WORD STRUCTURE IN KISA

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February, 2013
DECLARATION

I hereby certify that the work embodied in this thesis is the result of my original research and has not been submitted for a higher degree to any other University or Institution.

Name: EMILY AYIETA ONDONDO

Signed……………………

Date……………………
ACKNOWLEDGEMENTS

The present research was made possible with a University of Newcastle scholarship, the excellent, dedicated, and expert supervision of Dr. Mark Harvey and Dr. Alan Libert, and the infinite patience of my husband and children. To all, I say a big thank you.
DEDICATION

This Thesis is dedicated to

My husband George Odhiambo Ochieng’

And

My children Criscencia Atieno and Paul Otieno
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ABSTRACT

This dissertation examines the structure of words in Kisa (a dialect of Luhya), a Bantu language spoken in Western Kenya, from a phonological and morphological point of view. It describes the interaction at the phonology-morphology interface of the principles governing wordhood in Kisa. It shows that Kisa has two types of words the affixal word and the clitic word. This is determined primarily by the phonological and morphological criteria for wordhood. The areas covered in the thesis are parts-of-speech, segmental inventory including the status of nasal consonant sequences, syllable structure, nominal morphology, verbal morphology, and vowel hiatus resolution.
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LIST OF ABBREVIATIONS

- Morphological boundary
= Clitic boundary
+ Boundary between the elements of a compound
1-20 Noun classes 1-20
1sg First person singular
1pl First person plural
2sg Second person singular
2pl Second person plural
3sg Third person singular
3pl Third person plural
AG Agentive
APPL Applicative
AUG Augment
C Consonant
CAUS Causative
CL Class Prefix
Cl Clause
CM Connective Marker
EMPH Emphatic
FARF Far Future
FARP Far Past
FM Frequency Marker
HEST Hesternal Past
HODF Hodiernal Future
HODP Hodiernal Past
IFS Inflectional Final Suffix
INCH Inchoative
IND Indicative mood
INF Infinitive
INTR Intransitive
<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Definition</th>
</tr>
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<tbody>
<tr>
<td>IPA</td>
<td>International Phonetic Alphabet</td>
</tr>
<tr>
<td>IPFV</td>
<td>Imperfective</td>
</tr>
<tr>
<td>IRR</td>
<td>Irrealis</td>
</tr>
<tr>
<td>IT</td>
<td>Iterative</td>
</tr>
<tr>
<td>KIN</td>
<td>Kin Prefix</td>
</tr>
<tr>
<td>NAG</td>
<td>Non-agentive</td>
</tr>
<tr>
<td>NC</td>
<td>Nasal Consonant</td>
</tr>
<tr>
<td>NEARF</td>
<td>Near Future</td>
</tr>
<tr>
<td>NEG</td>
<td>Negative</td>
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<tr>
<td>O</td>
<td>Object</td>
</tr>
<tr>
<td>Ph</td>
<td>Phrase</td>
</tr>
<tr>
<td>pl</td>
<td>Plural</td>
</tr>
<tr>
<td>plS</td>
<td>Plural Subject</td>
</tr>
<tr>
<td>POL</td>
<td>Politeness</td>
</tr>
<tr>
<td>PRES</td>
<td>Present tense</td>
</tr>
<tr>
<td>PRF</td>
<td>Perfect aspect</td>
</tr>
<tr>
<td>PRO</td>
<td>Pronoun</td>
</tr>
<tr>
<td>PSTV</td>
<td>Persistive aspect</td>
</tr>
<tr>
<td>PASS</td>
<td>Passive</td>
</tr>
<tr>
<td>QUAL</td>
<td>Quality</td>
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<td>Reciprocal</td>
</tr>
<tr>
<td>REMP</td>
<td>Remote Past</td>
</tr>
<tr>
<td>RFL</td>
<td>Reflexive</td>
</tr>
<tr>
<td>Rt</td>
<td>Root</td>
</tr>
<tr>
<td>RVS</td>
<td>Reversive</td>
</tr>
<tr>
<td>S</td>
<td>Subject</td>
</tr>
<tr>
<td>sg</td>
<td>Singular</td>
</tr>
<tr>
<td>sgS</td>
<td>Singular Subject</td>
</tr>
<tr>
<td>sp</td>
<td>Species</td>
</tr>
<tr>
<td>SR</td>
<td>Surface Representation</td>
</tr>
<tr>
<td>St</td>
<td>Stem</td>
</tr>
<tr>
<td>Abbreviation</td>
<td>Description</td>
</tr>
<tr>
<td>--------------</td>
<td>---------------------------</td>
</tr>
<tr>
<td>SUBJ</td>
<td>Subjunctive mood</td>
</tr>
<tr>
<td>UR</td>
<td>Underlying Representation</td>
</tr>
<tr>
<td>V</td>
<td>Vowel</td>
</tr>
<tr>
<td>VHH</td>
<td>Vowel Height Harmony</td>
</tr>
<tr>
<td>Wd</td>
<td>Word</td>
</tr>
</tbody>
</table>
CHAPTER 1: INTRODUCTION

This dissertation describes and analyses the phonological and morphological structure of words in the Kenyan language Kisa. Kisa\(^1\) is a dialect of the Luhya\(^2\) language spoken in the Khwisero District, Western Province of Kenya. It has approximately 89,000 speakers (1999 population census\(^3\)).

This introductory chapter offers information about the Luhya dialects (section 1.1), and about previous research on them (section 1.2). Section 1.3 discusses studies dealing specifically with Kisa, while section 1.4 explains the areas covered by the present study. Section 1.5 presents the organisation of the work.

1.1 The Luhya dialects

Luhya belongs to the Bantoid genus of the Benue-Congo sub-family of the Niger-Congo language family (Haspelmath et al. 2008). There are at least 19 dialects of Luhya in Kenya (Marlo 2007: 2). The *Ethnologue* classification in figure 1.1 identifies 20 dialects, while the map in figure 1.2 shows 18.

Figure 1.1: Ethnologue classification of the Luhya dialects

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\(^{1}\) There are alternative names, Olushisa, Shisa, and Olukisa.

\(^{2}\) There are alternative names, Luyia and Oluluhya.

\(^{3}\) The 2009 census figures do not report population figures by ethnic group, so more current figures are not available.
Area under Study
1.2 Previous research on Luhya dialects

Among the Luhya dialects Lubukusu is the most comprehensively studied; aspects of its phonology, morphology, and syntax have been covered (De Blois 1975; Mutonyi 2000; Wasike 2007).

Some other dialects (Kisa, Lunyala, Lumarachi, Llogoori, Luwanga, Lutachoni, Lunyore Lutiriki, Lutsootso, and Lusamia) are not as well studied as Lubukusu. Yet others (Lukabras, Lumarama, Lusonga, Lutura, Lwitakho, Lwiisukha, and Lukhayo) are completely undescribed (Marlo 2007: 14). Consequently, published descriptive materials (Botne et al. 2006; Dalgish 1976; De Blois 1975; Marlo 2007; Muaka 2005; Mutonyi 2000; Wasike 2007) on the phonology and morphology of Luhya languages are limited, and cover only the phonology and morphology of some of the dialects.

1.3 Previous research on Kisa

There are only a few general studies of the Kisa dialect. Muluka (1983) examined some aspects of its syntax, while Ondondo (2004) analysed the role of lexical relationships in the discourse cohesiveness of Kisa spoken texts. Neither of these studies looks at any aspect of the phonology or morphology of the language.

There are only three studies that I am aware of that have dealt with some aspects of Kisa phonology and morphology. Donohew (1962), A First Course in Luyia, is a pedagogical grammar touching only briefly on phonology. It aimed to provide a standardised version for four dialects (Kisa, Marama, Tsotso, and Nyore), and therefore does not accurately describe the dialectal variation.

Donohew (1973), Some Verbal Extensions in Shisa, looked at verbal suffixes in Kisa from a syntactic point of view. Though this is an aspect of Kisa verbal morphology Donohew provides only minimal analysis of the phonology and morphology of Kisa.
Sample (1976), *The Application of Rules in the Phonology of Olukisa*, based on work carried out in (1936), is the only detailed study on the phonology of Kisa. This work principally examines the various consonant and vowel alternations found in individual words. It provides minimal consideration of other aspects of Kisa phonology such as syllable structure and metrical structure. In addition, this study does not touch on the morphology of the language.

The studies on the phonology and morphology of Kisa cited above were carried out over thirty years ago. Therefore, there is hardly any current information on the phonology and morphology of Kisa readily available.

### 1.4 The current study

The judgements in this thesis are based on my intuitions as a native speaker of Kisa. The main source of data is the Kisa-English Dictionary developed by the author in 2009. The dictionary has 5228 entries. Kisa, like many Bantu languages, allows a high degree of complexity in word structure. This thesis therefore focuses on the structure of Kisa words.

The dissertation:

- Provides new data on
  - Nasal consonant (NC) sequences
  - Resolution of vowel hiatus
  - Apocope
- Provides information about domain distinctions in phonological processes
- Distinguishes between productive and unproductive morphological patterns
- Discusses Kisa syllable structure
- Discusses Kisa nominal morphology
• Discusses Kisa verbal morphology

1.5 Organisation of the work

The following eight chapters are organised as follows. Chapter 2 discusses the different part-of-speech classes that occur in Kisa, as determined by morphological criteria.

Chapter 3 examines the basic issues in the phonology of Kisa. It presents the consonant and vowel phonemes of Kisa, and gives descriptions of vowel length, basic syllable structure, tone, and the basic phonotactic structure of Kisa words.

Chapter 4 describes the Kisa noun class system. It discusses the elements that constitute a Kisa noun, and the class marking found on nouns in Kisa, as well as the agreement markers on noun modifiers. The chapter also examines the formation of nouns through compounding.

Chapter 5 provides a description of the structure of the verbal word in Kisa. It also considers the phonological processes involving suffixes that occur within the verbal word.

Chapter 6 discusses clitics.

Chapter 7 considers the strategies used to resolve vowel hiatus within words and across word boundaries in Kisa.

Chapter 8 explores NC sequences in Kisa. It considers the distribution of vowel length before NC sequences and why NC sequences are preceded by a long vowel. The chapter also describes the phonological processes that occur when nasals are concatenated with other consonants.
Chapter 9 gives a concluding summary of the main claims in the thesis, and notes some issues for further research.
CHAPTER 2: PART-OF-SPEECH CLASSES

2.1 Introduction

This chapter discusses the classification of roots into part-of-speech classes, as determined by morphological criteria. Fourteen part-of-speech classes can be identified, grouped into three main categories, verbs, nominals (see table 2.4), and particles (see table 2.8). The category of nominals contains nine part-of-speech classes, Classes A1-A3 are composed of nouns and the interrogative pronoun ‘who(m)’; Class B consists of adjectives; Class C1 consists of demonstratives, the cardinal numerals ‘one’ to ‘six’, quantifiers, and the interrogative ‘what’; Class C2 includes possessives and the word ‘another/other’; Class D1 consists of multiplicative numerals; Class D2 has ordinal numerals; Class E is made of cardinal numerals above ‘six’, first and second person pronouns, and the distributive determiner búli ‘each’. The category of particles comprises four part-of-speech classes: adverbs, prepositions, conjunctions, and interjections.

The different parts of speech in Kisa are grouped into these categories and classes on the basis of three factors.

(1) a) Whether a root can take affixes
     b) The type of affixes that a root requires or permits
     c) The variations in the morphological structure of prefixes found when words function as heads of phrases as opposed to when they function as modifiers in phrases

There are three types of stems in Kisa, verbal, nominal, and particle stems. A minimal verbal stem in Kisa consists of a verbal root and the inflectional final suffix (IFS), as seen in the data in (2), or an adjectival root followed by an overt inchoative suffix and the IFS, as in the example in (3).

(2) a) \textit{kúl-a!}
     buy-sgS
     ‘Buy!’
b) ásámuł-a!
sneeze-sgS
‘Sneeze!’

(3) a) ráámbí-y-a!
tall-INCH-IND
‘Become tall!’

b) lálú-kh-a!
mad-INCH-IND
‘Become mad!’

A verbal root is a root which cannot appear without a suffix (i.e. the IFS), as (2) illustrates. Other types of roots may appear without a suffix, as shown in (4).

(4) a) o-mu-khááná
AUG-1-girl
‘a/the girl’

b) o-mu-ráámbí
AUG-1-tall
‘the tall one’

c) o-mu-lálú
AUG-1-mad
‘the mad one’

There are a number of prefixes which occur only with verbal stems. These are the verbal prefixes. Consider the data in (5).

(5) a) ba-la-kul-a.
3plS-HODF-buy-sgS
‘They will buy.’

b) ba-la-shin-a.
3plS-HODF-dance-sgS
‘They will dance.’

A second set of prefixes can only occur with nominal stems, as seen in the data in (4). These are the nominal prefixes.

There are two types of nominal stems. One type involves a verbal root and an overt derivational suffix:
The second type consists solely of a non-verbal root, as (4) shows.

A non-verbal root which can appear as the sole constituent of a nominal stem is a nominal root. A non-verbal root which cannot occur with the nominal prefixes is a particle. The stems of particles therefore consist only of a root.

There are three types of words in Kisa, verbal words, nominal words, and particles. A verbal word is a word which consists of a minimal verbal stem and verbal prefixes and suffixes only. The root in a verbal word can be a verbal root or an adjectival root. A nominal word is a word which involves nominal affixation. The root in a nominal word may be either a nominal root or a verbal root. A particle is a word that does not involve verbal or nominal affixation. The root in this word can only be a particle root. Table 2.1 shows the different types of words in Kisa.

Table 2.1: Kisa word types

<table>
<thead>
<tr>
<th>Word type</th>
<th>Stem type</th>
<th>Example</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>Verb</td>
<td>Verbal root+IFS</td>
<td>wd[Sl[Rd[kúl]Rd]St]-a]wd</td>
<td>‘Buy!’</td>
</tr>
<tr>
<td></td>
<td>Adjective root + inchoative suffix+IFS</td>
<td>wd[Sl[Rd[lálu]Rd-kh]St]-a]wd</td>
<td>‘Become mad!’</td>
</tr>
<tr>
<td>Nominal</td>
<td>Nominal root</td>
<td>wd[o-mu-St[Rd[súkú]Rd]St]wd</td>
<td>‘an/the enemy’</td>
</tr>
<tr>
<td></td>
<td>Verbal root + derivation suffix</td>
<td>wd[o-mu-St[Rd[lím]Rd-f]St]wd</td>
<td>‘a/the farmer’</td>
</tr>
<tr>
<td></td>
<td>Verbal root + derivational suffix</td>
<td>wd[o-khu-St[Rd[kúl]Rd-á]St]wd</td>
<td>‘a/the buying’</td>
</tr>
<tr>
<td>Particle</td>
<td>Particle root</td>
<td>wd[Sl[Rd[bwáángú]Rd]St]wd</td>
<td>‘quickly’</td>
</tr>
</tbody>
</table>
This chapter begins by discussing the category of verbs in section 2.2, followed by the members of the category of nominals in section 2.3. Section 2.4 describes particles. Section 2.5 gives a summary of the chapter.

### 2.2 Verbs

As discussed in section 2.1, there are two types of minimal verbal stems in Kisa. One kind, that consisting of an adjectival root, an inchoative suffix, and the IFS, is a closed class because the class of adjective roots is closed (see section 2.3.3.4). The other type, that consisting of verbal roots and the IFS is an open class.

#### 2.2.1 The minimum verbal word

A minimum verbal word in Kisa is made up of a root and an inflectional final suffix (IFS). A minimum verbal word can be an imperative or a subjunctive, as (7) and (8) illustrate.

(7) a)  
\[
\begin{align*}
\text{kùl-} & \quad \text{bwáângù!} \\
\text{buy-sgS} & \quad \text{quickly} \\
\text{‘Buy quickly!’}
\end{align*}
\]

b)  
\[
\begin{align*}
\text{shín-} & \quad \text{bwáângù!} \\
\text{dance-sgS} & \quad \text{quickly} \\
\text{‘Dance quickly!’}
\end{align*}
\]

(8) a)  
\[
\begin{align*}
\text{kul-} & \quad \text{bwáângù.} \\
\text{buy-SUBJ} & \quad \text{quickly} \\
\text{‘Please buy quickly.’}
\end{align*}
\]

b)  
\[
\begin{align*}
\text{shin-} & \quad \text{bwáângù.} \\
\text{dance-SUBJ} & \quad \text{quickly} \\
\text{‘Please dance quickly.’}
\end{align*}
\]

The imperative is marked by a high tone on the vowel in the initial syllable of the root, as (7) shows. The subjunctive, on the other hand, lacks specification for a tone, as in the forms in (8).
2.2.2 The maximum verbal word

A maximum verbal word in Kisa has the general structure in (9).

(9) Proclitics=Prefixes-Root-Suffixes=Enclitics

Verbal roots can take both derivational and inflectional suffixes.

2.2.2.1 Inflectional suffixes

Other than the obligatory IFS, the root can be followed by a number of inflectional suffixes in the order shown in (10) and as illustrated in (11).

(10) Root(-Reversive-Inchoative-Reciprocal-Applicative-Causative-Aspect-Passive)-IFS

(11) yāb-ūl-ūkh-ās-īr-ī-b-ūng-w-a!
dig-RVS-INCH-REC-APPL-CAUS-PASS-IPFV-PASS-sgS
‘Let it be being dug up for you (sg.)!’

2.2.2.2 Derivational suffixes

Verbal roots in Kisa can also take derivational suffixes. There are four derivational suffixes in Kisa that can be attached to verbal roots to derive nominal stems. The agentive suffix -i can be affixed to verbal roots to derive stems of agent nouns, as in (12).

(12) a) o-mu-lím-i
    AUG-1-dig-AG
    ‘a/the farmer’

    b) o-mu-lób-i
    AUG-1-fish-AG
    ‘a/the fisherman’

The suffix -o, on the other hand, is added to verbal roots to derive stems of non-agentive nouns, as (13) shows.
a) Ø-lú-sóóm-ó
   AUG-5a-read-NAG
   ‘a/the reading’

b) Ø-lú-káámb-ó
   AUG-5a-preach-NAG
   ‘a/the preaching’

The non-agentive suffix -o can also attach to a stem that contains a verbal root and an inflectional suffix. Consider (14).

(14) a) Ø-lú-sóóm-ér-ó
   AUG-5a-read-APPL-NAG
   ‘a/the school’

b) Ø-lú-láám-ír-ó
   AUG-5a-pray-APPL-NAG
   ‘a/the church’

There is another derivational suffix, -u, which is attached to verbal roots to derive nominal stems of quality adjectives, as in (15).

(15) a) o-mw-ééng-ú
   AUG-3-ripen-QUAL
   ‘a/the ripe one’

b) o-mu-khé’mér-ú
   AUG-3-fatten-QUAL
   ‘a/the fat one’

The suffix -a derives nominal stems of infinitives or gerunds when added to verbal roots, as (16-17) illustrate.

(16) o-khu-kúl-á
   AUG-15-buy-INF
   ‘a/the buying’

(17) i-n-gúl-á
   AUG-9c-buy-INF
   ‘a/the buying style’
The suffixes discussed above only occur with verbal roots. They do not occur with other roots.

### 2.2.2.3 Verbal prefixes

The root can also be preceded by a number of prefixes, as in the structure in (18) and the examples in (19) and (20).

(18) (Subject-Tense/Aspect-Object-Reflexive-)Root-IFS

(19) *ba-la-be-e-bék-ér-a*  
3plS-HODF-3plO-RFL-shave-APPL-IND  
‘they will shave themselves for them’

(20) *ba-shi-be-e-bék-ér-a*  
3plS-PSTV-3plO-RFL-shave-APPL-IND  
‘they are still shaving themselves for them’

Verbal prefixes cannot be affixed to the stems of other word categories, as the following examples show.

(21) *ba-la-súkú*  
3plS-HODF-enemy  
‘they will be enemies’

(22) *ba-la-láyí*  
3plS-HODF-good  
‘they will be good’

These forms are ungrammatical. They are not the actual forms for saying ‘they will be enemies’ or ‘they will be good’. These meanings are expressed by a clause with a copular verb, as in (23-24).

(23) *ba-la-ba a-ba-súkú*  
3plS-HODF-be AUG-2-enemy  
‘They will be enemies.’

(24) *ba-la-ba a-ba-láyí*  
3plS-HODF-be AUG-2-good  
‘They will be good.’
The overall structure of a maximum verbal word in Kisa is as in (25).

(25)  (Proclitic=Subject-Tense/Aspect-Object-Reflexive-)Root(-Reversive-
       Inchoative-Reciprocal-Applicative-Causative-Aspect-Passive)-
       IFS(=Enclitic)

Clitics are discussed in Chapter 6.

2.3 Nominals

Nominal stems are that class of stems which cannot take verbal affixes, but which
can take nominal (i.e. non-verbal) prefixes. As discussed in section 2.1, there are
two sets of nominal stems. One set involves a verbal root and an overt
derivational suffix (see section 2.2.2.2). The second set consists of just a nominal
root.

2.3.1 The minimum nominal word

Most nominals take an augment and a class prefix in their citation forms, as the
structure in (26) shows.

(26)  Augment-Class Prefix-Stem

There are two kinds of class prefixes, head class prefixes (see table 2.2) and
agreement prefixes (see table 2.3).

The nominals that take the structure in (26) include adjectives, singular/plural
common nouns, plural proper nouns, native place names, and numeral symbol
names. Consider (27-31).

(27)  a)  o-mu-kálí
       AUG-3-big
       ‘big’

       b)  o-ba-láyí
       AUG-2-good
       ‘good’
Table 2.2: Kisa head class prefixes

<table>
<thead>
<tr>
<th>Noun class</th>
<th>Augment</th>
<th>Class prefix</th>
<th>Root</th>
<th>Example</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>o-</td>
<td>mu-</td>
<td>súká</td>
<td>o-mu-súká</td>
<td>‘enemy’</td>
</tr>
<tr>
<td>2</td>
<td>a-</td>
<td>ba-</td>
<td>súká</td>
<td>a-ba-súká</td>
<td>‘enemies’</td>
</tr>
<tr>
<td>3</td>
<td>o-</td>
<td>mu-</td>
<td>sáálá</td>
<td>o-mu-sáálá</td>
<td>‘tree’</td>
</tr>
<tr>
<td>4</td>
<td>e-</td>
<td>mi-</td>
<td>sáálá</td>
<td>e-mi-sáálá</td>
<td>‘trees’</td>
</tr>
<tr>
<td>5a</td>
<td>Ø-</td>
<td>líí-</td>
<td>túúmá</td>
<td>líí-túúmá</td>
<td>‘maize’</td>
</tr>
<tr>
<td>5b</td>
<td>e-</td>
<td>líí-</td>
<td>ínó</td>
<td>e-lí-ínó</td>
<td>‘tooth’</td>
</tr>
<tr>
<td>6</td>
<td>a-</td>
<td>ma-</td>
<td>túúmá</td>
<td>a-ma-túúmá</td>
<td>‘maize (pl.)’</td>
</tr>
<tr>
<td>7</td>
<td>e-</td>
<td>shi-</td>
<td>kóómbé</td>
<td>e-shi-kóómbé</td>
<td>‘cup’</td>
</tr>
<tr>
<td>8</td>
<td>e-</td>
<td>bi-</td>
<td>kóómbé</td>
<td>e-bi-kóómbé</td>
<td>‘cups’</td>
</tr>
<tr>
<td>9a</td>
<td>e-</td>
<td>Ø-</td>
<td>kýláámú</td>
<td>e-kýláámú</td>
<td>‘pen’</td>
</tr>
<tr>
<td>9b</td>
<td>i-</td>
<td>ny-[^4]</td>
<td>bwá</td>
<td>i-m-bwá</td>
<td>‘dog’</td>
</tr>
<tr>
<td>9c</td>
<td>i-</td>
<td>ny-[^4]</td>
<td>kul</td>
<td>i-n-gúl-á</td>
<td>‘buying style’</td>
</tr>
<tr>
<td>9d</td>
<td>i-</td>
<td>nz[^5]</td>
<td>áy</td>
<td>i-nz-áy-á</td>
<td>‘plucking style’</td>
</tr>
<tr>
<td>10a</td>
<td>e-</td>
<td>tsi-</td>
<td>kýláámú</td>
<td>e-tsi-kýláámú</td>
<td>‘pens’</td>
</tr>
<tr>
<td>10b</td>
<td>Ø-</td>
<td>tsiúny-</td>
<td>bwá</td>
<td>tsiúm-bwá</td>
<td>‘dogs’</td>
</tr>
<tr>
<td>10c</td>
<td>Ø-</td>
<td>tsiúny-</td>
<td>kul</td>
<td>tsiún-gúl-á</td>
<td>‘buying styles’</td>
</tr>
<tr>
<td>10d</td>
<td>Ø-</td>
<td>tsiúñz-</td>
<td>áy</td>
<td>tsiúñz-áy-á</td>
<td>‘plucking styles’</td>
</tr>
<tr>
<td>11</td>
<td>o-</td>
<td>lu-</td>
<td>fu</td>
<td>o-lu-fu</td>
<td>‘dust’</td>
</tr>
<tr>
<td>12</td>
<td>a-</td>
<td>kha-</td>
<td>súká</td>
<td>a-kha-súká</td>
<td>‘little enemy’</td>
</tr>
<tr>
<td>13</td>
<td>o-</td>
<td>ru-</td>
<td>súká</td>
<td>o-ru-súká</td>
<td>‘little enemies’</td>
</tr>
<tr>
<td>14</td>
<td>o-</td>
<td>bu-</td>
<td>láñú</td>
<td>o-bu-láñú</td>
<td>‘light’</td>
</tr>
<tr>
<td>15</td>
<td>o-</td>
<td>khu-</td>
<td>kul</td>
<td>o-khu-kál-á</td>
<td>‘buying’</td>
</tr>
<tr>
<td>20</td>
<td>o-</td>
<td>ku-</td>
<td>súká</td>
<td>o-ku-súká</td>
<td>‘huge enemy’</td>
</tr>
</tbody>
</table>

[^4]: The nasal in classes 9b, 9c, 10b, and 10c is a palatal nasal in itself. The palatalisation does not come from the stem as the following examples illustrate.

(i)  
\[ i-ny\-ín\-á \]  
AUG-9c-dip-INF  
‘a/the dipping style’

(ii)  
\[ o-khw\-ún\-á \]  
AUG-15-dip-INF  
‘a/the dipping’

[^5]: The [z] in the prefix for classes 9d and 10d does not come from the stem as the following examples illustrate.

(i)  
\[ i-nz\-áy\-á \]  
AUG-9c-pluck-INF  
‘a/the plucking style’

(ii)  
\[ o-khw\-áy\-á \]  
AUG-15-pluck-INF  
‘a/the plucking’
(28) a) \textit{o-mu-khónó}  \\
AUG-3-hand  \\
’a/the hand’  \\

b) \textit{e-mí-khónó}  \\
AUG-4-hand  \\
’a/the hands’  \\

(29) \textit{a-ba-chóóní}  \\
AUG-2-John  \\
’Johns’  \\

(30) a) \textit{e-Ø-malííndí}  \\
AUG-9a-place name  \\
’Emalindi’  \\

b) \textit{e-tsi-malííndí}  \\
AUG-10a-place name  \\
’Emalindis’  \\

(31) a) \textit{i-Ø-sábá}  \\
AUG-9a-seven  \\
’a/the numeral seven symbol’  \\

b) \textit{e-tsi-sábá}  \\
AUG-10a-seven  \\
’numeral seven symbols’  \\

As illustrated, either, but not both, of the augment or the class prefixes may be \textit{Ø-}.

The augment does not appear when the nominals discussed above occur with the interrogative \textit{shííná} ‘which’, as exemplified in (32) and (33).

(32) \textit{mu-khónó shííná?}  \\
3-hand which  \\
’Which hand?’  \\

(33) \textit{Ø-malííndí shííná?}  \\
9a-place name which  \\
’Which Emalindi?’

Other nominals do not take an augment but must take a class prefix in their citation forms, as (34-36) show. These nominals include, demonstratives, quantifiers, the cardinal numerals ‘one’ to ‘six’, possessives, the interrogative
‘which’, and the word ‘another/other’. As these nominals most commonly appear as modifiers within NPs, I refer to their class marking as ‘agreement marking’. However, it should be noted that these nominals can appear as heads of NPs, with the same class marking.

Table 2.3: Kisa agreement prefixes

<table>
<thead>
<tr>
<th>Class agreement</th>
<th>Agreement prefix</th>
<th>Noun class</th>
<th>Adjective class</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td><em>wu</em>(^6)</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td><em>ba</em></td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td><em>ku</em></td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>4</td>
<td><em>chi</em></td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>5</td>
<td><em>li</em></td>
<td>5a/5b</td>
<td>5a/5b</td>
</tr>
<tr>
<td>6</td>
<td><em>ka</em></td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>7</td>
<td><em>shi</em></td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td>8</td>
<td><em>bi</em></td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>9</td>
<td><em>i</em></td>
<td>9a/b/c/d</td>
<td>9b/c/d</td>
</tr>
<tr>
<td>10</td>
<td><em>tsi</em></td>
<td>10a/b/c/d</td>
<td>10b/c/d</td>
</tr>
<tr>
<td>11</td>
<td><em>lu</em></td>
<td>11</td>
<td>11</td>
</tr>
<tr>
<td>12</td>
<td><em>kha</em></td>
<td>12</td>
<td>12</td>
</tr>
<tr>
<td>13</td>
<td><em>ru</em></td>
<td>13</td>
<td>13</td>
</tr>
<tr>
<td>14</td>
<td><em>bu</em></td>
<td>14</td>
<td>14</td>
</tr>
<tr>
<td>15</td>
<td><em>ku</em></td>
<td>15</td>
<td>15</td>
</tr>
<tr>
<td>20</td>
<td><em>ku</em></td>
<td>20</td>
<td>20</td>
</tr>
</tbody>
</table>

(34) *wu-nó*
1-this
‘this one’

---

\(^6\) This prefix is best analysed as such. It cannot be analysed as *u-* where the vowel becomes a glide before another vowel. Consider the following data:

(i) *wu-nó*
1-this
‘this one’

(ii) *wu-lyá*
1-that
‘that one’

(iii) SR *wé-ánjé*
UR *wu-anjé*
1-my
‘mine’
Finally, there is a set of nouns, which take neither an augment nor a class prefix in their citation forms. They include singular proper nouns, singular kin nouns, first and second person pronouns, cardinal numerals above 'six’, the distributive determiner *búlí* ‘each’, and the interrogative pronoun ‘who(m)’.

(37)  

**cóóñí**  
personal name  
‘John’

(38)  

**kúúká**  
grandfather  
‘grandfather’

(39)  

**ésyé**  
I/me  
‘I/me’

(40)  

**sábá**  
seven  
‘seven’

Singular diminutive/augmentative kin nouns and plural kin nouns take an augment, a class prefix, and a kin prefix in their citation forms. Consider (41) and (42).

(41)  

a)  

**a-kha-a-kúúká**  
AUG-12-KIN-grandfather’  
‘a/the little grandfather’

b)  

**o-ku-u-kúúká**  
AUG-20-KIN-grandfather  
‘a/the huge grandfather’

(42)  

a)  

**a-ba-a-kúúká**  
AUG-2-KIN-grandfather  
‘grandfathers’
b) \textit{o-ru-u-kúúká}  
AUG-13-KIN-grandfather'  
‘little grandfathers’

c) \textit{e-mi-i-kúúká}  
AUG-4-KIN-grandfather  
‘huge grandfathers’

The examples in the preceding discussion show that a minimum nominal word varies according to the nature of the nominal stem. Overall, the structure in (43) accounts for the range of variation.

(43) \hspace{1em} \text{(Augment-)(Class Prefix-)(KIN Prefix-)(Stem)}

2.3.2 \textbf{The maximum nominal word}

A maximum nominal word in Kisa has the structure in (44).

(44) \hspace{1em} \text{(Proclitic=)(Locative/Augment-)(ClassPrefix-)(KINPrefix-)(Stem)} \hspace{1em} (=Enclitic)

The stem in a nominal word can be preceded by a class prefix which can in turn be preceded by an augment, as discussed in the preceding section. Nominal stems that do not take a class prefix or an augment for their citation forms can be preceded by a locative prefix, as (45) and (46) show.

(45) \textit{khu-chóóní}  
on-personal name  
‘on John’

(46) \textit{khu-sábá}  
on-seven  
‘on seven’

Nominal stems that take a class prefix and/or an augment for their citation form can also be preceded by a locative prefix. The locative prefix in this case replaces the augment, as (47) illustrates, except with class 9b/c/d nouns (see section 8.3.4).
The locative prefix and the augment can be preceded by a proclitic and the stem can be followed by an enclitic. Clitics are discussed in Chapter 6.

2.3.3 Members of the nominal category

The members in the nominal category are divided into nine classes, A1, A2, A3, B, C1, C2, D1, D2, and E. The members of these classes are distinguished by the variations in the morphological structure of prefixes found when these words function as heads of phrases and as modifiers in phrases. Table 2.4 gives a summary of the members of the nominal category, their classes, and the morphological structure of the prefixes found when they are functioning as heads or modifiers in phrases.
Table 2.4: Members of the nominal category

<table>
<thead>
<tr>
<th>Class</th>
<th>Part of speech</th>
<th>‘Which’ form</th>
<th>As head of a phrase</th>
<th>As modifier in a phrase</th>
<th>Semantic domain</th>
<th>Open/closed</th>
</tr>
</thead>
<tbody>
<tr>
<td>CL-ROOT</td>
<td>AUG-CL-ROOT</td>
<td>CL-CM=AUG-CL-ROOT</td>
<td>Plural proper nouns</td>
<td>Open</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CL-ROOT</td>
<td>AUG-CL-ROOT</td>
<td>CL-CM=AUG-CL-ROOT</td>
<td>Native place names (singular/plural)</td>
<td>Closed</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CL-ROOT</td>
<td>AUG-CL-ROOT</td>
<td>CL-CM=AUG-CL-ROOT</td>
<td>Numeral symbol names (singular/plural)</td>
<td>Open</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CL-KIN-ROOT</td>
<td>AUG-CL-KIN-ROOT</td>
<td>CL-CM=AUG-CL-KIN-ROOT</td>
<td>Singular diminutive/augmentative kin nouns</td>
<td>Closed</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A3 Noun</td>
<td>ROOT</td>
<td>ROOT</td>
<td>CL-CM=ROOT</td>
<td>Singular proper nouns</td>
<td>Open</td>
<td></td>
</tr>
<tr>
<td>ROOT</td>
<td>ROOT</td>
<td>CL-CM=ROOT</td>
<td>Singular kin nouns</td>
<td>Closed</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pronoun</td>
<td>ROOT</td>
<td>ROOT</td>
<td>CL-CM=ROOT</td>
<td>The interrogative pronoun ‘who(m)’</td>
<td>Closed</td>
<td></td>
</tr>
<tr>
<td>B Adjective</td>
<td>CL-ROOT</td>
<td>AUG-CL-ROOT</td>
<td>AUG-CL-ROOT</td>
<td>Adjective roots</td>
<td>Closed</td>
<td></td>
</tr>
</tbody>
</table>

This is a closed class in Kisa because it is not possible to create new adjectives. For instance, to express a new attribute based on an existing word, a new adjective is not used. The form used takes the structure of a noun phrase marked by the connective marker ‘of’, as in the example below.

(i) o-mú-úndú w-a=bwáángú
AUG-1-person 1-CM=quickly
‘a quick person’
<table>
<thead>
<tr>
<th>Class</th>
<th>Part of speech</th>
<th>‘Which’ form</th>
<th>As head of a phrase</th>
<th>As modifier in a phrase</th>
<th>Semantic domain</th>
<th>Open/ closed</th>
</tr>
</thead>
<tbody>
<tr>
<td>C1</td>
<td>Pronoun</td>
<td>CL-ROOT</td>
<td>CL-ROOT</td>
<td>CL-ROOT</td>
<td>The interrogative ‘what’</td>
<td>Closed</td>
</tr>
<tr>
<td></td>
<td>Demonstrative</td>
<td>CL-ROOT</td>
<td>CL-ROOT</td>
<td>CL-ROOT</td>
<td>Closed</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Quantifier</td>
<td>CL-ROOT</td>
<td>CL-ROOT</td>
<td>CL-ROOT</td>
<td>Closed</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Cardinal numeral ‘one’ to ‘six’</td>
<td>CL-ROOT</td>
<td>CL-ROOT</td>
<td>CL-ROOT</td>
<td>Closed</td>
<td></td>
</tr>
<tr>
<td>C2</td>
<td>‘Another/other’</td>
<td>CL-ROOT</td>
<td>AUG-CL-ROOT</td>
<td>CL-ROOT</td>
<td>Closed</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Possessive</td>
<td>CL-ROOT</td>
<td>AUG-CL-ROOT</td>
<td>CL-ROOT</td>
<td>Closed</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>CL-RFL-CL-ROOT</td>
<td>AUG-CL-RFL-CL-ROOT</td>
<td>(CL)-(RFL)-CL-ROOT</td>
<td>Second and third person singular</td>
<td>Closed</td>
</tr>
<tr>
<td>D1</td>
<td>Multiplicative numeral above ‘six’</td>
<td>FM ROOT</td>
<td>FM ROOT</td>
<td>FM ROOT</td>
<td>Open</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Multiplicative numeral ‘one’</td>
<td>FM=ROOT</td>
<td>FM=ROOT</td>
<td>FM=ROOT</td>
<td>Closed</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Multiplicative numeral ‘two’ to ‘six’</td>
<td>FM=ROOT</td>
<td>FM=ROOT</td>
<td>AUG-CL-RFL-FM=ROOT</td>
<td>Closed</td>
<td></td>
</tr>
<tr>
<td>D2</td>
<td>Ordinal numeral above ‘six’</td>
<td>CL-CM=ROOT</td>
<td>(AUG-)CL-CM=ROOT</td>
<td>CL-CM=ROOT</td>
<td>Open</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Ordinal numeral ‘two’ to ‘six’</td>
<td>CL-CM=FM=ROOT</td>
<td>(AUG-)CL-CM=FM=ROOT</td>
<td>CL-CM=FM=ROOT</td>
<td>Closed</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Ordinal numeral ‘one’</td>
<td>CL-CM=AUG-CL-ROOT</td>
<td>(AUG-)CL-CM=AUG-CL-ROOT</td>
<td>CL-CM=AUG-CL-ROOT</td>
<td>Closed</td>
<td></td>
</tr>
<tr>
<td>E</td>
<td>Cardinal numerals above ‘six’</td>
<td>ROOT</td>
<td>ROOT</td>
<td>ROOT</td>
<td>Open</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Pronoun</td>
<td>ROOT</td>
<td>ROOT</td>
<td>ROOT</td>
<td>Closed</td>
<td></td>
</tr>
<tr>
<td></td>
<td>‘Each’</td>
<td>ROOT</td>
<td>ROOT</td>
<td>ROOT</td>
<td>Closed</td>
<td></td>
</tr>
</tbody>
</table>
2.3.3.1 Class A1

Class A1 contains four subclasses, singular and plural common nouns, singular and plural native place names, singular and plural numeral symbol names, and plural proper nouns (names of people, animals, games, and non-native place names). Native place names constitute a closed subclass, while the other three subclasses are open.

2.3.3.1.1 Singular and plural common nouns

In interrogative constructions with ‘which’, the roots of the nouns in this subclass are preceded by a class prefix only, as (48) shows.

(48) a) \textit{mu-khónó} \textit{shúîná}? \\
3-hand which \\
‘Which hand?’

b) \textit{mi-khónó} \textit{shúîná}? \\
4-hand which \\
‘Which hands?’

When functioning as heads of phrases, the roots are preceded by an augment and a class prefix, as in (49).

(49) a) \textit{o-mu-khónó} \textit{kw-áánjé} \\
AUG-3-hand 3-my \\
‘my hand’

b) \textit{e-mi-khónó} \textit{chy-áánjé} \\
AUG-4-hand 4-my \\
‘my hands’

As modifiers in phrases, the nouns in this class take the structure of a noun phrase marked by the connective ‘of’, as seen in (50).

---

8 The morphological structure of names of games in Kisa is the same as that of proper nouns. Therefore, I treat them as proper nouns.

9 New places, for instance for a newly formed village, are not given new native place names. The name given is non-native or is based on an existing native place name.

10 This is called ‘connective’ instead of ‘possessive’ for comparative Bantu reasons.
2.3.3.1.2 **Singular and plural native place names**

Like common nouns, the roots of native place names take a class prefix when they occur in an interrogative construction with ‘which’:

(51) a) Ø-malííndí\(^{11}\) shííná?
    9a-place name which
    ‘Which Emalindi?’

b) tsi-malííndí shííná?
    10a-place name which
    ‘Which Emalindis?’

When they are heads of phrases, the roots of native place names, like those of common nouns, take an augment and a class prefix, as in (52).

(52) a) e-Ø-malííndí y-áánjé
    AUG-9a-place name 9-my
    ‘my Emalindi’

b) e-tsi-malííndí tsi-bírí
    AUG-10a-place name 10-two
    ‘two Emalindis’

When functioning as modifiers in phrases, native place names, like common nouns, take the structure of a noun phrase marked by the connective:

---

\(^{11}\)Most native place name roots appear to have a frozen prefix:

(i) ma-lííndí (< class 6)

(ii) shi-náútsá (< class 7)
Plurals of place names may seem unusual. However, they occur in certain contexts in Kisa. Place names can be pluralised in a context where the speaker wants to distinguish two different aspects of a place, as in the following example.

\[(54)\]
\[khu-li\quad ne=e-tsi-malííndí\quad tsi-bírí,\]
\[1plS-be\quad with=AUG-10a-place name\quad 10-two\]
\[‘We have two Emalindis,\]
\[e-Ø-malííndí\quad y-a=a-ba-yííndá\quad néndé\quad e-Ø-malííndí\]
\[AUG-9a-place name\quad 9-CM=AUG-2-rich\quad and\quad AUG-9a-place name\]
\[Emalindi for the rich and Emalindi\]
\[y-a=a-ba-tákáhá.\]
\[9-CM=AUG-2-poor\]
\[for the poor.’\]

### 2.3.3.1.3 Singular and plural numeral symbol names

Like common nouns and native place names, the roots of numeral symbol names take a class prefix when they occur in an interrogative construction with ‘which’:

\[(55)\]
\[a)\quad n-dálá\quad shííná?\]
\[9b-óne\quad which\]
\[‘Which numeral one symbol?’\]

\[b)\quad Ø-tárú\quad shííná?\]
\[9a-three\quad which\]
\[‘Which numeral three symbol?’\]

\[c)\quad tsi-sábá\quad shíáná?\]
\[10a-seven\quad which\]
\[‘Which numeral seven symbols?’\]
They also take an augment and a class prefix as heads of phrases, just like the roots of common nouns and plural native place names:

\[(56)\]

\(\text{a) } i\text{-n-dálá} \quad n\text{-dálá} \quad \text{AUG-9b-óne} \quad 9\text{-one} \quad \text{‘a single occurrence of the numeral one symbol’}\)

\(\text{b) } i\text{-Ø-tárú} \quad y\text{-áánjé} \quad \text{AUG-9a-three} \quad 9\text{-my} \quad \text{‘my numeral three symbol’}\)

\(\text{c) } e\text{-tsi-sábá} \quad tsi\text{-bírí} \quad \text{AUG-10a-seven} \quad 10\text{-two} \quad \text{‘two numeral seven symbols’}\)

Similarly, like common nouns and plural native place names, they take the structure of a noun phrase marked by the connective, when functioning as modifiers in phrases:

\[(57)\]

\(\text{a) } i\text{-Ø-tíísháátí} \quad y\text{-e} = i\text{-n-dálá} \quad n\text{-dálá} \quad \text{AUG-9a-T-shirt} \quad 9\text{-CM=AUG-9b-óne} \quad 9\text{-one} \quad \text{‘a/the T-shirt with a single numeral one symbol (on it)’}\)

\(\text{b) } i\text{-Ø-káátí} \quad y\text{-e} = i\text{-Ø-sábá} \quad \text{AUG-9a-card} \quad 9\text{-CM=AUG-9a-seven} \quad \text{‘a/the playing card with a single numeral seven symbol (on it)’}\)

\(\text{c) } i\text{-Ø-tíísháátí} \quad y\text{-e} = e\text{-tsi-sábá} \quad tsi\text{-bírí} \quad \text{AUG-9a-T-shirt} \quad 9\text{-CM=AUG-10a-seven} \quad 10\text{-two} \quad \text{‘a/the T-shirt with two numeral seven symbols (on it)’}\)

### 2.3.3.1.4 Plural proper nouns

Like common nouns, native place names, and numeral symbol names, the roots of plural proper nouns take a class prefix when they occur in an interrogative construction with ‘which’:

\[(58)\]

\(\text{a) } ba\text{-chóóní} \quad shítúná? \quad \text{2-personal name} \quad \text{which} \quad \text{‘Which Johns?’}\)
b) \textit{ba-pítá} \textit{shííná?}  
2-personal name \textit{which}  
‘Which Peters?’

They also take an augment and a class prefix as heads of phrases, like the roots of common nouns, native place names, and numeral symbol names:

(59) a) \textit{a-ba-chóóní} \textit{ba-bírí}  
AUG-2-personal name \textit{2-two}  
‘two Johns’  
b) \textit{a-ba-pítá} \textit{ba-bírí}  
AUG-2-personal name \textit{2-two}  
‘two Peters’

Similarly, like common nouns, native place names, and numeral symbol names, they take the structure of a noun phrase marked by the connective, when functioning as modifiers in phrases:

(60) a) \textit{Ø-tsíím-bwá} \textit{tsy-a=a-ba-chóóní} \textit{ba-bírí}  
AUG-10b-dog 10-CM=AUG-2-personal name \textit{2-two}  
‘the dogs of the two Johns’  
b) \textit{Ø-tsíím-bwá} \textit{tsy-a=a-ba-pítá} \textit{ba-bírí}  
AUG-10b-dog 10-CM=AUG-2-personal name \textit{2-two}  
‘the dogs of the two Peters’

### 2.3.3.2 Class A2

Class A2 has two subclasses, plural kin nouns and singular diminutive/augmentative kin nouns. Kin nouns constitute a closed subclass in Kisa.

