Word order, information structure and agreement in Teke-Kukuya

Li, Z.

CHAPTER 2

A grammar sketch of Teke-Kukuya

This chapter is dedicated to an overall grammar sketch of the Teke-Kukuya language. Since previously the language has not been described in detail except for its phonology and noun classes, with this chapter I would also like to contribute to a reference grammar for the Kukuya people and society. The chapter is organised as follows. In section 2.1 I present the segmental phonology of the language, namely the inventories of consonants and vowels, as well as the syllable structure and some phonotactic rules. I describe the prosody system of the language in section 2.2, in which different phenomena associated with tone and accent are discussed. Section 2.3 concentrates on the nominal morphology. The noun class system and some nominal derivation rules are presented first and then the different components of noun phrases. Verbal morphology and the TAM conjugations are sketched in section 2.4. In section 2.5, I illustrate the clause structure of the language, including complement clauses and complementisers, non-verbal predication, adverbial clauses, relative constructions, as well as other word categories such as prepositions and conjunctions. Since word order variation influenced by information structure is described in detail in chapter 3, I will not

discuss word order and topic/focus expressions in this section. The syntax of relative constructions is analysed in chapter 5, so in this section I only display different functions and uses of the relative/adverbial clauses.

2.1 Segmental phonology

This section gives an overview of the sound system in Teke-Kukuya. I first introduce the consonant and vowel inventories, their distribution on different positions of a phonological word, the phonetic variation in their realisation, as well as some phonotactic rules. Then I discuss the syllable structure. The tone and prosodic system of the language are described in the next section. Here and throughout the thesis high tones (H) are marked by an acute accent, while low tones (L) remain unmarked and are highlighted by a grave accent only where useful.

The description on the phonology of Kukuya relies much on the pioneering and careful work done by Christiane Paulian, which was published in 1975 as a detailed presentation on the phonology of the language, and later observations and analyses of the prosodic domain in Kukuya by Larry Hyman in 1987 also provide crucial reference for my description in this part. The work in Paulian (1975) was based on her intensive fieldwork in Brazzaville, Lagué, Ngoulonkila and Lékana on the Kukuya variant of Teke, and Hyman (1987)'s analysis was dependent on the same corpus and personal communication with Paulian.

Since my main aim of the thesis is to investigate the morphosyntax and information structure of the language, I was not ambitious on contributing a more fine-grained description on its phonology. Therefore, the minimal pairs established by Paulian to investigate the phonemes and the calculation of the frequency of different phonemes and syllable structures based on her large lexicon database are taken as a baseline in my description. However, in the fieldwork I also checked most of the words she collected and the transcription in her monograph, and I also added the description on vowel nasalisation and coalescence, and some discussion on the re-

maining problems on the postlexical prosodic domain in the verb phrase that were not discussed in Paulian (1975) and Hyman (1987). Some of the previous findings and generalisations are re-interpreted in the light of the fieldwork carried out by myself as well as of the enlarging investigation and knowledge on the Teke cluster conducted by the linguists in recent years.

2.1.1 Consonants

As we will see, the distribution of consonants in Kukuya is quite unbalanced in the initial and intervocalic positions of the stem. Here a stem can refer to a nominal stem or a verb stem. Kukuya as a Bantu language is characterised by different noun classes, which are comparable to grammatical genders and are usually encoded by a CV-shape nominal prefix (see section 2.3.1). A nominal is usually formed by a noun class prefix and a lexical stem, and a verb stem consists of a lexical root, derivational extensions and a final vowel. Since there are no productive verbal extensions in Kukuya, the verb stem is simply the lexical root plus the final vowel. In this subsection I first present the stem-initial consonants which cover the full consonant inventory, and then introduce the extremely reduced intervocalic distribution, a special phenomenon on the "constricted" articulation of the consonants is described last.

2.1.1.1 Stem-initial consonants

		Bilabial		Labial-dental		Alveolar		Palatal	Velar		Glottal
Nasal		m		ɱ		n		ɲ	ŋ		
Plosive	**Prenasalized**	mp	mb			nt	nd		ŋk	ŋg	
	Plain	p	b			t	d		k		
Affricate	**Prenasalized**			mpf	mbv	nts	ndz				
	Plain			pf	bv	ts	dz				
Fricative				f		s		(ʃ)			(h)
Approximant						l		j	w		

