (was) 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 currently dispersed here in the relevant sections on morphology.

This is the product of the initial data-gathering phase of the project, where the goal was to elicit data which covers the obvious areas of the language that needed to be covered, and to discover the myriad non-obvious areas of the language also needing to be covered. It was discovered as a result of those elicitations that there is quite substantial variation in the language, much more that I encountered in e.g. Kerewe, and more like the level of variation found in Makonde. 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 eliciting on that 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 in new-found facts relevant to older chapters.

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. That 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 *váámiga* 'they strangled me', or *kɪgʊrí* 'bite it!' addressed to one person versus *kɪgʊrí* '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.

Acknowledgements

I would like to thank the many speakers of Logoori who have aided me in this research project: Rose Kamwesa, Editon Mulera, Beatrice Khisa, Norah Mungasia and Molsworth Luvaha who endured hours of obscure in-person questioning, and Ronnie Kisato, Richard Lugwili, Francis Aziavula, Enid Keseko, Splendour Yonge Isigi and Paul Mulehi who endured pages of obscure long-distance script-reading. 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. Finally, I would like to thank Umbisa Gusa for initially introducing me to the language, briefly, in connection with my Structure of Bantu class in around 1987: and then, for locating a speaker of Logoori for me in Seattle (Editon Mulera) when the project was re-started in 2014.

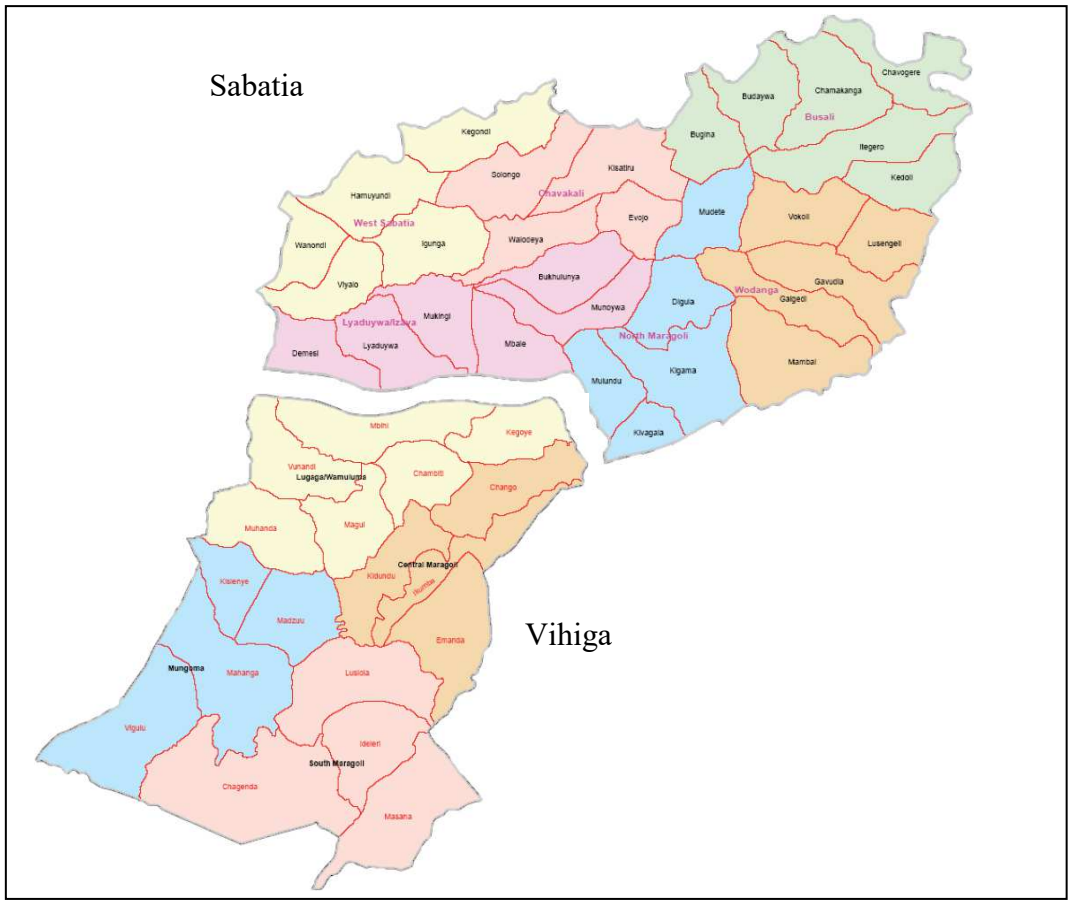
I owe a debt of thanks to Michael Marlo of the University of Missouri, through whose auspices this project was made financially and infrastructurally possible. That support was manifested primarily through NSF Grant BCS-1355750, but also through innumerable mechanisms of the University of Missouri which I never fully understood.