#### 2.3.3.2.1 Plural kin nouns

Plural kin nouns differ from the members of Class A1 in that their roots take a kin prefix in addition to the class prefix, as in the following examples:
2.3.3.2.2 Singular diminutive/augmentative kin nouns

The roots of singular diminutive/augmentative kin nouns, like those of plural kin nouns, take a kin prefix in addition to the class prefix:

(66)  
\[
\begin{align*}
  \text{kha-a-kúúká} & \quad \text{shííná} ? \\
  12-\text{KIN-grandfather} & \quad \text{which} \\
  \text{‘which little grandfather?’}
\end{align*}
\]

(67)  
\[
\begin{align*}
  \text{o-ku-u-kúúká} & \quad \text{kw-áánjé} \\
  \text{AUG-20-KIN-grandfather} & \quad \text{20-my} \\
  \text{‘my huge grandfather’}
\end{align*}
\]

(68)  
\[
\begin{align*}
  \text{a)} & \quad \text{i-m-bwá} \quad \text{y-}\text{a}=\text{a-kha-a-kúúká} \quad \text{kha-lálá} \\
  \text{AUG-9b-dog} & \quad \text{9-CM=AUTH-12-KIN-grandfather} \quad \text{12-one} \\
  \text{‘the dog of one little grandfather’}
\end{align*}
\]

\[
\begin{align*}
  \text{b)} & \quad \text{i-m-bwá} \quad \text{y-o=\text{o-ku-u-kúúká}} \quad \text{ku-lálá} \\
  \text{AUG-9b-dog} & \quad \text{9-CM=AUTH-20-KIN-grandfather} \quad \text{20-one} \\
  \text{‘the dog of one huge grandfather’}
\end{align*}
\]
2.3.3.3 Class A3

The members of Class A3 are divided into three subclasses, singular proper nouns, singular kin nouns, and the interrogative pronoun ‘who(m)’.

2.3.3.3.1 Singular proper nouns

This is an open class in Kisa. Singular proper nouns differ from members of Classes A1 and A2 because their roots are not preceded by any prefix when they occur in an interrogative construction with ‘which’:

\[(69)\]
\begin{align*}
\text{a)} & \quad \text{chóóní} & \text{shííñá}?
\text{personal name} & \text{which}
\text{‘Which John?’}
\end{align*}

\begin{align*}
\text{b)} & \quad \text{píítá} & \text{shííñá}?
\text{personal name} & \text{which}
\text{‘Which Peter?’}
\end{align*}

As heads of phrases, their roots do not take any prefixes, as (70) shows. In this way they differ from members of Classes A1 and A2, whose roots take an augment and a class prefix.

\[(70)\]
\begin{align*}
\text{a)} & \quad \text{chóóní} \quad \text{wa-ánjé}
\text{personal name} & \text{1-my}
\text{‘my John’}
\end{align*}

\begin{align*}
\text{b)} & \quad \text{píítá} \quad \text{wa-ánjé}
\text{personal name} & \text{1-my}
\text{‘my Peter’}
\end{align*}

However, as modifiers in phrases these nouns take the structure of a noun phrase marked by the connective, like the members of Classes A1 and A2. Consider (71).

\[(71)\]
\begin{align*}
\text{a)} & \quad i-m-bwá \quad y-a=chóóní
\text{AUG-9b-dog} & \text{9-CM=personal name}
\text{‘John’s dog’}
\end{align*}
b) \(i-m-bwá \quad y-a=pítá\)  
AUG-9b-dog  9-CM=personal name  
‘Peter’s dog’

### 2.3.3.2 Singular kin nouns

Singular kin nouns constitute a closed class in Kisa. Like the roots of singular proper nouns, the roots of these nouns do not take any prefixes when they appear in an interrogative construction with ‘which’:

(72) a) \(kúúká \quad shííná?\)  
grandfather  which  
‘Which grandfather?’

b) \(khóótsá \quad shííná?\)  
uncle  which  
‘Which uncle?’

Also, like the roots of singular proper nouns, the roots of singular kin nouns do not take any prefixes when functioning as heads of phrases, as (73) shows.

(73) a) \(kúúká \quad wa-ánjé\)  
grandfather  1-my  
‘my grandfather’

b) \(khóótsá \quad wa-ánjé\)  
uncle  1-my  
‘my uncle’

Like singular proper nouns, these nouns take the structure of a noun phrase marked by the connective when they function as modifiers in phrases, as in (74).

(74) a) \(i-m-bwá \quad y-a=kúúká\)  
AUG-9b-dog  9-CM=grandfather  
‘grandfather’s dog’

b) \(i-m-bwá \quad y-a=khóótsá\)  
AUG-9b-dog  9-CM=uncle  
‘uncle’s dog’
2.3.3.3 The interrogative pronoun ‘who(m)’

This is a closed class in Kisa. Like other members of Class A3, the root of this pronoun does not take any prefixes when it appears in an interrogative construction with ‘which’:

(75)  wíímá  shíímá?
     who(m)  which
     ‘Which one?’

Also, like other members of Class A3, the root does not take any prefixes when functioning as a head of a phrase, as (76) shows.

(76)  o-la-búkúl-a  wíímá?
     2sgS-HODF-take-IND  who(m)
     ‘Who(m) will you (sg.) take?’

Again, like other members of Class A3, these nouns take the structure of a noun phrase marked by the connective when functioning as a modifier in a phrase, as in (77).

(77)  a)  yi-nó  ni=i-m-bwá  y-a=wíímá?
     9-this  is=AUG-9b-dog  9-CM=who(m)
     ‘Whose dog is this?’

     b)  tsí-nó  ni=tsíím-bwá  tsy-a=wíímá?
     10-this  is=AUG-10b-dog  10-CM=who(m)
     ‘Whose dogs are these?’

2.3.3.4 Class B

Class B consists of adjective roots only. This is a closed class in Kisa comprising 89 roots. Adjective roots, unlike the roots of the members of Class A3, but like the roots of the members of Classes A1 and A2, take a class prefix when they occur in an interrogative construction with ‘which’, as (78) shows.

(78)  a)  mu-láyí  shíímá?
     1-good  which
     ‘Which good one?’
b)  
shi-kálí  
shííná?
7-big  which
‘Which big one?’

Like the roots of the members of Class A, adjective roots take an augment and a class prefix when functioning as heads of phrases, as in (79).

(79)  
a)  
búkúl-a  o-mu-láyí!
take-sgS  AUG-1-good
‘Take the good one!’

b)  
búkúl-a  e-shi-kálí!
take-sgS  AUG-7-big
‘Take the big one!’

The property that distinguishes adjectives from members of Class A1 is that as modifiers in phrases, adjective roots take an augment and a class prefix, as (80) illustrates, while the members of Class A1 take the structure of a noun phrase marked by the connective.

(80)  
a)  
e-shi-fúúníkhó  e-shi-láyí
AUG-7-lid   AUG-7-good
‘a/the good lid’

b)  
o-mu-khááná  o-mu-kálí
AUG-1-girl  AUG-1-big
‘a/the big girl’

Predicate nouns and adjectives take an augment and a class prefix, as the following examples show.

(81)  
a)  
i-n-gúbó  i-nó  ni=i-n-dáyí
AUG-9b-cloth  9-this  is=AUG-9b-good
‘This cloth is good.’

b)  
i-n-gúbó  i-nó  ni=i-n-gálí
AUG-9b-cloth  9-this  is=AUG-9b-big
‘This cloth is big.’

(82)  
a)  
o-mú-úndú  wu-nó  ni=Ø-líí-túmóóní
AUG-1-person  1-this  is=AUG-5-demon
‘This person is a demon.’
Another property that distinguishes adjectives from other members of the nominal category in Kisa is that adjective roots can be followed by derivational suffixes. There are three such suffixes, -y, -l, and -kh, which are attached to adjective roots to derive inchoative verbs, as in (83-85). The distribution of these three allomorphs is not predictable.

(83)  
\[ \text{ba-la-ráámbí-y-a.} \]
\[ 3\text{plS-HODF-tall-INCH-IND} \]
\[ \text{‘They will become tall.’} \]

(84)  
\[ \text{ba-la-kófú-l-a.} \]
\[ 3\text{plS-HODF-old-INCH-IND} \]
\[ \text{‘They will become old.’} \]

(85)  
\[ \text{ba-la-lálú-kh-a.} \]
\[ 3\text{plS-HODF-mad-INCH-IND} \]
\[ \text{‘They will become mad.’} \]

These suffixes cannot be attached to roots of other members of the nominal category.

### 2.3.3.5 Class C1

This class is made up of four parts of speech, demonstratives, quantifiers, the cardinal numerals ‘one’ to ‘six’, and the interrogative pronoun ‘what’. It constitutes a closed class in Kisa.

#### 2.3.3.5.1 Demonstratives

Table 2.5 gives the demonstratives in Kisa.
Table 2.5: Kisa demonstratives

<table>
<thead>
<tr>
<th>Distance from the speaker</th>
<th>Stem</th>
<th>Example</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proximal</td>
<td>-nó</td>
<td>i-nó</td>
<td>‘this one’</td>
</tr>
<tr>
<td>Near proximal</td>
<td>-yí</td>
<td>i-yí</td>
<td>‘this one’</td>
</tr>
<tr>
<td>Near distal</td>
<td>-yó</td>
<td>i-yó</td>
<td>‘that one’</td>
</tr>
<tr>
<td>Far distal</td>
<td>-lyá</td>
<td>i-ryá</td>
<td>‘that one’</td>
</tr>
</tbody>
</table>

Like members of Classes A1, A2, and B, demonstrative roots are preceded by a class prefix (see table 2.3) when they occur in interrogative constructions with ‘which’, as in (86). They differ from the members of Class A3, whose roots are not preceded by any prefix when they occur in this construction.

(86)  a)  i-nó  shúñá?
      9-this which
      ‘Which one?’

     b)  ku-nó  shúñá?
      3-this which
      ‘Which one?’

However, when functioning as heads of phrases, demonstrative roots, unlike the roots of the members of Classes A1, A2, A3, and B, only take a class prefix, as seen in (87). As heads of phrases, the roots of the members of Classes A1, A2, and B take an augment and a class prefix, while those of the members of Class A3 do not take any prefixes.

(87)  a)  búkúl-a  i-nó!
      take-sgS  9-this
      ‘Take this one!’

     b)  búkúl-a  ku-nó!
      take-sgS  3-this
      ‘Take this one!’

As modifiers in phrases, demonstrative roots are preceded by a class prefix, as (88) shows.
In this way they differ from members of Classes A1-A3, which take the structure of a noun phrase marked by the connective, and from members of Class B, whose roots take an augment and a class prefix in this position.

2.3.3.5.2 Quantifiers

There are only two quantifiers in Kisa, -osi ‘all’ and -onyene ‘only’.

Quantifier roots, like demonstrative roots, are preceded by a class prefix when they occur in interrogative constructions with ‘which’, as (89) illustrates.

(89) a) bó-ósí shiúná?
    2-all which
    ‘Which ones?’

b) kw-óósí shiúná?
    3-all which
    ‘Which one?’

Like demonstrative roots, quantifier roots take just the class prefix when functioning as heads of phrases, as in (90), and as modifiers in phrases, as in (91).

(90) a) búkúl-a bó-ósí!
    take-sgS 2-all
    ‘Take all!’

12 ‘Some’ and ‘each’ are defined as quantifiers in other languages such as English. There is no word for ‘some’ in Kisa. The morphological structure of the word for ‘each’, buli, does not correspond to the structure of the members of Class C1 but to the structure of the members of Class E.
b)  \(búkál-a\)  \(tsy-óósí\!\)  
\(\text{take}-\text{sgS}\)  \(10\text{-all}\)  
‘Take all!’

(91)  a)  \(e-\text{tsí-káláámú}\)  \(tsy-óósí\)  
\(\text{AUG-10a-pen}\)  \(10\text{-all}\)  
‘all the pens’

b)  \(e-\text{mi-káátí}\)  \(chy-óósí\)  
\(\text{AUG-4-bread}\)  \(4\text{-all}\)  
‘all the bread’

2.3.3.5.3 The cardinal numerals ‘one’ to ‘six’

The roots for the cardinal numerals\(^{13}\) ‘one’ to ‘six’ in Kisa are set out in (92).

(92)  \(-\text{lálá} ‘\text{one}’, -\text{bírí} ‘\text{two}’, -\text{tárú} ‘\text{three}’, -\text{né} ‘\text{four}’, -\text{ráánó} ‘\text{five}’, -\text{sáásábá} ‘\text{six}’\)

The cardinal numerals ‘one’ to ‘six’ are formed by adding a class prefix to the roots in (92). Consider (93).

(93)  a)  \(ba-\text{bírí}\)  
\(2\text{-two}\)  
‘two’

b)  \(tsi-\text{tárú}\)  
\(10\text{-three}\)  
‘three’

In interrogative constructions with ‘which’, the roots of these numerals take a class prefix, as in (94).

(94)  a)  \(ba-\text{bírí}\)  \(\text{shííná}?\)  
\(2\text{-two}\)  \(\text{which}\)  
‘Which two?’

b)  \(tsi-\text{tárú}\)  \(\text{shííná}?\)  
\(10\text{-three}\)  \(\text{which}\)  
‘Which three?’

\(^{13}\) The prefixes on numerals do not have a high tone in Kisa.
The roots of the cardinal numerals ‘one’ to ‘six’ in Kisa are like demonstrative roots and quantifier roots because they take just the class prefix when functioning as heads of phrases, as in (95), and when functioning as modifiers in phrases, as in (96).

(95)  
a)  
\[ \text{búkúl-a} \]
\[ \text{ba-bírí!} \]
\[ \text{take-sgS} \]
\[ \text{2-two} \]
\[ \text{‘Take two!’} \]

b)  
\[ \text{búkúl-a} \]
\[ \text{tsi-bírí!} \]
\[ \text{take-sgS} \]
\[ \text{10-two} \]
\[ \text{‘Take two!’} \]

(96)  
a)  
\[ \text{e-tsi-káláámú} \]
\[ \text{tsi-bírí} \]
\[ \text{AUG-10a-pen} \]
\[ \text{10-two} \]
\[ \text{‘two pens’} \]

b)  
\[ \text{e-mí-káátí} \]
\[ \text{chi-bírí} \]
\[ \text{AUG-4-bread} \]
\[ \text{4-two} \]
\[ \text{‘two loaves of bread’} \]

2.3.3.5.4  **The interrogative ‘what’**

The root of this word, like the roots of other members of Class C1, is preceded by a class prefix when it occurs in an interrogative construction with ‘which’, as (97) shows.

(97)  
a)  
\[ \text{ba-lé} \]
\[ \text{shííná?} \]
\[ \text{2-what} \]
\[ \text{which} \]
\[ \text{‘Which ones?’} \]

b)  
\[ \text{wu-lé} \]
\[ \text{shííná?} \]
\[ \text{1-what} \]
\[ \text{which} \]
\[ \text{‘Which one?’} \]

Like other members of Class C1, the root of this word takes the class prefix only when functioning as a head of a phrase, as in (98), and as a modifier in a phrase, as in (99).
(98)  a)  o-la-búkúl-a  *ba-lé?*
   2sgS-HODF-take-IND  2-what
   ‘What will you (sg.) take?’

   b)  o-la-búkúl-a  *wu-lé?*
    2sgS-HODF-take-IND  1-what
   ‘What will you (sg.) take?’

(99)  a)  e-tsi-káláámú  *tsi-ré?
    AUG-10a-pen  10-what
   ‘What pens?’

   b)  e-mi-káátí  *chi-ré?
    AUG-4-pen  4-what
   ‘What loaves of bread?’

2.3.3.6 Class C2

Class C2 consists of two closed parts-of-speech, possessives and the word ‘another/other’.

2.3.3.6.1 Possessives

The roots of the possessives in Kisa are set out in table 2.6.

Table 2.6: Kisa possessive roots

<table>
<thead>
<tr>
<th>Person</th>
<th>Singular</th>
<th>Gloss</th>
<th>Plural</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st</td>
<td>-ánjé</td>
<td>‘my’</td>
<td>-éfú</td>
<td>‘our’</td>
</tr>
<tr>
<td>2nd</td>
<td>-ô</td>
<td>‘your’</td>
<td>-ényú</td>
<td>‘your’</td>
</tr>
<tr>
<td>3rd</td>
<td>-é</td>
<td>‘his/her’</td>
<td>-ábó</td>
<td>‘their’</td>
</tr>
</tbody>
</table>

The roots in possessives take a class prefix (see table 2.3) when they occur in interrogative constructions with ‘which’, as (100) shows.

(100)  shy-áánjé  *shííná?
    7-my  which
   ‘Which of mine?’

14 It is not clear from the data what conditions the [l]– [r] alternation in these examples.
The forms of second and third person singular possessives are irregular. The root in these possessives is preceded by a class prefix, the reflexive prefix, and another class prefix. Consider (101).

$$\begin{align*}
\text{(101)} & \quad \text{a} \quad \text{SR} & \quad \text{ba-a-b-é} & \quad \text{shiíná?} \\
& \quad \text{UR} & \quad \text{ba-i-ba-e} & \quad \text{shiina} \\
& & \text{2-RFL-2-his/her} & \text{which} \\
& & \text{‘Which of his/hers?’ (class 2)}
\end{align*}$$

$$\begin{align*}
\text{b} \quad \text{SR} & \quad \text{ku-u-kw-ó} & \quad \text{shiíná?} \\
& \quad \text{UR} & \quad \text{ku-i-ku-o} & \quad \text{shiina} \\
& & \text{3-RFL-3-your} & \text{which} \\
& & \text{‘Which of yours?’ (class 3)}
\end{align*}$$

$$\begin{align*}
\text{c} \quad \text{SR} & \quad \text{chi-i-chy-é} & \quad \text{shiíná?} \\
& \quad \text{UR} & \quad \text{chi-i-chi-e} & \quad \text{shiina} \\
& & \text{4-RFL-4-his/her} & \text{which} \\
& & \text{‘Which of his/hers?’ (class 4)}
\end{align*}$$

$$\begin{align*}
\text{d} \quad \text{SR} & \quad \text{shi-i-shy-ó} & \quad \text{shiíná?} \\
& \quad \text{UR} & \quad \text{shi-i-shi-o} & \quad \text{shiina} \\
& & \text{7-RFL-7-your} & \text{which} \\
& & \text{‘Which of yours?’ (class 7)}
\end{align*}$$

Possessives take an augment and a class prefix when functioning as heads of phrases, as seen in (102).

$$\begin{align*}
\text{(102)} & \quad \text{a} \quad \text{búkúl-a} & \quad \text{e-shy-áánjé!} \\
& & \text{take-sgS} & \text{AUG-7-my} \\
& & \text{‘Take mine!’}
\end{align*}$$

$$\begin{align*}
\text{b} \quad \text{búkúl-a} & \quad \text{o-kw-áábó!} \\
& & \text{take-sgS} & \text{AUG-3-their} \\
& & \text{‘Take theirs!’}
\end{align*}$$

When functioning as modifiers in phrases they do not take the augment:

$$\begin{align*}
\text{(103)} & \quad \text{a} \quad \text{e-Ø-káláámú} & \quad \text{y-áánjé} \\
& & \text{AUG-9a-pen} & \text{9-my} \\
& & \text{‘my pen’}
\end{align*}$$

$$\begin{align*}
\text{b} \quad \text{e-Ø-káláámú} & \quad \text{y-áábó} \\
& & \text{AUG-9a-pen} & \text{9-their} \\
& & \text{‘their pen’}
\end{align*}$$
As modifiers in phrases, the second and third person singular monomoraic possessives occur as enclitics (see section 6.2.2):

(104) a) \[ e-Ø-káláámú=y-ó \]
\[-9a-pen=9-2sg\]
\[ 'your pen' \]

b) \[ o-mu-khónó =kw-é \]
\[-3-hand=3-his/her\]
\[ 'his/her hand' \]

2.3.3.6.2 The word ‘another/other’

In Kisa -andi is the root for the word ‘another/other’. Morphologically, this word behaves like possessives. However, it does not have a possessive meaning.

The root in this word, like the roots in possessives, takes just a class prefix when it occurs in an interrogative construction with ‘which’, as (105) shows.

(105) a) \[ shí-índí      shííná? \]
\[-7-another/other which\]
\[ 'Which another one?' \]

b) \[ bí-índí     shííná? \]
\[-8-another/other which\]
\[ 'Which other ones?' \]

When functioning as a head of a phrase, the root in this word takes an augment and a class prefix, just like possessives. Consider (106).

(106) a) \[ bükul-a     e-shí-índí ! \]
\[-take-sgS AUG-7-another/other\]
\[ 'Take another/the other one!' \]

b) \[ bükul-a     e-bí-índí ! \]
\[-take-sgS AUG-8-another/other\]
\[ 'Take others/the other ones!' \]

When functioning as a modifier in a phrase, the root in this word takes a class prefix only, like the roots of possessives. The example in (107) illustrates this.
The examples in the preceding discussion show that members of Class C2 differ from members of Class C1 in that their roots can take an augment and a class prefix when functioning as heads of phrases, while the roots of the members of Class C1 take only a class prefix in this position.

2.3.3.7 Class D1

This class consists of multiplicative numerals. Multiplicative numerals in Kisa are formed by adding a frequency marker to the roots of cardinal numerals. The multiplicative numerals ‘twice’ to ‘six times’ contain the frequency marker kha=, as (108) illustrates.

(108)  a)  kha=bírí
       FM=two
       ‘twice’

       b)  kha=tárú
       FM=three
       ‘thrice’

The multiplicative numeral ‘once’ has the frequency marker lu=, as in (109).

(109)  lu=lálá
       FM=one
       ‘once’

Multiplicative numerals above ‘six times’ contain the frequency marker mara, as (110) shows.
Multiplicative numerals do not take a class prefix when they occur in an interrogative construction with ‘which’, as (111) illustrates.

(111) a)  
\[ \text{mara}^{15} \text{ sábá} \]  
FM seven  ‘seven times’

b)  
\[ \text{mara} \text{ tándá} \]  
FM nine  ‘nine times’

They also do not take a class prefix when functioning as heads of phrases, as in (112).

(112) a)  
\[ \text{búkúl-a} \text{ kha=birá!} \]  
take-sgS FM=two  ‘Take twice!’

b)  
\[ \text{búkúl-a} \text{ kha=tárú!} \]  
take-sgS FM=three  ‘Take thrice!’

As modifiers in phrases, the multiplicative numeral ‘once’ and multiplicative numerals above ‘six times’ do not take a class prefix, as seen in (113).

(113) a)  
\[ \text{e-bí-sé} \text{ lu=lálá} \]  
AUG-8-time FM=one  ‘once the same length of time’

b)  
\[ \text{e-tsi-ká láámú} \text{ mara sábá} \]  
AUG-10a-pen FM seven  ‘seven times the pens’

---

\[^{15}\text{Mara is not a clitic because it is bimoraic.}\]
On the other hand, as modifiers in phrases, the multiplicative numerals ‘twice’ to ‘six times’ take an augment, the class 7 prefix $shi$-, and a reflexive prefix, as (114) shows.

\[(114) \quad \text{e-}t\text{-}s\text{-}k\text{á-lá-}\text{ámú} \quad \text{e-}s\text{-}h\text{-}i\text{-i-}k\text{ha=bí-}\text{rí} \]
\[
\text{AUG-10a-pen} \quad \text{AUG-7-RFL-FM=two} \\
\text{‘twice the pens’}
\]

As modifiers in phrases, although like adjective roots the multiplicative numerals ‘twice’ to ‘six times’ take an augment and a class prefix, they differ from adjective roots in that they take a frequency marker and a reflexive prefix in addition.

As modifiers in phrases the multiplicative numerals ‘twice’ to ‘six times’ also differ from adjectives because the prefixes they take, $e$-$shi$-, are always the same, as illustrated in (115).

\[(115) \quad \text{a) e-}t\text{-}s\text{-}k\text{á-lá-}\text{ámú} \quad \text{e-}s\text{-}h\text{-}i\text{-i-}k\text{ha=bí-}\text{rí} \]
\[
\text{AUG-10a-pen} \quad \text{AUG-7-RFL-FM=two} \\
\text{‘twice the pens’}
\]

\[
\text{b) a-}b\text{-a-}k\text{há-}\text{áná} \quad \text{e-}s\text{-}h\text{-}i\text{-i-}k\text{ha=bí-}\text{rí} \]
\[
\text{AUG-2-girl} \quad \text{AUG-7-RFL-FM=two} \\
\text{‘twice the girls’}
\]

The prefixes taken by adjectives vary depending on the prefixes taken by the nouns that they modify, as (116) shows.

\[(116) \quad \text{a) e-}t\text{-}s\text{-}k\text{á-lá-}\text{ámú} \quad \text{Ø-}t\text{-sí-n-dá-yí} \]
\[
\text{AUG-10a-pen} \quad \text{AUG-10b-good} \\
\text{‘good pens’}
\]

\[
\text{b) a-}b\text{-a-}k\text{há-}\text{áná} \quad \text{a-}b\text{-a-lá-yí} \]
\[
\text{AUG-2-girl} \quad \text{AUG-2-good} \\
\text{‘good girls’}
\]
2.3.3.8 Class D2

This class is composed of ordinal numerals. There are several different ways of forming ordinal numerals in Kisa. However, all ordinal numerals in Kisa must take the connective marker.

The ordinal numeral ‘first’ is formed by adding the connective marker to the class 15 noun for ‘starting/beginning’, as shown in (117).

(117)  o=a-khu-rááng-á
       CM=AUG-15-start/begin-INF
       ‘first’

The ordinal numerals ‘second’ to ‘sixth’ are formed by adding the connective marker and the frequency marker kha= to the roots for the cardinal numerals ‘two’ to ‘six’, as (118) shows.

(118) a)  a=kha=bírí
       CM=FM=two
       ‘second’

       b)  a=kha=tárú
       CM=FM=three
       ‘third’

The ordinal numerals above ‘sixth’ are formed by adding just the connective marker to the forms for the cardinal numerals ‘seven’ and above, as (119) exemplifies.

(119) a)  a=sábá
       CM=seven
       ‘seventh’

       b)  a=tísá
       CM=nine
       ‘ninth’

Unlike multiplicative numerals, in interrogative constructions with ‘which’ ordinal numerals take a class prefix. Consider (120).
(120) a) \(wa-a=kha=bírí\) \(shííná?\)  
1-CM=FM=two which  
‘Which second one?’

b) \(wa-a=kha=tárú\) \(shííná?\)  
1-CM=FM=three which  
‘Which third one?’

As heads of phrases ordinal numerals, unlike multiplicative numerals, must take a class prefix, as (121) shows, but they optionally take an augment. Consider (122).

(121) a) \(búkúl-a\) \(wa-a=kha=bírí!\)  
take-sgS 1-CM=FM=two ‘Take the second!’

b) *\(búkúl-a\) \(a=kha=bírí!\)  
take-sgS CM=FM=two ‘Take the second!’

(122) a) \(búkúl-a\) \(o-wa-a=kha=bírí!\)  
take-sgS AUG-1-CM=FM=two ‘Take the second!’

b) \(búkúl-a\) \(wa-a=kha=bírí!\)  
take-sgS 1-CM=FM=two ‘Take the second!’

When functioning as modifiers in phrases, ordinal numerals, unlike multiplicative numerals, only take a class prefix, as seen in (123).

(123) a) \(i-Ø-káláámú\) \(y-aa=kha=bírí\)  
AUG-9a-pen 9-CM=FM=two ‘the second pen’

b) \(i-Ø-káláámú\) \(y-aa=kha=tárú\)  
AUG-9a-pen 9-CM=FM=three ‘the third pen’

Members of Class D differ from the other members of the nominals category because members of Class D1 must take a frequency marker, while members of Class D2 must take the connective marker.
2.3.3.9 Class E

Class E consists of cardinal numerals above ‘six’, first and second person pronouns, and the distributive determiner ‘each’. The former is an open class, while the latter two are closed classes in Kisa.

2.3.3.9.1 Cardinal numerals above ‘six’

Cardinal numerals above ‘six’, like members of Class A3, do not take any prefix when they occur in an interrogative construction with ‘which’:

(124) a) sábá shíiíná?
    seven which
    ‘Which seven?’

    b) tísá shíiíná?
    nine which
    ‘Which nine?’

As heads of phrases their roots are not preceded by any prefixes, like members of Class A3, as in (125).

(125) a) bükül-a sábá!
    take-sgS seven
    ‘Take seven!’

    b) bükül-a tísá!
    take-sgS nine
    ‘Take nine!’

When cardinal numerals above ‘six’ are functioning as modifiers in phrases their roots do not take any prefixes, as in (126). They therefore differ from the members of Class A3 which take prefixes in this position.

(126) a) a-bá-áná sábá
    AUG-2-child seven
    ‘seven children’
2.3.3.9.2 **First and second person pronouns**

Table 2.7 gives the first and the second person pronouns in Kisa.

**Table 2.7: Kisa first and second person pronouns**

<table>
<thead>
<tr>
<th>Person</th>
<th>Singular</th>
<th>Plural</th>
</tr>
</thead>
<tbody>
<tr>
<td>1&lt;sup&gt;st&lt;/sup&gt;</td>
<td>(é)syé</td>
<td>(é)fwé</td>
</tr>
<tr>
<td>2&lt;sup&gt;nd&lt;/sup&gt;</td>
<td>(é)ywé</td>
<td>(é)nywé</td>
</tr>
</tbody>
</table>

These pronouns can function as subjects or objects.

The roots of these pronouns, like those of cardinal numerals above ‘six’, do not take any prefix when they occur in an interrogative construction with ‘which’:

(127) a)  

<table>
<thead>
<tr>
<th>sentence</th>
<th>meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>ésyé shúná?</td>
<td>What about me?</td>
</tr>
<tr>
<td>me which</td>
<td></td>
</tr>
</tbody>
</table>

b)  

<table>
<thead>
<tr>
<th>sentence</th>
<th>meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>éfwé shúná?</td>
<td>What about us?</td>
</tr>
<tr>
<td>us which</td>
<td></td>
</tr>
</tbody>
</table>

Like the roots of cardinal numerals above ‘six’, the roots of these pronouns are not preceded by any prefixes as heads of phrases. Consider (128).

(128) a)  

<table>
<thead>
<tr>
<th>sentence</th>
<th>meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>búkúl-a ésyé!</td>
<td>Take me!</td>
</tr>
<tr>
<td>take-sgS me</td>
<td></td>
</tr>
</tbody>
</table>

b)  

<table>
<thead>
<tr>
<th>sentence</th>
<th>meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>búkúl-a éfwé!</td>
<td>Take us!</td>
</tr>
<tr>
<td>take-sgS us</td>
<td></td>
</tr>
</tbody>
</table>
The roots of these pronouns do not take any prefixes when they function as an apposed head in a complex phrase:

(129)  
\[ \begin{align*} 
& a) \quad o\text{-}mu\text{-}khááná \quad éywé! \\
& \quad \text{AUG-1-girl} \quad \text{you} \\
& \quad \text{‘You girl!’} \\
& b) \quad a\text{-}ba\text{-}khááná \quad énywé! \\
& \quad \text{AUG-2-girl} \quad \text{you} \\
& \quad \text{‘You girls’} 
\end{align*} \]

First and second person pronouns can also occur as monomoraic forms, as table 2.7 shows. Monomoraic forms of these pronouns are clitics (see section 6.4):

(130)  
\[ \begin{align*} 
& a) \quad syé=shííná? \\
& \quad \text{1sg=which} \\
& \quad \text{‘What about me?’} \\
& b) \quad búkúl-á=syé! \\
& \quad \text{take-sgS=1sg} \\
& \quad \text{‘Take me!’} \\
& c) \quad o\text{-}mu\text{-}khááná=ywé! \\
& \quad \text{AUG-1-girl=2sg} \\
& \quad \text{‘You girl!’} 
\end{align*} \]

### 2.3.3.9.3 The distributive determiner ‘each’

The root for the distributive determiner ‘each’ in Kisa is *búlí*. This root, like those of the other members of Class E, does not take any prefix, as the following data show.

(131)  
\[ \begin{align*} 
& búlí \quad shííná? \\
& \quad \text{each} \quad \text{which} \\
& \quad \text{‘What about each?’} 
\end{align*} \]

(132)  
\[ \begin{align*} 
& búkúl-a \quad búlí \quad o\text{-}mu\text{-}khááná! \\
& \quad \text{take-sgS} \quad \text{each} \quad \text{AUG-1-girl} \\
& \quad \text{‘Take each girl!’} 
\end{align*} \]

(133)  
\[ \begin{align*} 
& búlí \quad o\text{-}mu\text{-}khááná \\
& \quad \text{each} \quad \text{AUG-1-girl} \\
& \quad \text{‘each girl’} 
\end{align*} \]
The examples in the preceding discussion show that members of Class E do not take any prefixes either as heads of phrases or as modifiers in phrases. This differentiates them from the other members of the nominal category, which are preceded by prefixes in these positions. However, I classify them under nominals and not as particles because, like other nominals, they take locative prefixes, as exemplified below.

(134) *shi-ri khu-sábd.*
    7-is    on-seven
    ‘(It) is on the seven.’

(135) *shi-ri khw-eésyé.*
    7-is    on-me
    ‘(It) is on me.’

(136) *shi-ri khu-búlí  o-mu-khááná.*
    7-is    on-each AUG-1-girl
    ‘(It) is on each girl.’

2.4 Particles

The roots in the words in this category do not take verbal or nominal affixes. Members of this category are divided into four parts of speech, adverbs, prepositions, conjunctions, and interjections. They constitute closed classes. Table 2.8 contains examples of words of each of these parts of speech.

Table 2.8: Examples of the members of the particles category

<table>
<thead>
<tr>
<th>Part of speech</th>
<th>Example</th>
<th>Gloss</th>
<th>Open/closed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adverbs</td>
<td>káálá</td>
<td>‘slowly’</td>
<td>Closed</td>
</tr>
<tr>
<td>Prepositions</td>
<td>hákárí</td>
<td>‘between’</td>
<td>Closed</td>
</tr>
<tr>
<td>Conjunctions</td>
<td>hárálí</td>
<td>‘but’</td>
<td>Closed</td>
</tr>
<tr>
<td>Interjections</td>
<td>māwé</td>
<td>‘expression of surprise’</td>
<td>Closed</td>
</tr>
</tbody>
</table>
2.4.1 Adverbs

Adverb roots take neither prefixes nor suffixes. Consider (137) and (138).

(137) \(búkál-a \quad káála!\)
    take-sgS   slowly
    ‘Take slowly!’

(138) \(o-mu-láyí \quad ókhúshírá\)
    AUG-1-good extremely
    ‘extremely good’

2.4.2 Prepositions

Like other members of the category of particles, prepositions take neither prefixes nor suffixes:

(139) \(hákári \quad wá-ábó\)
    between   1-them
    ‘between them’

2.4.3 Conjunctions

Some of the common conjunctions in Kisa are listed in (140).

(140) \(néndé \ ‘and’, \ nóómbá’or’, \ hárálí \ ‘but’, \ éníkálí \ ‘if’, \ khúshíchírá\)
    ‘because’

2.4.4 Interjections

Some of the common Kisa interjections are given in (141).

(141) \(máámáá! \ ‘expresses wonder’, \ mámáwé! \ ‘expresses surprise’, \ ákh!\)
    ‘expresses disgust’, \ bádné! \ ‘expresses pity’

2.5 Summary

This chapter looked at the part-of-speech classes in Kisa. It showed that there are 14 distinct part-of-speech classes in this language grouped into three categories based on the type of affixes they can take and the variations in the morphological
structure of the prefixes found when they function as heads of phrases and as modifiers in phrases.

Verbal stems require suffixes and can also take verbal prefixes. Nominal stems, except adjective roots, do not take suffixes. They take nominal or non-verbal prefixes. There are five principal classes of nominals, Class A, nouns and the interrogative pronoun ‘who(m)’; Class B, adjectives; Class C1, demonstratives, quantifiers, the cardinal numerals ‘one’ to ‘six’, and the interrogative ‘what’, Class C2, possessives and the word ‘another/other’; Class D1, multiplicative numerals, Class D2, ordinal numerals; Class E, cardinal numerals above ‘six’, first and second person pronouns, and the distributive determiner ‘each’.

Members of Class A differ from members of Class B in that members of Class A take the structure of a noun phrase marked by the connective when they function as modifiers in phrases, whereas members of Class B take an augment and a class prefix in this position.

Members of class C differ from members of class A and B in that when functioning as modifiers in phrases they take only a class prefix. On the other hand, members of Class C1 differ from members of Class C2, as the former take only a class prefix when functioning as heads of phrases, while the latter take an augment and a class prefix in that situation.

Members of Class D differ from members of the other classes in the nominal category because they must take either a frequency marker or the connective marker. Members of Class D1 differ from members of Class D2 as they take only a frequency marker when they occur in interrogative constructions with ‘which’ and when they are functioning as heads of phrases. Members of Class D2 take a class prefix in addition to the connective marker when functioning as heads of phrases.
Members of Class E are different from members of the other classes in the nominal category as they do not take any prefixes when functioning as heads of phrases or as modifiers in phrases. However, they take locative prefixes just like members of the other classes in the nominal category.

The third category is that of particles, with four parts of speech, namely adverbs, prepositions, conjunctions, and interjections. Particles do not take affixes.
CHAPTER 3: BASIC PHONOLOGY

3.1 Introduction
This chapter discusses the basic issues in the phonology of Kisa. It has two aims. First, it describes the consonant and vowel phonemes. Second, it describes the basic phonotactic structure of Kisa words.

Section 3.2 sets out the Kisa phonemic inventory and phonotactics. Section 3.3 discusses the basic syllable structure. Section 3.4 considers tone, while section 3.5 describes sub-minimal lexical word forms. Finally, section 3.6 is a summary of the chapter.

3.2 Segmental inventory
This section examines the segmental phonemes of Kisa. It also considers vowel length.

3.2.1 Consonants
The consonantal phonemes in Kisa are set out in table 3.1.

Table 3.1: Kisa IPA consonantal phonemes

<table>
<thead>
<tr>
<th></th>
<th>Bilabial</th>
<th>Labiodental</th>
<th>Alveolar</th>
<th>Palato-alveolar</th>
<th>Palatal</th>
<th>Velar</th>
<th>Glottal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stops</td>
<td>p</td>
<td>t</td>
<td></td>
<td></td>
<td>k</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Affricates</td>
<td></td>
<td>ts</td>
<td>ŋ</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fricatives</td>
<td>ß</td>
<td>f</td>
<td>s</td>
<td>j</td>
<td>x</td>
<td>h</td>
<td></td>
</tr>
<tr>
<td>Nasals</td>
<td>m</td>
<td>n</td>
<td>p</td>
<td>n</td>
<td></td>
<td></td>
<td>η</td>
</tr>
<tr>
<td>Trill</td>
<td></td>
<td>r</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lateral</td>
<td></td>
<td>l</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Glides</td>
<td>w</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>j</td>
<td></td>
</tr>
</tbody>
</table>

Table 3.2 shows the orthographic representation of the consonants in Kisa.
Table 3.2: Orthographic representation of Kisa consonants

<table>
<thead>
<tr>
<th></th>
<th>Bilabial</th>
<th>Labiodental</th>
<th>Alveolar</th>
<th>Palato-alveolar</th>
<th>Palatal</th>
<th>Velar</th>
<th>Glottal</th>
</tr>
</thead>
<tbody>
<tr>
<td>StOPS</td>
<td>p</td>
<td>t</td>
<td></td>
<td></td>
<td>k</td>
<td></td>
<td></td>
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<tr>
<td>Affricates</td>
<td></td>
<td>ts</td>
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<td></td>
<td>ch</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fricatives</td>
<td>b</td>
<td>f</td>
<td>s</td>
<td>sh</td>
<td>kh</td>
<td>h</td>
<td></td>
</tr>
<tr>
<td>Nasals</td>
<td>m</td>
<td>n</td>
<td>ny</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nasal-Stop</td>
<td>mb</td>
<td>nd</td>
<td></td>
<td></td>
<td>ng</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nasal-Affricate</td>
<td></td>
<td>nz</td>
<td>nj</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trill</td>
<td>r</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lateral</td>
<td>w</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>y</td>
</tr>
</tbody>
</table>

The velar nasal /ŋ/ (ng’) is a distinct phoneme from the velar nasal consonant (NC) cluster [ŋg] (ng). Consider the data in (1).

(1)  
a) tööŋ-a  ‘be left behind’
     tööŋg-a  ‘dip in soup’

   b) i-Ø-ŋuul-á  ‘removing style’
     i-p-ŋuul-á  ‘heaping style’

All the consonantal phonemes in table 3.1 above can be found word-initially and word-medially. The table shows that Kisa does not have voiced obstruents except the bilabial fricative /β/. Voiced stops and affricates do not occur independently in Kisa. They are only found after a nasal, as discussed in section 8.2. In this environment I analyse them as allophones of the corresponding voiceless stops and affricates. A nasal and a following voiced obstruent constitute NC sequences in Kisa, which are discussed in section 8.3.

---

16 In Kisa the letter <b> corresponds to the bilabial stop [b] only when it is preceded by a nasal, in other environments it corresponds to the bilabial fricative [β].
As table 3.1 shows, the system consists of 19 consonantal phonemes, which comprise three stops, four nasals, two affricates, six fricatives, one trill, one lateral, and two glides. My analysis differs from Sample (1976: 16), who identifies 18 consonantal phonemes. He does not recognize the bilabial glide [w] as a consonantal phoneme. Sample (1976: 21) proposes that surface [w] in Kisa is derived from underlying /u/:

(2) **SR**  
**UR**  
**UR**  
AUG-3-moon  
‘a/the moon/month’

(3)  
**o-mu-kóyé**  
AUG-3-robe  
‘a/thee rope’

Sample also proposes that surface [w] can derive from underlying /o/. Consider (4) and (5).

(4) **SR**  
**UR**  
2sgS-come-IND  
‘You (sg.) come.’

(5)  
**o-kon-a.**  
2sgS-sleep-IND  
‘You (sg.) sleep.’

However, there are examples of surface [w] in Kisa where it does not alternate with /u/ or /o/:

(6)  
**wúl-a!**  
win/succeed-sgS  
‘win/succeed!’

(7)  
**wúál-a!**  
pound-sgS  
‘Pound in a sack!’

The fact that the examples above begin with /w/ is supported by the following data:
The 1sgO prefix takes the allomorph [ny-] when followed by a root beginning with a consonant. Consider (10).

(10)  a) SR  n-gúl-a!
      UR  /ny-kul-a/
      1sgO-buy-sgS
      ‘Buy me!’

      b) SR  n-dóól-a!
      UR  /ny-tool-a/
      1sgO-pick up-sgS
      ‘Pick me up!’

The forms in (8) and (9) surface without the nasal, because a nasal is deleted before a glide, as discussed in section 8.2.3.

The 1sgO takes the allomorph [nz-] when followed by a root beginning with a vowel, as (11) shows.

(11)  a) nz-íy-a!
      1sgO-uproot-sgS
      ‘Uproot me!’

      b) nz-okhol-a!
      1sgO-scoup-sgS
      ‘Scoup me!’

3.2.2 Vowels

Kisa has five phonemic vowels. These vowels occur both in short and long forms. Underlying vowel length in roots is contrastive in Kisa, as we shall see below. In
this description, long vowels are indicated by doubling the vowel, while short vowels are shown as a single vowel.

The short vowels are given in table 3.3.

Table 3.3: Kisa short vowels

<table>
<thead>
<tr>
<th></th>
<th>Front Unrounded</th>
<th>Central</th>
<th>Back Rounded</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>i</td>
<td></td>
<td>u</td>
</tr>
<tr>
<td>Mid</td>
<td>e</td>
<td></td>
<td>o</td>
</tr>
<tr>
<td>Low</td>
<td></td>
<td>a</td>
<td></td>
</tr>
</tbody>
</table>

The set of long vowels is identical to the set of short vowels. All the short vowels in the table above occur word-initially, medially, and finally, except the high back vowel /u/, which does not occur word-initially. When any of these vowels is concatenated with a different vowel at various boundaries, phonological adjustments take place, resulting in different surface vowels. The vowel processes used to resolve vowel hiatus are discussed in Chapter 7.

There appears to be a significant difference between the [+high] long vowels and the [-high] long vowels. From my native speaker intuition, the [-high] long vowels appear to have a constant quality in production. In contrast the [+high] long vowels appear to vary in quality, being /i/ and /u/. However, experimental research is needed to confirm this.

As stated above, underlying vowel length is contrastive in roots. This is shown by the minimal pairs in (12-14) and the sub-minimal pair in (15).

(12)  a)  sááb-a!  ‘Wash!’
       sáb-a!  ‘Ask for something!’

       b)  méér-a!  ‘Become drunk!’
           mér-a!  ‘Shoot up!’ (as of plants)

       c)  síír-a!  ‘Jump over!’
           sír-a!  ‘Fence!’
(13)  

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>a</td>
<td>i-m-báálé</td>
<td>‘a/the gravel’</td>
</tr>
<tr>
<td></td>
<td>i-m-bálé</td>
<td>‘shooting up plants’</td>
</tr>
<tr>
<td>b</td>
<td>a-ma-bééré</td>
<td>‘milk’</td>
</tr>
<tr>
<td></td>
<td>a-ma-béré</td>
<td>‘millet’</td>
</tr>
<tr>
<td>c</td>
<td>i-shímá</td>
<td>‘respect’</td>
</tr>
<tr>
<td></td>
<td>i-shíómá</td>
<td>‘rust’</td>
</tr>
<tr>
<td>d</td>
<td>o-lu-kóósí</td>
<td>‘favouritism’</td>
</tr>
<tr>
<td></td>
<td>o-lu-kósí</td>
<td>‘neck of a fowl’</td>
</tr>
<tr>
<td>e</td>
<td>Ø-líí-kúuákú</td>
<td>‘pigeon’</td>
</tr>
<tr>
<td></td>
<td>Ø-líí-kúukú</td>
<td>‘grass (sp.)’</td>
</tr>
</tbody>
</table>

(14)  

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>síkúl-</td>
<td>‘Dislodge!’</td>
<td></td>
</tr>
<tr>
<td>síikúl-</td>
<td>‘Move from!’</td>
<td></td>
</tr>
<tr>
<td>síikúúl-</td>
<td>‘Nauseate!’</td>
<td></td>
</tr>
</tbody>
</table>

(15)  

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>nénér-</td>
<td>‘Eat sparingly!’</td>
<td></td>
</tr>
<tr>
<td>Ø-líí-néénérá</td>
<td>‘safari ant’</td>
<td></td>
</tr>
</tbody>
</table>

Underlying vowel length is also contrastive in affixes. Consider the minimal pair in (16).