Table 2.1: The stem-initial phonemic consonants in Teke-Kukuya

As we can observe in Table 2.1, in Kukuya there is no voiceless/voiced con-

trast for non-prenasalised velar plosives, and this merger may have already happened in Proto-West-Coastal Bantu (Pacchiarotti and Bostoen 2020); no labial-dental and alveolar fricatives, i.e. no /ɡ/, /v/ and /z/ as an initial consonant, the absence of which is also attested in other Teke varieties (Kristensen et al. 1986; Abandzounou 2012, Raharimanantsoa 2012, 2020); while all the prenasalised consonants have this contrast. All the voiceless consonants are slightly aspirated, but this can vary depending on the region and speaker. /h/ is attested only in one word which means 'also' [hé] so it is hard to justify identifying it as a phoneme. The same word is pronounced as [kɛ] in Teke-Eboo (B74), so perhaps the [h] is just a variant of /k/. In the transcription and orthography, the affricates /mpf/, /mbv/, /nts/ and /ndz/ are transcribed as <mf>, <mv>, <ns> and <nz> for simplicity. The palatal fricative /ʃ/ (transcribed as <**s**> in orthography) which was not placed in the consonant inventory in Paulian's description is rarely attested. See comparison of /ʃ/ with /s/ in (1). The boundary between the prefix and the nominal stem is marked by a hyphen.

(1) se /ʃe/ 'also, regardless of'
ki-sébe /ki-sébe/ 'to laugh'
séneme /séneme/ 'six'

In Paulian (1975) some notes were made on the conditions of some of these initial consonants: /w/ is realised as labio-velar when followed by back vowels and /a/, and as a labio-palatal glide [ɥ] when followed by a front vowel, for example in the words 'to give' [ki-wâ] and 'to lack' [ki-ɥʷéènà]. /m/, /n/ and /l/ can be geminated when occurring at the stem-initial accentuated position (see more detail in 2.2.2). /n/ is never attested before /u/. /f/, /mpf/ and /mbv/ never occurred before /o/ and are only rarely seen before /e/. /pf/ is never attested before the low vowels /e/ and /o/, which may be due to the fact that it originated from a voiceless plosive, and a process of assibilation (also known as Bantu spirantisation) occurs before high vowels for it to become a fricative and then an affricate. However, its voiced counterpart /bv/ is attested before /e/. /d/ is very rarely observed (absent in some other Teke varieties) and is never attested before /o/. Many stems in Proto-Bantu (PB) with this voiced dental plosive as initial consonant have been realized as the lateral /l/ in Teke, which may account for the rarity of /d/. /s/, /ts/

and /dz/ are realised as apico-prepalatal sibilants [s], [ts] and [dz] (as well as when prenasalised) before most vowels but are palatalised as [ʃ], [tʃ] and [dʒ] respectively before <**w**V> (see example (11b) below), /dz/ is also realised as [dʒ] before /e/ as in *dze* [dʒe] 'step'.

/ɱ/ as a phonemic labio-dental nasal, is reported as *only* occurring in the Kukuya language but very rarely as a phoneme in other known languages (but only phonetically) in the world (Ladeforged and Maddieson 1996; also see Hajek 2006, 2009 on this phoneme in Tibeto-Burman). According to Paulian (1975), this plosive phoneme is realised by the release of airflow between the top teeth and the lower lip and is accompanied by "a strong protrusion of both lips", which was exactly what I observed on the manner of articulation of the speakers when they tried to contrast this phoneme with /m/. However, this contrast seems to be only observed with elder speakers and is being neutralised among younger generations. This phoneme is never attested before /u/ and /o/ and is realised as [ɱʷ] before /a/, thus is transcribed as <**mw**>. As we will see shortly in the discussion of glides, the vowel in the sequence C**w**V has the same restrictions, so it seems that the /ɱ/ can be analysed as a variant of /m/ before the sequence **w**V. Here I follow Paulian (1975) to analyse the /ɱ/ as an independent phoneme, as all other bilabial consonants cannot be followed by the **w**V sequence, and the fact that it cannot be followed by /o/ reflects the same restriction for all other labio-dentals (/pf/, /bv/, /f/). The [ɱʷ] realisation before /a/ could be due to the labialisation triggered by the strong protrusion of the lips conflicting with the spread front vowels /i/ and /e/ and can only be fully realised before /a/. Some minimal pairs from Paulian (1975) distinguishing /m/ and /ɱ/ are illustrated in (2).

(2) mwáana /ɱáana/ 'child'
mwíi /ɱíi/ 'eyes'
míi /míi/ 'urine'
ki-mwaala /ki-ɱaala/ 'to laugh at'
ki-maala /ki-maala/ 'to complete the rest of...' (Paulian 1975: 36)