Introduction to Logoori Phonology and Morphology

David Odden

The purpose of this work is to describe the Logoori language, based on worked 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.

Logoori is one of the Luyia languages, which is 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, which roughly corresponds to Sabatia and Vihiga constituencies within Vihiga county, covering about 80 sq. miles. Maragoli is located approximately between the equator and .15º N latitude, 34.6º to 34.8º 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 Maragoli is.



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 recorded 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).

1. 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' 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'. I thus include the noun *ekebóóko* 'hippopotamus' even though it is most likely borrowed from Swahili, since this is a word used to talk about hippopotamuses in Logoori.[1] I will report on the grammar of noun plus number using constructions like *mia móója* '100' which is taken from Swahili, since this is a construction that people 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 – but I will refrain from trying to characterize which speakers tend to use a particular verb tense, apply vowel harmony, or retain the augment, since such claims require focused sociolinguistic investigation with a wider range of speakers.

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 have 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 features of variability are frequent enough to deserve comment, so 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].

Voicing of voiceless stops: EM *ɪpóósta* ~ BK *ɪbóósta* 'post office', *ɪsúgúdi* ~ *ɪsúgúti* '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 .[2]

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[1] The historically original noun *ɪ́ngóvó* 'hippopotamus' is not as widely known among speakers, no doubt because hippopotamuses are scarce in the area.

[2] This alternation is the synchronic residue of Dahl's Law.

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 *ʊm̀feneesi*, BK *ḿféneesi* 'jackfruit'. In addition BK produces *ḿ¦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¦fwóóyó*, (RL,EM,RO,PM) *ɪkí¦fóoyo*, (FA,EM) *kífóóyo*, and 'termite' (BK) *rifwéé¦déré*, (FA, EM) *rí¦féédére*. 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.

Vowel quality (likewise) and quantity (*mséve* / *mséeve* 'Kikuyu (derog.)', *rikáá¦fóóri* / *rikááfʊri*), *ɪkááyóóngo* / *ɪkáyóóngo* 'weed sp.' especially the penultimate syllable of loanwords.

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 /kɪ/ 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.

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').

Words originating in Swahili are (unsurprisingly) subject to considerable variation in pronunciation. The noun 'padlock', from Swahili *kafuri*, most often appears as *rikááfʊri* but in a significant number of instances appears as *ríkáfʊri, rikáá¦fóóri, rikáá¦fóóri* and *rikáá¦fóʊri* (individual speakers tend to be internally consistent). Similarly, *mfenesi* 'jackfruit' appears as *mfenesi, ḿ¦fénési, mfeneesi, ḿféneesi*, and *mfé¦néési*; *kibiriti* 'match' is borrowed as *kɪbí¦rííti, kɪbí¦ríítí, kí¦bíírííti, kɪbíí¦ríiti, kɪbííriiti* and *kɪbíriiti*, and *sungura* appears as *kɪsʊ́ʊ́¦ngʊ́ra, kí¦sʊ́ʊ́ngʊ́ra, kísʊ́ʊ́¦ngʊ́rá, kɪsʊ́ʊngʊ́ra*.[3]

While I have not observed the pattern with my speakers, the Brief Grammar mentions dialects where *k, t* are realised as [x, r̥] and the class 7 prefix appears as [ʃi].[4] While these features generally distinguish Logoori from other Luhya languages, it is quite plausible that dialects of Logoori spoken right next to other Luhya language could have adopted these features.[5]

2. Speakers and elicitation

[3] It is not certain that this word comes from Swahili.

[4] The BG does not note devoicing of *b,d,g* to *p,t,k* as found as in other Luhya languages.

[5] I exclude sporadic instances of *x* for *k* in the ethnonyms *ʊmwíísuka* 'Isukha person', *ʊmwíídako* 'Idakho person' from some speakers who are acquainted with the fact that in those languages, the words have *x*.

The bulk of our data comes from N speakers whom we have worked with.

Rose Kamwesa (b. ___), grew up in Igakara, northwest of Majengo in South Maragoli
Editon Mulera (b. 1982), grew up in Chanzeywe, midway between Majengo and Luanda
Ronnie Kisato (b. ___), also Chanzeywe, and is a childhood friend of EM
Beatrice Khisa (b. ___), grew up in Mbale (Vihiga) and Kamkuywa (Bungoma)
Richard Lugwili (b. 1962), grew up in Nadanya (Vihiga County)
Francis Aziavula (b. 1977), grew up in Mautuma (Kakamega)
Enid Keseko (b. 1993), grew up Kaimosi (Vihiga)
Splendour Yonge Isigi (b. 1993), grew up in Elunyu (Vihiga): daughter of Paul Mulehi
Norah Mungasia (b. 1982), Kakamega and various locations
Molsworth Luvaha (b. 1975), Losengeli (near Mago)
Paul Mulehi (b. 1957), grew up in Mahanga (near Chanzeywe)