(16)  

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>nd-a-ku-l-</td>
<td>1sgS-FARP-buy-IND</td>
<td></td>
</tr>
<tr>
<td></td>
<td>‘I bought some time back’</td>
<td></td>
</tr>
</tbody>
</table>

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>nd-aa-kul-</td>
<td>1sgS-REMP-buy-IND</td>
<td></td>
</tr>
<tr>
<td></td>
<td>‘I bought a long time ago’</td>
<td></td>
</tr>
</tbody>
</table>

### 3.2.3 Distribution of underlying long vowels

With the exception of interjections (see section 3.2.3.1), words or roots in Kisa do not begin or end with long vowels whether underlying or not. Consonant-initial
polysyllabic words can have long vowels in any position, except in word-final position, as the following examples show.

(17) béétsékál-

belch-sgS
‘Belch!’

(18) bótóókhán-

go round-sgS
‘Go round!’

(19) hétimáásítá

headmaster
‘headmaster’

(20) kúrisímáásí

Christmas
‘Christmas’

(21) i-Ø-párástámóólí

AUG-9a-paracetamol
‘a/the paracetamol’

They can also have long vowels in adjacent syllables, as in (22).

(22) a) Ø-líí-tímóóní

AUG-5a-demon
‘a/the demon’

b) Ø-líí-khóómóníó

AUG-5a-snail
‘a/the snail’

Consonant-initial closed monosyllabic roots can have long vowels, as in (23).

(23) a) bóól-

speak/say-sgS
‘Speak/say!’

b) súúl-

uproot-sgS
‘Uproot!’
Vowel-initial polysyllabic words can have long vowels in any position except in initial and final position, as the following examples show.

(24) íbáál-a!
    teach-sgS
    ‘Teach!’

(25) ókhúbéérá
    because
    ‘because’

(26) e-shí-ímbálákúúsí
    AUG-7-whirlwind
    ‘a/the whirlwind’

They also permit long vowels in adjacent syllables, as seen in (27).

(27) ítúúbúút-e!
    play in water-plS
    ‘Play in water!’

Vowel-initial closed monosyllabic roots do not allow long vowels.

There are only five affixes with underlying long vowels in Kisa. They are set out in (28).

(28) líí- ‘class 5a prefix’, tsííny- ‘class 10b/c prefix’, tsíínz- ‘class 10d prefix’,
    aa- ‘remote/hesternal past prefix’, -VVng\(^{17}\) ‘imperfective suffix’

3.2.3.1 Underlying long vowels in interjections

As an exception, interjections in Kisa allow underlying long vowels word-initially. There are only two interjections in the data that begin with a long vowel:

(29) ááwá! ‘oh no!’, áátsé! ‘expression of reproof’

\(^{17}\) VV in this suffix refers to a sequence of two vocalic moras.
Interjections also allow underlying long vowels word-finally. All the interjections that end with a long vowel in the data are given in (30).

(30) ápóó! ‘not at all!’, nyíí! ‘yes!’, kóó! ‘look here!’, hótíí! ‘form of announcing one’s arrival at a house’, sáá! ‘used to scare birds away’, máámbáá! ‘expresses wonder’

3.2.3.2 Summary of the distribution of underlying long vowels
There are three facts about the distribution of underlying long vowels in Kisa. First, long vowels, be they underlying or not, do not occur at the beginning or end of a word or root except in interjections. Second, underlying long vowels can occur in any other position in polysyllabic roots. Third, polysyllabic roots can have underlying long vowels in adjacent syllables.

3.3 Syllable structure
Kisa has open syllables. Closed syllables occur at the phrasal level only as a result of apocope. I discuss open syllables in this section. Closed syllables are discussed in Chapter 7.

The most common open syllable type in Kisa, as in other Luhya languages (Kanyoro 1983; Marlo 2006; Mutonyi 2000), is the CV syllable. Consider the syllables in the word in (31). Syllable boundaries are marked by a dot (.)

(31) ba-.la-.khu.p-a.n-i.r-a
3plS-HODF-beat-REC-APPL-IND
‘they will fight each other for’

Another open syllable type that occurs in Kisa is the CVV syllable, as illustrated by the first three syllables in (32).

(32) Ø-líí-.tíí.móó.ní
AUG-5a-demon
‘a/the demon’
The onset in CV and CVV syllables may be any consonantal phoneme of the language.

Open syllables consisting of just a single vowel also occur, as seen in (33). The syllable in question is in bold face and underlined.

(33)  a)  \( \text{á.l-a!} \)
   spread-sgS
   ‘Spread!’

   b)  \( \text{b-aa.-ľ.n-a} \)
   3plS-REMP-dip-IND
   ‘they dipped’

3.4 Tone


Donohew (1973: 307) posits two tonal phonemes in Kisa, high tone (´) and low tone. He observes that high-falling (’’) and low-rising (’’) variants also occur. Donohew (1973: 308-309) suggests that words in Kisa can be marked for a high or a low tone with a few occurring with more than one high tone. Synchronically, in Kisa, only the high tone is phonologically active. Low tone is assigned by default.

This thesis does not in general examine tone. It considers only the contrastive distribution of tone. It appears that contrastive tone can be accounted for by a model where only high tone is lexically specified. The appearance of tone on morphemes not specified for a high tone is determined by the general phrasal tonal phonology of Kisa.
In nominals, specified high tone is contrastive in only 56 minimal pairs in the corpus. Of these pairs 50 involve native words, some of which are listed in (34). The six pairs in (35) involve loans.

(34) a) i-n-dá ‘a/thelouse’
i-n-da ‘a/the stomach’

b) e-shi-ró ‘night time’
e-shi-ro ‘stick used for digging up potatoes’

c) o-bu-chésí ‘intelligence/wisdom/cleverness’
o-lu-chesi ‘perspiration/sweat’

d) o-lu-fú ‘death’
o-lu-fu ‘dust’

e) o-mw-ííkhó ‘a/the relative’
o-mw-iikho ‘a/the paddle’

(35) a) i-Ø-páákí ‘a/the bag’
o-bu-paaki ‘cheeriness’

b) i-Ø-kóókó ‘cocoa’
e-shi-kooko ‘an/the insect’

c) i-rúúlá ‘a/the ruler’
o-khu-ruul-a ‘the unloading’

d) i-Ø-ráándá ‘a/the carpenter’s plane’
o-bu-raanda ‘a/the veranda’

e) o-mu-káátí ‘bread’
e-shi-kaati ‘a/the skirt’

f) i-Ø-síírí ‘a/the secrete’
Ø-lií-síiri ‘a/the lizard’

There is no specified contrastive high tone in verb stems. In the verbal system, tones are morphemes.18

(36) kúl-e bwáángú!
buy-plS quickly
‘Buy quickly!’

18 There is no contrastive tone on prefixes in the verbal system.
The form with a high tone (36) has the meaning of a plural imperative, while that without a high tone (37) has a subjunctive meaning.

3.5 Sub-minimal lexical word forms

In this section I discuss consonant-initial verb and noun forms that can occur as sub-minimal words. There are no vowel-initial forms.

There are only 15 verb roots in the data made up of a single open syllable (see section 5.5):

(38)  

These verb roots can appear in sub-minimal words as imperative constructions, as in (39).

(39)  
a)  
\begin{align*} 
  r-á! & \quad \text{put-sgS} \\
  \text{Put!} & 
\end{align*}

b)  
\begin{align*} 
  r-é! & \quad \text{put-plS} \\
  \text{Put!} & 
\end{align*}

Only 22 nouns in the data consisting of an open monosyllabic root can occur as sub-minimal words:

(40)  
The nouns in (40) can appear as words in interrogative constructions with ‘which’, as in (41).

(41) a) só shiĩná?
father what
‘Which father?’

b) Ø-chó shiũná?
9a-toilet what
‘Which toilet?’

c) n-do shiũná?
9b-bucket what
‘Which bucket?’

The examples in the preceding discussion show the verb forms in (38) and the noun forms in (40) as word forms consisting of a single open syllable. These words are sub-minimal, as the following examples illustrate:

(42) r-á!
put-sgS
‘Put!’

(43) a) só shiũná?
father what
‘Which father?’

b) Ø-chó shiũná?
9a-toilet what
‘Which toilet?’

c) n-do shiũná?
9b-bucket what
‘Which bucket?’

The imperatives of the verbal forms in (38) are bimoraic when followed by word-level verbal enclitics (see section 6.2.1), as (44) shows.

(44) a) há-á=khú o-mw-ááná!
give-sgS=POL AUG-1-child
‘Please give the child!’
b)  \(\text{ré-é=}\text{yó!}\)  
\(\text{put-plS=}\text{there}\)  
‘Put there!’

However, when followed by phrase-level enclitics the imperatives of the verbal forms in (38) are monomoraic, as in (45).

(45)  
a)  \(\text{h-á=}\text{b-ó!}\)  
\(\text{give-sgS=}\text{2-PRO}\)  
‘Give them!’

b)  \(\text{r-é=}\text{b-ó!}\)  
\(\text{put-plS=}\text{2-PRO}\)  
‘Put them!’

The data in (44) shows that a minimal word in Kisa should be bimoraic. The forms in (39) are monomoraic because long vowels are prohibited word-finally in Kisa.

The vocative form of the noun \(\text{so} \) ‘father’ is monomoraic when followed by an enclitic, as (46) shows.

(46)  
a)  \(\text{só=}\text{w-ó!}\)  
\(\text{father=}1-2\text{sg}\)  
‘Your father!’

b)  \(\text{só=}\text{tá!}\)  
\(\text{father=}\text{no}\)  
‘Father no!’

3.6 Summary

This chapter looked at the segmental phonemes of Kisa. It showed that Kisa has 19 consonantal phonemes, three stops, four nasals, two affricates, six fricatives, two glides, one trill, and one lateral. All these phonemes occur in all positions of the word. The bilabial fricative /β/ is the only independently occurring voiced obstruent in Kisa.
The discussion demonstrated that Kisa has five phonemic vowels occurring in both long and short forms. Short vowels occur in all positions of the word, with the exception of the high back vowel /u/, which does not occur word-initially. Long vowels (whether underlying or not) do not occur at the beginning or end of words and roots except in interjections. There are only five affixes with underlying long vowels. Further, the discussion showed that underlying vowel length is phonemic in roots and that words in Kisa can have long vowels in adjacent syllables.

The description on tone showed that Kisa is a tone language, like other Luhya and Bantu languages. Lexical high tone is contrastive only in a few nominals. In verbs, contrastive high tone is affixal.
CHAPTER 4: NOMINAL MORPHOLOGY

4.1 Introduction

This chapter discusses the nominal morphology, principally the noun class system, of Kisa. In Kisa the maximal structure for a nominal word is that set out in (1), as discussed in section 2.3.2.

(1) \((\text{Proclitic}=)(\text{Locative}/\text{Augment-})(\text{ClassPrefix-})(\text{KINPrefix-})\text{Stem (=Enclitic)}\)

This structure is exemplified by the data in (2-6).

(2) \(\text{o-mu-súkú}\)
\(\text{AUG-1-enemy}\)
\(\text{‘an/the enemy’}\)

(3) \(\text{a-ba-a-kúúká}\)
\(\text{AUG-2-KIN-grandfather}\)
\(\text{‘grandfathers’}\)

(4) \(\text{khu-mu-súkú}\)
\(\text{on-1-enemy}\)
\(\text{‘on an/the enemy’}\)

(5) \(\text{khu-ba-a-kúúká}\)
\(\text{on-2-KIN-grandfather}\)
\(\text{‘on the grandfathers’}\)

(6) \(\text{ni=khō-ba-a-kúúká=b-ó}\)
\(\text{is=on-2-KIN-grandfather=2-your}\)
\(\text{‘(It) is on your grandfathers’}\)

Nouns in Bantu languages are divided into classes numbered from 1-24 (Guthrie 1967; Katamba 2006; Meeussen 1967; Welmers 1973). While there is justification for the 1-24 numbering in Proto-Bantu, changes have occurred in several of the Bantu languages. As a result, not all of the 24 classes are necessarily found in any present day Bantu language (Katamba 2006: 108).
Synchronically Kisa has 16 noun classes. It is prefixation and in particular noun class prefixes that are the hallmark of the Kisa noun class system. Nouns are placed into classes depending on the prefixes they take and their meanings, as (7) and (8) show.

(7) a) o-mu-khónó
    AUG-3-hand
    ‘a/the hand’

    b) o-mu-khááná
    AUG-1-girl
    ‘a/the girl’

(8) a) e-shi-tábú
    AUG-7-book
    ‘a/the book’

    b) e-bi-tábú
    AUG-8-book
    ‘the books’

In Kisa, as in other languages, nouns can be modified by other words. Modifiers of nouns take markers that agree with the noun class of the nouns they occur with, as in (9) and (10).

(9) o-mu-khónó  kw-áánjé
    AUG-3-hand  3-my
    ‘my hand’

(10) o-mw-ááná  wá-ánjé
     AUG-1-child 1-my
     ‘my child’

This chapter looks at the elements of a Kisa nominal (except clitics, which are discussed in Chapter 6). It also discusses class marking on Kisa nouns and marking for class agreement on noun modifiers. Section 4.2 describes noun class marking on common nouns, while section 4.3 explains class agreement markers on common noun modifiers. Section 4.4 deals with class marking on nouns other than common nouns. Section 4.5 discusses the productivity of noun classes in Kisa and section 4.6 talks about locatives.
Kisa has compound words. All the compounds in the data are nouns. Compounding is described in section 4.7. Section 4.8 is a summary of the chapter.

### 4.2 Noun class marking on common nouns

The root of a common noun can be preceded by a class prefix and an augment. This structure appears in all definite and/or specific contexts. It also occurs in a range of other contexts. This is the form that occurs with habitual-generic statements, as (11) shows.

(11) a)  $a$-$bá$-$á$ñ$á$ $nå=å$-$bå$-$lå$ñ$á$.  
    AUG-2-child is=AUG-2-good
    ‘The children are good.’

b)  $Ø$-$tsú$ñ$ù$-$bwå$ $nì=Ø$-$tsú$-$då$ñ$á$.  
    AUG-9b-dog is=AUG-9b-good
    ‘The dogs are good.’

This form also occurs with indefinite reference, as in (12).

(12) a)  $o$-$må$-$ú$ñ$ú$ $wó$-$ó$ñ$ì $wå$-$nå$-$a$ $å$-$nå$-$a$ $o$-$khw$-$íå$ñ$ts$-$å$.  
    AUG-1-person 1-all 3sgS-can-IND  AUG-15-come-INF
    ‘Any person can come.’

b)  $i$-$m$-$bwå$ $y$-$ó$ñ$ì $i$-$nå$-$a$ $å$-$nå$-$a$ $o$-$khw$-$íå$ñ$ts$-$å$.  
    AUG-9b-dog 9-all 9S-can-IND  AUG-15-come-INF
    ‘Any dog can come.’

Similarly, this form occurs with negatives, as seen in (13).

(13) a)  $shi=mu$-$li$ $å$-$bå$-$såkå$ñ$å$=$å$.  
    NEG=2plS-is AUG-2-enemy=no
    ‘You are not enemies.’

b)  $shi=ku$-$li$ $o$-$mu$-$såålå$ñ$å$=$å$.  
    NEG=3S-is AUG-3-tree=no
    ‘(It) is not a/the tree.’

However, there are two specific constructions where common nouns lack the augment. Common nouns occur without the augment in interrogative constructions with ‘which’, as exemplified in (14).
The other specific construction where common nouns can occur without the augment is with vocatives involving a first person possessive, as (15) and (16) illustrate.

\[(15)\]
\[\text{a)} \quad \text{búkúl-a} \quad \text{mw-ááná} \quad \text{wá-ánjé!} \]
\[\text{take-sgS} \quad 1\text{-child} \quad 1\text{-my} \]
\[\text{‘My child, take!’} \]
\[\text{b)} \quad \text{búkúl-a} \quad \text{m-bwá} \quad \text{y-áánjé!} \]
\[\text{take-sgS} \quad 9\text{b-dog} \quad 9\text{-my} \]
\[\text{‘My dog, take!’} \]

\[(16)\]
\[\text{a)} \quad \text{búkúl-a} \quad \text{mw-ááná} \quad \text{wé-éfú!} \]
\[\text{take-sgS} \quad 1\text{-child} \quad 1\text{-our} \]
\[\text{‘Our child, take!’} \]
\[\text{b)} \quad \text{búkúl-a} \quad \text{m-bwá} \quad \text{y-ééfu!} \]
\[\text{take-sgS} \quad 9\text{b-dog} \quad 9\text{-our} \]
\[\text{‘Our dog, take!’} \]

In a non-vocative function, common nouns take the augment, as (17) shows.

\[(17)\]
\[\text{a)} \quad \text{búkúl-a} \quad \text{o-mw-ááná} \quad \text{wá-ánjé!} \]
\[\text{take-sgS} \quad \text{AUG-1-child} \quad 1\text{-my} \]
\[\text{‘Take my child!’} \]
\[\text{b)} \quad \text{búkúl-a} \quad \text{i-m-bwá} \quad \text{y-áánjé!} \]
\[\text{take-sgS} \quad \text{AUG-9b-dog} \quad 9\text{-my} \]
\[\text{‘Take my dog!’} \]

The examples in the preceding discussion show that the augment is or can be absent in two particular constructions, both of which are definite. However, it is also present in all kinds of indefinite constructions. Therefore, the augment does not mark definiteness in Kisa. It is not clear from the data what function this
morpheme has. This morpheme is termed ‘augment’ for comparative Bantu reasons.

4.2.1 Noun classes

Common nouns in Kisa can be classified into 16 noun classes. These classes are numbered following the standard Bantu system for numbering noun classes. The numbering is fundamentally based on the oppositions found in agreement marking. However, there is some variation between the marking on nouns and agreement marking (see section 4.3). Of the 16 classes, nine are singular and seven are plural. These classes and the prefixes they are associated with are given in table 4.1.

It can be seen, from table 4.1, that class 5a does not have an augment and the class prefix has a long vowel, as (18) and (19) show.

(18) lîí-tûáma shîíná?
    5a-maize which
    ‘Which maize?’

(19) bûkûl-a  lîí-tûáma!
    take-sgS 5a-maize
    ‘Take the maize!'

There is some variation in the evidence concerning the analysis of class 5a. For all speakers, the form that occurs in an interrogative construction with shîîna is lîí-tuuma, as in example (18). This indicates that the class prefix is lîí- and the augment is Ø-.
Table 4.1: Kisa noun classes

<table>
<thead>
<tr>
<th>Noun class</th>
<th>Augment</th>
<th>Class prefix</th>
<th>Root</th>
<th>Example</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>o-</td>
<td>mu-</td>
<td>súkú</td>
<td>o-mu-súkú</td>
<td>‘enemy’</td>
</tr>
<tr>
<td>2</td>
<td>a-</td>
<td>ba-</td>
<td>súkú</td>
<td>a-ba-súkú</td>
<td>‘enemies’</td>
</tr>
<tr>
<td>3</td>
<td>o-</td>
<td>mu-</td>
<td>sáálá</td>
<td>o-mu-sáálá</td>
<td>‘tree’</td>
</tr>
<tr>
<td>4</td>
<td>e-</td>
<td>mi-</td>
<td>sáálá</td>
<td>e-mi-sáálá</td>
<td>‘trees’</td>
</tr>
<tr>
<td>5a</td>
<td>Ø-</td>
<td>lí-</td>
<td>túaámá</td>
<td>líí-túaámá</td>
<td>‘trees’</td>
</tr>
<tr>
<td>5b</td>
<td>e-</td>
<td>lí-</td>
<td>ínó</td>
<td>e-lí-ínó</td>
<td>‘tooth’</td>
</tr>
<tr>
<td>6</td>
<td>a-</td>
<td>ma-</td>
<td>túaámá</td>
<td>a-ma-túaámá</td>
<td>‘maize (pl.)’</td>
</tr>
<tr>
<td>7</td>
<td>e-</td>
<td>shi-</td>
<td>kóómbé</td>
<td>e-shi-kóómbé</td>
<td>‘cup’</td>
</tr>
<tr>
<td>8</td>
<td>e-</td>
<td>bi-</td>
<td>kóómbé</td>
<td>e-bi-kóómbé</td>
<td>‘cups’</td>
</tr>
<tr>
<td>9a</td>
<td>Ø-</td>
<td>e-</td>
<td>tsíín</td>
<td>e-tsi-áy-á</td>
<td>‘buying style’</td>
</tr>
<tr>
<td>9b</td>
<td>i-</td>
<td>ny-</td>
<td>bwá</td>
<td>i-m-bwá</td>
<td>‘dog’</td>
</tr>
<tr>
<td>9c</td>
<td>i-</td>
<td>ny-</td>
<td>kul</td>
<td>i-n-gúl-á</td>
<td>‘buying style’</td>
</tr>
<tr>
<td>9d</td>
<td>i-</td>
<td>nz-</td>
<td>ay</td>
<td>i-nz-áy-á</td>
<td>‘buying style’</td>
</tr>
<tr>
<td>10a</td>
<td>e-</td>
<td>tsi-</td>
<td>tsíín</td>
<td>e-tsi-áy-á</td>
<td>‘buying style’</td>
</tr>
<tr>
<td>10b</td>
<td>Ø-</td>
<td>tsíín-</td>
<td>bwá</td>
<td>tsíím-bwá</td>
<td>‘dogs’</td>
</tr>
<tr>
<td>10c</td>
<td>Ø-</td>
<td>tsíín-</td>
<td>kul</td>
<td>tsíín-gúl-á</td>
<td>‘buying style’</td>
</tr>
<tr>
<td>10d</td>
<td>Ø-</td>
<td>tsíínz-</td>
<td>ay</td>
<td>tsíínz-áy-á</td>
<td>‘buying style’</td>
</tr>
<tr>
<td>11</td>
<td>o-</td>
<td>lu-</td>
<td>fu</td>
<td>o-lu-fu</td>
<td>‘dust’</td>
</tr>
<tr>
<td>12</td>
<td>a-</td>
<td>kha-</td>
<td>súkú</td>
<td>a-kha-súkú</td>
<td>‘little enemy’</td>
</tr>
<tr>
<td>13</td>
<td>o-</td>
<td>ru-</td>
<td>súkú</td>
<td>o-ru-súkú</td>
<td>‘little enemies’</td>
</tr>
<tr>
<td>14</td>
<td>o-</td>
<td>bu-</td>
<td>láfú</td>
<td>o-bu-láfú</td>
<td>‘light’</td>
</tr>
<tr>
<td>15</td>
<td>o-</td>
<td>ku-</td>
<td>kul</td>
<td>o-ku-kúl-á</td>
<td>‘buying’</td>
</tr>
<tr>
<td>20</td>
<td>o-</td>
<td>ku-</td>
<td>súkú</td>
<td>o-ku-súkú</td>
<td>‘huge enemy’</td>
</tr>
</tbody>
</table>

However, there is variation in the locative forms. Younger speakers give the forms in (20), which are the predicted forms with lii- as the class prefix.

(20) a) khu-líí-túaámá
     on-5a-maize
     ‘on the maize’

b) mu-líí-túaámá
     in-5a-maize
     ‘in the maize’

By contrast, older speakers give the forms in (21). These forms indicate that li- is the augment and i- is the class prefix.

(21) a) mu-líí-túaámá
     in-5a-maize
     ‘in the maize’

By contrast, older speakers give the forms in (21). These forms indicate that li- is the augment and i- is the class prefix.

19 It can be /i-/ with some nominals
The prefix complex for classes 10b, 10c, and 10d show that these classes lack an augment, and the class prefix has a long vowel, as seen in (22) and (23).

(22)  
\[ \text{tsíím-bwá} \quad \text{shííná?} \]  
10b-dog which  
‘Which dogs?’

(23)  
\[ \text{búkúl-a} \quad \text{tsíím-bwá!} \]  
take-sgS 10b-dog  
‘Take the dogs!’

Class 9a, on the other hand, has an augment but lacks a class prefix, as illustrated in (24) and (25).

(24)  
\[ \text{Ø-káldámú} \quad \text{shííná?} \]  
9a-pen which  
‘Which pen?’

(25)  
\[ \text{búkúl-a} \quad \text{e-Ø-káldámú!} \]  
take-sgS AUG-9a-pen  
‘Take a/the pen!’

The augment in this class can be the mid front vowel /e/, as (26) exemplifies.

(26)  
a)  
\[ \text{e-Ø-káldámú} \]  
AUG-9a-pen  
‘a/the pen’

b)  
\[ \text{e-Ø-wááyíní} \]  
AUG-9a-wine  
‘a/the wine’

It can also be the high front vowel /i/, as in (27).
(27) a) \(i-Ø-káláámú\)
    AUG-9a-pen
    ‘a/the pen’

    b) \(i-Ø-wááyíní\)
    AUG-9a-wine
    ‘a/the wine’

It is not clear from the data what conditions this variation. However, the closed subclass of singular native place names can only take the \([e-]\) allomorph. Consider (28).

(28) a) \(e-Ø-malííndí\)
    AUG-9a-place name
    ‘Emalindi’

    \(e-Ø-mulúúnyá\)
    AUG-9a-place name
    ‘Emuluunya’

    b) \(*i-Ø-malííndí\)
    AUG-9a-place name
    ‘Imalindi’

    \(*i-Ø-mulúúnyá\)
    AUG-9a-place name
    ‘Imuluunya’

4.2.2 Noun class semantics

Common nouns are also assigned to respective classes based on their meaning. Table 4.2 summarizes the semantics of Kisa noun classes.
<table>
<thead>
<tr>
<th>Singular noun class</th>
<th>Semantics</th>
<th>Example</th>
<th>Gloss</th>
<th>Plural noun class</th>
<th>Semantics</th>
<th>Example</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Humans</td>
<td>o-mu-khááná</td>
<td>‘girl’</td>
<td>2</td>
<td>Regular plurals of class 1</td>
<td>a-ba-khááná</td>
<td>‘girls’</td>
</tr>
<tr>
<td>3</td>
<td>Trees, plants</td>
<td>o-mu-sáálá</td>
<td>‘tree’</td>
<td>4</td>
<td>Regular plurals of classes 3 and 20</td>
<td>e-mi-sáálá e-mi-khááná</td>
<td>‘trees’ ‘huge girls’</td>
</tr>
<tr>
<td>5</td>
<td>Fruits</td>
<td>Ø-líí-rámwá</td>
<td>‘banana’</td>
<td>6</td>
<td>Regular plurals of class 5, liquid masses</td>
<td>a-ma-rámwá a-má-ásí</td>
<td>‘bananas’ ‘water’</td>
</tr>
<tr>
<td>7</td>
<td>Nouns of manner</td>
<td>e-shi-nyóló</td>
<td>‘in a luo manner’</td>
<td>8</td>
<td>Regular plurals of class 7</td>
<td>e-bi-tábhú</td>
<td>‘books’</td>
</tr>
<tr>
<td>9a</td>
<td>Loans, native place names, and numeral symbol names</td>
<td>e-Ø-káláámú e-Ø-málííndí</td>
<td>‘pen’ ‘Emalindi’</td>
<td>10a</td>
<td>Regular plurals of class 9a</td>
<td>e-tsí-káláámú e-tsí-málííndí</td>
<td>‘pens’ ‘Emalindis’</td>
</tr>
<tr>
<td>9b</td>
<td>No clear semantic domain associations</td>
<td>i-n-gúbó i-m-búsí</td>
<td>‘dress’ ‘goat’</td>
<td>10b</td>
<td>Regular plurals of class 9b</td>
<td>Ø-tsíín-gúbó Ø-tsíím-búsí</td>
<td>‘dresses’ ‘goats’</td>
</tr>
<tr>
<td>9c/d</td>
<td>Gerunds with the meaning ‘style or way of doing things’</td>
<td>i-n-gúl-á</td>
<td>‘buying style’</td>
<td>10c/d</td>
<td>Regular plurals of class 9c/d</td>
<td>Ø-tsíín-gul-a</td>
<td>‘buying styles’</td>
</tr>
<tr>
<td>11</td>
<td>Languages</td>
<td>o-lu-nyóló</td>
<td>‘the luo language’</td>
<td>13</td>
<td>Regular plurals of class 12</td>
<td>o-ru-khááná</td>
<td>‘little girls’</td>
</tr>
<tr>
<td>12</td>
<td>Diminutives</td>
<td>a-kha-khááná</td>
<td>‘little girl’</td>
<td>14</td>
<td>Abstract entities, mass nouns</td>
<td>o-bu-yáánzí o-bu-syé</td>
<td>‘happiness’ ‘flour’</td>
</tr>
<tr>
<td>15</td>
<td>Infinitives/gerunds</td>
<td>o-khu-kúl-á</td>
<td>‘buying’</td>
<td>15</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>Augmentatives</td>
<td>o-ku-khááná</td>
<td>‘huge girl’</td>
<td>20</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

20There are no basic nouns such as ‘leg’, ‘knee’, ‘ear’ in this class.
Nouns referring to human referents standardly go into classes 1 and 2. However, as exceptions, there are a few nouns with human reference that appear in classes 5 and 7. They are listed in (29).


4.3 Agreement marking

Noun modifiers take class markers that agree with the class marking of the nouns they modify. These constitute standard agreement markers in Kisa. This implies that a given noun class marking occurs with a particular class agreement marking. However, the forms of the agreement markers vary considerably. The agreement markers on adjectives differ from those on other modifiers.

Adjectives take agreement markers identical to the prefixes on the nouns they modify. The prefixes that occur with adjective roots are the same as those that occur with noun roots except the prefixes for classes 5, 9, and 10. Table 4.3 shows the prefixes for all the classes other than classes 5, 9, and 10, which are given in table 4.4.
Table 4.3: Kisa adjective class marking

<table>
<thead>
<tr>
<th>Adjective class</th>
<th>Augment</th>
<th>Class prefix</th>
<th>Example</th>
<th>Gloss</th>
<th>Noun class</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>o-</td>
<td>mu-</td>
<td>o-mu-láyí</td>
<td>‘good’</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>a-</td>
<td>ba-</td>
<td>a-ba-láyí</td>
<td>‘good’</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>o-</td>
<td>mu-</td>
<td>o-mu-láyí</td>
<td>‘good’</td>
<td>3</td>
</tr>
<tr>
<td>4</td>
<td>e-</td>
<td>mi-</td>
<td>e-mi-láyí</td>
<td>‘good’</td>
<td>4</td>
</tr>
<tr>
<td>6</td>
<td>a-</td>
<td>ma-</td>
<td>a-ma-láyí</td>
<td>‘good’</td>
<td>6</td>
</tr>
<tr>
<td>7</td>
<td>e-</td>
<td>shi-</td>
<td>e-shi-láyí</td>
<td>‘good’</td>
<td>7</td>
</tr>
<tr>
<td>8</td>
<td>e-</td>
<td>bi-</td>
<td>e-bi-láyí</td>
<td>‘good’</td>
<td>8</td>
</tr>
<tr>
<td>11</td>
<td>o-</td>
<td>lu-</td>
<td>o-lu-láyí</td>
<td>‘good’</td>
<td>11</td>
</tr>
<tr>
<td>12</td>
<td>a-</td>
<td>kha-</td>
<td>a-kha-láyí</td>
<td>‘good’</td>
<td>12</td>
</tr>
<tr>
<td>13</td>
<td>o-</td>
<td>ru-</td>
<td>o-ru-láyí</td>
<td>‘good’</td>
<td>13</td>
</tr>
<tr>
<td>14</td>
<td>o-</td>
<td>bu-</td>
<td>o-bu-láyí</td>
<td>‘good’</td>
<td>14</td>
</tr>
<tr>
<td>15</td>
<td>o-</td>
<td>khu-</td>
<td>o-khu-láyí</td>
<td>‘good’</td>
<td>15</td>
</tr>
<tr>
<td>20</td>
<td>o-</td>
<td>ku-</td>
<td>o-ku-láyí</td>
<td>‘good’</td>
<td>20</td>
</tr>
</tbody>
</table>

Class marking for adjectives in classes 5, 9, and 10 is determined by the same principles that determine class marking for nouns in these classes. Consonant-initial stems take one allomorph and vowel-initial stems take another allomorph, as shown in table 4.4. Noun class 9a is the loan class, as stated earlier. There are no loan adjective roots in Kisa. Therefore, there is no adjective class corresponding to noun class 9a.

The data in table 4.4 mean that nouns and modifying adjectives from these classes will not always show the same allomorph. The following data illustrate class 5.

(30) Ø-lí-řámwá  e-ly-ééngú  
AUG-5a-banana  AUG-5b-ripe  
‘the/a ripe banana’

(31) e-ří-ìnó  Ø-lí-láyí  
AUG-5b-tooth  AUG-5a-good  
‘the/a good tooth’
Table 4.4: Kisa class 5, 9, and 10 adjective class marking

<table>
<thead>
<tr>
<th>Consonant-initial adjective</th>
<th>Vowel-initial adjective</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adjective class</td>
<td>Augment</td>
</tr>
<tr>
<td>5a</td>
<td>Ø-</td>
</tr>
<tr>
<td>9b/c</td>
<td>i-</td>
</tr>
<tr>
<td></td>
<td>9d</td>
</tr>
<tr>
<td>10b/c</td>
<td>Ø-</td>
</tr>
<tr>
<td></td>
<td>10d</td>
</tr>
</tbody>
</table>
Table 4.5 gives the class agreement markers found on other noun modifiers, such as possessive pronouns, demonstratives, quantifiers etc.

Table 4.5: Kisa class agreement prefixes

<table>
<thead>
<tr>
<th>Class agreement</th>
<th>Agreement</th>
<th>Noun class</th>
<th>Adjective class</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>wu-</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>ba-</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>ku-</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>4</td>
<td>chi-</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>5</td>
<td>li-</td>
<td>5a/5b</td>
<td>5a/5b</td>
</tr>
<tr>
<td>6</td>
<td>ka-</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>7</td>
<td>shi-</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td>8</td>
<td>bi-</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>9</td>
<td>i</td>
<td>9a/b/c/d</td>
<td>9b/c/d</td>
</tr>
<tr>
<td>10</td>
<td>tsi-</td>
<td>10a/b/c/d</td>
<td>10b/c/d</td>
</tr>
<tr>
<td>11</td>
<td>lu-</td>
<td>11</td>
<td>11</td>
</tr>
<tr>
<td>12</td>
<td>kha-</td>
<td>12</td>
<td>12</td>
</tr>
<tr>
<td>13</td>
<td>ru-</td>
<td>13</td>
<td>13</td>
</tr>
<tr>
<td>14</td>
<td>bu-</td>
<td>14</td>
<td>14</td>
</tr>
<tr>
<td>15</td>
<td>khu-</td>
<td>15</td>
<td>15</td>
</tr>
<tr>
<td>20</td>
<td>ku-</td>
<td>20</td>
<td>20</td>
</tr>
</tbody>
</table>

This table shows that the form of the agreement prefix for classes 3 and 20 is the same. Noun classes 5a and 5b share an agreement prefix. Similarly, noun classes 9a, 9b, 9c, and 9d share an agreement prefix, as do noun classes 10a, 10b, 10c, and 10d.

Agreement prefixes can be used to group noun classes in this language. We saw that class 1 and 3 have the same prefix complex, o-mu-. These seemingly identical classes can be distinguished and separated by their agreement prefixes, as shown in (32).

---

21 This means the prefixes found on noun phrases functioning as modifiers, demonstratives, quantifiers, cardinal numerals, ordinal numerals, and possessives.
Conversely, classes 5a and 5b have different prefix complexes. However, they share an agreement prefix, which means that they are subclasses of the same noun class. The same holds for classes 9a, 9b, 9c, and 9d as well as classes 10a, 10b, 10c, and 10d.

### 4.3.1 Other modifiers

Besides adjectives, there are other words that can occur as modifiers of nouns. They include the word ‘another/other’, possessives, demonstratives, and quantifiers. These modifiers take the agreement prefixes in table 4.5, as the following tables show.
Table 4.6: Kisa agreement prefixes with the word ‘another/other’

<table>
<thead>
<tr>
<th>Noun class</th>
<th>Agreement prefix</th>
<th>Example</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>wu-</td>
<td>o-mu-khááná wú-úndí</td>
<td>‘another girl’</td>
</tr>
<tr>
<td>2</td>
<td>ba-</td>
<td>o-ba-khááná bá-úndí</td>
<td>‘other girls’</td>
</tr>
<tr>
<td>3</td>
<td>ku-</td>
<td>o-mu-sáálá kú-úndí</td>
<td>‘another tree’</td>
</tr>
<tr>
<td>4</td>
<td>chi-</td>
<td>e-mi-sáálá chí-índí</td>
<td>‘other trees’</td>
</tr>
<tr>
<td>5a/5b</td>
<td>li-</td>
<td>e-li-inó lí-índí</td>
<td>‘another tooth’</td>
</tr>
<tr>
<td>6</td>
<td>ka-</td>
<td>a-mé-enó ká-úndí</td>
<td>‘other teeth’</td>
</tr>
<tr>
<td>7</td>
<td>shi-</td>
<td>e-shi-tábú shí-índí</td>
<td>‘another book’</td>
</tr>
<tr>
<td>8</td>
<td>bi-</td>
<td>e-bi-tábú bí-índí</td>
<td>‘other books’</td>
</tr>
<tr>
<td>9a/b/c/d</td>
<td>i-</td>
<td>e-Ø-káláámú y-úndí</td>
<td>‘another pen’</td>
</tr>
<tr>
<td>10a/b/c/d</td>
<td>tsi-</td>
<td>e-tsi-káláámú tsi-índí</td>
<td>‘other pens’</td>
</tr>
<tr>
<td>11</td>
<td>lu-</td>
<td>o-lu-sáálá lú-úndí</td>
<td>‘another stick’</td>
</tr>
<tr>
<td>12</td>
<td>kha-</td>
<td>a-kha-sáálá khá-úndí</td>
<td>‘another little stick’</td>
</tr>
<tr>
<td>13</td>
<td>ru-</td>
<td>o-ru-sáálá ru-úndí</td>
<td>‘other little sticks’</td>
</tr>
<tr>
<td>14</td>
<td>bu-</td>
<td>o-bu-syé bú-úndí</td>
<td>‘another packet of flour’</td>
</tr>
<tr>
<td>15</td>
<td>khu-</td>
<td>o-khu-kul-á khú-úndí</td>
<td>‘another buying’</td>
</tr>
<tr>
<td>20</td>
<td>ku-</td>
<td>o-ku-khááná kú-úndí</td>
<td>‘another huge girl’</td>
</tr>
</tbody>
</table>

Table 4.7: Kisa agreement prefixes with possessives

<table>
<thead>
<tr>
<th>Noun class</th>
<th>Agreement prefix</th>
<th>Example</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>wu-</td>
<td>o-mu-khááná wá-ánjé</td>
<td>‘my girl’</td>
</tr>
<tr>
<td>2</td>
<td>ba-</td>
<td>o-ba-khááná bá-ánjé</td>
<td>‘my girls’</td>
</tr>
<tr>
<td>3</td>
<td>ku-</td>
<td>o-mu-sáálá kw-ánjé</td>
<td>‘my tree’</td>
</tr>
<tr>
<td>4</td>
<td>chi-</td>
<td>e-mi-sáálá chy-ánjé</td>
<td>‘my trees’</td>
</tr>
<tr>
<td>5a/5b</td>
<td>li-</td>
<td>e-li-inó ly-ánjé</td>
<td>‘my tooth’</td>
</tr>
<tr>
<td>6</td>
<td>ka-</td>
<td>a-mé-enó ká-ánjé</td>
<td>‘my teeth’</td>
</tr>
<tr>
<td>7</td>
<td>shi-</td>
<td>e-shi-tábú shy-ánjé</td>
<td>‘my book’</td>
</tr>
<tr>
<td>8</td>
<td>bi-</td>
<td>e-bi-tábú by-ánjé</td>
<td>‘my books’</td>
</tr>
<tr>
<td>9a/b/c/d</td>
<td>i-</td>
<td>e-Ø-káláámú y-ánjé</td>
<td>‘my pen’</td>
</tr>
<tr>
<td>10a/b/c/d</td>
<td>tsi-</td>
<td>e-tsi-káláámú tsi-ánjé</td>
<td>‘my pens’</td>
</tr>
<tr>
<td>11</td>
<td>lu-</td>
<td>o-lu-sáálá lw-ánjé</td>
<td>‘my stick’</td>
</tr>
<tr>
<td>12</td>
<td>kha-</td>
<td>a-kha-sáálá khá-ánjé</td>
<td>‘my little stick’</td>
</tr>
<tr>
<td>13</td>
<td>ru-</td>
<td>o-ru-sáálá rw-ánjé</td>
<td>‘my little sticks’</td>
</tr>
<tr>
<td>14</td>
<td>bu-</td>
<td>o-bu-syé bw-ánjé</td>
<td>‘my flour’</td>
</tr>
<tr>
<td>15</td>
<td>khu-</td>
<td>o-khu-kul-á khw-ánjé</td>
<td>‘my buying’</td>
</tr>
<tr>
<td>20</td>
<td>ku-</td>
<td>o-ku-khááná kw-ánjé</td>
<td>‘my huge girl’</td>
</tr>
</tbody>
</table>
Table 4.8: Kisa agreement prefixes with demonstratives

<table>
<thead>
<tr>
<th>Noun class</th>
<th>Agreement prefix</th>
<th>Example</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>wu-</td>
<td>o-mu-khááná wu-nó</td>
<td>'this girl'</td>
</tr>
<tr>
<td>2</td>
<td>ba-</td>
<td>o-ba-khááná ba-nó</td>
<td>'these girls'</td>
</tr>
<tr>
<td>3</td>
<td>ku-</td>
<td>o-mu-sáálá ku-nó</td>
<td>'this tree'</td>
</tr>
<tr>
<td>4</td>
<td>chi-</td>
<td>e-mi-sáálá chi-nó</td>
<td>'these trees'</td>
</tr>
<tr>
<td>5a/5b</td>
<td>li-</td>
<td>e-lí-íno li-nó</td>
<td>'this tooth'</td>
</tr>
<tr>
<td>6</td>
<td>ka-</td>
<td>a-mé-éno ka-nó</td>
<td>'these teeth'</td>
</tr>
<tr>
<td>7</td>
<td>shi-</td>
<td>e-shi-tábú shi-nó</td>
<td>'this book'</td>
</tr>
<tr>
<td>8</td>
<td>bi-</td>
<td>e-bi-tábú bi-nó</td>
<td>'these books'</td>
</tr>
<tr>
<td>9a/b/c/d</td>
<td>i-</td>
<td>e-Ø-kaláámú i-nó</td>
<td>'this pen'</td>
</tr>
<tr>
<td>10a/b/c/d</td>
<td>tsi-</td>
<td>e-tsi-kaláámú tsi-nó</td>
<td>'these pens'</td>
</tr>
<tr>
<td>11</td>
<td>lu-</td>
<td>o-lu-sáálá lu-nó</td>
<td>'this stick'</td>
</tr>
<tr>
<td>12</td>
<td>kha-</td>
<td>a-kha-sáálá kha-nó</td>
<td>'this little stick'</td>
</tr>
<tr>
<td>13</td>
<td>ru-</td>
<td>o-ru-sáálá ru-nó</td>
<td>'these little sticks'</td>
</tr>
<tr>
<td>14</td>
<td>bu-</td>
<td>o-bu-syé bu-nó</td>
<td>'this flour'</td>
</tr>
<tr>
<td>15</td>
<td>khu-</td>
<td>o-khu-kúl-á khu-nó</td>
<td>'this buying'</td>
</tr>
<tr>
<td>20</td>
<td>ku-</td>
<td>o-ku-khááná ku-nó</td>
<td>'this huge girl'</td>
</tr>
</tbody>
</table>

Table 4.9: Kisa agreement prefixes with quantifiers

<table>
<thead>
<tr>
<th>Noun class</th>
<th>Agreement prefix</th>
<th>Example</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>wu-</td>
<td>o-mu-khááná wó-ósí</td>
<td>'the whole girl'</td>
</tr>
<tr>
<td>2</td>
<td>ba-</td>
<td>o-ba-khááná bó-ósí</td>
<td>'all girls'</td>
</tr>
<tr>
<td>3</td>
<td>ku-</td>
<td>o-mu-sáálá kw-ósí</td>
<td>'the whole tree'</td>
</tr>
<tr>
<td>4</td>
<td>chi-</td>
<td>e-mi-sáálá chy-ósí</td>
<td>'all trees'</td>
</tr>
<tr>
<td>5a/5b</td>
<td>li-</td>
<td>e-lí-íno ly-ósí</td>
<td>'the whole tooth'</td>
</tr>
<tr>
<td>6</td>
<td>ka-</td>
<td>a-mé-éno kó-ósí</td>
<td>'all teeth'</td>
</tr>
<tr>
<td>7</td>
<td>shi-</td>
<td>e-shi-tábú shy-ósí</td>
<td>'the whole book'</td>
</tr>
<tr>
<td>8</td>
<td>bi-</td>
<td>e-bi-tábú by-ósí</td>
<td>'all books'</td>
</tr>
<tr>
<td>9a/b/c/d</td>
<td>i-</td>
<td>e-Ø-kaláámú y-ósí</td>
<td>'the whole pen'</td>
</tr>
<tr>
<td>10a/b/c/d</td>
<td>tsi-</td>
<td>e-tsi-kaláámú tsy-ósí</td>
<td>'all pens'</td>
</tr>
<tr>
<td>11</td>
<td>lu-</td>
<td>o-lu-sáálá lw-ósí</td>
<td>'the whole stick'</td>
</tr>
<tr>
<td>12</td>
<td>kha-</td>
<td>a-kha-sáálá khó-ósí</td>
<td>'the whole little stick'</td>
</tr>
<tr>
<td>13</td>
<td>ru-</td>
<td>o-ru-sáálá rw-ósí</td>
<td>'all little sticks'</td>
</tr>
<tr>
<td>14</td>
<td>bu-</td>
<td>o-bu-syé bw-ósí</td>
<td>'the whole flour'</td>
</tr>
<tr>
<td>15</td>
<td>khu-</td>
<td>o-khu-kúl-á khw-ósí</td>
<td>'the whole buying'</td>
</tr>
<tr>
<td>20</td>
<td>ku-</td>
<td>o-ku-khááná kw-ósí</td>
<td>'the whole huge girl'</td>
</tr>
</tbody>
</table>
4.3.2 Numerals

Nouns can also be modified by numerals, which take the agreement prefixes in table 4.5 (except the numeral ‘one’), as the data in (33) show.

(33) a) \textit{o-mu-sáálá kw-aa=kha=bírí}  
AUG-3-tree 3-CM=FM=two  
‘the second tree’

b) \textit{a-ba-süká ba-bírí}  
AUG-2-enemy 2-two  
‘two enemies’

c) \textit{e-mi-sáálá chi-tárú}  
AUG-4-tree 4-three  
‘three trees’

The agreement prefixes taken by the cardinal numeral ‘one’ when it modifies nouns are not the same as the agreement prefixes shown in table 4.5. Table 4.10 gives the agreement prefixes with the cardinal numeral ‘one’.

4.3.3 Noun phrases as modifiers

In Kisa nouns can also be modified by noun phrases, as exemplified in (34).

(34) a) \textit{e-shi-kóómbé shy-o=o-mu-káámbí}  
AUG-7-cup 7-CM=AUG-1-preacher  
‘the preacher’s cup’

b) \textit{a-ma-péésá k-o=o-mu-káámbí}  
AUG-6-money 6-CM=AUG-1-preacher  
‘the preacher’s money’

These examples show that as modifiers nouns take the structure of a noun phrase marked by the connective, as in (35).

(35) Class Prefix-Connective marker=Noun
Table 4.10: Kisa agreement prefixes with the cardinal numeral ‘one’

<table>
<thead>
<tr>
<th>Noun class</th>
<th>Agreement prefix</th>
<th>Example</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>mu-</td>
<td>o-mu-khááná mu-lálá</td>
<td>‘one girl’</td>
</tr>
<tr>
<td>2</td>
<td>ba-</td>
<td>o-ba-khááná ba-lálá</td>
<td>‘some girls’</td>
</tr>
<tr>
<td>3</td>
<td>mu-</td>
<td>o-mu-sáálá mu-lálá</td>
<td>‘one tree’</td>
</tr>
<tr>
<td>4</td>
<td>mi-</td>
<td>e-mi-sáálá mi-lálá</td>
<td>‘some trees’</td>
</tr>
<tr>
<td>5a/5b</td>
<td>e-</td>
<td>e-lí-inó e-lálá</td>
<td>‘one tooth’</td>
</tr>
<tr>
<td>6</td>
<td>ma-</td>
<td>a-mé-énó ma-lálá</td>
<td>‘some teeth’</td>
</tr>
<tr>
<td>7</td>
<td>shi-</td>
<td>e-shi-tábú shi-lálá</td>
<td>‘one book’</td>
</tr>
<tr>
<td>8</td>
<td>bi-</td>
<td>e-bi-tábú bi-lálá</td>
<td>‘some books’</td>
</tr>
<tr>
<td>9a/b/c/d</td>
<td>n</td>
<td>e-Ø-káláámú n-dálá</td>
<td>‘one pen’</td>
</tr>
<tr>
<td>10a/b/c/d</td>
<td>tsíín-</td>
<td>e-tsí-káláámú tsíín-dálá</td>
<td>‘some pens’</td>
</tr>
<tr>
<td>11</td>
<td>lu-</td>
<td>o-lu-sáálá lu-lálá</td>
<td>‘one stick’</td>
</tr>
<tr>
<td>12</td>
<td>kha-</td>
<td>a-kha-sáálá kha-lálá</td>
<td>‘one little stick’</td>
</tr>
<tr>
<td>13</td>
<td>ru-</td>
<td>o-ru-sáálá ru-lálá</td>
<td>‘some little sticks’</td>
</tr>
<tr>
<td>14</td>
<td>bu-</td>
<td>o-bu-syé bu-lálá</td>
<td>‘some flour’</td>
</tr>
<tr>
<td>15</td>
<td>khu-</td>
<td>o-khu-kál-á khu-lálá</td>
<td>‘one buying’</td>
</tr>
<tr>
<td>20</td>
<td>ku-</td>
<td>o-ku-khááná ku-lálá</td>
<td>‘one huge girl’</td>
</tr>
</tbody>
</table>

The connective marker ‘of’ in the structure in (35) is a proclitic (see section 6.3.2). The class prefix can be any of the agreement prefixes in table 4.5. This depends on the class of the noun being modified by the connective construction. Consider table 4.11.
Table 4.11: Kisa agreement prefixes with the connective marker’

<table>
<thead>
<tr>
<th>Noun class</th>
<th>Agreement prefix</th>
<th>Example</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>wu-</td>
<td>o-mu-khááná w-o=o-mu-káámbí</td>
<td>‘the preacher’s girl’</td>
</tr>
<tr>
<td>2</td>
<td>ba-</td>
<td>o-ba-khááná b-o=o-mu-káámbí</td>
<td>‘the preacher’s girls’</td>
</tr>
<tr>
<td>3</td>
<td>ku-</td>
<td>o-mu-sáádá kw-o=o-mu-káámbí</td>
<td>‘the preacher’s tree’</td>
</tr>
<tr>
<td>4</td>
<td>chi-</td>
<td>e-mi-sáálá chy-o=o-mu-káámbí</td>
<td>‘the preacher’s trees’</td>
</tr>
<tr>
<td>5a/5b</td>
<td>li-</td>
<td>e-li-ínó ly-o=o-mu-káámbí</td>
<td>‘the preacher’s tooth’</td>
</tr>
<tr>
<td>6</td>
<td>ka-</td>
<td>a-mé-énó k-o=o-mu-káámbí</td>
<td>‘the preacher’s teeth’</td>
</tr>
<tr>
<td>7</td>
<td>shi-</td>
<td>e-shi-tábú shy-o=o-mu-káámbí</td>
<td>‘the preacher’s book’</td>
</tr>
<tr>
<td>8</td>
<td>bi-</td>
<td>e-bi-tábú by-o=o-mu-káámbí</td>
<td>‘the preacher’s books’</td>
</tr>
<tr>
<td>9a/b/c/d</td>
<td>i-</td>
<td>e-Ø-káláámú y-o=o-mu-káámbí</td>
<td>‘the preacher’s pen’</td>
</tr>
<tr>
<td>10a/b/c/d</td>
<td>tsi-</td>
<td>e-tsi-káláámú t sy-o=o-mu-káámbí</td>
<td>‘the preacher’s pens’</td>
</tr>
<tr>
<td>11</td>
<td>lu-</td>
<td>o-lu-sáádá lw-ó=o-mu-káámbí</td>
<td>‘the preacher’s stick’</td>
</tr>
<tr>
<td>12</td>
<td>kha-</td>
<td>a-kha-sáádá kh-o=o-mu-káámbí</td>
<td>‘the preacher’s little stick’</td>
</tr>
<tr>
<td>13</td>
<td>ru-</td>
<td>o-ru-sáádá rw-ó=o-mu-káámbí</td>
<td>‘the preacher’s little sticks’</td>
</tr>
<tr>
<td>14</td>
<td>bu-</td>
<td>o-bu-syé bw-o=o-mu-káámbí</td>
<td>‘the preacher’s flour’</td>
</tr>
<tr>
<td>15</td>
<td>khu-</td>
<td>o-khu-kul-á khw-ó=o-mu-káámbí</td>
<td>‘the preacher’s buying’</td>
</tr>
<tr>
<td>20</td>
<td>ku-</td>
<td>o-ku-khááná kw-o=o-mu-káámbí</td>
<td>‘the preacher’s huge girl’</td>
</tr>
</tbody>
</table>

4.4 Class marking of nouns other than common nouns

This class of nouns includes kin terms and proper nouns (non-native place names, names of people, animals, and games). The morphological structure of singular kin nouns is the same as that of singular proper nouns (see section 2.3.3.3). Therefore, I treat kin terms as proper nouns for the purposes of class marking.

4.4.1 Proper nouns

Proper nouns do not take any prefixes in the singular form. They include names of people, names of animals, names of games, and non-native place names, as the following examples show.
In the plural form, these nouns take prefixes from different plural classes.

People’s names take the class 2 prefix *a-ba-*, as (38) shows.

(38) a) *a-ba-chóóní*
AUG-2-personal name
‘Johns’

b) *a-ba-pítá*
AUG-2-personal name
‘Peters’

The plurals of names of animals, names of games, and non-native place names take the class 10a prefix *e-tsi-*, as seen in (39).

(39) a) *e-tsy-áákúúmó*
AUG-10a-name of a cow
‘Akumos’
b)  
\[ \text{e-tsy-aátáárá} \]
AUG-10a-name of a game’
‘Ataras’

c)  
\[ \text{e-tsi-náróbí} \]
AUG-10a-place name
‘Nairobi’

The plural forms of the proper nouns seen above may seem unusual. However, they do occur in Kisa. Plurals of place names occur in certain situations in Kisa, as we saw in section 2.3.3.1.2. People’s names can be pluralised if for instance we want to talk about two or more people with the same name. Consider (40).

(40)  
\[ \text{o-li} \quad \text{na=a-ba-chóóní} \quad \text{ba-tárú.} \]
2sgS-be with=AUG-2-personal name 2-three
‘You have three Johns.’

Similarly, names of animals and games can be pluralised in this situation, as in (41).

(41)  
\[ \text{a) } \text{o-la-kul-a} \quad \text{e-tsy-áákúúmó} \quad \text{tsi-bírí.} \]
2sgS-HODF-buy-IND AUG-10a-name of a cow 10-two
‘You will buy two Akumos.’

\[ \text{b) } \text{o-la-chóór-a} \quad \text{e-tsy-aátáárá} \quad \text{tsi-tárú.} \]
2sgS-HODF-draw-IND AUG-10a-name of a game 10-three
‘You will draw three Ataras.’

4.4.2 Kin terms

Like proper nouns, kin terms do not take any prefixes in the singular form, as (42) shows.

(42)  
\[ \text{a) } \text{kúuká} \]
grandfather
‘grandfather’
b)  *khóótsá*
   uncle
   ‘uncle’

Kin terms can also occur in plural form, as in (43) and (44).

(43)  *a-na-a-kúúká*
     AUG-2-KIN-grandfather
     ‘grandfathers’

(44)  *o-la-lol-a a-na-a-khóótsá ba-tárú.*
     2sgS-HODF-see-IND AUG-2-KIN-uncle 2-three
     ‘You will see three uncles.’

These examples show that a vowel morpheme intervenes between the class prefix and the kin root. I propose that this is the kin prefix in Kisa.

The kin prefix is present in singular and plural forms of augmentative kin terms, as shown by (45) and (46).

(45)  *o-ku-u-páápá*
     AUG-20-KIN-father
     ‘a/the huge father’

(46)  *e-mi-i-páápá*
     AUG-4-KIN-father
     ‘huge fathers’

The singular and plurals of diminutive kin nouns also have the kin prefix, as (47) illustrates.

(47)  a)  *a-na-a-kúúká*
     AUG-12-KIN-grandfather
     ‘a/the little grandfather’

b)  *o-ra-a-kúúká*
     AUG-13-KIN-grandfather
     ‘little grandfathers’
The preceding examples show that the kin prefix is an underspecified vowel which takes the features of the preceding vowel.

### 4.4.3 Agreement marking on nouns other than common nouns

The agreement markers that appear with these nouns are the same as those that appear with common nouns (see table 4.5), as the following examples show.

(48)  
\[a\text{-}kha\text{-a\text{-}kūukā} \quad a\text{-}kha\text{-lāyī}\]
AUG-12-KIN-grandfather’ AUG-12-good
‘a/the good little grandfather’

(49)  
\[e\text{-}mī\text{-}i\text{-}pāápā \quad chí\text{-}índī\]
AUG-4-KIN-father 4-other
‘other huge fathers’

(50)  
\[chōönī \quad wā\text{-}ánjé\]
personal name 1-my
‘my John’

(51)  
\[a\text{-}ba\text{-}chōönī \quad ba\text{-}nō\]
AUG-2-personal name 2-this
‘these Johns’

(52)  
\[nārōbī \quad y\text{-}óósī\]
place name 9-all
‘the whole of Nairobi’

(53)  
\[e\text{-}tsi\text{-}nārōbī \quad tsi\text{-}bīrī\]
AUG-10a-place name 10-two
‘two Nairobis’

(54)  
\[nārōbī \quad n\text{-}dālā\]
place name 9-one
‘one Nairobi’
nárøbí  y-a=a-ba-tákhá
place name  9-CM-AUG-2-poor
‘Nairobi for the poor’

4.5 Noun class productivity

Evidence for noun class productivity in Bantu involves class prefixes (Schadeberg 2006; Stegen 2002). In Kisa, as in other Bantu languages, different prefixes can be attached to the same noun root, placing it in different noun classes. For instance, the noun root -súkú ‘enemy’ can take different prefixes, resulting in nouns in different classes and with different meanings, as (56) shows.

(56)  a)  o-mu-súkú
       AUG-1-enemy
       ‘an/the enemy’

       b)  Ø-líí-súkú
       AUG-5a-enemy
       ‘a/the huge enemy’ (derogatory)

       c)  e-shi-súkú
       AUG-7-enemy
       ‘a/the little enemy’ (derogatory)

       d)  a-kha-súkú
       AUG-12-enemy
       ‘a/the little enemy’

       e)  o-ku-súkú
       AUG-20-enemy
       ‘a/the huge enemy’

The same noun root can take plural prefixes, as shown in (57).

(57)  a)  a-ba-súkú
       AUG-2-enemy
       ‘enemies’
b)  *e-mi-súkú*
   AUG-4-enemy
   ‘huge enemies’

c)  *a-ma-súkú*
   AUG-6-enemy
   ‘huge enemies’ (derogatory)

d)  *e-bi-súkú*
   AUG-8-enemy
   ‘little enemies’ (derogatory)

e)  *o-ru-súkú*
   AUG-13-enemy
   ‘little enemies’

f)  *o-bu-súkú*
   AUG-14-enemy
   ‘enemyhood’

### 4.5.1 Loans

Loan nouns provide evidence for the productivity of noun classes within the noun class system and for the semantics of the classes (Demuth 2000). Evidence from ChiBemba (Spitulnik 1987), Sesotho (Demuth 2000), and Setswana (Demuth 2000) shows that the assignment of loan nouns to noun classes is determined by competing morphophonological and semantic bases, and where neither is applicable, nouns are assigned to the default class, which varies from one language to another. In this section, I examine the loan nouns in the data, and the basis on which they are assigned to respective classes.

Loan nouns in Kisa are placed into classes based on the criteria in (58).

(58)  a)  Whether the referent is human or non-human
b) If the loan has non-human reference, whether or not it belongs to a lexical domain which has a prototypical association with a particular class

c) Whether the loan has non-human reference and begins with a nasal consonant cluster, but does not belong to a lexical domain which has a prototypical association with a particular class

d) If none of the preceding factors apply, the loan is assigned to class 9a by default

Loan nouns that refer to humans are placed into class 1, the humans’ class. The data in (59) and (60) show some of the loan nouns assigned to this class.

<table>
<thead>
<tr>
<th>Source word</th>
<th>Source word (English)</th>
<th>Source word (Swahili)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(59) a)</td>
<td>o-mu-náásl</td>
<td>Nurse (English)</td>
</tr>
<tr>
<td></td>
<td>AUG-1-nurse</td>
<td></td>
</tr>
<tr>
<td></td>
<td>‘a/the nurse’</td>
<td></td>
</tr>
<tr>
<td>b)</td>
<td>o-mu-káráání</td>
<td>karani (Swahili)</td>
</tr>
<tr>
<td></td>
<td>AUG-1-secretary</td>
<td></td>
</tr>
<tr>
<td></td>
<td>‘a/the secretary’</td>
<td></td>
</tr>
<tr>
<td>(60) a)</td>
<td>o-mu-súúngú</td>
<td>mzungu</td>
</tr>
<tr>
<td></td>
<td>AUG-1-european</td>
<td></td>
</tr>
<tr>
<td></td>
<td>‘a/the European’</td>
<td></td>
</tr>
<tr>
<td>b)</td>
<td>o-mu-tákátúfú</td>
<td>mtakatifu</td>
</tr>
<tr>
<td></td>
<td>AUG-1-holy</td>
<td></td>
</tr>
<tr>
<td></td>
<td>‘a/the saint’</td>
<td></td>
</tr>
</tbody>
</table>

Non-human loan nouns that belong to a lexical domain which has a prototypical association with a particular noun class are usually placed into that class. Consider (61).
The nouns in (61) are placed in class 5a, which is the class for fruits. Those in (62) are placed in class 3, the class for trees and plants.

The loan nouns in (63) are placed into class 11, the class for nouns referring to languages, while the loan noun in (64) is placed in class 7, the class for nouns referring to manner.
The loan noun in (65) is assigned to class 14, the class for abstract entities.

Non-human loans that begin with a heterorganic nasal consonant cluster (for instance the m-C in Swahili), and that do not belong to a lexical domain which has a prototypical association with a particular noun class, are assigned to a noun class with a prefix that begins with a nasal that corresponds to the nasal in the cluster. Consider the nouns in (66).

a) \textit{o-mu-fúréchí} \textit{mfereji} \\
AUG-3-faucet \‘a/the faucet’

b) \textit{o-mu-téékó} \textit{mtego} \\
AUG-3-trap \‘a/the trap’

c) \textit{o-mu-swáákí} \textit{mswaki} \\
AUG-3-tooth brush \‘a/the tooth brush’

d) \textit{o-mu-kóchó} \textit{mkojo} \\
AUG-3-urine \‘urine’

e) \textit{o-mu-chúúsí} \textit{mchuzi} \\
AUG-3-soup \‘soup’
The nasal in the cluster of the loan nouns in (66) above corresponds to the nasal in the prefix for classes 1 and 3. Given that these nouns do not belong to a lexical domain which has a prototypical association with noun class 1, they are placed into class 3.

The situation where the loan has an initial homorganic nasal consonant cluster is problematic. There are Swahili nouns in the data that begin with a homorganic nasal consonant cluster, as (67) shows.

(67)  

The assignment of these loans is not straightforward. Consider the following data.

(68)  
a) SR Ø-tsíí-ndééché
UR /Ø-tsiiny-ndeechel
AUG-10b-aeroplane
‘aeroplanes’

b) o-ru-ndééché
AUG-13-aeroplane
‘little aeroplanes’

c) e-mi-ndééché
AUG-4-aeroplane
‘huge aeroplanes’

(69)  
a) SR Ø-tsiín-do
UR /Ø-tsiiny-to/
AUG-10b-bucket
‘buckets’

b) o-ru-to
AUG-13-bucket
‘little buckets’
The diminutive and augmentative paradigms in (68) show that the root of the loan is \textit{ndééché}. The plural in (69a) shows that the prefix for class 10b is underlyingly /\textit{tsííny-}/. The nasal in this prefix assimilates in place of articulation to a following obstruent (see section 8.2.2). The nasal of a nasal-final prefix is deleted when followed by a root beginning with a nasal (see section 8.2.3). Therefore, the nasal in the class prefix in the loan in (68a) is deleted because it is followed by a root beginning with a nasal.

I posit that the singular of the loan in (68a) is underlyingly /\textit{li-ny-ndééché}/. Parallel to the plural, the prefix nasal is deleted, leaving no actual substantive noun class prefix. Consider the paradigms in (71-73).

(71) a) SR \textit{i-Ø-ndééché}  
UR /\textit{i-ny-ndeeche}/  
AUG-9b-aeroplane  
‘an/the aeroplane’

b) \textit{a-kha-ndééché}  
AUG-12-aeroplane  
‘a/the little aeroplane’
c)  
{o-ku-ndééché}  
AUG-20-aeroplane  
‘a/the huge aeroplane’

(72)  

a) SR  \(i-n\)-do  
UR  /\(i-ny\)-to/  
AUG-9b-bucket  
‘a/the bucket’

b)  
\(a-kha\)-to  
AUG-12-bucket  
‘a/the little bucket’

c)  
\(o-ku\)-to  
AUG-20-bucket  
‘a/the huge bucket’

(73)  

a)  
\(e-Ø-káláámú\)  
AUG-9a-pen  
‘a/the pen’

b)  
\(a-kha-káláámú\)  
AUG-12-pen  
‘a/the little pen’

c)  
\(o-ku-káláámú\)  
AUG-20-pen  
‘a/the huge pen’

The prefix complex \(i-Ø\)- in the output form of the loan, as (71a) shows, is identical to that of class 9a nouns, as seen in (73a). The locative forms of class 9b nouns are irregular and distinctive (see section 8.3.4), whereas those of class 9a nouns are regular. The locative form of \(ndééché\) shows the irregular distinctive class 9b pattern (see section 8.3.4). This is evidence that \(i-Ø-ndééché\) is a class 9b form and not a class 9a form.

Non-human loan nouns that belong to a lexical domain that has no prototypical association with a particular noun class are assigned to class 9a, the default loan class. In the data there were 312 loan nouns out of 2443
nouns. Among the 312, 206 fall in this class. Some of them are given in
(74).

(74) i-Ø-tísíkí ‘disk’, i-Ø-fárásí ‘horse’, i-Ø-stúmbá ‘lion’,
i-Ø-kóómbáástí ‘compass’, i-Ø-chúpá ‘bottle’, i-Ø-půríndá ‘printer’,
i-Ø-túró ‘drawer’, i-Ø-kílííníkí ‘clinic’, i-Ø-sípáná ‘spanner’, i-Ø-
síkárá ‘screw’

Nouns derived from loan verbs can be placed in classes 9c and 9d, as (75)
shows.

(75) a) i-n-gónéékít-á Source word (English)
    AUG-9c-connect-INF
    ‘the connecting style’

    b) i-nz-álááw-á
    AUG-9d-allow-INF
    ‘the allowing style’

Similarly, nouns derived from loan verbs can be assigned to class 15. The
prefix o-khu- for class 15 can be affixed to the verb roots in (75) to derive
nouns, as in (76).

(76) a) o-khu-kónéékít-á Source word (English)
    AUG-15-connect-INF
    ‘the connecting’

    b) o-khw-áálááw-á
    AUG-15-allow-INF
    ‘the allowing’

These nouns in the plural form are placed in classes 10c and 10d, which
shows their productivity.
4.6 Locatives

Either a locative prefix or an augment can occur in the structure of a Kisa nominal word, as shown in (1). Modifiers occurring with locative nouns also take agreement markers. In this section I consider the locative prefixes in Kisa and their meanings. I also look at locative agreement. I begin by discussing the various locative prefixes.

4.6.1 Locative prefixes

There are three locative prefixes in Kisa, *ha-* ‘by/at’, *khu-* ‘on’ and *mu-* ‘in’, exemplified in (77)-(79).

(77) *ha-shi-kóómbé*
    at/by-7-cup
    ‘at/by the cup’

(78) *khu-shi-kóómbé*
    on-7-cup
    ‘on the cup’

(79) *mu-shi-kóómbé*
    in-7-cup
    ‘in the cup’

4.6.2 Locative agreement

Modifiers occurring with locative nouns take either agreement prefixes corresponding to the locative prefix in question or agreement prefixes that agree with the class marking of the nouns in the locative construction. This depends on the location being referred to. If the location referred to involves the referent as a whole, then agreement prefixes are used. On the other hand, if the location referred to does not involve the referent as a whole, then the locative prefixes are used. Table 4.12 gives locative agreement markers with
a locative head, while table 4.13 gives standard agreement markers with a locative head.

The following example illustrates locative agreement when the modifier is a possessive.

(80) a)  
\[ \text{khu-mu-sáálá} \quad \text{khw-ááníé} \]
\[ \text{on-3-tree} \quad \text{on-my} \]
\[ \text{‘on the surface of my tree’} \]

b)  
\[ \text{mu-shi-kóómbé} \quad \text{mw-ááníé} \]
\[ \text{in-7-cup} \quad \text{in-my} \]
\[ \text{‘the space inside my cup’} \]

c)  
\[ \text{ha-mu-lyáángó} \quad \text{há-ááníé} \]
\[ \text{at/by-3-door} \quad \text{at/by-my} \]
\[ \text{‘the space at/by my door’} \]

A similar situation is seen when the modifier is a noun phrase, as in (81).

(81) a)  
\[ \text{khu-shi-kóómbé} \quad \text{khw-o=o-mu-káámbí} \]
\[ \text{on-7-cup} \quad \text{on-CM=AUG-1-preacher} \]
\[ \text{‘on the surface of the preacher’s cup’} \]

b)  
\[ \text{mu-shi-kóómbé} \quad \text{mw-o=o-mu-káámbí} \]
\[ \text{in-7-cup} \quad \text{in-CM=AUG-1-preacher} \]
\[ \text{‘the space inside the preacher’s cup’} \]

c)  
\[ \text{ha-shi-kóómbé} \quad \text{h-o=o-mu-káámbí} \]
\[ \text{at/by-7-cup} \quad \text{at/by-CM=AUG-1-preacher} \]
\[ \text{‘the space at/by the preacher’s cup’} \]
Table 4.12: Kisa locative agreement markers with a locative head

<table>
<thead>
<tr>
<th>Noun class</th>
<th>Locative noun</th>
<th>Modifier</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Locative prefix</td>
<td>Class prefix</td>
<td>Example root</td>
</tr>
<tr>
<td>7</td>
<td>khu-</td>
<td>shi-</td>
<td>kóómbé ‘cup’</td>
</tr>
<tr>
<td>4</td>
<td>mu-</td>
<td>mi-</td>
<td>sáálá ‘tree’</td>
</tr>
<tr>
<td>12</td>
<td>ha-</td>
<td>kha-</td>
<td>sáálá ‘tree’</td>
</tr>
</tbody>
</table>

Table 4.13: Kisa standard agreement markers with a locative head

<table>
<thead>
<tr>
<th>Noun class</th>
<th>Locative noun</th>
<th>Modifier</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Locative prefix</td>
<td>Class prefix</td>
<td>Example root</td>
</tr>
<tr>
<td>7</td>
<td>khu-</td>
<td>shi-</td>
<td>kóómbé ‘cup’</td>
</tr>
<tr>
<td>4</td>
<td>mu-</td>
<td>mi-</td>
<td>sáálá ‘tree’</td>
</tr>
<tr>
<td>12</td>
<td>ha-</td>
<td>kha-</td>
<td>sáálá ‘tree’</td>
</tr>
</tbody>
</table>
The examples in (82) and (83) illustrate standard agreement markers with a locative head.

(82) a) *khu-mu-súkú wá-ánjé*
    on-1-enemy 1-my
    ‘on my enemy’

   b) *mu-shi-kóómbé shy-áánjé*
    in-7-cup 7-my
    ‘in my cup’

   c) *ha-mu-lyáángó kw-áánjé*
    at/by-3-door 3-my
    ‘at/by my door’

(83) a) *khu-shi-kóómbé shy-o=o-mu-káámbí*
    on-7-cup 7-CM=AUG-1-preacher
    ‘on the preacher’s cup’

    b) *mu-shi-kóómbé shy-o=o-mu-káámbí*
    in-7-cup 7-CM=AUG-1-preacher
    ‘in the preacher’s cup’

    c) *ha-mu-lyáángó kw-o=o-mu-káámbí*
    at/by-3-door 3-CM=AUG-1-preacher
    ‘at/by the preacher’s door’

4.7 Compound nouns

Compounding in Kisa, as in other Bantu languages, is not a productive process (Schadeberg 2006: 86). Therefore, there are only a small number of compound words in Kisa. All the compound words in the data are nouns.

The nature of the roots appearing in compounds varies. Some compounds involve a noun root and an adjective root, as illustrated in (84).
Other compounds are formed by combining a verb root and an adjective root, as demonstrated in (85).

(85) \( i-\emptyset-n\text{öönd}-\text{á}+\text{ba-láyí} \)
AUG-9b-follow-IFS+2-good
‘a/the pimple’

Another type of compounding in Kisa involves the combination of a verb root and a noun root, as in (86-87).

(86) \( i-n\text{z-áy-á}+\text{mu-råúmblà} \)
AUG-9d-pluck-IFS+3-tree species
‘a/the giraffe’

(87) \( o-\text{mu-súkw}+\text{ííkhúúné} \)
AUG-1-enemy+shrink
‘a/the mimosa plant’

Examples (84-86) show that a noun root or an adjective root does not take an augment when it appears as the second root in the compound.

The noun class of compounds, as the examples in the preceding discussion show, is the same as the noun class of the first root in the compound.

Compound nouns, like other nouns in Kisa, can be preceded by a locative prefix. As in non-compound nouns, the locative prefix replaces the augment. Consider (88).
4.7.1 Agreement in compounds

Modifiers occurring with compound nouns take standard agreement prefixes associated with the class of the prefix on the first root in the compound. This is illustrated by the following data.

(89) a) \( i\text{-}n\text{-z\text{-}áy\text{-}á\text{+}mu\text{-rúámbá} \quad i\text{-}n\text{o} \)
AUG-9d-pluck-INF+3-tree species 9-this
‘this giraffe’

b) \( e\text{-}shi\text{-lák\text{-}á\text{+}mu\text{-nwá} \quad shi\text{-nó} \)
AUG-7-promise-INF+3-mouth 7-this
‘this curse’

c) \( o\text{-}mu\text{-khónó\text{+}mu\text{-khásí} \quad ku\text{-nó} \)
AUG-3-hand+1-woman 3-this
‘this left hand’

d) \( o\text{-}mw\text{-ááná\text{+}mu\text{-tóró} \quad wu\text{-nó} \)
AUG-1-child+1-soft 1-this
‘this infant’

The agreement prefixes on a modifier occurring with locative compounds follow the pattern discussed in section 4.6.2, as in (90) and (91).

(90) \( khu\text{-}mu\text{-khónó\text{+}mu\text{-khásí} \quad khu\text{-nó} \)
on-3-hand+1-woman on-this
‘on the surface of this left hand’

(91) \( khu\text{-}mu\text{-khónó\text{+}mu\text{-khásí} \quad ku\text{-nó} \)
on-3-hand+1-woman 3-this
‘on this left hand’
4.8 Summary

This chapter set out to explore nominal morphology in Kisa. It showed that nouns are grouped into classes based on the prefixes they take and their meanings. There are 16 noun classes, nine of which are singular and seven of which are plural. We saw that there are two types of marking in Kisa related to the noun class system, noun class marking and class agreement marking. The prefixes that occur with nouns when they are heads of phrases constitute noun class markers while those that occur with words occurring as modifiers in a phrase comprise class agreement markers.

The discussion on noun class productivity indicated that all the noun classes in Kisa are productive. Further, this chapter looked at the morphological process of compounding.
CHAPTER 5: VERBAL MORPHOLOGY

5.1 Introduction


Figure 5.1: Bantu verbal word structure

![Diagram of Bantu verbal word structure]

The structure of the verb in Kisa follows the pattern in figure 5.1. The maximum verbal word takes the form in (1), as discussed in section 2.2.2.

(1) Proclitic=(Subject-Tense/Aspect-Object-Reflexive-)Root (-Reversive-Inchoative-Reciprocal-Applicative-Causative-Aspect -Passive-)IFS (=Enclitic)

This structure is illustrated in (2).

---

22This structure is used here for comparative Bantu reasons.
The constituents in the structure in (1) which are not illustrated in (2) are aspect marking, the object, and the reflexive marker. They are illustrated in (3).

(3)  \text{o-shi-be-e-bék-ér-a.}
\hspace{1cm}2sgS-PSTV-3plO-RFL-shave-APPL-IND
\hspace{1cm}‘You are still shaving yourself for them.’

The only obligatory elements in a Kisa verbal word in the structure in (1) are the root and the inflectional final suffix (IFS). Together, they constitute the minimum verbal form in Kisa, as discussed in section 2.2.1.

This chapter looks at the elements of a Kisa verbal word and the phonological processes involving suffixes within this word. It starts with a discussion of the structure of verbal roots in section 5.2, followed by a description of the suffixes that can be used to expand these roots in section 5.3. The prefixes that can be attached to these roots are detailed in section 5.4. Section 5.5 deals with verbs that consist of single open syllables. Section 5.6 provides a summary of the chapter.

\textbf{5.2 The structure of verbal roots}

Verbal roots in Kisa can be monosyllabic or polysyllabic, as the data in (4) and (5) show.

(4)  \begin{enumerate}
\item \text{a) át-a!}
\hspace{1cm}spread-sgS
\hspace{1cm}‘Spread!’
\end{enumerate}
b)  \textit{kúl-a!}  
\begin{tabular}{l}
buy-sgS  \\
‘Buy!’
\end{tabular}

\begin{table}
\end{table}

(5) a)  \textit{ásámúl-a!}  
\begin{tabular}{l}
sneeze-sgS  \\
‘Sneeze!’
\end{tabular}

b)  \textit{béétsékál-a!}  
\begin{tabular}{l}
belch-sgS  \\
‘Belch!’
\end{tabular}

CVC is the most common verbal root shape in Kisa, as in other Bantu languages (Kanyoro 1983; Marlo 2006; Mutonyi 2000). All polysyllabic verbal roots end with a consonant. There are only 15 monosyllabic verbal roots that end with a vowel (see section 5.5).

5.3 Verbal suffixes

In this section I discuss verbal suffixes according to two properties:

\begin{table}
\end{table}

(6) a)  \begin{tabular}{l}
Being obligatory or optional
\end{tabular}

b)  \begin{tabular}{l}
Whether the suffix has a fixed position in the suffix template
\end{tabular}

Three groups of suffixes can be identified, the (IFS) which is obligatory; optional suffixes which precede the obligatory suffix; and the optional iterative reduplicative -VC suffix, with a non-fixed position before the obligatory suffix.

5.3.1 The obligatory inflectional final suffix

Synchronically, there are five IFS morphemes in Kisa, one of which has three allomorphs. These are listed in table 5.1.
Table 5.1: Kisa obligatory inflectional final suffixes

<table>
<thead>
<tr>
<th>Suffix</th>
<th>Allomorphs</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>-a</td>
<td></td>
<td>Singular subject imperative</td>
</tr>
<tr>
<td>-e</td>
<td></td>
<td>Plural subject imperative</td>
</tr>
<tr>
<td>-e</td>
<td></td>
<td>Subjunctive/Irrealis</td>
</tr>
<tr>
<td>-a</td>
<td></td>
<td>Indicative</td>
</tr>
<tr>
<td>-ire</td>
<td>-ire</td>
<td>Hesternal/Hodiernal past</td>
</tr>
<tr>
<td></td>
<td>-ir-e</td>
<td></td>
</tr>
<tr>
<td></td>
<td>-e</td>
<td></td>
</tr>
</tbody>
</table>

In the imperative the IFS marks the number of the subject, as the following data show.

(7) a) *yáb-a*               *bwáángú!*
dig-sgS     quickly
‘Dig quickly!’

b) *kúl-a*               *bwáángú!*
buy-sgS     quickly
‘Buy quickly!’

(8) a) *yáb-e*               *bwáángú!*
dig-plS     quickly
‘Dig quickly!’

b) *kúl-e*               *bwáángú!*
buy-plS     quickly
‘Buy quickly!’

The subjunctive in Kisa takes the IFS vowel suffix -e, as in (9).

(9) a) *yab-e*               *bwáángú!*
dig-SUBJ     quickly
‘Please dig quickly.’

b) *kul-e*               *bwáángú!*
buy-SUBJ     quickly
‘Please buy quickly.’
Example (10) illustrates the indicative IFS -a.

(10) a)  
\[
\begin{array}{ccc}
\text{a-bá-áná} & \text{ba-la-yab-a} & \text{bwáángú}.\\
\text{AUG-2-child} & \text{3plS-HODF-dig-IND} & \text{quickly}
\end{array}
\]
‘The children will dig quickly.’

b)  
\[
\begin{array}{ccc}
\text{a-bá-áná} & \text{ba-la-kul-a} & \text{bwáángú}.\\
\text{AUG-2-child} & \text{3plS-HODF-buy-IND} & \text{quickly}
\end{array}
\]
‘The children will buy quickly.’

5.3.1.1 The hesternal/hodiernal IFS allomorphs [-ire], [-e], and [-ir-e]

These are the only suffixes in Kisa that mark tense. The suffix -ire occurs with monosyllabic verb roots, as seen in (11) and (12), and polysyllabic verb roots which have a long vowel in the final syllable, as (13) shows.

(11)  
\[
\begin{array}{ccc}
\text{b-aa-kul-ire} & \text{bwáángú}.\\
\text{3plS-HEST-buy-HEST} & \text{quickly}
\end{array}
\]
‘They bought quickly.’ (recently)

(12)  
\[
\begin{array}{ccc}
\text{ba-tííy-íré} & \text{bwáángú}.\\
\text{3plS-work-HODP} & \text{quickly}
\end{array}
\]
‘They worked quickly.’ (earlier today)

(13)  
\[
\begin{array}{ccc}
\text{ba-búkáán-íré} & \text{bó-ósí}.\\
\text{3plS-meet-HODP} & \text{2-all}
\end{array}
\]
‘They all met.’ (earlier today)

In polysyllabic verb roots with a short vowel in the final syllable, the hesternal and hodiernal past is marked by the IFS vowel suffix -e and a long vowel in the final syllable of the root, as in (14).

(14) a)  
\[
\begin{array}{ccc}
\text{ba-súkúún-e} & \text{khu-mu-kháándá} & \text{súkún}\\
\text{3plS-throw-HODP} & \text{on-1-girl}
\end{array}
\]
‘They threw on the girl.’ (earlier today)
b) \( ba\-búkúúl\-e \)
\( o\-mu\-khááná. \)
\( búkúl \)
3plS-take-HODP AUG-1-girl
‘They took the girl.’ (earlier today)

c) \( ba\-síkáám\-e \)
\( khu\-mu\-khááná. \)
\( sikam \)
3plS-kneel-HODP on-1-girl
‘They knelt on the girl.’ (earlier today)

d) \( ba\-túkúút\-e \)
\( o\-bu\-sérá. \)
\( túkút \)
3plS-stir-HODP AUG-14-porridge
‘They stirred the porridge.’ (earlier today)

When the root is expanded by any of the suffixes discussed in section 5.3.2, the hesternal and hodiernal past is marked by the IFS vowel suffix \(-e\) and a long vowel in the final syllable of the stem, as the following examples show.

<table>
<thead>
<tr>
<th>Underlying verbal stem</th>
</tr>
</thead>
</table>
| (15) \( ba\-tííy\-íír\-e \)
3plS-work-APPL-HODP mother work-APPL
‘They worked for mother.’ |
| (16) \( ba\-khúp\-áán\-e. \)
3plS-beat-REC-HODP beat-REC
‘They beat each other.’ |
| (17) \( ba\-sám\-ííy\-e. \)
3plS-bark-CAUS-HODP bark-CAUS
‘They made bark.’ |

The allomorph \([-ir\-e]\) occurs in passive verbs that contain monosyllabic roots or polysyllabic verb roots which have a long vowel in the final syllable. Consider (18).

(18) a) \( b\-aa\-kul\-ir\-w\-e \)
\( bwáángú. \)
3plS-HEST-buy-HEST-PASS-HEST quickly
‘They were bought quickly.’ (recently)
b) \( bi-tüy-ír-w-e \quad bwáängú. \)  

8S-work-HODP-PASS-HODP quickly  
‘They were worked quickly.’ (earlier today)

c) \( ba-tüümüül-ír-w-e. \)  

3plS-disperse-HODP-PASS-HODP  
‘They were dispersed.’ (earlier today)

---

5.3.2 Optional suffixes that precede the IFS

There are seven optional suffixes which can precede the IFS. These are the reversive, inchoative, reciprocal, applicative, causative, passive, and imperfective suffixes.

These suffixes occur in the order shown in (19).

(19) Root-Reversive-Inchoative-Reciprocal-Applicative-Causative-Imperfective-Passive-IFS

The reversive suffix changes the meaning of a verb root into its semantic opposite. The reversive is marked by the suffix \(-ul\), as seen in (20).

(20) a) \( rëk-úl-a! \)  
bolt-RVS-sgS  
‘Unbolt!’

b) \( bás-úl-a! \)  
plait-RVS-sgS  
‘Unplait!’

c) \( bís-úl-a! \)  
hide-RVS-sgS  
‘Reveal!’

The roots in the verbs in (20) above exist by themselves in Kisa, as (21) shows.
(21)  
a)  rék-a!
bolt-sgS  
‘Bolt!’

b)  bás-a!
plait-sgS  
‘Plait!’

c)  bís-a!
hide-sgS  
‘Hide!’

The intransitive reversive forms of the verbs in (20) are given in (22).

(22)  
a)  rék-úkh-a!
bolt-INTR.RVS-sgS  
‘Become unbolted!’

b)  bás-úkh-a!
plait-INTR.RVS-sgS  
‘Become unplaited!’

c)  bís-úkh-a!
hide-INTR.RVS-sgS  
‘Become revealed!’

The inchoative suffix adds to the core meaning of the verb root the semantic element of ‘becoming’ or ‘entering into a state’. It is marked by -ikh, as (23) shows.

(23)  
a)  fút-íkh-a!
rub-INCH-sgS  
‘Become erased!’

b)  bás-íkh-a!
plait-INCH-sgS  
‘Become plaited!’
The reciprocal in Kisa expresses mutual action, that is, an action performed by two or more subjects on one another. Reciprocal verbs require more than one agent. The agents cannot be indirect objects.

The reciprocal is marked by the suffix -an, as in (24).

(24)  púm-án-e!
      weigh-REC-plS
      ‘Weigh each other!’

The causative suffix increases the valency of the verb by adding another agent. This suffix shows that somebody (or something) causes someone (or something) else to do something.

The causative is marked by the suffix -y, which is underlyingly /-i/, as shown in (25).

(25)  SR  a-bá-áná b-a-sam-y-a Ø-tsúm-bwá.
      UR  /a-ba-ana b-a-sam-i-a Ø-tsiim-bua/
          AUG-2-child 3plS-FARP-bark-CAUS-IND AUG-10b-dog
          ‘The children made the dogs bark.’

In a passive construction, the agent is demoted and the object promoted to the subject role. The passive is marked by the suffix -w, which is underlyingly /-u/, as (26) illustrates.

(26)  SR  a-bá-áná b-a-lum-w-a khu-mu-khónó.
      UR  /a-ba-ana b-a-lum-u-a khu-mu-khono/
          AUG-2-child 3plS-FARP-bite-PASS-IND on-3-hand
          ‘The children were bitten on the hand.’
There is one aspect suffix in Kisa, the imperfective suffix:

(27) \( \text{táy-ááng-}a \quad \text{bwáángú!} \)
    fetch-IPFV-sgS quickly
    ‘Be fetching quickly!’

The vowel in this suffix varies depending on the following vowel, as in (28-30).

(28) \( \text{áy-ééng-}e \quad \text{bwáángú!} \)
    pluck-IPFV-plS quickly
    ‘Be plucking quickly!’

(29) \( \text{SR} \quad \text{ba-bal-uung-w-a} \quad \text{bwáángú.} \)
    \( \text{UR} /\text{ba-bal-uung-u-a} \quad \text{buangu/} \)
    3plS-count-IPFV-PASS-IND quickly
    ‘They are being counted quickly.’

(30) \( \text{SR} \quad \text{ba-sam-iinj-y-a} \quad \text{bwáángú} \)
    \( \text{UR} /\text{ba-sam-iinj-i-a} \quad \text{buangu/} \)
    3plS-bark-IPFV-CAUS-IND quickly
    ‘they are making bark quickly’

These examples show that the imperfective suffix has an underspecified vowel and thus has the form \(-VVng\), the vowel of which takes the features of the following vowel.

5.3.2.1 The applicative

The applicative suffix adds one argument to the verb. It is marked by \(-ir\), as (31) shows.

(31) \( \text{táy-ír-}a \quad \text{máámá!} \)
    fetch-APPL-sgS mother
    ‘Fetch for mother!’

\[ ^{23} \text{This suffix is not realized as \(-il\) in Kisa. There is no } r/l \text{ consonant harmony in Kisa.} \]
The applicative suffix in Kisa, as in other Bantu languages (McPherson 2008; Stegen 2002), expresses a number of meanings. First, it is used to express the benefactive, as seen in (32-33).

(32)  
\[ b-a-mu-kul-ir-a \quad e-shi-kápó. \]
\[ 3\text{plS-FARP-3sgO-buy-APPL-IND} \quad \text{AUG-7-basket} \]
\[ 'They bought for him/her a/the basket.' \]

(33)  
\[ b-a-mu-súkún-ír-a \quad o-mu-kóyé. \]
\[ 3\text{plS-FARP-3sgO-throw-APPL-IND} \quad \text{AUG-3-rope} \]
\[ 'They threw him the rope.' \]

Second, the applicative suffix may have the instrumental sense ‘by means of’, that is, using something as an instrument to do another thing, as seen in (34).

(34)  
\[ b-a-shi-tay-ir-a \quad a-má-átsí. \]
\[ 3\text{plS-FARP-7O-fetch-APPL-IND} \quad \text{AUG-6-water} \]
\[ 'They fetched water with it.' \]

The object prefixes \textit{mu-} in (32-33) and \textit{shi-} in (34) cross-reference the applicative object.

Third, the applicative suffix can have a locative meaning, as shown in (35).

(35)  
\[ b-a-sóóm-ér-a \quad khu-shi-táándá. \]
\[ 3\text{plS-FARP-read-APPL-IND} \quad \text{on-7-bed} \]
\[ 'They read on the bed.' \]

\[ ^{24}\text{This sentence can occur without the applicative suffix with the same meaning:} \]

(i)  
\[ b-a-sóóm-a \quad khu-shi-táándá. \]
\[ 3\text{plS-FARP-read-IND} \quad \text{on-7-bed} \]
\[ 'They read on the bed.' \]
In locative applicatives, the applicative object cannot be cross-referenced by a prefix, as (36) illustrates.

(36) *b-a-khu-sóóm-ér-a e-shi-tábú
    3plS-FARP-on-read-APPL-IND AUG-7-book
    ‘They read the book on it’

Instead, we get a directional enclitic (see section 6.2.1), as in (37).