The geographical distribution of speakers in the data pool is not particularly "even". Luvaha, Keseko and Yonge are from North Maragoli east of Mudete, and Mulera, Kisato, Mulehi and Kamwesa are from South Maragoli, west of Majengo – in both areas, the individuals grew up within 3 miles of each other (however, only Mulera & Kisato, and Mulehi & Yonge know each other).[6] Data from Kamwesa, Mulera and Luvaha are both most extensive 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 and Luvaha, data was gathered during face-to-face sessions with Odden, and in the case of data from Lugwili, Keseko, Aziavula, Yonge and Mulehi, data elicited via script written by Odden, adminstered and recorded in Kenya by Kelvin Alulu, and subsequently transcribed by Odden. Data from Kisato was self-recorded, following scripts provided by Odden.

I provide not only "correct" Logoori forms, elicited from speakers, but also some data on acceptability which is likewise elicited, that is, the judgment that **yaakokí!dééká* is not correct for 'he just cooked it' (instead of *yaakoké!dééká* or *yaakɔkí!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

[6] Mulehi, who is Yonge's father, has lived in North Maragoli for years, but grew up in Chanzeywe.

(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.[7]

3. 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 appear to be at least three.[8] Within those versions, one can discern differences in spelling patterns, especially differences in indication of vowel length.

older	*newer*
makura	makula
uwi ikisukululwi	uwa ikisukululwi
yivula	yiivula
kigira	kijira
musaza weve	musaaza 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 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 have also 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).

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

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[7] A partial exception is judgements of phonetically impossible geminates. A speaker can easily volunteer forms like *yáá'ddúyá* and *yáárí'dúyá* 'he beat it-5', but gemination is not possible for all consonants, thus *yáárí'górá* 'he bought it' exists, and not **yáá'ggórá*, 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 *yáárí'górá* is correct but **yáá'górá* is not.

[8] I am in possession of a full translation copyright 2008, 1986, a New Testament translation copyright 1954, 1967, 1972, 1996, and an online extract of Genesis from a 1967 version.

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].

The primary source of contemporary 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 Logoori 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.

4. Brief sketch of the language

One of the main challenges in describing the Logoori language, apart from the aforementioned matter of variability, is the need to simultaneously understand many parts of the language, in order to understand one part of the language. In order to fullyy 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 sections 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

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 presented in an "as pronounced" form, and does not consistently normalize all phonetic details out of existence.

Chapter 3 on segmental phonology 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 a challenge, for example one needs to be able to "undo" phonological rules in order to recognize that the *j* in ***nj**eenyí* 'I wanted it$_{-7}$' is the same morpheme as *k**í*** in *vaa**k**írımi* 'they have plowed it$_{-7}$'. That chapter lays out the various rules affecting combinations of nasal plus consonant, explains the conditions under which *y* is inserted, as well as when it it deleted, and when vowels are deleted between certain similar consonants (for example …*rır*… becomes …*ll*…). There are a number of processes of vowel harmony whereby *ı,ʊ* alternate with *e,o*; there is also palatalization where *k,g* become *ch,j* in certain contexts. Underlying combinations of vowels are generally reduced to a single vowel, and depending on the context the first vowel may delete, or it may be changed to a glide *y,w*; the second vowel may be lengthened, or not, again depending on context. A full understanding of these processes requires an understanding of the morphological system which combined 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. Illustrative examples of morphemes in relevant morphology chapters will then present both the basis unmodified morpheme (to the extent that an unmodified allomorph exists) plus forms which have undergone various phonological rules.

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. 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, which is laid out in chapter 4. Both chapters covers the same tenses, but they organize the data differently, ch. 4 focusing on tonal properties and ch. 8 focusing on morpholigical and semantic properties

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 information given in chapter 7.

Chapter 6 sets forth the noun class system, explaining the markers at the beginnings of nouns such as *mʊ*, *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 *mʊ-* as the Cl. 1 marker indicates that the noun is a singular human, and its plural generally replaces *mʊ* with *va*. Certain classes have specialized meaning, such as *ka-* 'cl. 12' which means 'small N', *kʊ-* 'cl. 17' which means 'on N'. This chapter introduces the nuon 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 basical lexical meaning, plus grammatical markers. In nouns and adjectives, exemplified by *ɪkǃ́fóóyó* 'rabbit' the former would include the root *fooyo* meaning 'rabbit', plus the prefixes *ɪ-kɪ*, 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 __', 'made __ 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-anɪ* '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, *-kɪ-* 'Cl. 7 object prefix' (=it), *-deek-* 'cook', *-ɪr-* which is the applied extension (=for), *-an-* which is the reciprocal extension (=each other), and *ɪ*, 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 *-kédeekeranɪ* would be the Mstem for this word, although it is not a word itself.