(37) b-a-sóóm-ér-á=khú e-shi-tábú.
    3plS-FARP-read-APPL-IND=on it AUG-7-book
    ‘They read the book on it.’

### 5.3.2.2 Co-occurrence of suffixes

Most of the suffixes discussed in the foregoing subsections can co-occur. Table 5.2 gives a summary of the order of each case of two successive suffixes.

As table 5.2 below shows, the inchoative and the reciprocal suffixes do not co-occur with the passive suffix.

### 5.3.3 The iterative suffix

The iterative suffix in Kisa is a reduplicative -VC suffix with a lexicalized distribution. It occurs before the obligatory IFS, but has no fixed position in the suffix template. Consider the following examples.
Table 5.2: Co-occurrence of the optional suffixes that precede the IFS

<table>
<thead>
<tr>
<th>Suffix</th>
<th>Reversive</th>
<th>Inchoative</th>
<th>Reciprocal</th>
<th>Applicative</th>
<th>Imperfective</th>
<th>Causative</th>
<th>Passive</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reversive</td>
<td></td>
<td></td>
<td></td>
<td>ul-ikh</td>
<td>ul-ir</td>
<td>ul-y</td>
<td>ul-w</td>
</tr>
<tr>
<td></td>
<td>RVS-INCH</td>
<td>RVS-REC</td>
<td>RVS-APPL</td>
<td>RVS-IPFV</td>
<td>RVS-CAUS</td>
<td>RVS-PASS</td>
<td></td>
</tr>
<tr>
<td>Inchoative</td>
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<td></td>
<td></td>
<td>ikh-an</td>
<td>ish-ir</td>
<td>is-y</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>INCH-REC</td>
<td>INCH-APPL</td>
<td>INCH-CAUS</td>
<td></td>
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<tr>
<td>Reciprocal</td>
<td></td>
<td></td>
<td></td>
<td>an-ir</td>
<td>an-VVng</td>
<td>as-y</td>
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<td></td>
<td></td>
<td>REC-APPL</td>
<td>REC-IPFV</td>
<td>REC-CAUS</td>
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<tr>
<td>Applicative</td>
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<td></td>
<td></td>
<td>ir-VVng</td>
<td>ir-y</td>
<td>ir-w</td>
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<td></td>
<td></td>
<td>APPL-IPFV</td>
<td>APPL-CAUS</td>
<td>APPL-PASS</td>
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<tr>
<td>Imperfective</td>
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<td>VVng-y</td>
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<td></td>
<td>IPFV-CAUS</td>
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<tr>
<td>Causative</td>
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<td></td>
<td>i-bw</td>
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<tr>
<td>Passive</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>CAUS-PASS</td>
</tr>
</tbody>
</table>
The iterative suffix is unpredictably restricted. It occurs only with the reversive and the applicative suffixes. The reciprocal -an cannot be reduplicated with an iterative meaning, as (43) shows.

(43) *khúp-án-án-e!
    beat-REC-IT-plS
    ‘Beat each other repeatedly!’

\(25\) The iterative suffix can precede the suffix in question:

(i) sib-úl-úl-a
    block-IT-RVS-sgS
    ‘Unblock repeatedly!’
5.3.4  **Verbal suffixes in loan verbs**

Loan verbs into Kisa take the suffixes discussed above. The following examples illustrate this with the English loan ‘to cover’.

(44)  kááb-úl-a   bwáángú!
      cover-RVS-sgS quickly
‘Uncover quickly!’

(45)  kááb-túl-úl-a   bwáángú!
      cover-RVS-IT-sgS quickly
‘Uncover repeatedly quickly!’

(46)  kááb-íkh-a   bwáángú!
      cover-INCH-sgS quickly
‘Be covered quickly!’

(47)  kááb-án-e   bwáángú!
      cover-REC-plS quickly
‘Cover each other quickly!’

(48)  kááb-ír-a   máámá!
      cover-APPL-sgS mother
‘Cover for mother!’

(49)  kááb-ír-ír-a   máámá!
      cover-APPL-IT-sgS mother
‘Cover repeatedly for mother!’

(50)  kááb-y-a   máámá!
      cover-CAUS-sgS mother
‘Make mother cover!’

(51)  kááb-w-a   bwáángú!
      cover-PASS-sgS quickly
‘Be covered quickly!’

(52)  ba-kááb-ír-ááng-a
      3plS-cover-APPL-IPFV-IND
‘they are covering for’
5.3.5 Phonological processes involving suffixes in a verbal word

There are three phonological processes attested that affect verbal suffixes. These are vowel height harmony, palatalisation, and assibilation.

5.3.5.1 Vowel height harmony

This process affects all suffixes that begin with an underlying high front vowel /i/ except the causative suffix. When the preceding vowel is a mid vowel these suffixes show a mid vowel [e] allomorph, as in (53-55). Otherwise, they show an [i], as in (56-58).

(53)  *ba-la-lol-ekh-a.*
     3plS-HODF-see-INCH-IND
     ‘They will be visible.’

(54)  *ba-la-rem-er-a*
     3plS-HODF-chop-APPL-IND
     ‘they will chop for’

(55)  *ba-bóól-éré.*
     3plS-speak/say-HODP
     ‘They spoke.’

(56)  *bi-la-bis-ikh-a.*
     8S-HODF-hide-INCH-IND
     ‘They will become hidden.’

(57)  *ba-la-béétsékál-ír-a*
     3plS-HODF-belch-APPL-IND
     ‘they will belch for’

(58)  *ba-fun-ire.*
     3plS-harvest-HODP
     ‘They harvested.’

The harmony just mentioned also occurs with the reduplicative iterative -VC suffix, as the following examples show.
(59) \textit{ba-la-khup-ir-ir-a}  
3plS-HODF-beat-APPL-IT-IND  
‘they will beat repeatedly for’

(60) \textit{ba-la-khom-er-er-a}  
3plS-HODF-hit-APPL-IT-IND  
‘they will hit repeatedly for’

The causative suffix \textit{-i} is not subject to this harmony, as seen in (61).

(61) a) SR \textit{*ba-la-khom-e-a}  
UR \textit{/ba-la-khom-i-a/}  
3plS-HODF-hit-CAUS-IND  
‘they will make hit’

b) SR \textit{*ba-la-khom-e-bw-a}  
UR \textit{/ba-la-khom-i-bu-a/}  
3plS-HODF-hit-CAUS-PASS-IND  
‘they will be made to hit’

In the case of (61a) the causative suffix surfaces as a glide and not as a vowel, while in the case of (61b) it surfaces as a vowel, as (62) shows.

(62) a) SR \textit{ba-la-khom-y-a}  
UR \textit{/ba-la-khom-i-a/}  
3plS-HODF-hit-CAUS-IND  
‘they will make hit’

b) SR \textit{ba-la-khom-i-bw-a}  
UR \textit{/ba-la-khom-i-bu-a/}  
3plS-HODF-hit-CAUS-PASS-IND  
‘they will be made to hit’

5.3.5.2 Palatalisation

Palatalisation is triggered by all suffixes beginning with an underlying high front vowel /i/ other than the inchoative suffix.
Palatalisation converts dorsal segments to palato-alveolars. The velar stop /k/ changes to the palato-alveolar affricate /ʃ/ (ch), as seen in (63-65).

(63) SR  ba-le-ech-y-a.
UR  /ba-la-ek-i-a/
    3plS-HODF-learn-CAUS-IND
    ‘They will teach.’

(64) SR  ba-la-ráách-ír-a
UR  /ba-la-raak-ir-a/
    3plS-HODF-plant-APPL-IND
    ‘they will plant for’

(65) SR  ba-súúch-íré.
UR  /ba-suuk-ire/
    3plS-plait-HODP
    ‘They plaited.’

The velar fricative /x/ (kh) changes to the palatal-alveolar fricative /ʃ/ (sh).

Consider the following data.

(66) SR  ba-la-tsesh-y-a
UR  /ba-la-tsekh-i-a/
    3plS-HODF-laugh-CAUS-IND
    ‘they will make laugh’

(67) SR  ba-la-tsush-ir-a
UR  /ba-la-tsukh-ir-a/
    3plS-HODF-pour-APPL-IND
    ‘they will pour for’

(68) SR  ba-bíísh-íré
UR  /ba-biikh-ire/
    3plS-keep-HODP
    ‘they kept’

The velar sequence [ŋ] changes to the palato-alveolar sequence [ɲ] (nj). The examples in (69-71) show this.
There are two verbal suffixes ending with dorsal segments, the inchoative -ikh and the imperfective -VVng. The dorsal segments in these suffixes change to palatals when followed by /i/-initial suffixes, as the following examples show.

The velar consonants discussed above do not change to palato-alveolar consonants when followed by the inchoative suffix -ikh, as (75-77) show, except when the inchoative has itself been palatalised, as seen in (78-80).
(75) SR *ba-la-loch-ekh-a.
UR /ba-la-lok-ikh-a/
3plS-HODF-bewitch-INCH-IND
‘They will become bewitched.’

(76) SR *bi-la-téésh-ékh-a.
UR /bi-la-teekh-ikh-a/
8S-HODF-cook-INCH-IND
‘They will become cooked.’

(77) SR *ba-la-réénj-ékh-a.
UR /ba-la-reeng-ikh-a/
3plS-HODF-shake-INCH-IND
‘They will be shakeable.’

(78) SR ba-la-loch-esh-er-a
UR /ba-la-lok-ikh-ir-a/
3plS-HODF-bewitch-INCH-APPL-IND
‘They will become bewitched for’

(79) SR bi-la-téésh-ésh-ér-a
UR /bi-la-teekh-ikh-ir-a/
8S-HODF-cook-INCH-APPL-IND
‘They will become cooked for’

(80) SR ba-la-réénj-ésh-ér-a
UR /ba-la-reeng-ikh-ir-a/
3plS-HODF-shake-INCH-APPL-IND
‘They will be shakeable for’

5.3.5.3 Assibilation

The process of assibilation is not phonologically predictable in Kisa. It is only triggered by the causative suffix. The liquids /l/ and /r/ change to the alveolar fricative /s/ before this suffix, as the following examples show.

(81) SR ba-la-sáás-y-a
UR /ba-la-saal-i-a/
3plS-HODF-jingle-CAUS-IND
‘they will make jingle’
The final consonant /x/ (kh) of the inchoative suffix changes to /s/ before the causative suffix, as seen in (83).

(83) SR \(ba-la-lol-es-y-a\)  
UR \(ba-la-lol-ekh-i-a\)  
3plS-HODF-see-INCH-CAUS-IND  
‘they will show’

The usual output of the dorsal segment /x/ (kh) followed by the causative suffix -i is (sh-y), as in (66). Therefore, the asibilation output in (83) is an exception to the general pattern of palatalisation.

Also, the final consonant /n/ of the reciprocal suffix changes to /s/ before the causative suffix, as seen in (84a). That of the root does not undergo assibilation, as (84b) shows.

(84) a) SR \(ba-la-khup-as-y-a\)  
UR \(ba-la-khup-an-i-a\)  
3plS-HODF-beat-REC-CAUS-IND  
‘they will make beat one another’

b) SR \(ba-la-shin-y-a\)  
UR \(ba-la-shin-i-a\)  
3plS-HODF-dance-CAUS-IND  
‘they will make dance’

However, if the reciprocal suffix is preceded by a root ending with either /l/ or /r/ the final consonant /n/ of the reciprocal suffix does not undergo assibilation. The final consonant /l/ or /r/ of the root undergoes assibilation instead, as the following data show.
(85) SR lís-án-i-e!  
UR /lir-an-i-e/  
cry-REC-CAUS-plS  
‘Make each other cry!’

(86) a) SR súa-sán-i-e!  
UR /suul-an-i-e/  
uproot-REC-CAUS-plS  
‘Make each other uproot!’

b) SR ba-súa-sán-i-e!  
UR /ba-suul-an-i-e/  
3plO-uproot-REC-CAUS-plS  
‘Make them uproot each other!’

Other /i/-initial suffixes (including the agentive suffix -i) do not trigger assimilation, as the examples below illustrate.

(87) SR *ba-la-búa-íkh-a.  
UR /ba-la-buul-ikh-a/  
3plS-HODF-disclose-INCH-IND  
‘they will be disclosed.’

(88) SR *ba-la-lis-ir-a  
UR /ba-la-lir-ir-a/  
3plS-HODF-cry-APPL-IND  
‘they will cry for’

(89) SR *ba-súa-sírë  
UR /ba-suul-íre/  
3plS-uproot-HODP  
‘they uprooted’

5.3.6 Phonological processes involving suffixes in a loan verbal word

Not all the phonological processes that occur in a verbal word with a native root, discussed in sections 5.3.5.1, 5.3.5.2, and 5.3.5.3, occur in a verbal word with a loan root. In this section I discuss which processes occur and which do not.
5.3.6.1 Vowel height harmony

Vowel height harmony, as discussed in section 5.3.5.1, applies regularly to loan verbs, as the following data exemplify.

(90) a) tsi-la-fišh-íkh-a.
10S-HODF-fish-INCH-IND
‘They will be fished.’

b) ka-la-set-ekh-a.
6S-HODF-set-INCH-IND
‘They will be settable.’

(91) a) ba-la-sáách-ír-a
3plS-HODF-search-APPL-IND
‘they will search for’

b) ba-la-set-er-a
3plS-HODF-set-APPL-IND
‘they will set for’

(92) a) ba-fúúl-íré
3plS-fool-HODP
‘they fooled’

b) ba-lóóch-éré
3plS-lock-HODP
‘they locked’

5.3.6.2 Palatalisation

In loans palatalisation operates regularly, as in the examples below.

(93) a) SR ba-la-lích-y-a
UR /ba-la-liik-i-a/
3plS-HODF-lick-CAUS-IND
‘they will make lick’
5.3.6.3 Assibilation

In a native verbal word assibilation is triggered by the causative suffix. As noted above, the liquids /l/ and /r/ change to the alveolar fricative /s/ before the causative suffix. This process does not take place with loan verb roots, as (97a) shows.
(97)  

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>a) SR</td>
<td>*ba-la-róós-y-a</td>
<td>3plS-HODF-roll-CAUS-IND</td>
</tr>
<tr>
<td>UR</td>
<td>/ba-la-rool-i-a/</td>
<td>‘they will make roll’</td>
</tr>
<tr>
<td>b) SR</td>
<td>ba-la-róól-y-a</td>
<td>3plS-HODF-roll-CAUS-IND</td>
</tr>
<tr>
<td>UR</td>
<td>/ba-la-rool-i-a/</td>
<td>‘they will make roll’</td>
</tr>
</tbody>
</table>

There is no loan verb root ending with /r/.

Similarly, the final consonant /x/ (kh) of the inchoative and /n/ of the reciprocal suffixes do not undergo assibilation before the causative suffix in loans. Consider (98a) and (99a).

(98)  

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>a) SR</td>
<td>*ba-la-sípúláásh-ís-y-a</td>
<td>3plS-HODF-splash-INCH-CAUS-sgS</td>
</tr>
<tr>
<td>UR</td>
<td>/ba-la-sipulaash-ikh-i-a/</td>
<td>‘they will make be splashed’</td>
</tr>
<tr>
<td>b) SR</td>
<td>ba-la-sípúláásh-íkh-y-a</td>
<td>3plS-HODF-splash-INCH-CAUS-sgS</td>
</tr>
<tr>
<td>UR</td>
<td>/ba-la-sipulaash-ikh-i-a/</td>
<td>‘they will make be splashed’</td>
</tr>
</tbody>
</table>

(99)  

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>a) SR</td>
<td>*sípúláásh-ás-y-e</td>
<td>splash-REC-CAUS-plS</td>
</tr>
<tr>
<td>UR</td>
<td>/sipulaash-an-i-e/</td>
<td>‘Make splash each other!’</td>
</tr>
<tr>
<td>b) SR</td>
<td>sípúláásh-án-y-e!</td>
<td>splash-REC-CAUS-plS</td>
</tr>
<tr>
<td>UR</td>
<td>/sipulaash-an-i-e/</td>
<td>‘Make splash each other!’</td>
</tr>
</tbody>
</table>

The dorsal segment /x/ (kh) of the inchoative suffix in (98) does not undergo palatalisation before the causative suffix, as is the case with a native verb.
root (see (83)). Consider (100a). However, this is what would be expected on general grounds, as in (66).

(100)  

a) SR  
\*ba-la-sipulaash-ish-y-a  
/ba-la-sipulaash-ikh-i-a/  
3plS-HODF-splash-INCH-CAUS-sgS  
‘they will cause to be splashed’  

b) SR  
ba-la-sipuláásh-ikh-y-a  
/ba-la-sipulaash-ikh-i-a/  
3plS-HODF-splash-INCH-CAUS-sgS  
‘they will cause to be splashed’  

It can be seen from the preceding discussion that vowel height harmony and palatalisation are productive processes in Kisa (they apply to a wide range of phonemes and to loans), while assibilation is not.

5.4 Verbal prefixes  
As discussed in section 5.1 the verbal word can also involve prefixes, as shown in (101).

(101)  
(Subject-Tense/Aspect-Object-Reflexive-)Root-IFS  

5.4.1 Tense/aspect  
Table 5.3 summarises the various tense/aspect markers in Kisa.
Table 5.3: Kisa tense/aspect markers

<table>
<thead>
<tr>
<th>Tense</th>
<th>Tense/aspect prefix</th>
<th>Tense suffix</th>
</tr>
</thead>
<tbody>
<tr>
<td>Remote Past (REMP)</td>
<td>aa-</td>
<td>-</td>
</tr>
<tr>
<td>Far Past (FARP)</td>
<td>a-</td>
<td></td>
</tr>
<tr>
<td>Hesternal Past (HEST)</td>
<td>aa-</td>
<td>-ire, -e,-ir-e</td>
</tr>
<tr>
<td>Hodiernal Future (HODF)</td>
<td>la-</td>
<td></td>
</tr>
<tr>
<td>Near Future (NEARF)</td>
<td>na-</td>
<td></td>
</tr>
<tr>
<td>Far Future (FARF)</td>
<td>akha-</td>
<td></td>
</tr>
<tr>
<td>Remote Future (REMF)</td>
<td>li-</td>
<td></td>
</tr>
<tr>
<td>Perfect Aspect (PRF)</td>
<td>akha-</td>
<td></td>
</tr>
<tr>
<td>Persitve Aspect (PSTV)</td>
<td>shi-</td>
<td></td>
</tr>
</tbody>
</table>

Table 5.4 illustrates these tenses/aspects in the affirmative, while table 5.5 shows them in the negative.

26These markers are the same in both subject and object relative clauses and in negative constructions.
<table>
<thead>
<tr>
<th>Tense</th>
<th>C-initial root</th>
<th>Gloss</th>
<th>V-initial root</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>REMP</td>
<td><em>b-aa-kul-a</em> 3plS-REMP-buy-IND</td>
<td>‘They bought (long time ago)’</td>
<td><em>b-dá-ín-a</em>  3plS-REMP-dip-IND</td>
<td>‘They dipped (long time ago)’</td>
</tr>
<tr>
<td>FARP</td>
<td><em>b-a-kul-a</em> 3plS-FARP-buy-IND</td>
<td>‘They bought (sometime back)’</td>
<td><em>b-é-én-a</em>  3plS-FARP-dip-IND</td>
<td>‘They dipped (sometime back)’</td>
</tr>
<tr>
<td>HEST</td>
<td><em>b-aa-kul-ire</em> 3plS-HEST-buy-HEST</td>
<td>‘They bought (recently)’</td>
<td><em>b-dá-ín-íré</em>  3plS-HEST-dip-HEST</td>
<td>‘They dipped (recently)’</td>
</tr>
<tr>
<td>HODP</td>
<td><em>ba-kul-ire</em> 3plS-buy-HODP</td>
<td>‘They bought (earlier today)’</td>
<td><em>bé-é-neré</em>  3plS-dip-HODP</td>
<td>‘They dipped (earlier today)’</td>
</tr>
<tr>
<td>PRES</td>
<td><em>ba-kul-a</em> 3plS-buy-IND</td>
<td>‘They buy (now)’</td>
<td><em>bé-é-á</em>  3plS-dip-IND</td>
<td>‘They dip (now)’</td>
</tr>
<tr>
<td>HODF</td>
<td><em>ba-la-kul-a</em> 3plS-HODF-buy-IND</td>
<td>‘They will buy (later today)’</td>
<td><em>ba-lé-én-a</em>  3plS-HODF-dip-IND</td>
<td>‘They will dip (later today)’</td>
</tr>
<tr>
<td>NEARF</td>
<td><em>na-ba-kul-e</em> NEARF-3plS-buy-IRR</td>
<td>‘They will buy (in the near future)’</td>
<td><em>na-bé-é-í</em>  NEARF-3plS-dip-IRR</td>
<td>‘They will dip (in the near future)’</td>
</tr>
<tr>
<td>FARF</td>
<td><em>ba-akha-kul-e</em> 3plS-FARF-buy-IRR</td>
<td>‘They will buy (sometime to come)’</td>
<td><em>ba-akhé-én-a</em>  3plS-FARF-dip-IRR</td>
<td>‘They will dip (sometime to come)’</td>
</tr>
<tr>
<td>REMF</td>
<td><em>ba-li-kul-a</em> 3plS-REMF-buy-IND</td>
<td>‘They will buy (a long time to come)’</td>
<td><em>ba-li-in-a</em>  3plS-REMF-dip-IND</td>
<td>‘They will dip (a long time to come)’</td>
</tr>
</tbody>
</table>
Table 5.5: Kisa tense verb paradigms in the negative

<table>
<thead>
<tr>
<th>Tense</th>
<th>C-initial root</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>REMP</td>
<td>shi=b-aa-kul-a=tá NEG=3plS-REMP-buy-IND=no</td>
<td>‘They did not buy (long time ago)’</td>
</tr>
<tr>
<td>FARP</td>
<td>shi=b-a-kul-a=tá NEG=3plS-FARP-buy-IND=no</td>
<td>‘They did not buy (sometime back)’</td>
</tr>
<tr>
<td>HEST</td>
<td>shi=b-aa-kul-ire=tá NEG=3plS-HEST-buy-HEST=no</td>
<td>‘They did not buy (recently)’</td>
</tr>
<tr>
<td>HODP</td>
<td>shi=ba-kul-ire=tá NEG=3plS-buy-HODP=no</td>
<td>‘They did not buy (earlier today)’</td>
</tr>
<tr>
<td>PRES</td>
<td>shi=ba-kul-a=tá NEG=3plS-buy-IND=no</td>
<td>‘They are not going to buy (now)’</td>
</tr>
<tr>
<td>HODF</td>
<td>shi=ba-la-kul-a=tá NEG=3plS-HODF-buy-IND=no</td>
<td>‘They will not buy (later today)’</td>
</tr>
<tr>
<td>NEARF</td>
<td>shi=na-ba-kul-e=tá NEG=NEARF-3plS-buy-IRR=no</td>
<td>‘They will not buy (in the near future)’</td>
</tr>
<tr>
<td>FARF</td>
<td>shi=ba-aka-kul-e=tá NEG=3plS-FARF-buy-IRR=no</td>
<td>‘They will not buy (sometime to come)’</td>
</tr>
<tr>
<td>REMF</td>
<td>shi=ba-li-kul-a=tá 3plS-REMF-buy-IND</td>
<td>‘They will not buy (a long time to come)’</td>
</tr>
</tbody>
</table>

5.4.2 Subject agreement

The verb agrees with its subject by means of a subject prefix. This prefix precedes the tense/aspect prefix and agrees with the noun class of the subject, as (102-103) show.

(102) a-ma-túúmá ka-la-róóny-a háási.
AUG-6-maize 6S-HODF-drop-IND down ‘The maize will drop down.’

(103) e-bi-kóómbé bi-la-róóny-a háási.
AUG-8-cup 8S-HODF-drop-IND down ‘The cups will drop down.’
In the absence of an overt subject, subject prefixes (in terms of agreement morphology) function in the same way subject pronouns do in English, as in (104-105).

(104)  *ba-la-tííy-a.* 
3plS-HODF-work-IND  
‘They will work.’

(105)  *bi-la-kul-w-a.* 
8S-HODF-buy-PASS-IND  
‘They will be bought.’

Subject prefixes in Kisa are the same as the agreement prefixes discussed in section 4.3 except the prefixes for class 1 nouns, which are discussed in section 5.4.2.1. A summary of the subject prefixes and their corresponding noun classes is given in table 5.6.

5.4.2.1 Subject prefixes for class 1 nouns

Subject prefixes for class 1 nouns take different forms depending on two factors, whether a following morpheme is consonant- or vowel-initial and whether there is a following past tense vowel prefix.

Table 5.7 gives a summary of the subject prefix allomorphs for class 1 nouns.

Table 5.7: Kisa class 1 subject prefix allomorphs

<table>
<thead>
<tr>
<th>Before a consonant</th>
<th>Before a vowel</th>
<th>Before a past tense vowel prefix</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>a-</em></td>
<td><em>ya-</em></td>
<td><em>y-</em></td>
</tr>
<tr>
<td>Class agreement</td>
<td>Subject prefix</td>
<td>Noun class</td>
</tr>
<tr>
<td>-----------------</td>
<td>----------------</td>
<td>------------</td>
</tr>
<tr>
<td>1</td>
<td>a-</td>
<td>1</td>
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<tr>
<td>2</td>
<td>ba-</td>
<td>2</td>
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<tr>
<td>3</td>
<td>ku-</td>
<td>3</td>
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<tr>
<td>4</td>
<td>chi-</td>
<td>4</td>
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<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>li-</td>
<td>5/5a/5b</td>
</tr>
<tr>
<td></td>
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<td></td>
</tr>
<tr>
<td>6</td>
<td>ka-</td>
<td>6</td>
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<td></td>
<td></td>
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<tr>
<td>7</td>
<td>shi-</td>
<td>7</td>
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<tr>
<td>8</td>
<td>bi-</td>
<td>8</td>
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<td></td>
<td></td>
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<tr>
<td>9</td>
<td>i</td>
<td>9/9a/9b/9c/9d</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>tsí-</td>
<td>10/10a/10b/10c/10d</td>
</tr>
<tr>
<td>11</td>
<td>lu-</td>
<td>11</td>
</tr>
<tr>
<td></td>
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<tr>
<td>12</td>
<td>kha-</td>
<td>12</td>
</tr>
<tr>
<td></td>
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<td></td>
</tr>
<tr>
<td>13</td>
<td>ru-</td>
<td>13</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>bu-</td>
<td>14</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>khu-</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>ku-</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The allomorph [ya-] cannot be analysed as i- or e-, where the vowel becomes a glide before another vowel. Consider the data in (106), in which (106b) and (106c) are the alternative analyses, where the prefix is i- or e- respectively.

(106) a) SR yé-én-a.
      UR /ya-in-a/.
      1S-dip-IND
      ‘S/he dips.’

b) *SR y-iin-a.
   UR /i-in-a/.
   1S-sweep-IND
   ‘S/he sweeps.’

c) *SR y-iin-a.
   UR /e-in-a/.
   1S-sweep-IND
   ‘S/he sweeps.’

5.4.2.2 First and second person subject prefix allomorphs

These subject prefixes are summarised in table 5.8.

Table 5.8: Kisa first and second person subject prefix allomorphs

<table>
<thead>
<tr>
<th>Person</th>
<th>Singular</th>
<th>Plural</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Before a consonant</td>
<td>Before a vowel</td>
</tr>
<tr>
<td>1st</td>
<td>*eny-</td>
<td>ndi-</td>
</tr>
<tr>
<td>2nd</td>
<td>o-</td>
<td>o-</td>
</tr>
</tbody>
</table>

Table 5.9 shows Kisa subject prefixes in the far past.
Table 5.9: Kisa subject prefixes in the far past construction

<table>
<thead>
<tr>
<th>Noun class</th>
<th>Subject prefix</th>
<th>Example</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>nd-</td>
<td>nd-a-kul-a</td>
<td>1sgS-FARP-buy-IND</td>
</tr>
<tr>
<td></td>
<td>khu-</td>
<td>khw-a-kul-a</td>
<td>khw-a-kul-a</td>
</tr>
<tr>
<td></td>
<td>o-</td>
<td>w-a-kul-a</td>
<td>1plS-FARP-buy-IND</td>
</tr>
<tr>
<td></td>
<td>mu-</td>
<td>mw-a-kul-a</td>
<td>2sgS-FARP-buy-IND</td>
</tr>
<tr>
<td></td>
<td>y-</td>
<td>y-a-kul-a</td>
<td>2plS-FARP-buy-IND</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>ba-</td>
<td>b-a-kul-a</td>
<td>3sgS-FARP-buy-IND</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>ku-</td>
<td>kw-a-kul-a</td>
<td>4S-FARP-buy-IND</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>chi-</td>
<td>chy-a-kul-a</td>
<td>5S-FARP-buy-IND</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5a/5b</td>
<td>li-</td>
<td>ly-a-kul-a</td>
<td>6S-FARP-buy-IND</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>ka-</td>
<td>k-a-kul-a</td>
<td>7S-FARP-buy-IND</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>shi-</td>
<td>shy-a-kul-a</td>
<td>8S-FARP-buy-IND</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>bi-</td>
<td>by-a-kul-a</td>
<td>9S-FARP-buy-IND</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9a/b/c/d</td>
<td>i</td>
<td>y-a-kul-a</td>
<td>10S-FARP-buy-IND</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10a/b/c/d</td>
<td>tsi-</td>
<td>tsy-a-kul-a</td>
<td>11S-FARP-buy-IND</td>
</tr>
<tr>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>11</td>
<td>lu-</td>
<td>lw-a-kul-a</td>
<td>12S-FARP-buy-IND</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>kha-</td>
<td>kh-a-kul-a</td>
<td>13S-FARP-buy-IND</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>ru-</td>
<td>rw-a-kul-a</td>
<td>14S-FARP-buy-IND</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>bu-</td>
<td>bw-a-kul-a</td>
<td>15S-FARP-buy-IND</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>khu-</td>
<td>khw-a-kul-a</td>
<td>16S-FARP-buy-IND</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>ku-</td>
<td>kw-a-kul-a</td>
<td>17S-FARP-buy-IND</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

'I bought.’
‘We bought.’
‘You (sg.) bought.’
‘You (pl.) bought.’
‘S/he bought.’
‘They bought.’
‘It bought.’
‘They bought.’
‘They bought.’
‘They bought.’
‘They bought.’
‘They bought.’
‘S/he/it bought.’
‘S/he/it bought.’
5.4.3 Object marking

The object can be marked on the verb in Kisa. The object marker follows the tense/aspect prefixes, as (107) shows.

(107) a) o-mu-khááná a-la-mu-lol-a
AUG-1-girl 3sgS-HODF-3sgO-see-IND
‘The girl will see him/her.’

b) o-mu-khááná a-la-ba-lol-a
AUG-1-girl 3sgS-HODF-2O-see-IND
‘The girl will see them.’

When there is an overt object in the sentence there is no object marker on the verb, as in (108).

(108) a) a-la-lol-a o-mu-khááná.
3sgS-HODF-see-IND AUG-1-girl
‘S/he will see the girl.’

b) *a-la-mu-lol-a o-mu-khááná.
3sgS-HODF-3sgO-see-IND AUG-1-girl
‘S/he will see the girl.’

Object marking with prefixes in Kisa is normally reserved for direct objects, as seen in the preceding examples. However, it is possible to mark the indirect or benefactive object in Kisa. This is possible in two contexts, in a double object construction and in a reflexive verb.

5.4.3.1 The double object construction

The indirect or benefactive object can be marked in a construction with a ditransitive verb. Consider (109).
(109) \textit{ba-la-shi-ba-h-a}.
\text{3plS-HODF-7O-3plO-give-IND}
\text{‘They will give it to them.’}

It can also be marked in an applicative verb (see section 5.3.2.1), as seen in (110).

(110) \textit{ba-la-shi-ba-kul-ir-a}.
\text{3plS-HODF-7O-3plO-buy-APPL-IND}
\text{‘They will buy it for them.’}

As these examples show, the object prefix cross-referencing the benefactive object follows the one cross-referencing the direct object.

5.4.3.2 The reflexive verb

The reflexive indicates that the situation applies to the subject itself, and is marked by the prefix \textit{i-}, as in (111).

(111) \textit{b-aa-i-bis-a}.
\text{3plS-REMP-RFL-hide-IND}
\text{‘They hid themselves.’}

In a reflexive verb, the prefix cross-referencing the benefactive object precedes the reflexive prefix, as (112) and (113) show. This order is different from the order of the direct object prefix and the benefactive object prefix, as we saw in the preceding subsection.

(112) \textit{b-a-anz-i-bis-a}.
\text{3plS-FARP-1sgO-RFL-hide-IND}
\text{‘They hid themselves from me.’}

(113) \textit{ba-la-anz-i-béch-ér-a}.
\text{3plS-HODF-1sgO-RFL-shave-APPL-IND}
\text{‘They will shave themselves for me.’}
5.4.3.3 Object markers

Object markers correspond to the class agreement prefixes discussed in section 4.3. A summary of the object markers and their corresponding noun classes is given in table 5.10.

Table 5.10: Kisa object prefixes

<table>
<thead>
<tr>
<th>Class agreement</th>
<th>Object prefix</th>
<th>Noun class</th>
<th>Example</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>mu-</td>
<td>1</td>
<td>ba-la-mu-lol-a 3plS-HODF-1O-see-IND</td>
<td>‘they will see him’</td>
</tr>
<tr>
<td>2</td>
<td>ba-</td>
<td>2</td>
<td>ba-la-ba-lol-a 3plS-HODF-2O-see-IND</td>
<td>‘they will see them’</td>
</tr>
<tr>
<td>3</td>
<td>ku-</td>
<td>3</td>
<td>ba-la-ku-lol-a 3plS-HODF-3O-see-IND</td>
<td>‘they will see it’</td>
</tr>
<tr>
<td>4</td>
<td>chi-</td>
<td>4</td>
<td>ba-la-chi-lol-a 3plS-HODF-4O-see-IND</td>
<td>‘they will see them’</td>
</tr>
<tr>
<td>5</td>
<td>li-</td>
<td>5a/5b</td>
<td>ba-la-li-lol-a 3plS-HODF-5O-see-IND</td>
<td>‘they will see it’</td>
</tr>
<tr>
<td>6</td>
<td>ka-</td>
<td>6</td>
<td>ba-la-ka-lol-a 3plS-HODF-6O-see-IND</td>
<td>‘they will see them’</td>
</tr>
<tr>
<td>7</td>
<td>shi-</td>
<td>7</td>
<td>ba-la-shi-lol-a 3plS-HODF-7O-see-IND</td>
<td>‘the will see it’</td>
</tr>
<tr>
<td>8</td>
<td>bi-</td>
<td>8</td>
<td>ba-la-bi-lol-a 3plS-HODF-8O-see-IND</td>
<td>‘they will see them’</td>
</tr>
<tr>
<td>9</td>
<td>i</td>
<td>9a/b/c/d</td>
<td>ba-la-i-lol-a 3plS-HODF-9O-see-IND</td>
<td>‘they will see it’</td>
</tr>
<tr>
<td>10</td>
<td>tsi-</td>
<td>10a/b/c/d</td>
<td>ba-la-tsi-lol-a 3plS-HODF-10O-see-IND</td>
<td>‘they will see them’</td>
</tr>
<tr>
<td>11</td>
<td>lu-</td>
<td>11</td>
<td>ba-la-lu-lol-a 3plS-HODF-11O-see-IND</td>
<td>‘they will see it’</td>
</tr>
<tr>
<td>12</td>
<td>kha-</td>
<td>12</td>
<td>ba-la-kha-lol-a 3plS-HODF-12O-see-IND</td>
<td>‘they will see it (the little one)’</td>
</tr>
<tr>
<td>13</td>
<td>ru-</td>
<td>13</td>
<td>ba-la-ru-lol-a 3plS-HODF-13O-see-IND</td>
<td>‘they will see them (the little ones)’</td>
</tr>
<tr>
<td>14</td>
<td>bu-</td>
<td>14</td>
<td>ba-la-bu-lol-a 3plS-HODF-14O-see-IND</td>
<td>‘they will see it’</td>
</tr>
<tr>
<td>15</td>
<td>khu-</td>
<td>15</td>
<td>ba-la-khu-lol-a 3plS-HODF-15O-see-IND</td>
<td>‘they will see it’</td>
</tr>
<tr>
<td>20</td>
<td>ku-</td>
<td>20</td>
<td>ba-la-ku-lol-a 3plS-HODF-20O-see-IND</td>
<td>‘they will see it (the huge one)’</td>
</tr>
</tbody>
</table>
5.4.3.4 First and second person object prefixes

A summary of the morphemes and allomorphs of the first and second person object prefixes is given in table 5.11.

Table 5.11: Kisa first and second person object prefix morphemes and allomorphs

<table>
<thead>
<tr>
<th>Person</th>
<th>Singular</th>
<th>Plural</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st</td>
<td>Word-initial</td>
<td>Word-medial</td>
</tr>
<tr>
<td></td>
<td><em>ny-</em>/nz-</td>
<td><em>iny-/inz-</em></td>
</tr>
<tr>
<td>2nd</td>
<td><em>khu-</em></td>
<td></td>
</tr>
</tbody>
</table>

Note that the second person singular object prefix *khu-* has the same form as the first person plural object prefix. Similarly, the third person singular object prefix *mu-* has the same form as the second person plural object prefix.

The first person singular prefix allomorphs are illustrated in table 5.12.

---

27The nasal in this prefix is palatal. The palatalisation does not come from the stem as the following example illustrates.

(i) *ny-in-a!*
    1sgO-dip-sgS
    ‘Dip me!’
Table 5.12: Examples of first person singular object prefix allomorphs

<table>
<thead>
<tr>
<th>Allomorph form</th>
<th>Environment</th>
<th>Example</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>ny-</em></td>
<td>VN⁵⁸ root word-initially</td>
<td><em>ny-in-a!</em> 1sgO-dip-sgS</td>
<td>‘Dip me!’</td>
</tr>
<tr>
<td></td>
<td>C-initial root word-initially</td>
<td><em>n-gul-a!</em> 1sgO-buy-sgS</td>
<td>‘Buy me!’</td>
</tr>
<tr>
<td><em>iny-</em></td>
<td>VN root word-medially</td>
<td><em>b-aa-iny-in-a</em> 3plS-REMP-1sgO-dip-IND</td>
<td>‘they dipped me’</td>
</tr>
<tr>
<td></td>
<td>C-initial root word-medially</td>
<td><em>b-aa-in-gul-a</em> 3plS-REMP-1sgO-buy-IND</td>
<td>‘they bought me’</td>
</tr>
<tr>
<td><em>nz-</em></td>
<td>Reflexive prefix word-initially</td>
<td><em>nz-i-paa-k-ir-a!</em> 1sgO-RFL-cheer-APPL-sgS</td>
<td>‘Cheer yourself for me!’</td>
</tr>
<tr>
<td></td>
<td>VC²⁹ root word-initially</td>
<td><em>nz-ak-a!</em> 1sgO-scratch-sgS</td>
<td>‘Scratch me!’</td>
</tr>
<tr>
<td><em>inz-</em></td>
<td>Reflexive prefix word-medially</td>
<td><em>b-aa-inz-i-paa-k-ir-a</em> 3plS-REMP-1sgO-RFL-cheer-APPL-IND</td>
<td>‘they cheered themselves for me’</td>
</tr>
<tr>
<td></td>
<td>VC root word-medially</td>
<td><em>b-aa-inz-ak-a</em> 3plS-REMP-1sgO-scratch-IND</td>
<td>‘they scratched me’</td>
</tr>
</tbody>
</table>

Table 5.13 shows Kisa object prefixes in the far past.

---

²⁸ N here stands for any nasal.
²⁹ C here stands for any consonant other than a nasal.
Table 5.13: Kisa object prefixes in the far past construction

<table>
<thead>
<tr>
<th>Noun class</th>
<th>Object prefix</th>
<th>Example</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>iny-</td>
<td>y-a-an-gul-a</td>
<td>‘S/he bought me.’</td>
</tr>
<tr>
<td></td>
<td>khu-</td>
<td>y-a-khu-kul-a</td>
<td>‘S/he bought us.’</td>
</tr>
<tr>
<td></td>
<td>khu-</td>
<td>y-a-khu-kul-a</td>
<td>‘S/he bought you (sg.).’</td>
</tr>
<tr>
<td></td>
<td>mu-</td>
<td>y-a-mu-kul-a</td>
<td>‘S/he bought you (pl.).’</td>
</tr>
<tr>
<td></td>
<td>ba-</td>
<td>y-a-ba-kul-a</td>
<td>‘S/he bought him/her.’</td>
</tr>
<tr>
<td></td>
<td></td>
<td>y-a-an-gul-a</td>
<td>‘S/he bought me.’</td>
</tr>
<tr>
<td></td>
<td></td>
<td>y-a-khu-kul-a</td>
<td>‘S/he bought us.’</td>
</tr>
<tr>
<td></td>
<td></td>
<td>y-a-khu-kul-a</td>
<td>‘S/he bought you (sg.).’</td>
</tr>
<tr>
<td></td>
<td></td>
<td>y-a-mu-kul-a</td>
<td>‘S/he bought you (pl.).’</td>
</tr>
<tr>
<td></td>
<td></td>
<td>y-a-mu-kul-a</td>
<td>‘S/he bought him/her.’</td>
</tr>
<tr>
<td></td>
<td></td>
<td>y-a-ba-kul-a</td>
<td>‘S/he bought them.’</td>
</tr>
<tr>
<td>2</td>
<td>ba-</td>
<td>y-a-ba-kul-a</td>
<td>‘S/he bought them.’</td>
</tr>
<tr>
<td>3</td>
<td>ku-</td>
<td>y-a-ku-kul-a</td>
<td>‘S/he bought it.’</td>
</tr>
<tr>
<td>4</td>
<td>chi-</td>
<td>y-a-chi-kul-a</td>
<td>‘S/he bought them.’</td>
</tr>
<tr>
<td>5a/5b</td>
<td>li-</td>
<td>y-a-li-kul-a</td>
<td>‘S/he bought it.’</td>
</tr>
<tr>
<td>6</td>
<td>ka-</td>
<td>y-a-ka-kul-a</td>
<td>‘S/he bought them.’</td>
</tr>
<tr>
<td>7</td>
<td>shi-</td>
<td>y-a-shi-kul-a</td>
<td>‘S/he bought it.’</td>
</tr>
<tr>
<td>8</td>
<td>bi-</td>
<td>y-a-bi-kul-a</td>
<td>‘S/he bought them.’</td>
</tr>
<tr>
<td>9a/b/c/d</td>
<td>i-</td>
<td>y-a-i-kul-a</td>
<td>‘S/he bought it.’</td>
</tr>
<tr>
<td>10a/b/c/d</td>
<td>tsi-</td>
<td>y-a-tsi-kul-a</td>
<td>‘S/he bought them.’</td>
</tr>
<tr>
<td>11</td>
<td>lu-</td>
<td>y-a-lu-kul-a</td>
<td>‘S/he bought it.’</td>
</tr>
<tr>
<td>12</td>
<td>kha-</td>
<td>y-a-kha-kul-a</td>
<td>‘S/he bought him/her/it.’</td>
</tr>
<tr>
<td>13</td>
<td>ru-</td>
<td>y-a-ru-kul-a</td>
<td>‘S/he bought them.’</td>
</tr>
<tr>
<td>14</td>
<td>bu-</td>
<td>y-a-bu-kul-a</td>
<td>‘S/he bought it.’</td>
</tr>
<tr>
<td>15</td>
<td>kha-</td>
<td>y-a-kha-kul-a</td>
<td>‘S/he bought it.’</td>
</tr>
<tr>
<td>20</td>
<td>ku-</td>
<td>y-a-ku-kul-a</td>
<td>‘S/he bought him/her/it.’</td>
</tr>
</tbody>
</table>
5.5 Verb roots with single open syllables

There are 15 verb roots that consist of a single open syllable in Kisa. I analyse and divide them into three groups. First we have four C(Glide)V verb roots ending with the low vowel /a/, given in (114). Second there are six CV verb roots ending with a high vowel, either /i/ or /u/, listed in (115). The third group has five CVV verb roots, syllabified as monosyllabic, shown in (116).

(114) ba ‘be’, ha ‘give’, ra ‘put’, wwa ‘be finished’


The verb roots listed above occur with the prefixes discussed in section 5.4. They also occur with all the suffixes discussed in section 5.3 except the reverseive and the inchoative suffixes. Some of the suffixes attested have special allomorphs with open monosyllabic roots. Table 5.14 shows the allomorphs of the various suffixes that occur with these verb roots. Table 5.15 gives the allomorphs that occur with other roots.
Table 5.14: Allomorphs of suffixes that occur with verb roots that consist of a single open syllable

<table>
<thead>
<tr>
<th>Suffix</th>
<th>Form</th>
<th>Example</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reciprocal</td>
<td>-itsan</td>
<td><em>ba-la-sy-eetsan-a</em></td>
<td>3plS-HODF-grind-REC-IND</td>
</tr>
<tr>
<td>Applicative</td>
<td>-ir</td>
<td><em>ba-la-nyw-eer-a</em></td>
<td>3plS-HODF-drink-APPL-IND</td>
</tr>
<tr>
<td>Iterative</td>
<td>-ir-ir</td>
<td><em>ba-la-nyw-eer-er-er-a</em></td>
<td>3plS-HODF-drink-APPL-IT-IT-IND</td>
</tr>
<tr>
<td>Causative</td>
<td>-isi</td>
<td><em>ba-la-he-esy-a</em></td>
<td>3plS-HODF-give-CAUS-IND</td>
</tr>
<tr>
<td>Passive</td>
<td>-ibu</td>
<td><em>ba-la-li-ibw-a</em></td>
<td>3plS-HODF-eat-PASS-IND</td>
</tr>
<tr>
<td>Imperfective</td>
<td>-itsVVng</td>
<td><em>ba-li-itsaang-a</em></td>
<td>3plS-eat-IPFV-IND</td>
</tr>
<tr>
<td>Hesternal/Hodiernal IFS</td>
<td>-ire</td>
<td><em>ba-li-ire</em></td>
<td>3plS-eat-HODP</td>
</tr>
</tbody>
</table>

Table 5.15: Allomorphs of suffixes that occur with other verb roots

<table>
<thead>
<tr>
<th>Suffix</th>
<th>Form</th>
<th>Example</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reciprocal</td>
<td>-an</td>
<td><em>ba-la-khup-an-a</em></td>
<td>3plS-HODF-beat-REC-IND</td>
</tr>
<tr>
<td>Applicative</td>
<td>-ir</td>
<td><em>ba-la-sukin-ir-a</em></td>
<td>3plS-HODF-throw-APPL-IND</td>
</tr>
<tr>
<td>Iterative</td>
<td>-ir-ir</td>
<td><em>ba-la-lóónd-ér-ér-ér-a</em></td>
<td>3plS-HODF-follow-APPL-IT-IT-IND</td>
</tr>
<tr>
<td>Causative</td>
<td>-i</td>
<td><em>ba-la-lis-y-a</em></td>
<td>3plS-HODF-cry-CAUS-IND</td>
</tr>
<tr>
<td>Passive</td>
<td>-u</td>
<td><em>ba-la-bükul-w-a</em></td>
<td>3plS-HODF-take-PASS-IND</td>
</tr>
<tr>
<td>Imperfective</td>
<td>-VVng</td>
<td><em>ba-kul-aang-a</em></td>
<td>3plS-HODF-buy-IPFV-IND</td>
</tr>
<tr>
<td>Hesternal/Hodiernal IFS</td>
<td>-ire</td>
<td><em>ba-kul-ire</em></td>
<td>3plS-buy-HODP</td>
</tr>
</tbody>
</table>
5.5.1 Minimum verbal forms with verb roots consisting of a single open syllable

We saw in section 2.2.1 and section 5.1 that a minimum verbal form is made up of the root and the IFS. This is also the case with verb roots with single open syllables, as (117-119) show.

(117) \( r \- á! \)
   put-sgS
   ‘Put!’

(118) \( ly \- á! \)
   eat-sgS
   ‘Eat!’

(119) \( nyw \- á! \)
   drink-sgS
   ‘Drink!’

The minimum verbal forms with the verb roots above surface with one vowel when we expect them to surface with two vowels – the final vowel of the root and the IFS vowel suffix. A single vowel surfaces in these forms due to the fact that long vowels do not occur word-finally in Kisa, as discussed in section 3.2.3.

5.5.2 Underlying forms of verb roots with single open syllables

My analysis of the verb roots in (114) and (116) differs from previous analyses of the Luhya languages. Mutonyi (2000) and Wasike (2007) have proposed that the verb roots in (114) consist only of a consonant. This cannot account for the forms that appear with the word-level verbal enclitics (see section 6.2.1). Under these analyses the verb roots in (114) should take the forms in (120) when they occur with these enclitics. However, these are not the actual forms. The actual outputs are those in (121).
(120)  a)  \( *r-\text{á}=\text{yó} \) \( \text{bwáangú!} \)  
put-sgS=there quickly  
‘Put there quickly!’  

b)  \( *b-\text{á}=\text{yó} \) \( \text{bwáangú!} \)  
be-sgS=there quickly  
‘Be there quickly!’

(121)  a)  \( \text{rá-\text{á}=yó} \) \( \text{bwáangú!} \)  
put-sgS=there quickly  
‘Put there quickly!’  

b)  \( \text{bá-\text{á}=yó} \) \( \text{bwáangú!} \)  
be-sgS=there quickly  
‘Be there quickly!’

Again, in their analyses, we get the forms in (122-125) when the suffixes in table 5.14 are affixed to these verb roots. These are not the actual forms.

(122) \( *ba-la-h-itsan-a \)  
3plS-HODF-give-REC-IND  
‘they will give each other’

(123) \( *ba-la-h-ir-a \)  
3plS-HODF-give-APPL-IND  
‘they will give for’

(124) \( *ba-la-h-isy-a \)  
3plS-HODF-give-CAUS-IND  
‘they will give’

(125) \( *ba-la-h-ibw-a \)  
3plS-HODF-give-PASS-IND  
‘they will be given’

However, if these verb roots are interpreted as being CV, we get the forms in (126-129) when they occur with the suffixes in table 5.14. These are the actual outputs.
Therefore, I propose that it is preferable to analyse the verb roots in (114) as consisting of a consonant followed by the low vowel /a/ in the underlying representation.

De Blois (1975), Marlo (2006), and Mutonyi (2000) have suggested that the verb roots in (116) are underlyingly CV in Bukusu. The first three are made up of a consonant followed by the mid vowel /e/, as in (130). The last two consist of a consonant followed by the mid vowel /o/, as in (131).

(130)  se ‘grind’, she ‘dawn’, ne ‘defecate’
(131)  kho ‘pay dowry’, nyo ‘drink’

When these roots are followed by a different vowel, De Blois (1975) and Mutonyi (2000) argue that the mid vowels /e/ and /o/ become the glides /y/ and /w/ respectively, and are followed by a long vowel (except
word-finally). The data in (132) illustrate these roots with the IFS in Bukusu.

(132) a) SR  \textit{ba-la-sy-a}  
UR /ba-la-se-a/  
3plS-HODF-grind-IND  
‘they will grind’

b) SR  \textit{na-ba-khw-e}  
UR /na-ba-kho-e/  
NEARF-3plS-pay dowry-IRR  
‘they will pay dowry’

With other suffixes (see table 5.14), Marlo (2006: 298) says that the analyses above assume that the output forms of the root and suffix vowels are determined by the regular vowel height harmony (see section 5.3.5.1) and hiatus resolution processes (see Chapter 7) before glide formation.

Following these analyses we should get the forms in (133) with the applicative suffix in Kisa:

(133) a) SR  \textit{*ba-la-se-er-a}  
VHH /ba-la-se-er-a/  
UR /ba-la-se-ir-a/  
3plS-HODF-grind-APPL-IND  
‘they will grind for’

b) SR  \textit{ba-la-khw-er-a}  
VHH /ba-la-kho-er-a/  
UR /ba-la-kho-ir-a/  
3plS-HODF-pay dowry-APPL-IND  
‘they will pay dowry for’

The form in (133a) is not the actual output. The root-final vowel /e/ in this example cannot become a glide because it is followed by a vowel identical to it. The actual output is that in (135a). Though the form in (133b) is the
actual output, the analysis is not uniform since it does not derive the actual output in (133a).

If the verb roots in (116) are analysed as consisting of a consonant followed by a high vowel and the low vowel /a/ we get the surface forms in (134) after the first vowel changes to a glide.

(134)  
\[ \text{sya ‘grind’, shya ‘dawn’, nya ‘defecate’, khwa ‘pay dowry’, nywa ‘drink’} \]

The forms in (134) cannot be the underlying forms because there are no words in Kisa with underlying consonant glide sequences, as stated in section 7.3.5.

When the roots in (134) occur with the suffixes in table 5.14, for instance the applicative suffix, we get the forms in (135), which are the actual forms.

(135)  
\[ \begin{align*}
\text{a) SR } & \quad \text{ba-la-sye-er-a} \\
\text{UR } & \quad /ba-la-sya-ir-a/ \\
& \quad 3\text{plS-HODF-grind-APPL-IND} \\
& \quad \text{‘they will grind for’} \\
\text{b) SR } & \quad \text{ba-la-khwe-er-a} \\
\text{UR } & \quad /ba-la-khwa-ir-a/ \\
& \quad 3\text{plS-HODF-pay dowry-APPL-IND} \\
& \quad \text{‘they will pay dowry for’}
\end{align*} \]

Therefore, I propose that the verb roots in (116) should be analysed as consisting of a consonant followed by a high vowel and the low vowel /a/. They cannot be analysed as being CGV because Kisa does not have underlying CGV forms (see section 7.3.5).

We can see from the preceding discussion that there is a contrast between the verb roots li ‘eat’, ri ‘fear’, tsi ‘go’, and yi ‘be hot/burnt’ in (115) and
the verb roots *sia* ‘grind’, *shia* ‘dawn’, and *nia* ‘defecate’ in (116). The same contrast is seen with the verb roots *ku* ‘fall’ and *fu* ‘die’ in (115) and the verb roots *khua* ‘pay dowry’ and *nyua* ‘drink’ in (116).

However, this contrast is neutralized in some word forms. When the IFS is added to these verb roots the resultant verbs have the same form except for the initial consonant, as shown in (136) and (137).

(136) a) SR ly-á! ly-i-a/ eat-sgS ‘Eat!’
    UR b) SR ry-á! ry-i-a/ fear-sgS ‘Fear!’
    UR c) SR tsy-á! tsy-i-a/ go-sgS ‘Go!’
    UR d) SR yy-á! yi-i-a/ be hot/burnt-sgS ‘be hot/burnt!’
    UR e) SR sy-á! sia-i-a/ grind-sgS ‘Grind!’
    UR f) SR shy-á! shia-i-a/ dawn-sgS ‘Dawn!’

\[ \begin{array}{ll}
\text{SR} & \text{ly-á!} \\
\text{UR} & \text{ly-i-a/ eat-sgS} \\
& \text{‘Eat!’} \\
\text{SR} & \text{ry-á!} \\
\text{UR} & \text{ry-i-a/ fear-sgS} \\
& \text{‘Fear!’} \\
\text{SR} & \text{tsy-á!} \\
\text{UR} & \text{tsy-i-a/ go-sgS} \\
& \text{‘Go!’} \\
\text{SR} & \text{yy-á!} \\
\text{UR} & \text{yi-i-a/ be hot/burnt-sgS} \\
& \text{‘be hot/burnt!’} \\
\text{SR} & \text{sy-á!} \\
\text{UR} & \text{sia-i-a/ grind-sgS} \\
& \text{‘Grind!’} \\
\text{SR} & \text{shy-á!} \\
\text{UR} & \text{shia-i-a/ dawn-sgS} \\
& \text{‘Dawn!’} \\
\end{array} \]
5.6 Summary

This chapter set out to look at the morphology of the verbal word in Kisa. It established that a minimum Kisa verbal form is made up of the root and the obligatory IFS, and conveys an imperative or subjunctive meaning. This minimum verbal word can be expanded by including prefixes and suffixes.

The prefixes that can precede the verb root include the subject, tense/aspect, object, and reflexive prefixes, in that order. The suffixes, on the other hand, fall into two groups. First, we have those that have a fixed position before the obligatory IFS, i.e. the reversive, inchoative, reciprocal, applicative, causative, imperfective, and passive suffixes, in this order. Second, there is
the iterative suffix, which precedes the IFS, but has no fixed position in the suffix template.

There are three phonological processes which affect verbal suffixes in Kisa. Two of these processes, palatalisation and vowel height harmony, are productive. Assibilation is unproductive, given that it does not apply when the verb root is a loan.
CHAPTER 6: CLITICS

6.1 Introduction

This chapter discusses the principal classes of clitics in Kisa. There are a number of less common clitics whose functions remain to be fully examined. I do not discuss these clitics in this chapter. The research literature (e.g. Anderson 2005; Bermúdez-Otero 2011; Crystmann 2001; Gaglia & Schwarze 2011; Luis 2004; Zwicky 1985; Zwicky & Pullum 1983) uses phonological, morphological, and syntactic criteria to define clitics:

(1) a) Linear order
    b) Distribution
    c) Degree of selection with respect to the host
    d) Arbitrary gaps in the set of combinations
    e) Morphophonological idiosyncrasies
    f) Phonological patterns
    g) Syntactic rules

Of the properties in (1) the principle ones I use are those in (2).

(2) a) Phonological patterns
    b) Syntactic rules

The property in (2a) distinguishes clitics from affixes. That in (2b) differentiates word-level, phrase-level, and clause-level clitics. Classification according to these two properties gives the following three groups of clitics:
(3)  a)  Word-level clitics
    b)  Phrase-level clitics
    c)  Clause-level clitics

The distribution of clitics in Kisa is constrained chiefly by semantic and pragmatic plausibility, with morphological factors playing only a limited role. There are clitics that attach to all word categories (verbs, nominals, and particles), those that occur with nominals and particles only, and those that appear with either verbs or nominals.

All the clitics discussed in this chapter are given in table 6.1.

The order in which these clitics occur is shown in (4), and exemplified in (5).

(4)  Clause-level Proclitics=Phrase-level Proclitics=Word-level Proclitics=Host=Word-level Enclitics=Phrasal-level Enclitics=Clause-level Enclitics

(5)  a-bóól-éré
      3sgS-speak-HODP

  Clmbu=Ph[b-o=Wd/shi=ba-la-ra-a=yó]Wd=b-ó]Ph=táCl.
  that=2-PRO=NEG=3plS-HODF-put-IND=there= 2-PRO=no
  ‘S/he said that they will not put them there.’

This chapter begins by discussing word-level enclitics (section 6.2), followed by word-level proclitics (section 6.3). Section 6.4 describes phrase-level clitics, while section 6.5 explains clause-level clitics. Section 6.6 is a summary of the chapter.
Table 6.1: Kisa clitics

<table>
<thead>
<tr>
<th>Category</th>
<th>Form</th>
<th>Gloss</th>
<th>Clitic type</th>
<th>Property</th>
</tr>
</thead>
<tbody>
<tr>
<td>Word-level</td>
<td>=yó</td>
<td>‘there’</td>
<td>Enclitic</td>
<td>Word-level phonology and syntax</td>
</tr>
<tr>
<td></td>
<td>=mú</td>
<td>‘in, inside, in there’</td>
<td>Enclitic</td>
<td>Word-level phonology and syntax</td>
</tr>
<tr>
<td></td>
<td>=khú</td>
<td>‘on it’</td>
<td>Enclitic</td>
<td>Word-level phonology and syntax</td>
</tr>
<tr>
<td></td>
<td>=khú</td>
<td>‘polite way of asking for something’</td>
<td>Enclitic</td>
<td>Word-level phonology and syntax</td>
</tr>
<tr>
<td></td>
<td>=CL-o</td>
<td>‘your’</td>
<td>Enclitic</td>
<td>Word-level phonology and syntax</td>
</tr>
<tr>
<td></td>
<td>=CL-e</td>
<td>‘his/her’</td>
<td>Enclitic</td>
<td>Word-level phonology and syntax</td>
</tr>
<tr>
<td></td>
<td>shi=</td>
<td>‘negative’</td>
<td>Proclitic</td>
<td>Word-level phonology</td>
</tr>
<tr>
<td></td>
<td>na=</td>
<td>‘with’</td>
<td>Proclitic</td>
<td>Word-level phonology</td>
</tr>
<tr>
<td></td>
<td>ni=</td>
<td>‘is’</td>
<td>Proclitic</td>
<td>Word-level phonology</td>
</tr>
<tr>
<td></td>
<td>CL-a=</td>
<td>‘of’</td>
<td>Proclitic</td>
<td>Word-level phonology</td>
</tr>
<tr>
<td>Phrase-level</td>
<td>syé</td>
<td>‘I/me’</td>
<td>Proclitic/Enclitic</td>
<td>Phrase-level syntax</td>
</tr>
<tr>
<td></td>
<td>fwé</td>
<td>‘we/us’</td>
<td>Proclitic/Enclitic</td>
<td>Phrase-level syntax</td>
</tr>
<tr>
<td></td>
<td>ywé</td>
<td>‘you (sg.)’</td>
<td>Proclitic/Enclitic</td>
<td>Phrase-level syntax</td>
</tr>
<tr>
<td></td>
<td>nywé</td>
<td>‘you (pl.)’</td>
<td>Proclitic/Enclitic</td>
<td>Phrase-level syntax</td>
</tr>
<tr>
<td></td>
<td>yé</td>
<td>‘s/he/him/her’</td>
<td>Proclitic/Enclitic</td>
<td>Phrase-level syntax</td>
</tr>
<tr>
<td></td>
<td>CL-o</td>
<td>‘It/they/them’ (Classes 2-20)</td>
<td>Proclitic/Enclitic</td>
<td>Phrase-level phonology and syntax</td>
</tr>
<tr>
<td>Clause-level</td>
<td>=tá</td>
<td>‘no’</td>
<td>Enclitic</td>
<td>Clause-level syntax</td>
</tr>
<tr>
<td></td>
<td>=ní</td>
<td>‘emphatic’</td>
<td>Enclitic</td>
<td>Clause-level syntax</td>
</tr>
<tr>
<td></td>
<td>=mbú</td>
<td>‘like that/in that manner’</td>
<td>Enclitic</td>
<td>Clause-level syntax</td>
</tr>
<tr>
<td></td>
<td>mbú=</td>
<td>‘(so) that’</td>
<td>Proclitic</td>
<td>Word-level phonology and clause-level syntax</td>
</tr>
</tbody>
</table>
6.2 Word-level enclitics

Table 6.2 presents the word-level enclitics in Kisa.

Table 6.2: Kisa word-level enclitics

<table>
<thead>
<tr>
<th>Enclitic</th>
<th>Gloss</th>
<th>Part-of-speech restrictions</th>
</tr>
</thead>
<tbody>
<tr>
<td>=yó</td>
<td>‘there’</td>
<td>Verbs</td>
</tr>
<tr>
<td>=mú</td>
<td>‘in, inside, in there’</td>
<td>Verbs</td>
</tr>
<tr>
<td>=khú</td>
<td>‘on it’</td>
<td>Verbs</td>
</tr>
<tr>
<td>=khú</td>
<td>‘polite way of asking for something’</td>
<td>Verbs</td>
</tr>
<tr>
<td>=CL-o</td>
<td>‘your’</td>
<td>Nominals and particles</td>
</tr>
<tr>
<td>=CL-e</td>
<td>‘his/her’</td>
<td>Nominals and particles</td>
</tr>
</tbody>
</table>

6.2.1 Word-level verbal enclitics

Verbal enclitics only occur with verbs. As table 6.2 shows, this set consists of directional enclitics and the politeness enclitic =khú,30 which expresses a polite way of asking for something:

(6)  khoóny-a=khú!
     help-sgS=POL
     ‘Please help!’

Directional enclitics express the location or direction of an action or event. As shown in table 6.2, there are three directional enclitics with the specific meanings in (7), illustrated in (8-10).

(7)  a)  =yó  ‘there’
     b)  =khú  ‘on it’
     c)  =mú  ‘in, inside, in there’

30This clitic can be used to mean ‘a little’ in Kisa.
(8)  súkún-a=yó bwáängú!
throw-sgS=there quickly
‘Throw there quickly!’

(9)  súkún-a=khú bwáängú!
throw-sgS=on it quickly
‘Throw on it quickly!’

(10) súkún-a=mú bwáängú!
throw-sgS=in there quickly
‘Throw in there quickly!’

The verbal enclitics in table 6.2 show word-level phonology. Sub-minimal hosts show a long vowel with the word-level verbal enclitics, as in (11-13).

(11)  a)  rá-á=yó!
put-sgS=there
‘Put there!’

   b)  *r-á=yó!
put-sgS=there
‘Put there!’

(12)  a)  rá-á=khú!
put-sgS=on it
‘Put on it!’

   b)  *r-á=khú!
put-sgS=on it
‘Put on it!’

(13)  a)  nywá-á=khú!
drink-sgS=POL
‘Please drink!’

   b)  *nyw-á=khú!
drink-sgS=POL
‘Please drink!’

These verbal enclitics require that the verb stem be a minimum prosodic word (see section 3.5). This condition holds of the verb stem, and not the
whole verb. This is shown by the fact that the addition of prefixes, as (14) illustrates, does not count towards minimality for these purposes.

(14) a) \( ba-la-ra-a=yó \)
3plS-HODF-put-IND=there
‘They will put there’

b) \( ba-la-ra-a=khú \)
3plS-HODF-put-IND=on it
‘They will put on it’

c) \( ba-la-nywa-a=khú \)
3plS-HODF-drink-IND=POL
‘They will drink please’

However, if the verb stem is a minimal word, we get a short vowel:

(15) a) \( nywe-esy-a=yó! \)
drink-CAUS-sgS=there
‘Make drink there!’

b) \( he-esy-a=khú! \)
give-CAUS-sgS=POL
‘Please give!’

Therefore, these verbal enclitics are word-level clitics since the verb stem must satisfy minimum word-hood if it would otherwise be sub-minimal.

The verbal enclitics in table 6.2 also show word-level syntax. When the verb is followed by a modifier, these enclitics cannot attach to that modifier:

(16) a) \( rá-á=yó \)
put-sgS=there \( a-ba-khááná! \)
AUG-2-girl
‘Put the girls there!’

b) \( *r-á \)
put-sgS \( a-ba-khááná=yó! \)
AUG-2-girl=there
‘Put the girls there!’
6.2.2 Word-level non-verbal enclitics

As table 6.2 shows, non-verbal enclitics are second and third person singular monomoraic possessives. These enclitics take a class prefix, and attach to both nominals (18) and particles (19).

(18)  
   a) \[ i-n-gítá=y-ó \]  
   AUG-9b-guitar=9-2sg  
   “your guitar”

   b) \[ o-mw-ááná=w-ó \]  
   AUG-1-child=1-2sg  
   “your child”

   c) \[ a-bá-áná \]  
   AUG-2-child=2-his/her  
   “his/her children”

   d) \[ e-shi-tábú=shy-é \]  
   AUG-7-book=7-his/her  
   “his/her book”

(19) \[ khúshíchírá=y-é \]  
   because=9-his/her  
   “his/her reason”

Non-verbal enclitics do not show word-level phonology with sub-minimal hosts, as (20) shows.

---

31. *e is glossed as ‘his/her’ because this form only occurs with human referents.
(20)  

a)  
só=w-ó  
father=1-2sg  
‘your father’  

*sóó=w-ó  
father=1-2sg  
‘your father’  

b)  
só=w-é  
father=1-his/her  
‘his/her father’  

*sóó=w-e  
father=1-his/her  
‘his/her father’  

However, they show word-level phonology in that they can take class prefixes, as the preceding examples show, while affixes cannot.

These enclitics also show word-level syntax. Consider (21).  

(21)  

a)  
i-n-gítá=y-ó  
AUG-9b-guitar=9-2sg  
‘your good guitar’  
i-n-dáyí  
AUG-9b/c-good  

*i-n-gítá  
AUG-9b-guitar  
‘your good guitar’  
i-n-dáyí=y-ó  
AUG-9b/c-good=9-2sg  

b)  
o-mw-ááná=w-ó  
AUG-1-child=1-2sg  
‘your goodchild’  
o-mu-láyí  
AUG-1-good  

*o-mw-ááná  
AUG-1-child  
‘your goodchild’  
o-mu-láyí=w-ó  
AUG-1-good=1-2sg
### 6.3 Word-level proclitics

Table 6.3 presents the word-level proclitics in Kisa.

<table>
<thead>
<tr>
<th>Proclitic</th>
<th>Gloss</th>
<th>Part-of-speech restrictions</th>
</tr>
</thead>
<tbody>
<tr>
<td>shi=</td>
<td>‘negative’</td>
<td>Verbs</td>
</tr>
<tr>
<td>na=</td>
<td>‘with’</td>
<td>Nominals</td>
</tr>
<tr>
<td>ni=</td>
<td>‘is’</td>
<td>Nominals and particles</td>
</tr>
<tr>
<td>CL-a=</td>
<td>‘of’</td>
<td>Nominals and particles</td>
</tr>
</tbody>
</table>

The phonological behavior of proclitics is distinct from that of prefixes. Proclitics that end with a high vowel do not show gliding (see section 7.3.10), while prefixes do (see section 7.3). There is no gliding across word boundaries in this environment, as discussed in section 7.6.

Proclitics that end with the low vowel /a/ show partial assimilation of the first vowel to the second vowel, when the second vowel is the high front vowel /i/ (see section 7.3.10). Prefixes, on the other hand, show total bidirectional assimilation (see section 7.3). There is no assimilation across word boundaries in this environment (see section 7.6).

Therefore, in not showing gliding and total assimilation, in the environments discussed above, proclitics portray word-level phonology.

#### 6.3.1 The word-level verbal proclitics shi=

This proclitic attaches only to verbs, as shown in (22). It shows word-level phonology, as seen in (22b).

(22) a) \[ shi=ba-la-mu-khóóny-a=tá. \]
\[-\text{NEG=3plS-HODF-1sgO-help-IND=no} \]
\[-\text{‘They will not help him/her.’} \]
It cannot appear with nominals or particles. Consider (23) and (24).

(23)  *shi=Ø-líí-túúmá=tá.
     NEG=AUG-5a-maize=no
     ‘not the maize’

(24)  *shi=káálá=tá.
     NEG=slowly=no
     ‘not quickly’

6.3.2 Word-level non-verbal proclitics

These proclitics include the preposition ‘with’, the copula ‘is’, and the connective marker ‘of’.

The preposition na= ‘with’ occurs only with nominals and shows word-level phonology (25b):

(25)  a)  na=a-má-átsí
     with=AUG-6-water
     ‘with water’

b)  SR    ne=i-n-gúbó
     UR   /na=i-n-gubo/
     with=AUG-9b-cloth
     ‘with a/the cloth’

It cannot appear with verbs or particles, as the following data show.

(26)  *na=bákál-a!
     with=táke-sgS
     ‘with take!’
(27) *na=káálá
   with=slowly
   ‘with slowly’

The copula proclitic \( ni^{32} \) ‘is’ attaches only to nominals and particles, as (28) and (29) illustrate. It shows word-level phonology as (28b) illustrates.

(28) a) \( ni=\emptyset\text{-}líí\text{-}khútú^{33} \)
     is=AUG-5a-tortoise
     ‘(It) is a/the tortoise.’

     b) SR \( no=o\text{-}mu\text{-}súkú. \)
        UR /\( ni=o\text{-}mu\text{-}suku. /\n        is=AUG-1-enemy
        ‘(it) is an/the enemy.’

(29) \( ni=ḥákárí. \)
    is=between
    ‘(it) is between.’

The connective marker ‘of’ takes a class prefix, and occurs with both nominals (30) and particles (31).

(30) a) \( w-a=a\text{-}bá\text{-}áná \)
     1-CM=AUG-2-child
     ‘the children’s’

The following example shows a negative copula.

(i) \( shi=no=o\text{-}mu\text{-}súkú=tá. \)
    NEG=is=AUG-1-enemy=no
    ‘(It) is not an/the enemy.’

33 This structure is the same when we have an overt subject, as seen in the following example.

(i) \( i-\emptyset\text{-}sóló \quad i-nó \quad ni=\emptyset\text{-}líí\text{-}khútú. \)
    AUG-9b-animal 9-this is=AUG-5a-tortoise
    ‘This animal is a tortoise.’

\[32\text{The following example shows a negative copula.}\]
b) \[ b-a=a-bá-áná \]
\[ \text{2-CM=AUG-2-child} \]
\[ \text{‘the children’s’} \]

c) \[ shy-e=e-shi-kóómbé \]
\[ \text{7-CM=AUG-7-cup} \]
\[ \text{‘the cup’s’} \]

d) \[ by-e=i-n-dábú \]
\[ \text{8-CM=AUG-9b-pot} \]
\[ \text{‘the pot’s’} \]

\[ (31) \quad w-a=hákárí \]
\[ \text{1-CM=between} \]
\[ \text{‘the middle one’} \]

This proclitic shows word-level phonology, as seen in (30c and d).

The word-level non-verbal proclitics occur in the order shown in (32), and exemplified in (33).

(32) \[ \text{Copula ‘is’=Preposition ‘with’=Associative ‘of’=Host} \]

(33) \[ ni=na=b-a=a-bá-áná . \]
\[ \text{is=with=2-CM=AUG-2-child} \]
\[ \text{‘(It) is with those of the children.’} \]

6.4 Phrase-level clitics

Phrase-level clitics show phrase-level syntax. They can appear as proclitics or enclitics. Pronominal clitics are the only clitics in Kisa that show this property in relation to their hosts. However, there is one case when these clitics have a fixed order, namely if the subject and the object of a transitive
verb are each cross-referenced by a clitic. Table 6.4 gives the pronominal clitics in Kisa.

Table 6.4: Kisa pronominal clitics

<table>
<thead>
<tr>
<th>Noun Class</th>
<th>Person</th>
<th>Clitic</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1ʳᵉ</td>
<td>syé</td>
<td>‘I/me’</td>
</tr>
<tr>
<td></td>
<td></td>
<td>fwé</td>
<td>‘we/us’</td>
</tr>
<tr>
<td>2</td>
<td>2ⁿᵈ</td>
<td>ywé</td>
<td>‘you (sg.)’</td>
</tr>
<tr>
<td></td>
<td></td>
<td>nywé</td>
<td>‘you (pl.)’</td>
</tr>
<tr>
<td>3</td>
<td>3ʳᵗᵈ</td>
<td>yé</td>
<td>‘s/he/him/her’</td>
</tr>
<tr>
<td>2</td>
<td>b⁻ó</td>
<td></td>
<td>‘they/them’</td>
</tr>
<tr>
<td>3</td>
<td>kw⁻ó</td>
<td></td>
<td>‘it’</td>
</tr>
<tr>
<td>4</td>
<td>chy⁻ó</td>
<td></td>
<td>‘they/them’</td>
</tr>
<tr>
<td>5</td>
<td>ly⁻ó</td>
<td></td>
<td>‘it’</td>
</tr>
<tr>
<td>6</td>
<td>k⁻ó</td>
<td></td>
<td>‘they/them’</td>
</tr>
<tr>
<td>7</td>
<td>shy⁻ó</td>
<td></td>
<td>‘it’</td>
</tr>
<tr>
<td>8</td>
<td>by⁻ó</td>
<td></td>
<td>‘they/them’</td>
</tr>
<tr>
<td>9</td>
<td>y⁻ó</td>
<td></td>
<td>‘it’</td>
</tr>
<tr>
<td>10</td>
<td>tsy⁻ó</td>
<td></td>
<td>‘they/them’</td>
</tr>
<tr>
<td>11</td>
<td>lw⁻ó</td>
<td></td>
<td>‘it’</td>
</tr>
<tr>
<td>12</td>
<td>kh⁻ó</td>
<td></td>
<td>‘it/s/he/him/her’</td>
</tr>
<tr>
<td>13</td>
<td>rw⁻ó</td>
<td></td>
<td>‘they/them’</td>
</tr>
<tr>
<td>14</td>
<td>bw⁻ó</td>
<td></td>
<td>‘it’</td>
</tr>
<tr>
<td>15</td>
<td>khw⁻ó</td>
<td></td>
<td>‘it’</td>
</tr>
<tr>
<td>20</td>
<td>kw⁻ó</td>
<td></td>
<td>‘it/s/he/him/her’</td>
</tr>
</tbody>
</table>

Pronominal clitics can function as subjects and objects.

34It is not possible to have two pronominal clitics in a row in Kisa.

(i) *o-la-bükul-a=y⁻ó=yé.
    2sgS-HODF-take-IND=9-PRO=3sg
    ‘You (sg.) will take it/him/her.’

Pronominal clitics do not occur in isolation in Kisa

35In the underlying representation the glide in the CGV forms corresponds to a vowel:
sie>sye, fue>fwe, yue>ywe, nyue>nywe
As table 6.4 above shows, the root in classes 2-20 pronominals takes a class prefix, showing word-level phonology. Consider the following examples:

(34)  shy-ó=shúná?
    7-PRO=what
    ‘What about it?’

(35)  o-la-búkúl-a=y-ó.
    2sgS-HODF-take-IND=9-PRO
    ‘You (sg.) will take it.’

(36)  a-bá-áná=b-ó    ba-li-ire.
    AUG-2-child=2-PRO 3plS-eat-HODP
    ‘The children ate.’

Pronominal clitics occur with verbs, nominals, and particles. When they appear with nominals (37-38) and particles (39-40) they can occur as proclitics or enclitics.

(37)   a) SR   b-á³⁶=á-bá-áná    na=a-ba-lámú.
       UR   /b-á=a-ba-ana  ni=a-ba-lamú/
       2-PRO=AUG-2-child  is=AUG-2-alive
       ‘The children are well/fine/alive.’

       b) SR   fwá=á-bá-áná    khul-kul-e.
       UR   /fwé=a-ba-ana  khul-kul-e/
       1pl=AUG-2-child  1plS-buy-SUBJ
       ‘Let us, the children, buy.’

(38)   a)   a-bá-áná=b-ó    na=a-ba-lámú.
       AUG-2-child=2-PRO  is=AUG-2-alive
       ‘The children are well/fine/alive.’

       b)    a-bá-áná=nywé    kúl-e!
       AUG-2-child=2pl  buy-plS
       ‘Children buy!’

³⁶ This proclitic can be left out without changing the meaning of the construction.
Pronominal enclitics show phrase-level syntax. When the noun is followed by one or more modifiers, the pronominal enclitic attaches to the last of these, as (41) shows.

(41)  
\[\text{a-\text{bá-áná} ba-\text{nó}=b-\text{ó} na=a-\text{ba-lámú}.}\]  
AUG-2-child 2-this=2-PRO is=AUG-2-alive  
‘These children are well/fine/alive.’

\[\text{b-\text{bá-áná} ba-\text{ánjé} ba-\text{nó}=b-\text{ó} na=a-\text{ba-lámú}.}\]  
AUG-2-child 2-my 2-this=2-PRO is=AUG-2-alive  
‘These children of mine are well/fine/alive.’

These enclitics cannot attach to the last word in the construction, as the following data shows. Therefore, these enclitics do not show clause-level syntax.

(42)  
\[\text{*a-bá-áná ba-nó na=a-\text{ba-lámú}=b-\text{ó}.}\]  
AUG-2-child 2-this is=AUG-2-alive=2-PRO  
‘These children are well/fine/alive.’

\[\text{*a-bá-áná ba-\text{ánjé} ba-nóna=a-\text{ba-lámú}=b-\text{ó}.}\]  
AUG-2-child 2-my 2-thisis=AUG-2-alive=2-PRO  
‘These children of mine are well/fine/alive.’

When they occur with verbs pronominal clitics can mark the subject or the object. As objects they can appear as enclitics when an object prefix is

\[\text{37}^{\text{Given that pronominal clitics are phrase-level clitics they cannot show vowel lengthening when they occur as proclitics.}}\]
present (43) or absent (44) in a verb form. The two constructions do not differ in meaning.

(43)  
a)  
\textit{a-la-bá-kúl-a=b-ó.}  
3sgS-HODF-3plO-take-IND=2-PRO  
’S/he will take them.’

b)  
\textit{a-la-khu-búkúl-a=fwé.}  
3sgS-HODF-1plO-take-IND=1pl  
’S/he will take us.’

(44)  
a)  
\textit{a-la-búkúl-a=b-ó.}  
3sgS-HODF-take-IND=2-PRO  
’S/he will take them.’

b)  
\textit{a-la-búkúl-a=fwé.}  
3sgS-HODF-take-IND=1pl  
’S/he will take us.’

These examples show that these enclitics mark the direct object. They can also mark the indirect object, as (45) illustrates.

(45)  
a-la-bá-h-a=b-ó    e-shi-kóómbe.  
3sgS-HODF-3plO-give-IND=2-PRO  AUG-7-cup  
’S/he will give them the/a cup.’

When there is an overt direct object noun phrase in the verb phrase pronominal clitics cannot be used as enclitics, as shown in (46).

(46)  
a)  
*\textit{a-la-khup-a=b-ó}     a-bá-áná.  
3sgS-HODF-beat-IND=2-PRO  AUG-2-child  
’S/he will beat the children.’

b)  
*\textit{a-la-khup-a}     a-bá-áná=b-ó.  
3sgS-HODF-beat-IND  AUG-2-child=2-PRO  
’S/he will beat the children.’

As objects pronominal clitics can also occur as proclitics, as in (47).
When pronominal clitics mark the subject they can also occur as proclitics or enclitics:

(47)  

a)  \( yó=ó-lá-búkúl-a. \)
\( 3\text{sg}=2\text{sg}\text{S}-\text{HODF-take-IND} \)
‘You (sg.) will take him/her.’

b)  \( b-ó=ó-la-búkúl-a. \)
\( 2\text{PRO}=2\text{sg}\text{S}-\text{HODF-take-IND} \)
‘You (sg.) will take them.’

c)  \( yé=bá-lá-mú-búkúl-a. \)
\( 3\text{sg}=3\text{pl}\text{S}-\text{HODF-3sgO-take-IND} \)
‘They will take him/her.’

Verbs can simultaneously have a pronominal proclitic and a pronominal enclitic. In this case the proclitic cross-references the subject and the enclitic cross-references the object, as in (50).

(48)  

a)  \( yá=á-lá-kón-a. \)
\( 3\text{sg}=3\text{sg}\text{S}-\text{HODF-sleep-IND} \)
‘S/he will sleep.’

b)  \( a-la-kon-a=yé. \)
\( 3\text{sg}\text{S}-\text{HODF-sleep-IND}=3\text{sg} \)
‘S/he will sleep.’

(49)  

a)  \( ywó=ó-lá-kón-a. \)
\( 2\text{sg}=2\text{sg}\text{S}-\text{HODF-sleep-IND} \)
‘You (sg.) will sleep.’

b)  \( o-la-kon-a=ywé. \)
\( 2\text{sg}\text{S}-\text{HODF-sleep-IND}=2\text{sg} \)
‘You (sg.) will sleep.’

(50)  

a)  \( yá=á-lá-búkúl-a=yé. \)
\( 3\text{sg}=3\text{sg}\text{S}-\text{HODF-take-IND}=3\text{sg} \)
‘S/he will take him/her.’
As noted above, in constructions with two pronominal clitics, the interpretation of the clitics is fixed. The proclitic must cross-reference the Subject, and the enclitic must cross-reference the Object. For instance, if the order of the clitics in (50b) is reversed we get a different meaning. Consider (51).

\[(51) \quad \text{yé=á-lá-búkúl-a=b-ó.}\]
\[\text{3sg=3plS-HODF-take-IND=2-PRO}\]
\[\text{‘S/he will take them.’}\]

Pronominal enclitics follow word-level enclitics:

\[(52) \quad \text{khóóny-a=khú=b-ó!}\]
\[\text{help-sgS=POL=2-PRO}\]
\[\text{‘Please help them!’}\]

\[(53) \]
\[\text{a) } \text{súkún-a=yó=ye!}\]
\[\text{throw-sgS=there=3sg}\]
\[\text{‘Throw him/her there!’}\]
\[\text{b) } \text{súkún-a=khú=yé!}\]
\[\text{throw-sgS=on it=3sg}\]
\[\text{‘Throw him/her on it!’}\]
\[\text{c) } \text{súkún-a=mú=yé!}\]
\[\text{throw-sgS=in there=3sg}\]
\[\text{‘Throw him/her in there!’}\]

\[(54) \quad \text{i-n-gítá=y-ó=y-ó i-la-kw-a.}\]
\[\text{AUG-9b-guitar=9-2sg=9-PRO 9S-HODF-fall-IND}\]
\[\text{‘Your guitar will fall.’}\]

Pronominal proclitics precede word-level proclitics:
(55)  \( b\-\dot{\text{o}}=sh\text{t}=b\-\text{\textacute{a}}\-\text{\textacute{a}}\-\text{m}\-\dot{\text{u}}\text{-kh\textacute{o}\-\text{\textacute{e}}\-n}y\text{-}\dot{\text{a}}\text{-t\-}\dot{\text{\textacute{a}}}. \)  
\( 2\-\text{PRO}=\text{NEG}=3\text{plS-HODF-1sgO-help-IND}=\text{no} \)
‘They will not help him/her.’

(56)  \( b\-\dot{\text{o}}=n\text{\textacute{a}}=\text{\textacute{a}}\-\text{b\-\text{	extacute{a}}\-\dot{\text{\textacute{a}}}} . \)  
\( 2\-\text{PRO}=\text{with}=\text{AUG-2-child} \)
‘they with the children’

(57)  \( b\-\dot{\text{o}}=n\text{\textacute{a}}=\text{\textacute{a}}\-\text{b\-\text{\textacute{a}}-kh\text{\textacute{a}}\-\dot{\text{\textacute{a}}}} . \)  
\( 2\-\text{PRO}=\text{is}=\text{AUG-2-girl} \)
‘They are girls.’

(58)  \( b\-\dot{\text{o}}=b\-\text{\textacute{a}}=\text{\textacute{a}}\-\text{\textacute{a}}\-\text{b\-\text{	extacute{a}}\-\dot{\text{\textacute{a}}}} \quad \text{ba-la-tsy}\text{-}\dot{\text{\textacute{a}}}.\)  
\( 2\-\text{PRO}=2\-\text{CM}=\text{AUG-2-child} \quad 3\text{plS-HODF-go-IND} \)
‘The children’s will go.’

### 6.5 Clause-level clitics

These clitics appear with all word categories. Table 6.5 shows the clause-level clitics in Kisa.

Table 6.5: Kisa clause-level clitics

<table>
<thead>
<tr>
<th>Clitic</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>=t-\text{\textacute{a}}</td>
<td>‘no’</td>
</tr>
<tr>
<td>=n\text{\textacute{t}}</td>
<td>‘emphatic’</td>
</tr>
<tr>
<td>=mb\text{\textacute{u}}</td>
<td>‘like that/in that manner’</td>
</tr>
<tr>
<td>mbu-\dot{\text{\textacute{a}}}</td>
<td>‘(so) that’</td>
</tr>
</tbody>
</table>

As the table above shows, some of the clause-level clitics are enclitics and some are proclitics.

The enclitic =t\-\text{\textacute{a}} ‘no’ can attach to verbs, nominals, and particles, as the following examples illustrate:

(59)  \( sh\text{\textacute{i}}=b\-\text{\textacute{a}}\-\text{\textacute{a}}\-\text{m}\-\text{\textacute{a}}\-\text{\textacute{u}}\-\text{kh\textacute{o}\-\text{\textacute{e}}\-\text{\textacute{e}}\-n}y\text{-}\text{\textacute{\text{\textacute{a}}}}=t\-\text{\textacute{a}}. \)  
\( \text{NEG}=3\text{plS-HODF-3sgO-help-IND}=\text{no} \)
‘They will not help him/her.’
The emphatic enclitic =ni also attaches to verbs (62), nominals (63), and particles (64):

(62)  
\[ \text{súkú-n-a=ni!} \]
\[ \text{throw-sgS=EMPH} \]
\[ \text{‘Go ahead and throw!’} \]

(63)  
\[ \text{lol-a o-mu-súkú=ní.} \]
\[ \text{see-sgS AUG-1-enemy=EMPH} \]
\[ \text{‘Go ahead and see the enemy!’} \]

(64)  
\[ \text{bis-a káálá=ní.} \]
\[ \text{hide-sgS slowly=EMPH} \]
\[ \text{‘Go ahead and hide slowly!’} \]

The enclitic =mbú ‘like that/in this manner’ attaches to verbs (65), nominals (66), and particles (67) as well.

(65)  
\[ \text{ba-la-mu-súkú-n-a=mbú.} \]
\[ \text{3plS-HODF-1sgO-throw-IND=like that} \]
\[ \text{‘They will throw him/her like that.’} \]

(66)  
\[ \text{o-la-lol-a o-mu-súkú=mbú.} \]
\[ \text{2sgS-HODF-see-IND AUG-1-enemy=like that} \]
\[ \text{‘You will see the enemy like that.’} \]

(67)  
\[ \text{o-la-bis-a hákáří=mbú.} \]
\[ \text{2sgS-HODF-hide-IND between=like that} \]
\[ \text{‘You will hide in the middle like that.’} \]

The enclitics discussed above occur in the order shown in (68), and exemplified in (69).
When other words follow the verb in a negative construction the enclitics discussed above attach to the last word in the construction, as in (70).

(70) a) $shi=$ba-la-khóóny-a $ bwáángú=$mbú=tá=ní.
   NEG=3plS-HODF-help-IND quickly=like that=no=EMPH
   ‘They will not help quickly like that.’

   b) $shi=$ba-la-khóóny-a
   NEG=3plS-HODF-help-IND
   $o=$mu-khááná=$mbú=tá=ní.
   AUG-1-girl=like that=no=EMPH
   ‘They will not help the girl like that.’

   c) $shi=$ba-la-khóóny-a $ o=$mu-khááná
   NEG=3plS-HODF-help-IND AUG-1-girl
   $ bwáángú=$mbú=tá=ní.
   quickly=like that=no=EMPH
   ‘They will not help the girl quickly like that.’

These enclitics, therefore, attach to the last constituent in the clause, showing clause-level syntax. Hence, they are clause-level clitics.

Clause-level enclitics follow the pronominal enclitics:

(71) $shi=$ba-la-súkún-a=yé=$mbú=tá=ní.
   NEG=3plS-HODF-throw-IND=3sg=like that=no=EMPH
   ‘They will not throw him/her like that.’

(72) $shi=$ba-la-khóóny-a=b-ó
   NEG=3plS-HODF-help-IND=2-PRO
   $ bwáángú=$mbú=tá=ní.
   quickly=like that=no=EMPH
   ‘They will not help them quickly like that.’
The proclitic mbu= ‘(so) that’ attaches to verbs (73), nominals (74), and particles (75).

(73)  SR  ba-la-mu-súkún-a  mba=a-kw-e.
UR  /ba-la-mu-sukun-a  mbu=a-ku-e/  
3plS-HODF-1sgO-throw-IND  so that=3sgS-fall-SUBJ  
‘They will throw him/her so that s/he falls.’

(74)  SR  o-la-bóól-a  mba=a-bá-áná ba-tsy-e.
UR  /o-la BOOL-a  mbu=a-bá-áná ba-tsi-e/  
2sgS-HODF-say/speak-IND that=AUG-2-child3plS-go-SUBJ  
‘You will say that the children go.’

(75)  SR  o-la-bóól-a  mbe=erwaányí ni=i-n-diýí.
UR  /o-la-bool-a  mbu=erwaanyi ni=i-n-láyí/  
2sgS-HODF-say/speak-IND that=outside  is=AUG-9b-good  
‘You will say that outside is good.’

It shows word-level phonology, as seen in the preceding examples.

This proclitic precedes pronominal clitics, as seen in (76).

(76)  o-la-bóól-a  mbu=b-ó=bá-lá-bukúl-a.
2sgS-HODF-say/speak that=2-PRO=3plS-HODF-take-IND  
‘You will say that they will buy.’

6.6 Summary

This chapter discussed the commonly occurring clitics. They are of three kinds, word-level, phrase-level, and clause-level clitics. Phrase- and clause-level clitics attach to any host, whereas word-level clitics are restricted by part-of-speech considerations. Phrase-level clitics can attach to their hosts as proclitics or enclitics. Word-level and clause-level clitics have a fixed position in relation to their hosts. Some members of these groups occur only as proclitics, while others only as enclitics.
Phrase-level clitics comprise pronominal clitics only. Word-level clitics include verbal directional and politeness enclitics; the non-verbal second and third person singular monomoraic possessive enclitics; the verbal proclitic \( shi= \); the non-verbal proclitics ‘is’, ‘of’, and ‘with’. Clause-level clitics consist of the enclitic \( =tá \) ‘no’, the emphatic enclitic \( =ní \), the enclitic \( =mbú \) ‘like that/in that manner, and the proclitic \( mbú= \) ‘(so) that’.

Word-level proclitics follow phrase-level proclitics while clause-level proclitics precede them. Word-level enclitics precede phrase-level enclitics whereas clause-level enclitics follow them. Word-level proclitics occur in a fixed order. The copula \( ni= \) ‘is’ comes first, followed by the preposition \( na= \) ‘with’ and the connective marker \( CL-a= \) ‘of’ in that order. The clause-level enclitics also appear in a fixed order, with \( =mbú \) coming first, followed by \( =tá \) ‘no’ and then the emphatic \( =ní \).

Various classes of clitics differ from each other and from affixes in the following respects:

(77)  

a) Word-level clitics show word-level phonology and syntax. Affixes do not.

b) Phrase-level clitics show phrase-level syntax.

c) Clause-level clitics show clause-level syntax.
CHAPTER 7: VOWEL HIATUS RESOLUTION AND APOCOPE

7.1 Introduction

Vowel hiatus is very common both within words and across word boundaries in Kisa as in other Bantu languages (Casali 1997; Harford 1997; Mtenje 2007; Pulleyblank 2003; Sample 1976; Sibanada 2009; Tanner 2006). There are three ways in which vowel hiatus can be resolved in Kisa, assimilation, gliding, and apocope. Assimilation occurs everywhere except root-internally. Gliding occurs root-internally, across affix boundaries, but not across proclitic-host and word boundaries. Apocope only occurs across word boundaries within phrases (syntactic) and at the end of words in phrase-final position (see section 7.8).

Table 7.1 gives a summary of the vowel hiatus resolution patterns found in Kisa.

Given that assimilation and apocope affects vowels across word boundaries, as stated above, there is need to look at the structure of phrases in Kisa in order to understand these processes. This chapter begins by providing an overview of the structure of the Kisa noun phrase and verb phrase in section 7.2, followed by a discussion of regressive assimilation and gliding within the word in section 7.3. Section 7.4 describes progressive assimilation inside the word, while section 7.5 examines word-internal assimilation and gliding in loans. Section 7.6 deals with assimilation across word boundaries, and section 7.7 discusses assimilation across word boundaries in loans. Section 7.8 considers apocope. Section 7.9 is a summary of the chapter.
Table 7.1: Kisa vowel hiatus resolution patterns

<table>
<thead>
<tr>
<th>Vowel 1</th>
<th>Vowel 2</th>
<th>Root-internal, Root-affix, and Affix-affix</th>
<th>Proclitic-host</th>
<th>Word-word</th>
</tr>
</thead>
<tbody>
<tr>
<td>i</td>
<td>e</td>
<td>yee</td>
<td>ee</td>
<td>ee</td>
</tr>
<tr>
<td>a</td>
<td>yaa</td>
<td>aa</td>
<td>aa</td>
<td>aa</td>
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<tr>
<td>o</td>
<td>yoo</td>
<td>oo</td>
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<td>oo</td>
</tr>
<tr>
<td>u</td>
<td>yuu</td>
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<tr>
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<td>ei</td>
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<td>i</td>
<td>wii</td>
<td>ii</td>
<td>ui</td>
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<tr>
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<td>wee</td>
<td>ee</td>
<td>ee</td>
<td>ee</td>
</tr>
<tr>
<td>a</td>
<td>waa</td>
<td>aa</td>
<td>aa</td>
<td>aa</td>
</tr>
<tr>
<td>o</td>
<td>woo</td>
<td>oo</td>
<td>oo</td>
<td>oo</td>
</tr>
</tbody>
</table>

The gaps in the table above occur because the configuration never arises.

7.2 Phrase structure

7.2.1 The noun phrase

A maximal noun phrase in Kisa, as in other Bantu languages (Lusekelo 2009, 2011; Matambirofa 2000; Rugemalira 2007), has the general structure in (1).

(1) Pre-modifier + Head + Post-modifier(s)
The head in this structure constitutes a minimal noun phrase, as (2) shows.

(2)  o-mu-líná
     AUG-1-friend
     ‘a/the friend’

The only pre-modifier in a Kisa noun phrase is the distributive búlì ‘each’, as illustrated in (3).

(3)  búlì  o-mu-líná
     each    AUG-1-friend
     ‘each friend’

Various elements occur as post-modifiers in a Kisa noun phrase. The possible elements appear in a specific order, as shown in (4) and as exemplified in (5).

(4)  Head + Possessive + The word ‘another/other’ + Numeral + Adjective + Noun + Demonstrative + Quantifier (all) + Quantifier (only)

(5)  e-bi-táámbáyá by-áánjé bí-índí bi-tárú e-bi-láyí
     AUG-8-cloth 8-my 8-other 8-three AUG-8-good
     by-e=i-Ø-méésá bi-ryá byá-óstí byó-ónyéné
     8-CM-AUG-9a-table 8-that 8-all 8-only
     ‘only all those three other good tablecloths of mine’

The order of the numeral, adjective, and noun modifiers in (4) can vary. The adjective can precede the numeral, as in (6).

(6)  o-mu-líná wá-ánjé wú-úndí o-mu-láyí mu-lálá
     AUG-1-friend 1-my 1-other AUG-1-good 1-one
     ‘one other good friend of mine’

The noun may precede the adjective, as seen in (7) and the numeral, as in (8).
More than one adjective or noun can occur as a modifier in a Kisa noun phrase. Consider (9) and (10).

(9)  o-mu-líná wá-ánjé wú-úndí o-mu-kálí o-mu-láyí
  AUG-1-friend 1-my 1-another AUG-1-big AUG-1-good
  ‘another big good friend of mine’

(10) o-mu-líná wá-ánjé wú-úndí mu-láláo-mu-láyí
     AUG-1-friend 1-my 1-other 1-one  AUG-1-good
     w-o=o-lu-yállí  w-e=Ø-tsín-gúfú
     1-CM=AUG-11-respect 1-CM=AUG-10b-strength
     ‘one other good strong respectful friend of mine’

Semantic restrictions prevent multiple occurrences of possessives, demonstratives, and numerals:

(11) *o-mu-líná wa-ánjé wá-ábó
     AUG-1-friend 1-my 1-their

(12) *o-mu-líná wu-lyá wu-nó
     AUG-1-friend 1-that 1-this
The other elements can co-occur:

\[(14)\]

\[\begin{array}{lll}
\text{a) } & \text{\textit{o-mu-líná}} & \text{\textit{wá-ánjé}} & \text{\textit{wú-úndí}} \\
& \text{AUG-1-friend} & 1-my & 1-other \\
& \text{'my other friend'} & & \ \\
\text{b) } & \text{\textit{o-mu-líná}} & \text{\textit{wá-ánjé}} & \text{\textit{o-mu-láyí}} \\
& \text{AUG-1-friend} & 1-my & \text{AUG-1-good} \\
& \text{'my good friend'} & & \ \\
\text{c) } & \text{\textit{o-mu-líná}} & \text{\textit{wá-ánjé}} & \text{\textit{wu-lyá}} \\
& \text{AUG-1-friend} & 1-my & 1-that \\
& \text{'that friend of mine'} & & \ \\
\text{d) } & \text{\textit{o-mu-líná}} & \text{\textit{wú-úndí}} & \text{\textit{o-mu-láyí}} \\
& \text{AUG-1-friend} & 1-my & \text{AUG-1-good} \\
& \text{'another good friend'} & & \ \\
\text{e) } & \text{\textit{o-mu-líná}} & \text{\textit{wú-úndí}} & \text{\textit{mu-lálá}} \\
& \text{AUG-1-friend} & 1-my & 1-one \\
\end{array}\]

\[7.2.2\] **The verb phrase**

A maximal verb phrase in Kisa has the general structure in (15).

\[(15)\] \text{Head + Post-modifier(s)}

The head is the only obligatory element in a Kisa verb phrase, and can constitute a minimal verb phrase, as in (16).

\[(16)\] \text{\textit{bůkúl-a!}} \\
\text{take-sgS} \\
\text{'Take!' }
There are four types of post-modifiers in a Kisa verb phrase, noun phrases, locatives, prepositional phrases, and adverb phrases. These post-modifiers come in the order shown in (17) and illustrated in (18).

(17) Head + Noun phrase + Locatives + Prepositional phrase + Adverb phrase

(18) \[ \text{ba}-\text{a-súkúin-ír-a} \quad \text{o-mw-ááná} \quad \text{e-shi-tábú} \]
    \[ \text{3plS-FARP-throw-APPL-IND} \quad \text{AUG-1-child} \quad \text{AUG-7-book} \]

\[ \text{khu-Ø-méésá} \quad \text{no=mu-khónó} \quad \text{bwáángú.} \]

\[ \text{on-9a-table} \quad \text{with=AUG-3-hand} \quad \text{quickly} \]

‘They threw the book on the table for the child with the hand quickly.’

The head verb in a Kisa verb phrase can be followed by two noun phrase modifiers. This occurs when the head verb is a ditransitive verb (see section 5.4.3.1) or an applicative verb (see section 5.3.2.1). Consider (19) and (20) respectively.

(19) \[ \text{ba}-\text{la-h-a} \quad \text{o-mw-ááná} \quad \text{Ø-líí-túúmá}. \]
    \[ \text{3plS-HODF-give-IND} \quad \text{AUG-1-child} \quad \text{AUG-5a-maize} \]

‘They will give the child the maize.’

(20) \[ \text{ba}-\text{la-kul-ír-a} \quad \text{o-mw-ááná} \quad \text{Ø-líí-túúmá}. \]
    \[ \text{3plS-HODF-buy-APPL-IND} \quad \text{AUG-1-child} \quad \text{AUG-5a-maize} \]

‘They will buy the maize for the child.’

The noun phrase can interchange positions with the locative without a difference in meaning, as (21) shows.

(21) \[ \text{kúl-a} \quad \text{khu-shí-író} \quad \text{e-shi-tábú!} \]
    \[ \text{buy-sgS} \quad \text{on-7-market} \quad \text{AUG-7-book} \]

‘Buy the book in the market!’

In an applicative verb (see section 5.3.2.1) the locative can precede the direct object noun phrase, as (22) illustrates, but it cannot precede the indirect object noun phrase, as seen in (23).
The prepositional phrase can precede the locative, as in (24).

(24) *kúl-a e-shi-tábú no=o-mw-ááná khu-shí-író!
buy-sgS AUG-7-book with=AUG-1-child on-7-market
‘Buy the book in the market with the child!’

However, this is not possible with an applicative verb:

(25) *kárááng-ír-a38 Ø-tsíí-fwá ne=e-shi-chííkó
fry-APPL-sgS AUG-10b-vegetable with=AUG-7-spoon
khu-shí-tóófú!
on-7-stove
‘Fry the vegetables on the stove with a spoon!’

The adverb can precede the prepositional phrase, as (26) exemplifies.

(26) kúl-a e-shi-tábú khu-shí-író bwáángú
buy-sgS AUG-7-book on-7-market quickly
no=o-mw-ááná!
with=AUG-1-child
‘Buy the book in the market with the child quickly!’

---

38 The applicative is not obligatory here. The same sentence can have the word order in question without the applicative:

(i) kárááng-a Ø-tsíí-fwá ne=e-shi-chííkó khu-shí-tóófú!
fry-sgS AUG-10b-vegetable with=AUG-7-spoon on-7-stove
‘Fry the vegetables on the stove with a spoon!’
There can be multiple locatives, prepositional phrases, and adverb phrases in a Kisa verb phrase, as shown in (27-29).

(27) kón-a   mu-u-n-zú   khu-mu-kótsóró!
sleep-sgS   in-AUG-9b-house   on-3-mattress
‘Sleep on the mattress in the house!’

(28) lím-a  no=o-mw-ááná   ne=Ø-líí-chéémbé!
dig-sgS   with=AUG-1-child   with=AUG-5a-hoe
‘Dig with the hoe in the company of the child!’

(29) téékh-a  obuláyí   bwáángú!
cook-sgS   well   quickly
‘Cook well quickly!’

There is no fixed ordering of locatives, prepositional, and adverb phrases, regardless of the preposition or adverb involved. Changing the order does not change the meaning. Consider (30-32).

(30) kón-a   khu-mu-kótsóró   mu-u-n-zú!
sleep-sgS   on-3-mattress   in-AUG-9b-house
‘Sleep on the mattress in the house!’

(31) lím-a  ne=Ø-líí-chéémbé   no=o-mwá-áná!
dig-sgS   with=AUG-5a-hoe   with=AUG-1-child
‘Dig with the hoe in the company of the child!’

(32) téékh-a   bwáángú   óbúláyí!
cook-sgS   quickly   well
‘Cook well quickly!’

However, adverbs and their modifiers occur in a fixed order. Consider (33-34).

(33) téékh-a   bwáángú   múnó!
cook-sgS   quickly   very
‘Cook very quickly!’
(34) *téékʰ-a  múnó  bwáángú!
    cook-sgS     very    quickly
    ‘Cook very quickly!’

7.3 Regressive assimilation and gliding within the word

The combinations of the vowels that can undergo assimilation occur across affixes, roots and affixes, and proclitics and hosts. Those that undergo gliding occur root-internally, across affixes, and across roots and affixes. Vowel hiatus resolution involving roots and affixes takes the patterns outlined in table 7.2.

Table 7.2: Vowel hiatus resolution across the prefix-root boundary

<table>
<thead>
<tr>
<th>Vowel 1</th>
<th>Vowel 2</th>
<th>Output</th>
</tr>
</thead>
<tbody>
<tr>
<td>i</td>
<td>e</td>
<td>yee</td>
</tr>
<tr>
<td>a</td>
<td>yaa</td>
<td></td>
</tr>
<tr>
<td>o</td>
<td>yoo</td>
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<td>a</td>
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<td>oo</td>
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<tr>
<td>u</td>
<td>i</td>
<td>wii</td>
</tr>
<tr>
<td></td>
<td>e</td>
<td>wee</td>
</tr>
<tr>
<td></td>
<td>a</td>
<td>waa</td>
</tr>
<tr>
<td></td>
<td>o</td>
<td>woo</td>
</tr>
</tbody>
</table>

These patterns are exemplified below:

(35) a) SR  ba-lé-éts-a.
    UR  /ba-la-its-a/
    3plS-HODF-come-IND
    ‘They will come.’
b) SR  
\textit{ba-le-ey-a.}
\textit{/ba-la-ey-a/}
3sgS-HODF-sweep-IND
‘They will sweep.’

c) SR  
\textit{ba-lo-ol-a.}
\textit{/ba-la-ol-a/}
3plS-HODF-reach-IND
‘They will reach.’

d) SR  
\textit{a-khó-óbá}
\textit{/a-kha-uba/}
AUG-12-sun
‘little sun’

(36) a) SR  
\textit{ba-ly-eey-a}
\textit{/ba-li-ey-a/}
3sgS-REMF-sweep-IND
‘they will sweep’

b) SR  
\textit{ba-ly-aal-a}
\textit{/ba-li-al-a/}
3plS-REMF-spread-IND
‘they will spread’

c) SR  
\textit{ba-ly-ool-a.}
\textit{/ba-li-ol-a/}
3plS-FARF-reach-IND
‘They will reach.’

d) SR  
\textit{e-ly-úúbá}
\textit{/e-li-uba/}
AUG-5b-sun
‘a/the sun’

(37) a) SR  
\textit{ba-mw-úín-á.}
\textit{/ba-mu-in-a/}
3plS-3sgO-dip-IND
‘They dip him/her.’

b) SR  
\textit{ba-mw-eey-a.}
\textit{/ba-mu-ey-a/}
3plS-3sgO-sweep-IND
‘They sweep him/her.’
c) SR  ba-mw-aay-a.
    UR  /ba-mu-ay-a/
    3plS-3sgO-pluck-IND
    ‘They pluck him/her.’

d) SR  ba-mw-oosy-a.
    UR  /ba-mu-osí-a/
    3plS-3sgO-wash-IND
    ‘They wash him/her.’

In all these forms, the second vowel is a trigger for assimilation, and the first vowel is a target for assimilation. This is why these patterns are analysed as involving regressive assimilation.

The first vowel is never a mid vowel. When the first vowel is a high vowel, it appears as a non-moraic glide, and its mora is realised on the second vowel by mora preservation.

When the first vowel is a low vowel and the second vowel is a [-high] vowel, we also get total assimilation of the first vowel to the second vowel. The only case where we do not get total assimilation of the first [+low] vowel to the second vowel is when the second vowel is [+high]. In this case we get partial bidirectional assimilation where the result is a [-high, -low] vowel.

7.3.1 Analyses of gliding

A number of analysts (Casali 1997; Sample 1976; Sibanada 2009; Tanner 2006) propose that data such as those in (36) and (37) involve glide formation. They argue that the first vowel undergoes delinking with its associated mora but maintains its attachment to its root node, preserving its articulatory features (Rosenthall 1994; Tanner 2006: 22). Sample (1976: 49)
and Tanner (2006: 21) posit that the mora of the first vowel attaches to the second vowel by mora preservation, as indicated in figure 7.1.

Figure 7.1: Tanner’s account of glide formation

I follow this analysis. Roots with initial vowels can be preceded by consonant-final prefixes. All the prefix allomorphs that end with a consonant are listed in (38).


All vowel-initial roots have a short vowel following consonant-final prefixes, as the following examples show.

(39) a)  i-ny-ín₃⁹-á  
AUG-9c-dip-INF  
‘dipping style’

₃⁹In Kisa vowel initial verb roots do not have a ghost consonant [y]. /y/ is a phoneme in Kisa:

(i) SR  i-Ø-yéékh-á  
UR /i-ny-yeekh-a/  
AUG-9c-lean-INF  
‘at/the leaning style’

(ii) o-khu-yéékh-á  
AUG-15-lean-INF  
‘at/the leaning’
b) *i-ny-iin-a
AUG-9c-dip-INF
‘dipping style’

(40) a) i-nz-áy-á
AUG-9d-pluck-INF
‘plucking style’

b) *i-nz-aay-a
AUG-9d-pluck-INF
‘plucking style’

(41) a) Ø-tsúny-ín-á
AUG-10c-dip-INF
‘dipping styles’

b) *Ø-tsúny-iin-a
AUG-10c-dip-INF
‘dipping styles’

(42) a) Ø-tsúnz-áy-á
AUG-10d-pluck-INF
‘plucking styles’

b) *Ø-tsúnz-aay-a
AUG-10d-pluck-INF
‘plucking styles’

(43) a) b-a-any-ín-a
3plS-FARP-1sgO-dip-IND
‘they dipped me’

b) *b-a-any-iin-a
3plS-FARP-1sgO-dip-IND
‘they dipped me’

(44) a) b-a-anz-ay-a.
3plS-FARP-1sgO-pluck-IND
‘They plucked me.’

b) *b-a-anz-aay-a.
3plS-FARP-1sgO-pluck-IND
‘They plucked me.’
It is possible to have a long vowel root-internally after (ny) and (nz), as (47) and (48) illustrate.

(47) o-lu-nyádlí
    AUG-11-line
    ‘a/the line’

(48) i-Ø-ránzádyí
    AUG-9b/c-red
    ‘a/the red one’

Therefore, there is no reason to analyse the root-initial short vowels as resulting from some reduction caused by the preceding (ny) or (nz). Consequently, in all vowel-initial roots, the initial vowel must be underlyingly short.

The example in (49) shows a vowel-initial root preceded by a vowel-final prefix.

(49) SR  ba-mwaay-a.
    UR /ba-mu-ay-a/
    3plS-3sgO-pluck-IND
    ‘They pluck him/her.’
Under the analyses by Sample and Tanner, which I adopt, this word form is segmented morphologically as in (50).

(50) SR  
UR  /ba-mu-ay-a/  
3plS-3sgO-pluck-IND  
‘They pluck him/her.’

The implications of the analysis of gliding above for syllable structure is that there are syllables with complex onsets in Kisa, as (51) shows.

(51) a)  e-.ly-úú.bá  
AUG-5b-sun  
‘the sun’

b)  ba-.mw-aa.l-a.  
3plS-3sgO-spread-IND  
‘They spread him/her.’

7.3.2 Root-suffix combinations

Hiatus resolution across a root-suffix boundary is uncommon because nominals do not take suffixes and there are only 15 vowel-final verb roots. The patterns here match those seen with prefix-root combinations, as the following examples show.

(52) a) SR  ré-ér-á=yó!  
UR  /ra-ir-a=yo/  
put-APPL-sgS=there  
‘Put there for!’

b) SR  ré-é=yo!  
UR  /ra-e=yo/  
put-plS=there  
‘Put there!’
We have seen in the preceding discussion that the output of assimilation and gliding is a long vowel. This only occurs in word-internal syllables. In word-final syllables the output does not involve a long vowel, as the following examples show. This is in keeping with the avoidance of long vowels in final syllables in Kisa, as discussed in section 3.2.3.
7.3.3 Prefix-prefix combinations

In Kisa dissimilar vowel sequences also occur across prefix boundaries. Table 7.3 shows the attested patterns.

Table 7.3: Vowel hiatus resolution across a prefix-prefix boundary

<table>
<thead>
<tr>
<th>Vowel 1</th>
<th>Vowel 2</th>
<th>Output</th>
</tr>
</thead>
<tbody>
<tr>
<td>i</td>
<td>a</td>
<td>yaa</td>
</tr>
<tr>
<td>a</td>
<td>i</td>
<td>ee</td>
</tr>
<tr>
<td></td>
<td>e</td>
<td>ee</td>
</tr>
<tr>
<td></td>
<td>o</td>
<td>oo</td>
</tr>
<tr>
<td>u</td>
<td>i</td>
<td>wii</td>
</tr>
<tr>
<td></td>
<td>a</td>
<td>waa</td>
</tr>
</tbody>
</table>

As this table shows, the first vowel is never a mid vowel in prefix-prefix combinations. In addition, there are no prefixes beginning with the high back vowel /u/. However, the patterns here match those seen with affix-root combinations, as the following examples illustrate.

(57) a) SR  o-la-be-e-lum-ir-a.
UR  /o-la-ba-i-lum-ir-a/
2sgS-HODF-3pIO-RFL-bite-APPL-IND
‘You (sg.) will bite yourself for them.’
b) SR  ne-en-gul-e.
    UR /na-en-kul-e/
    NEARF-1sgS-buy-IRR
    ‘I will buy.’

c) SR  no-o-kul-e.
    UR /na-o-kul-e/
    NEARF-2sgS-buy-IRR
    ‘You (sg.) will buy.’

(58) SR  shy-akha-kul-e.
    UR /shi-akha-kul-e/
    7S-FARF-buy-IRR
    ‘It will buy.’

(59) a) SR  ba-la-mw-ii-lum-ir-a.
    UR /ba-la-mu-i-lum-ir-a/
    3plS-HODF-3sgO-RFL-bite-APPL-IND
    ‘They will bite themselves for him/her.’

    b) SR  mw-aakha-kul-e.
    UR /mu-akha-kul-e/
    2plS-FARF-buy-IRR
    ‘You (pl.) will buy.’

7.3.4 Suffix-suffix combinations

Dissimilar vowel sequences across suffix boundaries are seen when the causative and passive suffixes are followed by the inflectional final suffix (IFS), as in (60) and (61).

(60) SR  lúm-y-a!40
    UR /lum-i-a/
    bite-CAUS-sgS
    ‘Make bite!’

---

40If we add =yo to these forms they do not produce length: lum-y-a=yo
The output, as these examples show, has a glide corresponding to the first vowel. A short vowel corresponds to the second vowel because long vowels do not occur word-finally in Kisa, as stated earlier.

7.3.5 Root-internal combinations

There are both verb and noun roots in Kisa with the structure C-glide-long vowel, as shown in (62) and (63).

(62) lwáán-a!
    wrestle-sgS
    ‘Wrestle!’

(63) shyáám-a!
    be crooked-sgS
    ‘Be crooked!’

There are two possible explanations for root-internal C-glide-long vowel structures. One is to propose that the surface forms are identical to the underlying forms. The other is to posit that these structures have sequences of dissimilar vowels in the underlying representation, as shown in (64) and (65), based on the heteromorphemic patterns discussed in the preceding subsections.

(64) lúán-a!
    wrestle-sgS
    ‘Wrestle!’

(65) shíám-a!
    be crooked-sgS
    ‘Be crooked!’
I propose that the second account is preferable because in morphologically complex forms there is an alternation between glide + Vowel-Vowel forms and high Vowel-Consonant forms. Consider (66) and (67).

\[(66)\]  
\begin{align*}  
a) & \quad \text{SR} \quad o-lw-ááná \\
& \quad \text{UR} \quad /o-lu-ana/ \\
& \quad \text{AUG-11-child} \\
& \quad \text{‘childishness’} \\
\end{align*}

\begin{align*}  
b) & \quad o-lu-kán-ó \\
& \quad \text{AUG-11-tell a folk tale-NAG} \\
& \quad \text{‘a folk tale’} \\
\end{align*}

\[(67)\]  
\begin{align*}  
a) & \quad \text{SR} \quad e-shy-áámá \\
& \quad \text{UR} \quad /e-shi-ama/ \\
& \quad \text{AUG-7-social club} \\
& \quad \text{‘social club’} \\
\end{align*}

\begin{align*}  
b) & \quad e-shi-lám-ú \\
& \quad \text{AUG-7-live-QUAL} \\
& \quad \text{‘a live one’} \\
\end{align*}

### 7.3.6 Three vocalic mora sequences

Sequences of three vocalic moras occur in Kisa. Consider (68).

\[(68)\]  
\begin{align*}  
a) & \quad b-aa-al-a \\
& \quad 3\text{plS-REMP-spread-IND} \\
& \quad \text{‘they spread’} \\
\end{align*}

\begin{align*}  
b) & \quad b-aa-ey-a \\
& \quad 3\text{sgS-REMP-sweep-IND} \\
& \quad \text{‘they swept’} \\
\end{align*}

\begin{align*}  
c) & \quad b-aa-ol-a. \\
& \quad 3\text{plS-REMP-reach-IND} \\
& \quad \text{‘They reached.’} \\
\end{align*}
d)  $b$-aa-its-a.$^{41}$
    3plS-REMP-come-IND
    ‘They came.’

The data in (68b-d) show that the third vowel does not assimilate.

### 7.3.7 Prefix vowel deletion

The remote/hesternal and far past prefixes are $aa$- and $a$- respectively, as seen in (69).

(69)  a)  $b$-aa-kul-a
    3plS-REMP-buy-IND
    ‘they bought’ (a long time ago)

    b)  $b$-a-kul-a
    3plS-FARP-buy-IND
    ‘they bought’ (some time back)

These prefixes can be preceded by a prefix ending with the low vowel /a/, as (70) and (71) show.

(70)  SR  $b$-aa-kul-a
    UR  /ba-aa-kul-a/
    3plS-REMP-buy-IND
    ‘they bought’ (a long time ago)

(71)  SR  $b$-a-kul-a
    UR  /ba-a-kul-a/
    3plS-FARP-buy-IND
    ‘they bought’ (some time back)

Two and three vocalic mora sequences occur in Kisa, as discussed above. However, the output in (70) has two vocalic moras when we expect three, as are present in the underlying form. On the other hand, the output in (71) has one vocalic mora when we expect the two seen in the underlying form.

$^{41}$Kisa does not have stem-initial [y] in this context.
Therefore, I propose that the final vowel of the first prefix is deleted in this context.

The remote/hesternal past prefix \textit{aa-} and the far past prefix \textit{a-} can also be preceded by a prefix ending with a [+]high] vowel, as illustrated in (72) and (73).

\begin{itemize}
  \item[(72)]
    \begin{itemize}
      \item a) SR \textit{mw-aa-kul-a}
        
        UR /\textit{mu-aa-kul-a/}
        
        2plS-REMP-buy-IND
        
        ‘you (pl.) bought’ (a long time ago)
      \item b) SR \textit{shy-aa-kul-a}
        
        UR /\textit{shi-aa-kul-a/}
        
        7S-REMP-buy-IND
        
        ‘it bought’ (a long time ago)
    \end{itemize}
\end{itemize}

\begin{itemize}
  \item[(73)]
    \begin{itemize}
      \item a) SR \textit{mw-a-kul-a}
        
        UR /\textit{mu-a-kul-a/}
        
        2plS-FARP-buy-IND
        
        ‘you (pl.) bought’ (some time back)
      \item b) SR \textit{shy-a-kul-a}
        
        UR /\textit{shi-a-kul-a/}
        
        7S-FARP-buy-IND
        
        ‘it bought’ (some time back)
    \end{itemize}
\end{itemize}

The output, as these examples show, has a glide corresponding to the first vowel. As in other prefix-prefix contexts, we would expect the output in (73) to have a sequence of two vocalic moras. We would also expect the output in (72) to have the three vocalic moras which we see in the underlying form. However, this is not the case. I posit that the vocalic mora of the first vowel is deleted like other vocalic moras in this context, as discussed above.
7.3.8 Gemination and gliding

The process of gliding may result in the creation of geminate glides if the first vowel is preceded by a glide in the input. Gliding results in the creation of geminate glides when the glide preceding the first vowel is provided by the root:

\[(74)\]

a) SR \(yy-áá = yó!\)
    UR /yi-a=yo/
    be hot/burn-sgS=there
    ‘Be hot/burn there!’

b) SR \(yy-éé = yó!\)
    UR /yi-e=yo/
    be hot/burn-plS=there
    ‘Be hot/burn there!’

c) SR \(húúy-y-a!\)
    UR /huuy-i-a/
    migrate-CAUS-sgS
    ‘Make migrate!’

d) SR \(o-lú-lúûyyá\)
    UR /o-lu-luuyia/
    AUG-11-luhya
    ‘the Luhya language’

7.3.9 Gliding and the cluster (\(nd\))

The process of gliding results in different outputs when the first vowel is preceded by the cluster (\(nd\)). The first vowel must change into a glide if the cluster or the consonant in the cluster is provided by the root:

\[(75)\]

a) SR \(lóónd-y-a!\)
    UR /loond-i-al/
    follow-CAUS-sgS
    ‘Make follow!’
When the cluster belongs to a prefix and the second vowel belongs to the root, gliding applies variably, as the following examples show.
However, if the cluster and the second vowel are both provided by a prefix, gliding cannot take place, and progressive assimilation occurs instead (see section 7.4). Consider (80).

(80) a) SR nda-akha-kul-e
    UR /ndi-akha-kul-e/
    1sgS-FARF-buy-IRR
    ‘I will buy’

b) SR *ndy-aakha-kul-e
    UR /ndi-akha-kul-e/
    1sgS-FARF-buy-IRR
    ‘I will buy’

7.3.10 Proclitic-host combinations

Proclitic-host vowel hiatus resolution takes the patterns shown in table 7.4.

---

42/ndi-/ is the only prefix in Kisa that has a cluster followed by a vowel.
Table 7.4: Proclitic-host vowel hiatus resolution patterns

<table>
<thead>
<tr>
<th>Vowel 1</th>
<th>Vowel 2</th>
<th>Output</th>
</tr>
</thead>
<tbody>
<tr>
<td>i</td>
<td>e</td>
<td>ee</td>
</tr>
<tr>
<td></td>
<td>a</td>
<td>aa</td>
</tr>
<tr>
<td></td>
<td>o</td>
<td>oo</td>
</tr>
<tr>
<td>e</td>
<td>i</td>
<td>ei</td>
</tr>
<tr>
<td></td>
<td>a</td>
<td>aa</td>
</tr>
<tr>
<td></td>
<td>o</td>
<td>oo</td>
</tr>
<tr>
<td>a</td>
<td>i</td>
<td>ei</td>
</tr>
<tr>
<td></td>
<td>e</td>
<td>ee</td>
</tr>
<tr>
<td></td>
<td>o</td>
<td>oo</td>
</tr>
<tr>
<td>o</td>
<td>i</td>
<td>oi</td>
</tr>
<tr>
<td></td>
<td>e</td>
<td>ee</td>
</tr>
<tr>
<td></td>
<td>a</td>
<td>aa</td>
</tr>
<tr>
<td>u</td>
<td>i</td>
<td>ii</td>
</tr>
<tr>
<td></td>
<td>e</td>
<td>ee</td>
</tr>
<tr>
<td></td>
<td>a</td>
<td>aa</td>
</tr>
<tr>
<td></td>
<td>o</td>
<td>oo</td>
</tr>
</tbody>
</table>

Table 7.4 shows that the mid vowels can appear as the first vowel in proclitic-host sequences. It also shows that there are no examples of /u/ as a second vowel. This is because words in Kisa do not begin with the high back vowel /u/, as discussed in section 3.2.2.

The general pattern at this boundary is complete assimilation of the first vowel to the second vowel:

(81)  a) SR: *she=en-da-kul-a=tá.*

b) SR: *sha=a-la-kul-a=tá.*
(82) a) SR  
\[ \text{yá=á-lá-mú-búkúl-a.} \]  
\[ /ye=a-la-mu-bukul-a/ \]  
3sg=3sgS-HODF-3sgO-take-IND  
‘S/he will take him/her.’  

(83) a) SR  
\[ \text{b-é=en-dá-bá-búkúl-a.} \]  
\[ /b-o=en-la-ba-bukul-a/ \]  
2-PRO=1sgS-HODF-3plO-take-IND  
‘I will take them.’  

(84) a) SR  
\[ \text{ne=e-shi-kápó} \]  
\[ /na=e-shi-kapo/ \]  
With=AUG-7-basket  
‘with the basket’  

(85) a) SR  
\[ \text{a-bóól-éré} \quad mbi=i-n-gálí \]  
\[ /a-bóól-éré \quad mbu=i-n-gálí \]  
3sgS-say/speak-HODP that=AUG-9b/c-big  

\[ \text{ni=i-n-dáyí.} \]  
\[ \text{ni-i-n-dáyí/} \]  
is-AUG-9b/c-good  
‘S/he said that the big one is good.’
b) SR  a-bóól-éré   mbe=en-da-kul-a.  
UR  /a-bool-ere   mbu=en-la-kul-a/  
3sgS-say/speak-HODP  that=1sgS-buy-IND  
’S/he said that I will buy.’

c) SR  a-bóól-éré   mba=a-la-kul-a.  
UR  /a-bool-ere   mbu=a-la-kul-a/  
3sgS-say/speak-HODP  that=3sgS-buy-IND  
’S/he said that s/he will buy.’

d) SR  a-bóól-éré   mbo=o-la-kul-a.  
UR  /a-bool-ere   mbu=o-la-kul-a/  
3sgS-say/speak-HODP  that=2sgS-buy-IND  
’S/he said that you (sg.) will buy.’

All the exceptions have a high vowel as the second vowel. When the first vowel is a mid-vowel, there is no assimilation:

(86) a)  yé=í-m-bwá!  
3sg=AUG-9b-dog  
‘S/he a dog!’

b)  b-ó= í-m-bwá!  
2-PRO=AUG-9b-dog  
‘They a dog!’

When the first vowel is a low vowel, there is progressive assimilation:

(87) SR  né=íkúlú  
UR  /na=ikulu/  
with=up  
‘up as well’

As we saw in section 6.3.1, proclitics are different from prefixes in that they do not show gliding. A prefix-final [+high] vowel changes to a glide when followed by a different vowel:
(88) a) SR  
\textit{e-shy-ááchí}  
\textit{/e-shi-achi/}  
AUG-7-granary  
‘a/the granary’

b) SR  
\textit{shy-aakha-kw-e}  
\textit{/shi-akha-ku-e/}  
7S-FARF-fall-IRR  
‘It will fall.’

(89) a) SR  
\textit{o-mw-ááná}  
\textit{/o-mu-ana/}  
AUG-1-child  
‘a/the child’

b) SR  
\textit{mw-aakha-kw-e}  
\textit{/mu-akha-ku-e/}  
2plS-FARF-fall-IRR  
‘You (pl.) will fall.’

However, a proclitic-final [+high] vowel does not become a glide in this context:

(90) SR  
\textit{sha=a-la-kul-a=tá.}  
\textit{/shi=a-la-kul-a=tá/}  
NEG=3sgS-HODF-buy-IND=no  
‘S/he will not buy.’

(91) SR  
\textit{ba-la-súkún-a mba=a-búkúl-e.}  
\textit{/ba-la-sukun-a mbu=a-bukul-e/}  
3plS-HODF-throw-IND so that=3sgS-take-SUB  
‘They will throw so that s/he takes.’

Clitics can themselves be morphologically complex and involve prefixation. The root in third person pronominal clitics (see section 6.4), the proclitic ‘of’ (see section 6.3.2), and second and third person singular monomoraic possessive enclitics (see section 6.2.2) take agreement prefixes. Consider the following data:
When these clitics occur as proclitics vowel deletion occurs:

(93) a) SR \(b-\dot{o} = b\-\dot{a}\-k\-\dot{u}l\-\dot{\text{-ire}}\)  
UR \(/ba-o=ba-kul-ire/\)  
2-PRO=3plS-buy-HODP  
‘they bought’

b) SR \(b-a=m\-\dot{a}\-\dot{a}m\-\text{\text{-a}}\)  
UR \(/ba-a=maama/\)  
2-CM=mother  
‘mother’s’

(94) a) SR \(b-\dot{a}=\dot{a}\-l\-\dot{a}\-b\-\dot{u}k\-\dot{u}l\-\text{-a.}\)  
UR \(/ba-o=la-bukul-a/\)  
2-PRO=3sgS-HODF-take-IND  
‘S/he will take them.’

b) SR \(b-\dot{a}=\dot{a}\-b\-\dot{a}m\-\text{-a}\)  
UR \(/ba-a=ba-an\-a/\)  
2-CM=AUG-2-child  
‘the children’s’

The underlying forms in the examples in (93) have a sequence of two vocalic moras, while the surface forms have one. In (94) we see a sequence of three vocalic moras in the underlying forms and a sequence of two

---

43 These clitics cannot be used in isolation.
vocalic moras in the surface forms. Two and three vocalic mora sequences occur in Kisa, as discussed in section 7.3.6. Given that they do not surface in the forms in (93-94) when we expect them to I propose that the final vowel of the prefix that precedes the proclitic is deleted in this context.

If the final vowel of the prefix is [+high] it becomes a glide, and its mora is deleted, as the following data show.

(95)  
<table>
<thead>
<tr>
<th></th>
<th>SR</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>a)</td>
<td>SR</td>
<td><em>by-ó</em>=bá-kúl-írê.</td>
</tr>
<tr>
<td>UR</td>
<td>/bi-ó/=ba-kul-ire/</td>
<td></td>
</tr>
<tr>
<td></td>
<td>8-PRO=3plS-buy-HODP</td>
<td></td>
</tr>
<tr>
<td></td>
<td>‘They bought them.’</td>
<td></td>
</tr>
<tr>
<td>b)</td>
<td>SR</td>
<td><em>bw-a</em>=máámá</td>
</tr>
<tr>
<td>UR</td>
<td>/bu-a/=máámá/</td>
<td></td>
</tr>
<tr>
<td></td>
<td>14-CM=mother</td>
<td></td>
</tr>
<tr>
<td></td>
<td>‘mother’s’</td>
<td></td>
</tr>
</tbody>
</table>

(96)  
<table>
<thead>
<tr>
<th></th>
<th>SR</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>a)</td>
<td>SR</td>
<td><em>by-á</em>=á-lá-búkúl-a.</td>
</tr>
<tr>
<td>UR</td>
<td>/bi-ó/=a-la-bukul-a/</td>
<td></td>
</tr>
<tr>
<td></td>
<td>8-PRO=3sgS-HODF-take-IND</td>
<td></td>
</tr>
<tr>
<td></td>
<td>‘S/he will take them.’</td>
<td></td>
</tr>
<tr>
<td>b)</td>
<td>SR</td>
<td><em>bw-a</em>=a-bá-áná</td>
</tr>
<tr>
<td>UR</td>
<td>/bu-a/=a-ba-ana/</td>
<td></td>
</tr>
<tr>
<td></td>
<td>14-CM=AUG-2-child</td>
<td></td>
</tr>
<tr>
<td></td>
<td>‘the children’s’</td>
<td></td>
</tr>
</tbody>
</table>

After deletion, vowel hiatus resolution follows the patterns shown in table 7.4, as the following data exemplify.

(97)  
<table>
<thead>
<tr>
<th></th>
<th>SR</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>a)</td>
<td>SR</td>
<td><em>shy-e</em>=e-shi-kóómbé</td>
</tr>
<tr>
<td>UR</td>
<td>/shi-a/=e-shi-koombe/</td>
<td></td>
</tr>
<tr>
<td></td>
<td>7-CM=AUG-7-cup</td>
<td></td>
</tr>
<tr>
<td></td>
<td>‘the cup’s’</td>
<td></td>
</tr>
</tbody>
</table>
7.4 Progressive assimilation

Progressive assimilation in Kisa involves the total assimilation of the second of two vowels in a sequence to the first vowel, and is found only in prefix-prefix combinations. There are only two /i/ initial prefixes which normally follow a vowel final prefix, the reflexive prefix i- and the first person singular object prefix iny-. The first person singular object prefix iny- shows progressive assimilation, whereas the reflexive prefix i- does not.

The first person singular object prefix is iny-, as seen in (100).
(100) o-la-shi-iny-in-ir-a.
2sgS-HODF-7O-1sgO-dip-APPL-IND
‘You (sg.) will dip it for me.’

When this object prefix is preceded by a prefix ending with the low vowel /a/, the output is a long vowel corresponding to the first vowel. Consider (101).

(101) SR o-la-ba-ambáák-ir-a.
UR /o-la-ba-iny-paak-ir-a/
2sgS-HODF-3plO-1sgO-cheer-APPL-IND
‘You (sg.) will cheer them for me.’

When preceded by a prefix ending with the high back vowel /u/, the output is a long vowel corresponding to the first vowel, as in (102).

(102) SR ba-la-mu-un-dóól-ér-a.
UR /ba-la-mu-iny-tool-er-a/
3plS-HODF-3sgO-1sgO-pick-APPL-IND
‘They will pick him/her up for me.’

7.5 Word-internal assimilation and gliding in loans

Loans show the same vowel assimilation and gliding patterns discussed above. At an affix-root boundary, the output is a long mid vowel when the first vowel is [+low] and the second vowel is [-low], as the following examples show.

(103) SR ba-la-bé-ékisáámín-a.
UR /ba-la-ba-ekisaamin-a/
3plS-HODF-3plO-examine-IND
‘They will examine them.’

(104) SR ba-la-bó-óféénd-a.
UR /ba-la-ba-ojeend-a/
3plS-HODF-3plO-offend-IND
‘They will offend them.’
If the first vowel is [+high] and the second vowel is any of the other four vowels in the language, the output has a glide corresponding to the first vowel and a long vowel corresponding to the second vowel, as the data below illustrate.

(106) SR  
\textit{ba-la-shy-óóféénd-a.}  
\begin{tabular}{l}
UR \\
\textit{ba-la-shi-ofeend-a/}
\end{tabular}  
3plS-HODF-7O-offend-IND  
‘They will offend it.’

(107) SR  
\textit{ba-la-mw-íírítéét-a.}  
\begin{tabular}{l}
UR \\
\textit{ba-la-mu-iriteet-a/}
\end{tabular}  
3plS-HODF-2sgO-irritate-IND  
‘They will irritate him/her.’

Proclitic-host combinations with loan hosts also show the same vowel assimilation patterns as with native hosts:

(108) SR  
\textit{ne=e-ly-áábákáátó}  
\begin{tabular}{l}
UR \\
\textit{ni=e-li-abakaato/}
\end{tabular}  
is=AUG-5b-avocado  
‘it is an avocado’

(109) SR  
\textit{ne=i-Ø-káláámú}  
\begin{tabular}{l}
UR \\
\textit{na=i-Ø-káláámú/}
\end{tabular}  
with=AUG-9a-pen  
‘with a pen’

### 7.6 Vowel assimilation across word boundaries

There are no words in Kisa beginning with the high back vowel /u/, as stated earlier. Gliding does not occur across word boundaries, as mentioned
in section 7.1. Vowel assimilation in word-word combinations show the patterns given in table 7.5.

Table 7.5: Kisa word-word vowel hiatus resolution patterns

<table>
<thead>
<tr>
<th>Vowel 1</th>
<th>Vowel 2</th>
<th>Output</th>
</tr>
</thead>
<tbody>
<tr>
<td>i</td>
<td>e</td>
<td>ee</td>
</tr>
<tr>
<td></td>
<td>a</td>
<td>aa</td>
</tr>
<tr>
<td></td>
<td>o</td>
<td>oo</td>
</tr>
<tr>
<td>e</td>
<td>i</td>
<td>ei</td>
</tr>
<tr>
<td></td>
<td>a</td>
<td>aa</td>
</tr>
<tr>
<td></td>
<td>o</td>
<td>oo</td>
</tr>
<tr>
<td>a</td>
<td>i</td>
<td>ai</td>
</tr>
<tr>
<td></td>
<td>e</td>
<td>ee</td>
</tr>
<tr>
<td></td>
<td>o</td>
<td>oo</td>
</tr>
<tr>
<td>o</td>
<td>i</td>
<td>oi</td>
</tr>
<tr>
<td></td>
<td>e</td>
<td>ee</td>
</tr>
<tr>
<td></td>
<td>a</td>
<td>aa</td>
</tr>
<tr>
<td>u</td>
<td>i</td>
<td>ui</td>
</tr>
<tr>
<td></td>
<td>e</td>
<td>ee</td>
</tr>
<tr>
<td></td>
<td>a</td>
<td>aa</td>
</tr>
<tr>
<td></td>
<td>o</td>
<td>oo</td>
</tr>
</tbody>
</table>

This table shows that across word boundaries the first vowel assimilates totally to the following second vowel, as was the case with proclitic-host and root-affix combinations:

(110) a)  
SR  | e-mi-káché  | e-my-áángú  
UR  | /e-mi-kachi | e-mi-angu/  
AUG-4-maize stalk | AUG-4-light  
‘light maize stalks’

b)  
SR  | a-má-áná  | a-má-ánjí  
UR  | /a-ma-ani | a-ma-anji/  
AUG-6-strength | AUG-6-many  
‘a lot of strength’
<table>
<thead>
<tr>
<th>Number</th>
<th>a</th>
<th>b</th>
</tr>
</thead>
<tbody>
<tr>
<td>(111)</td>
<td>SR</td>
<td>c) ( o-mu-\text{khásó} ) &amp; ( o-mw-\text{áängú} ) ( /o-mu-\text{khásí} ) &amp; ( o-mu-\text{angu}/ ) AUG-1-woman &amp; AUG-1-light 'a light woman'</td>
</tr>
<tr>
<td></td>
<td>UR</td>
<td>( /o-mu-\text{khásí} ) &amp; ( o-mu-\text{angu}/ ) AUG-1-light</td>
</tr>
<tr>
<td>(112)</td>
<td>SR</td>
<td>a) ( a-ma-\text{yeémbe} ) &amp; ( a-mé-\text{ängú} ) ( /a-má-\text{yeembe} ) &amp; ( a-ma-\text{engu}/ ) AUG-6-mango &amp; AUG-6-ripe 'ripe mangoes'</td>
</tr>
<tr>
<td></td>
<td>b) ( o-mu-\text{reéndó} ) &amp; ( o-mw-\text{áängú} ) ( /o-mu-\text{reende} ) &amp; ( o-mu-\text{angu}/ ) AUG-1-neighbour &amp; AUG-1-light 'a light neighbour'</td>
<td></td>
</tr>
<tr>
<td>(113)</td>
<td>SR</td>
<td>a) ( e-mi-\text{kňáné} ) &amp; ( e-my-\text{áängú} ) ( /e-mi-\text{kňááná} ) &amp; ( e-mi-\text{angu}/ ) AUG-1-girl &amp; AUG-1-light 'huge light girls'</td>
</tr>
<tr>
<td></td>
<td>b) ( o-mw-\text{áánó} ) &amp; ( o-mw-\text{áängú} ) ( /o-mu-\text{ana} ) &amp; ( o-mu-\text{angu}/ ) AUG-1-child &amp; AUG-1-light 'a light child'</td>
<td></td>
</tr>
<tr>
<td>(114)</td>
<td>SR</td>
<td>a) ( e-bi-\text{tábé} ) &amp; ( e-by-\text{áängú} ) ( /e-bi-\text{tábú} ) &amp; ( e-bi-\text{angu}/ ) AUG-8-book &amp; AUG-8-light 'light books'</td>
</tr>
<tr>
<td></td>
<td>b) ( a-ma-\text{khútá} ) &amp; ( a-má-\text{ánjí} ) ( /a-ma-\text{khutu} ) &amp; ( a-ma-\text{anjí}/ ) AUG-6-tortoise &amp; AUG-6-many 'many tortoises'</td>
<td></td>
</tr>
</tbody>
</table>
There is no assimilation whatsoever to a following [+high] [-back] vowel. Consider the following examples.

(115) a) \( i\-Ø\-ng’óómbé \) \( i\-Ø\-khóméfú \)
AUG-9b-cow AUG-9b/c-fat
‘a fat cow’

b) \( i\-Ø\-nyámá \) \( i\-ny\-ómú \)
AUG-9b-meat AUG-9b/c-dry
‘a dry meat’

c) \( i\-n\-gókhó \) \( i\-Ø\-síró \)
AUG-9b-chicken AUG-9b/c-heavy
‘a heavy chicken’

d) \( i\-Ø\-kútú \) \( i\-ny\-ómú \)
AUG-9a-rust AUG-9b/c-dry
‘a dry rust’

7.7 Vowel assimilation across word boundaries in loans

Loans into Kisa show the assimilation patterns discussed above. Consider (116-117).

(116) a) \( SR\ o\-mu\-náásó \) \( o\-mw\-dáángú \)
UR \( /o\-mu\-naasi \) \( o\-mu\-angu/ \)
AUG-1-nurse AUG-1-light
‘a light nurse’

b) \( SR\ e\-mi\-kótsóré \) \( e\-my\-dáángú \)
UR \( /e\-mi\-kotsoro \) \( e\-mi\-angu/ \)
AUG-4-mattress AUG-4-light
‘light mattresses’
7.8 Apocope

Apocope is found in the speech of Kisa speakers born after the mid-1960s, but not in the speech of those born before then. Apocope in Kisa occurs across word boundaries within phrases and at the end of words in phrase-final position. Apocope is used as a vowel hiatus resolution strategy phrase-internally when a following word begins with a vowel.

Synchronically, apocope is obligatory in phrase-final position, as (118) shows. The only exception is in phrases that have a single sub-minimal word. Consider (119).

(118) a)  
<table>
<thead>
<tr>
<th>SR</th>
<th>b-a-sikam.</th>
</tr>
</thead>
<tbody>
<tr>
<td>UR</td>
<td>b-a-sikam-a</td>
</tr>
<tr>
<td></td>
<td>3pl-FARP-kneel-IND</td>
</tr>
<tr>
<td></td>
<td>‘They knelt.’</td>
</tr>
</tbody>
</table>
b) SR  bükül-a  Ø-lií-síkám!
UR  bukul-a  Ø-liii-sikam-o
  take-sgS  AUG-5a-kneel-NAG
  ‘Take the knee!’

c) SR  o-mw-ááná  y-a-kw.
UR  o-mu-ana  y-a-ku-a
  AUG-1-child  3sgS-FARP-fall-IND
  ‘The child fell.’

(119) a)  kw-á!
  fall-sgS
  ‘Fall!’

b)  só!
  father
  ‘Father!’

Within phrases, apocope is obligatory except when:

(120) a)  The following word is consonant-initial

b)  The following word has an initial high front vowel

c)  The second syllable of the following word has a long vowel

The fact that apocope does not take place when the following word begins
with a consonant or a high front vowel is exemplified in (121) and (122)
respectively.

(121) SR  o-téékh-ááng-a  kádlá  mún.
UR  /o-teekh-aang-a  kádlá  mun/  2sgS-cook-IPFV-IND  slowly very
  ‘You (sg.) are cooking very slowly.’
The data in (123) illustrate the fact that apocope does not occur when the following word has a long vowel in the second syllable:

(123) SR  
\[ ba-la-búkúl-e \quad e-my-áábákááté \]

3plS-FARP-take-IND AUG-4-avocado

\[ e-shi-i-kha=bír. \]

\[ e-shi-i-kha=biri/ \]

AUG-7-RFL-FM=two

‘They will take twice the avocadoes.’

Note that in these examples the final vowel of a preceding word totally assimilates to the following vowel if it is not identical to it, except when the following vowel is the high front vowel /i/. This conforms to the vowel assimilation patterns across word boundaries discussed in section 7.6.

The data in (124) exemplify the fact that apocope applies obligatorily within phrases when none of the situations in (120) holds.

(124) a) SR  
\[ b-a-búkál \quad o-mu-kháán \quad o-mu-kál \]

3plS-FARP-take AUG-1-girl AUG-1-big

\[ o-mu-láy. \]

\[ o-mu-layi/ \]

AUG-1-good

‘They took a very big good girl.’
Apocope does not occur in a phrase consisting of a single sub-minimal word, as stated earlier. However, when open monosyllabic word forms appear phrase-internally, apocope applies following the patterns discussed above (see the principles in (120)), as the following examples illustrate.

(125) SR  
\[
\begin{array}{lll}
r-á & Ø-tsín-do & háás!
\end{array}
\]
UR  
\[
\begin{array}{lll}
r-a & Ø-tsiin-do & haasi/
\end{array}
\]
put-sgS  
\[
\begin{array}{ll}
\text{AUG-10b-bucket} & \text{down}
\end{array}
\]
‘Put the buckets down!’

(126) SR  
\[
\begin{array}{lll}
r-á & i-Ø-kálaamú & háás!
\end{array}
\]
UR  
\[
\begin{array}{lll}
r-a & i-Ø-kalaamu & haasi/
\end{array}
\]
put-sgS  
\[
\begin{array}{ll}
\text{AUG-9a-pen} & \text{down}
\end{array}
\]
‘Put the pen down!’

(127) SR  
\[
\begin{array}{lll}
r-ó & o-mw-ááná & hán!
\end{array}
\]
UR  
\[
\begin{array}{lll}
r-a & o-mu-ana & hano/
\end{array}
\]
put-sgS  
\[
\begin{array}{ll}
\text{AUG-1-child} & \text{here}
\end{array}
\]
‘Put the child here!’

(128) SR  
\[
\begin{array}{lll}
r & e-shi-kápó & hán!
\end{array}
\]
UR  
\[
\begin{array}{lll}
r-a & e-shi-kapo & hano/
\end{array}
\]
put-sgS  
\[
\begin{array}{ll}
\text{AUG-7-basket} & \text{here}
\end{array}
\]
‘Put the basket here!’

Apocope leaves singleton consonants, homorganic nasal consonant (NC), Cy/w, and NOy/w sequences at the end of words. Consider the following examples.
Summary

This chapter looked at how vowel hiatus is resolved in Kisa. It showed that there are three methods used in resolving vowel hiatus in Kisa, assimilation, gliding, and apocope.

Assimilation affects combinations of vowels across affix-affix, root-affix, proclitic-host, and word boundaries. There is no positive evidence for assimilation in root-internal combinations. Assimilation in Kisa is regressive, where the first vowel totally assimilates to the second vowel. However, there are exceptions:

(133) a) There is partial bidirectional assimilation at an affix-root boundary when the first vowel is [+low] and the second vowel is [+high]. The result is a long mid vowel.
b) We get total progressive assimilation at a prefix-prefix boundary when the second vowel is the high front vowel /i/ (except the vowel of the reflexive prefix).

c) Partial progressive assimilation occurs at a proclitic-host boundary when the first vowel is [+low] and the second vowel is [+high]. In this case the output has a mid vowel corresponding to the first vowel followed by the [+high] vowel of the host.

d) There is no assimilation at a proclitic-host boundary when the first vowel is a mid vowel and the second vowel is [+high].

e) Across word boundaries there is no assimilation whatsoever when the second vowel is [+high].

As outlined above, total regressive assimilation fails to occur only in cases where the output would be a long high vowel, and progressive assimilation also occurs only when the output would be a long high front vowel. This may be connected to the observation made in section 3.2.2 that the phonetic realization of the long high vowels is possibly different from that of the other vowels.

Gliding does not occur across proclitic-host and word boundaries. However, it applies root-internally, between affixes, and between affixes and roots. A [+high] vowel, as the first vowel, must change to a glide. However, there are two exceptions. It does not become a glide when it occurs at a prefix-root boundary and is preceded by a glide. It also does not change to a glide when it occurs at a prefix-prefix boundary and is preceded by the cluster (nd). At a prefix-root boundary this vowel may or may not change to a glide when preceded by the cluster (nd).

Apocope obligatorily occurs phrase-finally. The only exception is in phrases consisting of a single sub-minimal word. Apocope also occurs obligatorily
across word boundaries phrase-internally, except when a following word is consonant-initial, begins with the high front vowel /i/, or has a long vowel in the second syllable.

Apocope creates simple and complex codas at the end of words in Kisa. Simple codas can be any of the consonantal phonemes in the language. Complex codas can be made of two or three consonants. Biconsonantal codas may consist of any of the consonantal phonemes in the language followed by a glide or they may be NC sequences. Triconsonantal codas are made up of NCy/w sequences. Simple as well as complex codas contribute a single mora to a preceding syllable only when preceded by a short vowel. When preceded by a long vowel they do not do this.
8.1 Introduction

There are five homorganic nasal consonant sequences in Kisa, [mb], [nd], [ndʒ] (nz), [ndʒ] (nj), and [ŋŋ] (ng). These sequences can be tautomorphemic or heteromorphemic. Homorganic nasal consonant sequences can be found word-initially and word-medially, as the following examples show.

(1) mbáángá
awkward
‘awkward’

(2) e-shi-báámbálá
AUG-7-dry fish
‘dry fish’

(3) i-n-gúbó
AUG-9b-clothing
‘clothing’

They can also be found word-finally in apocopated forms, as in (4).

(4) bwááng
quickly
‘quickly’

This chapter has two objectives. The first is to describe the phonological processes that occur when nasals are concatenated with other consonants in Kisa. The second is to explain when homorganic nasal consonant sequences are preceded by a long or a short vowel. The chapter begins with a discussion of the phonological processes involving nasal consonant sequences in Kisa (section 8.2), followed by a description of nasal consonant (NC) sequences (section 8.3). Section 8.4 looks at phonological
analyses of NC sequences in Bantu. Section 8.5 is a summary of the chapter.

8.2 Heteromorphemic nasal + consonant sequences

Word formation in Kisa often involves the creation of nasal + consonant sequences. This occurs when there is a nasal-final prefix and the following morpheme begins with a consonant. All the prefixes that end with a nasal in Kisa are listed in (5).


When nasals are concatenated with consonants, assimilation or deletion occurs.

8.2.1 Post-nasal voicing

In Kisa nasal-final prefixes can be concatenated with roots beginning with a stop or an affricate, as in (6-7).

(6) SR en-duku-t-a
    UR /eny-tukut-a/
    1sgS-stir-IND
    ‘I stir’

(7) SR en-zukh-a
    UR /eny-tsukh-a/
    1sgS-pour-IND
    ‘I pour’

As there are no voiced obstruents (except the bilabial fricative /β/) in the Kisa segmental inventory (see table 3.1), these examples show that when voiceless obstruents are preceded by a nasal, the nasal has a voicing effect.
on them. As a result, the obstruent in prefix-root NC sequences is always voiced.

The NC sequences discussed above also occur root-internally, as seen in (8).


The data in (8) show that the obstruent in root-internal NC sequences is also voiced. This could be interpreted in two ways. The first analysis would be that the obstruent is voiced both in the underlying and surface representations. The second interpretation is that it is voiceless in the underlying representation.

I propose that the obstruent in root-internal NC sequences be analysed as being voiceless in the underlying representation for two reasons. First, with the exception of the bilabial fricative /β/, voiced obstruents do not otherwise occur independently in Kisa, as we saw in section 3.2.1. The only environment where we encounter the voiced counterparts of these consonants is after a nasal. Second, the analysis of heteromorphemic NC sequences shows that the obstruent is voiceless in the underlying representation.

8.2.2 Nasal place assimilation

The nasal in nasal-final prefixes is underlyingly /n̥ny/, as (9) shows.

(9) a) b-a-any-in-a
3plS-FARP-1sgO-dip-IND
‘they dipped me’
b)  \( b-a-\text{any}-\text{eny-a} \)

\[ 3\text{plS-FARP-1sgO-want-IND} \]

‘they wanted me’

When this nasal is followed by obstruents, the nasal in the ensuing NC sequences assimilates in place of articulation to the following obstruent, as the following examples show.

(10) SR  \( \text{em-báák-a} \)
    UR  \( /\text{eny-paak-a/} \)
    1sgS-cheer-IND
    ‘I cheer’

(11) SR  \( \text{en-dukut-a} \)
    UR  \( /\text{eny-tukut-a/} \)
    1sgS-stir-IND
    ‘I stir’

(12) SR  \( \text{en-zúún-a} \)
    UR  \( /\text{eny-tsaun-a/} \)
    1sgS-stir-IND
    ‘I stir’

(13) SR  \( \text{en-jáák-a} \)
    UR  \( /\text{eny-chaak-a/} \)
    1sgS-strat-IND
    ‘I start’

(14) SR  \( \text{en-gul-a} \)
    UR  \( /\text{eny-kul-a/} \)
    1sgS-stir-IND
    ‘I stir’

8.2.3 Nasal deletion

When prefixes ending with a nasal are followed by roots beginning with a fricative (except /\( β \)/), a nasal, a glide, or the trill /\( r \)/, the nasal of the prefix is deleted, as in (15-18).
There is one exceptional environment where the final nasal of a prefix is not deleted before the trill /ɾ/. This occurs only with class 9b and class 10b nouns. The trill /ɾ/ of a class 9b/10b noun root changes to the alveolar stop [d] when preceded by a prefix ending with a nasal, as (19) shows.

(19) a) SR
   UR /i-ny-rabu/
   AUG-9b-pot
   ‘a/the pot’

b) SR
   UR /Ø-tsííny-rabu/
   AUG-10b-pot
   ‘pots’

The root in the noun in (19) begins with the trill /ɾ/, as shown by the augmentative and diminutive forms in (20).

(20) a) o-ku-rábú
   AUG-20-pot
   ‘a/the huge pot

b) a-kha-rábú
   AUG-12-pot
   ‘a/the little pot’

\[44\] This rule cannot be in the other direction, i.e. /d/> [ɾ], because the phoneme /d/ does not exist in Kisa.
This process is unproductive and found only in these classes. For instance, when the prefix for class 9c ny- is followed by a noun root that begins with /t/, the trill does not change to the voiced alveolar stop [d]. The nasal in this prefix is deleted instead, as in (21).

(21) a) SR  $i$-$Ø$-$rũúk-a$
    UR  /i-ny-ruuk-a/
    AUG-9c-jump-INF
    ‘jumping style’

       b) SR  $i$-$Ø$-$rek-a$
    UR  /i-ny-rek-a/
    AUG-9c-bolt-INF
    ‘bolting style’

Further, this process does not apply to loans. When the prefix for class 9c ny- is followed by a loan root that begins with /t/, the nasal in this prefix is deleted, as (22) shows.

(22) a) SR  $i$-$Ø$-$rılıáakis-a$
    UR  /i-ny-rilaakis-a/
    AUG-9c-relax-INF
    ‘relaxing style’

       b) SR  $i$-$Ø$-$rẽchẽsít-a$
    UR  /i-ny-recheesit-a/
    AUG-9c-register-INF
    ‘registering style’

8.2.4 Post-nasal fortition

If a nasal-final prefix is followed by the voiced bilabial fricative /β/, the nasal of the prefix assimilates in place of articulation to this consonant, as exemplified in (23).
The example above shows that the fricative /β/ undergoes fortition, becoming the voiced bilabial stop [b].

Also, when the following consonant is the lateral /l/, the final nasal of the prefix assimilates in place of articulation to the lateral and the lateral undergoes fortition, becoming the voiced alveolar stop [d], as shown in (24).

Fortition of the lateral /l/ to the stop [d] only occurs when the lateral is followed by a vowel and a non-nasal consonant.

When nasal-final prefixes are followed by roots beginning with the lateral /l/ followed by a vowel and a nasal or a NC sequence, the output has an alveolar nasal /n/ in place of the palatalnasal /ɲ/ of the prefix and the initial lateral /l/ of the root, as illustrated in (25-26).
(25) SR e-num-a
    UR /eny-lum-a/
    1sgS-bite-IND
    ‘I bite’

(26) SR e-nóónd-a
    UR /eny-loond-a/
    1sgS-follow-IND
    ‘I follow’

This is a manifestation of Meinhof’s Law, a well-known law in other Luhya and Bantu languages (Herbert 1986; Kula 2006; Meeussen 1962; Mutonyi 2000; Piggott 1994).

Meinhof’s Law is a process which causes a NC sequence to change to a nasal or a nasal geminate (depending on the language) when followed by a vowel and a nasal or a NC sequence (Herbert 1986; Kula 2006; Piggott 1994). Meinhof’s Law is analysed as a process of nasal assimilation that targets oral segments flanked by nasals (Herbert 1977; Johnson 1979).

As the examples in (25-26) show, the output is a nasal only when the lateral is followed by a vowel and a nasal. In this environment, the lateral is flanked by nasals even though a vowel intervenes. Given that adjacent dissimilar segments tend to assimilate for easy articulation (Archangeli & Pulleyblank 2007; Bakovic 2007), it is plausible to argue that the lateral /l/ becomes a nasal in this environment.

However, we expect two nasals to appear in the surface form after the lateral changes to a nasal, but we see only one. There are two possible explanations for this. Either the nasal of the prefix is deleted or the initial segment of the root is deleted. Suggesting the latter poses a theoretical challenge. Deleting the first element of the root disrupts left-edge anchoring of a morpheme, which is important for lexical access (Pulleyblank 2003: 5).
Given that the nasal of nasal-final prefixes is deleted when followed by a root beginning with a nasal, as discussed in section 8.2.3, I posit that it is the nasal of the prefix that is deleted.

### 8.2.5 Nasal consonant processes in loans

Loans in Kisa show the nasal assimilation and post-nasal voicing seen with native words in the preceding discussion, as the following data show.

(27) SR \textit{en-déép-a}  
\textit{eny-tieep-a/}  
1sgS-tape-IND  
‘I tape’

(28) SR \textit{em-búúk-a}  
\textit{eny-puuk-a/}  
1sgS-book-IND  
‘I book’

(29) SR \textit{en-jáléénj-a}  
\textit{eny-chaleenj-a/}  
1sgS-challenge-IND  
‘I challenge’

(30) SR \textit{en-góléékít-a}  
\textit{eny-koleekit-a/}  
1sgS-collect-IND  
‘I collect’

When a prefix ending with a nasal is followed by a loan root beginning with a fricative, a nasal, a glide, or the trill /r/, the nasal of the prefix is deleted, as the examples below illustrate.


(32) \textit{e-máák-a} ‘I mark’, \textit{e-néém-a} ‘I name’
(33)  e-yéél-a ‘I yell’, e-wííp-a ‘I weep’

(34)  e-ríláákís-a ‘I relax’

The data in (35) exemplify a nasal-final prefix followed by a root beginning with the lateral /l/.

(35)  a)   SR  e-lókéét-a
        UR  /eny-lokeet-a/
             1sgS-locate-IND
             ‘I locate’

       b)   SR  e-líís-a
        UR  /eny-liis-a/
             1sgS-lease-IND
             ‘I lease’

This example shows that the lateral /l/ does not undergo fortition to [d], as is the case with native verb roots. Note that the nasal of the prefix is deleted in this case.

When the loan root begins with the lateral /l/ and the lateral is followed by a vowel and a nasal, Meinhof’s Law does not apply. Consider (36) and (37).

(36)  SR  e-lííng-a
      UR  /eny-liing-a/
           1sgS-link-IND
           ‘I link’

(37)  SR  e-líín-a
      UR  /eny-liin-a/
           1sgS-lean-IND
           ‘I lean’

These examples show that the lateral does not become a nasal. They also show that the nasal of the prefix is deleted when it occurs before a lateral.
Therefore, post-nasal fortition and Meinhof’s Law are not productive in Kisa as they do not apply to a wide range of phonemes and in loans.

8.3 NC sequences in Kisa

8.3.1 Tautomorphemic NC sequences

In roots the vowel preceding NC sequences in Kisa is normally long when preceded by a tautomorphemic consonant, as (38) shows.

(38) a) \( sáámb-a! \)
    burn-sgS
    ‘Burn!’

b) \( lóónd-a! \)
    follow-sgS
    ‘Follow!’

There are two exceptions in the lexical vocabulary, given in (39), and two exceptions in the grammatical vocabulary, shown in (40).

(39) \( ránzááyí ‘red’, rámbííya ‘orange’ \)

(40) \( néndé ‘and’, shíngá ‘like’ \)

The vowel preceding NC sequences in roots is short when it is not preceded by a tautomorphemic consonant, as in (41) and (42).

(41) a) \( b-a-any-ambul-a \)
    3plS-FARP-1sgO-rescue-IND
    they rescued me'

---

45 However, there are stems of the form CVVCVVCV, e.g.
\( lóóndóól-a ‘follow along’ \)
b) $\emptyset$-tsùny-ámbúl-á
AUG-10c-rescue-INF
‘rescuing styles’

(42) a) ímb-a!
sing-sgS
‘Sing!’

b) éng-a!
ripen-sgS
‘Ripen!’

There are 33 noun roots and 21 verb roots in Kisa that begin with a vowel
followed by a homorganic NC sequence. In all cases, the vowel preceding
the NC sequence is short.

Kisa has two lexical words, four grammatical words, and two clitics with an
initial tautomorphemic NC sequence, listed in (43-45).

(43) Mbúuyá ‘personal name’, mbóótsó ‘niece’

(44) mbúlá ‘so that’, mbushíná ‘why’, mbéri ‘before’,
mbáángá ‘awkward’

(45) mbu= ‘(so) that’, =mbú ‘like that/in that manner’

There is one root with an initial NC sequence:

(46) $\emptyset$-lú-ngáláshííngá
AUG-5a-bet
‘a/the bet’

There are six affix allomorphs with tautomorphemic NC sequences:

nz- ‘1sgO’, and -aang ‘imperfective’
8.3.2 NC sequences in loans

The distribution of vowel length before NC sequences in loans follows the patterns seen with the native Kisa vocabulary, as discussed in the preceding section. The vowel preceding tautomorphemic NC sequences in loans is long, when it is preceded by a tautomorphemic consonant, regardless of the length of the vowel preceding the NC in the original word in the source language. Consider (48).

(48) a) \textit{kóómbíít-a!}  
\hspace{1cm} \text{compete-sgS}  
\hspace{1cm} \text{‘Compete!’}  

b) \textit{kóómbúlééyín-a!}  
\hspace{1cm} \text{complain-sgS}  
\hspace{1cm} \text{‘Complain!’}  

c) \textit{e-Ø-kóómbyúútá}  
\hspace{1cm} \text{AUG-9a-computer}  
\hspace{1cm} \text{‘a/the computer’}  

On the other hand, the vowel preceding a NC sequence in a loan root is short when it is not preceded by a tautomorphemic consonant in the source language, as seen in the data in (49).

(49) a) \textit{émbúlóóy-a!}  
\hspace{1cm} \text{employ-sgS}  
\hspace{1cm} \text{‘Employ!’}  

b) \textit{b-a-any-émbůlóóy-a.}  
\hspace{1cm} \text{3plS-FARP-1sgO-employ-sgS}  
\hspace{1cm} \text{‘They employed me.’}
8.3.3 Heteromorphemic NC sequences

Heteromorphemic NC sequences in Kisa arise when a nasal-final affix is followed by a morpheme beginning with an obstruent (stop, affricate, or /β/), as discussed in section 8.2.

The distribution of vowel length before heteromorphemic NC sequences shows the same pattern as tautomorphemic NC sequences. The vowel preceding heteromorphemic NC sequences is long only when it is preceded by a consonant. Otherwise heteromorphemic NC sequences are preceded by a short vowel, or they are word-initial:

(50) $i$-$m$-$b$-$a$
    AUG-9b-clod
    ‘a/the clod’

(51) $m$-$b$-$ål$-$a$!
    1sgO-count-sgS
    ‘Count me!’

Sample (1976: 57-58) proposes that there is vowel lengthening before heteromorphemic NC sequences in Kisa, as in the following examples.

(52) SR  $ii$-$m$-$b$-$a$
    UR  $/i$-$ny$-$β$-$a$/
        AUG-9b-clod
        ‘a/the clod’

(53) SR  $e$-$t$-$ś$-$í$m-$b$-$á$
    UR  $/e$-$ti$-$ń$-$y$-$β$-$a$/
        AUG-10b-clod
        ‘clods’

The surface form in (52) is not the actual output. The correct form has a short vowel. The vowel in the class 10b prefix is always long (see section 4.2.1), and vowel length is contrastive for grammatical morphemes in Kisa.
(see section 3.2.2). Therefore, there is no basis for proposing an underlying representation with a short vowel for the form in (53).

In any examples of long vowels preceding heteromorphemic NC sequences, the long vowel is provided independently by the preceding morphemes, as (54) and (55) show.

(54) Ø-tsíım-báfú
     AUG-10b-rib
     ‘ribs’

(55) b-a-an-gul-a.
     3plS-FARP-1sgO-buy-IND
     ‘They bought me.’

If the long vowel is not supplied, then the vowel is short, as in (56).

(56) ni=m-bá shííná?
     is=9b-clod what
     ‘It is which clod?’

8.3.4 Class 9b/c/d locatives

There is one situation where there appears to be evidence for vowel lengthening before heteromorphemic NC sequences in Kisa. The vowel preceding NC sequences in the locative forms of class 9b/c/d nouns is always long.

The prefix complex for classes 9b and 9c is i-ny- ‘AUG-9b/c’, and that for 9d is i-nz- ‘AUG-9d’. Generally, in the locative forms of nominals, the locative prefix replaces the augment (as discussed in section 2.3.2). Consequently, the locative forms predicted for class 9b/c/d nouns are those in (57-59).
(57) *mu-n-gúbó
    in-9b-clothing
    ‘in the clothing’

(58) *mu-n-gúl-á
    in-9c-buy-INF
    ‘in the buying style’

(59) *mu-nz-áy-á
    in-9d-pluck-INF
    ‘in the plucking style’

However, the actual forms are the ones in (60-62), with a long vowel preceding the NC sequence.

(60) muu-n-gúbó
    in-9b-clothing
    ‘in the clothing’

(61) muu-n-gúl-á
    in-9c-buy-INF
    ‘in the buying style’

(62) muu-nz-áy-á
    in-9d-pluck-INF
    ‘in the plucking style’

This would appear to support the positing of vowel lengthening before NC sequences. However, there are three pieces of evidence which show that the conditioning for the appearance of these long vowels is morphological, rather than phonological. First, the long vowel does not appear in constructions involving the interrogative shiíná:

(63) mu-n-gúbó     shiíná?
    in-9b-clothing    what
    ‘In which clothing?’

(64) mu-n-gúl-á     shiíná?
    in-9c-buy-INF    what
    ‘In which buying style?’
The interrogative construction with *shííná* has no effect on the form of locatives, other than that of class 9b/c/d locatives. However, as discussed in sections 2.3.1 and 4.2.1, it does exclude the augment in non-locative nominal forms:

(65) *mu-nz-áy-á* shííná?
in-9d-pluck-INF what
‘In which plucking style?’

(66) *n-gúbó* shííná?
9b-clothing what
‘Which clothing’

(67) *n-gúl-á* shííná?
9c-buy-INF what
‘Which buying style’

(68) *nz-áy-a* shííná?
9d-pluck-INF what
‘Which plucking style’

The class 9b/c/d augment- is a short vowel and so it is a single mora. The difference between the locative forms in (60-62) and those in (63-65) is a single vocalic mora. This mora fails to appear in the same environment where the augment fails to appear. Therefore, I analyse the second mora of the long vowel in class 9b/c/d locative forms as being contributed by the augment:

(69) SR *mu-u-n-gúbó*
UR */mu-i-ny-kubo/
in-AUG-9b-clothing
‘in the clothing’

(70) SR *mu-u-n-gúl-á*
UR */mu-i-ny-kul-a/
in-AUG-9c-buy-INF
‘in the buying style’
Following the analysis above, the locative forms of class 9b/c/d nouns take the citation form of the class 9b/c/d nouns as their stem i.e. Augment + Class + Root. They do not take the usual locative stem, which is only Class + Root:

(72) \( \text{i-n-gúbó} \)
AUG-9b-clothing
‘a/the clothing’

(73) \( \text{i-n-gúl-á} \)
AUG-9c-buy-INF
‘a/the buying style’

(74) \( \text{i-nz-áy-á} \)
AUG-9d-pluck-INF
‘a/the plucking style’

The vowel sequence in the locative forms in (69-71) shows progressive assimilation. Progressive vowel assimilation at a prefix-prefix boundary is attested in Kisa with the 1sgO morpheme -iny, (see section 7.4).

The second piece of evidence that the long vowels in the class 9b/c/d locative forms are not solely phonologically conditioned comes from the locative forms of singular proper noun roots with initial NC sequences:

(75) a) \( \text{ha-mbóótsó} \)
by-niece
‘by the niece’

b) \( \text{ha-mbúúyá} \)
by-personal name
‘by Mbuuya’
As shown in (75), the locative forms of these nouns have short vowels in their prefixes. As discussed in sections 2.3.3.4.2 and 4.4.2, singular proper nouns do not take either augment or class prefixes. The citation forms of the nouns in (75) are mbootso ‘niece’ and Mbúúyá. Consequently, there are no potential alternative stems. Under my analysis, there is therefore no possibility of long vowels in these locative forms. If an avoidance of short vowels before NC sequences were a sufficient motivation for the appearance of long vowels in the class 9b/c/d locatives, then it should also be a sufficient motivation to enforce lengthening of locative prefix vowels when the following root has an initial NC sequence.

The third piece of evidence in favour of my analysis comes from the failure of long vowels to appear in an environment which seems to be phonologically identical to the ones discussed above. Consider the following data.

(76) a) Ø-líí-ngáláshíínga a-ma-ngáláshíínga
    AUG-5a-bet AUG-6-bet
    ‘a/the bet’ ‘bets’

    b) a-kha-ngáláshíínga o-ru-ngáláshíínga
    AUG-12-bet AUG-13-bet
    ‘a/the little bet’ ‘little bets’

    c) o-ku-ngáláshíínga e-mi-ngáláshíínga
    AUG-20-bet AUG-4-bet
    ‘a/the huge bet’ ‘huge bets’

As shown in (76), if a root with a morpheme-initial NC sequence takes a class prefix which has a short vowel, then the vowel of the class prefix remains short. This pattern is also found with loans with an initial homorganic cluster (see section 4.5.1). If the appearance of long vowels before NC sequences in the class 9b/c/d locatives is to avoid short vowels in this environment, then we would expect a long vowel before the
NCsequences in (76b-c). Under the analysis discussed above there is no possibility of lengthening across the class prefix-root boundary in the examples in (76b-c), as there is no alternative stem which could potentially be selected.

While the appearance of long vowels in the class 9b/c/d locatives is morphologically conditioned, its output effect is to provide a long vowel before the NC sequence. There is evidence to this effect from the patterning of nominal loans in Kisa. As discussed in section 4.5.1, there are loan nouns in class 9b with roots beginning with NC sequences. The locative forms of these loans show the class 9b patterning:

(77)  

a)   \[ mu-u-Ø-ndééché \]
    in-AUG-9b-aeroplane
    ‘in the aeroplane’

b)   \[ mu-Ø-ndééché shííná? \]
    in-9b-plane what
    ‘in which plane?’

The locatives of loans in classes 9c and 9d show the same patterning:

(78)  

a)   \[ mu-u-m-búúk-a \]
    in-AUG-9c-book-INF
    ‘in the booking style’

b)   \[ mu-m-búúk-a shííná \]
    in-9c-book-INF which
    ‘in which booking style?’

(79)  

a)   \[ mu-u-nz-álááw-a \]
    in-AUG-9d-allow-INF
    ‘in the allowing style’

b)   \[ mu-nz-álááw-a shííná \]
    in-9d-allow-INF which
    ‘in which allowing style?’
8.3.5  Summary of Kisa NC sequences

Two observations can be made from the preceding discussion about the vowel preceding NC sequences in Kisa. First, root and word-initial vowels are never long even when followed by a NC sequence. There are 33 nominal and 21 verbal roots whose initial sequence is VNC, and thus this sequence is not marginal in Kisa. All vowel-initial prefixes which can appear word-initially have an initial short vowel.

We know from loans that this constraint is actively enforced. Vowel-initial loans never have a long vowel (80a), but loans with the initial sequence VNC are freely integrated into Kisa (81).

\begin{align*}
(80) \quad a) \quad \text{áálókéét-a!} & \quad \text{allocate-sgS} \\
& \quad \text{‘Allocate!’} \\
\quad b) \quad \text{álókéét-a!} & \quad \text{allocate-sgS} \\
& \quad \text{‘Allocate!’}
\end{align*}

(81) \quad \text{émbúlóóy-a!} & \quad \text{employ-sgS} \\
& \quad \text{‘Employ!’}

Second, subject to this constraint, NC sequences are normally preceded by a long vowel (with the exception of two lexical and two grammatical words in the Kisa lexicon). There are two facts which are evidence that VVNC is an active output target. The first one is that in loans vowels are long regardless of vowel length in the source language.

The second fact is that the locative forms of class 9b/c/d nouns appear with long vowels before an NC sequence. However, this is morphologically and not phonologically motivates. They only appear when there is an alternative
stem form. If there is no alternative stem form, the VVNC target cannot be attained.

8.4 Phonological analyses of NC sequences in Bantu

There is disagreement over the interpretation of NC sequences in Bantu languages. One line of analysis proposes that NC sequences are pre-nasalized stops (Clements 1986; Herbert 1975; Hyman 1992; Maddieson & Ladefoged 1993; Marlo & Brown 2003; Morrison 2009; Riehl 2008; Sample 1976; Stegen 2002; Tak 2003). The alternative hypothesis is that NC sequences are clusters (Downing 2005; Hubbard 1995).

The principal pieces of evidence discussed in this debate are the following:

(82)  a) The durational properties of NC sequences as compared to the durational properties of single segments

b) Native speaker syllabification of words involving NC sequences

c) The general syllabic structure of Bantu languages

d) The distribution of vowel length preceding NC syllables. NC sequences are normally preceded by a long vowel

Herbert (1975: 112; 1986: 61) and Morrison (2009: 228) argue that NC sequences are pre-nasalized consonants because their duration is approximately the same as that of single consonants. However, Hubbard (1995: 249) states that the durational properties of NC sequences vary widely, being anywhere from 1.5 to four times the length of individual nasals or consonants. Downing (2005: 196) argues that because the phonetic evidence given in support of this analysis is controversial, phonetic duration
is not sufficient evidence by itself to support the idea that NC sequences are pre-nasalised consonants.

Herbert (1986: 67-68) and Morrison (2009: 239) propose that NC sequences are single segments because speakers of languages in which they occur assign them to the same syllable whenever they are asked to divide words involving NC sequences into syllables. These analysts argue that native speakers of these languages pause after vowels when asked to perform this task.

Downing (2005: 209) proposes that this is a test for prosodic word-hood rather than syllable structure. She argues that speakers are likely to pronounce the English word ‘happy’ as “hap” and “py” when asked to pause between syllables. She maintains that speakers pronounce “hap” rather than “ha” because “hap” is a possible phonological word in English, while “ha” is not. She notes that this test is not a reliable one in languages like English where not every possible syllable is also a possible phonological word. She posits that since all words in Bantu languages end with a vowel, it is reasonable for a speaker, when asked to syllabify a word, to insert a pause between the vowel and the nasal, as this would allow each string between the pauses to be parsed as a possible phonological word.

A number of analysts (Herbert 1975; Marlo & Brown 2003; Morrison 2009; Stegen 2002; Tak 2003) propose that NC sequences are pre-nasalized consonants, based on the general syllabic structure of Bantu languages. They argue that if the nasals in NC sequences were analysed as codas, they would be the only codas in Bantu languages. Therefore, a NC sequence is syllabified as an onset of the following syllable. In onset position a NC sequence does not meet the increasing sonority principle of syllables. Consequently, it is a pre-nasalized consonant.
Downing (2005: 206) argues against the above analysis. She says that it does not consider the sonority of the nasal. Her argument is that if a language were to have only one type of coda, it would likely be a highly sonorous consonant such as a nasal. Therefore, she states that there is no reason to argue on the basis of syllable structure that nasal codas are impossible in Bantu languages.

A number of analysts (Clements 1986; Herbert 1975; Hyman 1992; Maddieson & Ladefoged 1993; Marlo & Brown 2003; Morrison 2009; Sample 1976: 109; Stegen 2002; Tak 2003) propose that NC sequences are pre-nasalized consonants as an explanation for the hypothesis that NC sequences are always preceded by a long vowel. They argue that the nasal in NC sequences is moraic and in the coda position of the preceding syllable in the input, as shown in figure 8.1.

Figure 8.1: Input moraic nasal

![Figure 8.1: Input moraic nasal](image)

In the output, the nasal is resyllabified in onset position with the following consonant in conformity with the general CV syllable structure of Bantu. In onset position the nasal cannot be moraic. Therefore, its mora is compensated for by lengthening the preceding vowel, as in figure 8.2.
Downing (2005: 187) provides evidence from Jahore Malay and argues that this kind of compensatory lengthening is possible even when the NC sequence must be analysed as a cluster.

Downing (2005: 198-199) analyses NC sequences in Bantu as clusters. She argues that the sequence is a cluster in the input, as shown in figure 8.3.

She shows the input as either having a long or short vowel to capture the generalization that the usual contrast in vowel length is neutralised before NC sequences.

Downing (2005: 198) proposes that the nasal is not associated with a mora in the input, as shown in figure 8.3 above, because it only lengthens a preceding vowel if it is followed by a consonant.

With respect to the output, Downing argues that the nasal is assigned a mora by the Weight by Position (WBP) Principle, which she parametricizes as in (83).
WEIGHT BY POSITION (WBP): A [+son] consonant is moraic when immediately followed by a less sonorant segment (Downing 2005: 198).

She further explains that consonants do not head moras, as per the constraint in (84)

NO CMORA: The head of a mora must be a vowel [that is, a mora must be associated with a vowel] (Downing 2005: 198).

Therefore, the vowel preceding NC sequences lengthens to link the inserted mora and shares it with the nasal, as figure 8.4 illustrates.

Figure 8.4: Output to pre-NC lengthening

Following Downing, I am treating NC sequences in Kisa as clusters. The evidence is not definitive. However, since NC sequences in Kisa can be heteromorphemic, as discussed in section 8.3.3, it appears simplest to analyse them as clusters.

8.5 Summary

This chapter looked at NC sequences in Kisa. It showed that NC sequences are clusters in Kisa, and the vowel preceding them only lengthens when it is preceded by a tautomorphemic consonant and the NC is tautomorphemic. There is no vowel lengthening before heteromorphemic NC sequences.

46 The nasal in NC sequences in Kisa does not bear tone.
Long vowels in this environment are provided independently by the combining morphemes; otherwise the vowel is always short. The preference for long vowels before NC sequences is the result of the attempt to achieve a phonologically independent VVNC target in Kisa.

Further, the chapter discussed the processes in Kisa that involve nasal consonant sequences. It showed that when nasals occur adjacent to consonants phonological adjustments take place to aid easy articulation. The phonological processes attested include post-nasal voicing, post-nasal fortition, nasal place assimilation, nasal deletion, and Meinhof’s Law. Post-nasal fortition and Meinhof’s Law are not productive, while the others are.
CHAPTER 9: CONCLUSION

This chapter summarises the principal areas covered in this thesis. It also suggests some areas for further research.

The thesis has described segment and word structure in Kisa. There are three areas of particular interest:

- The status of NC sequences
- Criteria for wordhood
- Productivity of morphological relations

The phonological status of NC sequences in Bantu has been the subject of on-going debate. The point of disagreement has been whether NC sequences are single segments or clusters. The research literature presents an array of analyses, which can be broadly summarized in terms of two competing hypotheses that explain the status of NC sequences in relation to the long vowel preceding them.

The first hypothesis holds that NC sequences are homorganic clusters at all levels of analysis, with the nasal as the coda of the preceding syllable, and the consonant as the onset of the following syllable. The nasal is associated with a mora. However, this mora cannot be exclusively linked to the nasal. Therefore, the preceding vowel lengthens to link it (Downing 2005; Hubbard 1995).

The second proposes that NC sequences are clusters in the input representation, with the nasal associated with a mora and analysed as either a coda or an ambisyllabic consonant. In the output, the nasal does not
appear as a coda due to a dispreference for codas in Bantu languages. The mora is re-assigned to the preceding vowel, causing it to lengthen. The nasal coalesces with the obstruent to form a single segment, specifically a pre-nasalized obstruent, which functions as an onset (Clements 1986; Hebert 1975; Hyman 1992; Maddieson & Ladefoged 1993; Morrison 2009; Sample 1976; Tak 2003).

This thesis has made a novel contribution to this debate by providing evidence that compensatory lengthening is not the best analysis of the fact that NC sequences are normally preceded by a long vowel in Kisa. The discussion in section 8.3 shows three facts about NC sequences in Kisa:

- NC sequences are not preceded by a long vowel in all environments
- There is no vowel lengthening before heteromorphemic NC sequences
- The appearance of long vowels before NC sequences is both phonologically and morphologically conditioned

These facts show that the status of NC sequences in Kisa cannot be explained in relation to the long vowel preceding them. I suggested that the best analysis of Kisa NC sequences is one where VVNC is an independent target, and the analysis of NC sequences makes no reference to the preceding vowel.

As in other languages, there is no single criterion for wordhood in Kisa. The research literature on Bantu (Bresnan & Mchombo 1995; Gurthrie 1948; Henson 2009; Herbert 1992; Hyman & Katamba 2005; Louw 1984; Myers 1995; van der Spuy 2006) distinguishes the following types semantic, syntactic, morphological, and phonological words.
This thesis identifies two types of words in Kisa. We have, on the one hand, the affixal word, which only includes the root plus or minus affixes, and on the other hand, the clitic word, which includes the root, affixes, and word-level clitics.

This distinction is made on the basis of the following properties:

- Different phonological patterns; the affixal word shows gliding and assimilation of the second vowel to the first vowel, which the clitic word does not (see Chapter 6 and section 7.3)

- Different morphological relations; the affixal word shows restriction to one part-of-speech class (see section 2.1), whereas the clitic word is freer (see Chapter 6)

- Word categorisation; the classification of words into the three major groups – verbs, nominals, and particles (see section 2.1) is centred on the affixal word

- Word minimality; some lexical (affixal) words can be sub-minimal (see section 3.5)

Some of these criteria are logically independent, but they coincide. The phonological criterion of gliding selects the same domain (the affixal word) as the morphological criterion of selecting only one part-of-speech. This argues that it is worth recognising the affixal word as a construct.

The thesis has also examined productive and unproductive processes. It has shown that unproductive patterns are confined to the affixal word and include assimilation (see section 5.3.6.2), post-nasal fortition, and Meinhof’s Law (see section 8.2.5). This is further support for the affixal word as a construct.
A number of issues emerge from this study that I recommend for further exploration. As pointed out in the discussion in section 3.2.2, it would be important to undertake experimental research to ascertain the phonetic realization of long high vowels.

The description of tone in section 3.4 focused only on lexical tone. It was shown that lexical tone is contrastive in just a few (56) nominal roots, and some verbal affixes. This was not examined in detail in this dissertation. Therefore, I suggest that further research should focus on the phonology of Kisa tone.

Different sections of Chapter 7 showed that certain processes (i.e. assimilation, apocope) may not be word-level phenomena, as they also occur across word boundaries. Investigation into Kisa phrasal phonology would be important in this respect.
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