Another question arising from Table 2.1 is whether we should treat the *prenasalised consonants* as phonemes or consonant clusters. In some stud-

ies on other Teke variants, the prenasalised consonants are analysed as sequences of nasal plus consonants (Raharimanantsoa 2012, 2020). According to Paulian (1975) the prenasalised consonants in Kukuya should be considered as mono-phonemes, for the following reasons: the nasal part of the complex consonant always assimilates with the oral part in the place of articulation; the prenasalised consonants have a clear contrast between voiceless and voiced ones, while some voiceless oral consonants do not have their voiced counterparts, e.g. there exists the prenasalised consonant /ŋg/ that contrasts with /ŋk/ while /g/ is absent, so /ŋg/ should necessarily be a mono-phoneme, otherwise we have to postulate that /g/ only occurs when prenasalised; in addition, according to Paulian's calculation on the frequency of the consonants, she showed that the frequency of /nd/ even surpasses that of /d/, if we treat the prenasalised consonants as consonant clusters, this difference in frequency is not expected. Here I object her last account since the rarity of /d/ may be due to the diachronic shift from /d/ in PB to /l/ and the larger occurrence of /nd/ sequence may also result from neutralisation of the historical /n-l/ cluster. However, I follow Paulian to analyse (at least some) NC sequences as phonemes, while some of them are unambiguously consonant clusters. Here at least three types of NC sequences should be distinguished:

i) NC sequences that are mono-phonemic consonants, which always occur at the stem-initial position: see examples in (3). Here I interpret the prenasalised consonants as originated from an NV-prefix in which the vowel may have been lost and the nasal becomes attached to the stem and inseparable, new class prefixes can be added as the nasal is reanalysed as part of the stem. This can also account for the fact that a verb root never begins with a prenasalised consonant in Kukuya.

(3) /baa-**nt**aba/ 'goats'
/kii-**mb**úli/ 'lion'
/**nz**iimi/ 'many, much'

ii) separable nasal prefix followed by a stem-initial oral consonant: these cases are attested with class 9/10 nominal and concord prefixes as shown in (4), and more frequently, with the 1SG subject marker **N**- in (5). In these ex-

amples the duration of the NC cluster in pronunciation is noticeably longer than in (i) above. When the NC sequence occurs, a neutralisation rule on the contrast between stop and continuant is always applied as in (6), which Hyman (2019: 139) summarises as "Bantu languages prefer that post-nasal consonants be [+voice] rather than [-voice] and [-continuant] rather than [+continuant]". This rule can also be interpreted as a prohibition of the change of C after a nasal, for example the weakening of ***p** to [w] and ***d** to [l] as in the word *ki-lóbo* (*dób-) 'to catch fish' is blocked after a nasal as in *m-lóbo* [mdóbo] 'I catch fish'. Post-nasal affrication is also attested, also shown in (6). When a nasal prefix is followed by a stem that also starts with a nasal, the sequence is realised as a geminated nasal, but as we will see shortly, stem-initial nasals are themselves geminated, so the nasal prefix may be just unpronounced.

(4) li-yŭ [li-yŭ] (cl.5) 'a peanut'
n-yŭ [**n**-dzŭ]/ (cl.10) 'peanuts'
mpólo **n**-kima [mpólo ŋ-kima] (cl.9) 'another chance'

(5) a. Me m-wéénά mí-para.
[me**mp**éénámípata]
'I lack money.'
b. Me n-yuk-í bó-ri we ya má-lúa.
[me**ndz**ukíbóri we ya málúa]
'I heard that you were sick.'

(6) *Neutralisation rule of NC cluster*
N+/p/, N+/w/ > [mp]
N+/pf/, N+/f/ > [mpf]
N+/ts/, N+/s/ > [nts]
N+/dz/, N+/j/ > [ndz]
N+/l/ > [nd]

iii) there are also cases in which the underlying structure of NC sequence is ambiguous, especially for the class 9 nouns that have their plural counterparts in class 6. Class 9/10 nominals start exclusively with a nasal, however,

as shown in (7), the class 6 plural prefix *ma-* does not substitute the nasal prefix of the singular form, in contrast with the class 10 nasal prefix that replaces the singular class 5 prefix in (4) above. Also shown in (7), in the formation of diminutives, the first syllable of a class 9 noun stem combined with the nasal prefix is reduplicated (see more on the diminutives in 2.3.1) as a whole unit, while for other noun classes the prefix is never reduplicated, which again shows that the nasal is inseparable from the stem. This may also suggest that the original nasal prefix has undergone homorganic assimilation with the initial oral consonant and becomes available for noun class change by adding other class prefixes. What slightly differs from (i) is that the nasal prefix here can still contribute to the characterisation of noun class and is associated with the concord morphology (see section 2.3.1 below).

(7) /**n**tséke/ (cl.9) '(small) field'
/**ma**-**n**tséke/ (cl.6) '(group of) fields'
/**nz**ó/ (cl.9) 'house'
/ki-**nz**ú-**nz**o/ 'small house' (diminutive)
/mu-bilí/ (cl.3) 'cola tree'
/ki-**bǐ**-bilí/ 'small cola tree' (dimunitive)
/nzó yi-**m**-bvé/ (cl.9) 'a nice house'

2.1.1.2 Glides

The phonological status of glides is not ambiguous in Kukuya. There are clearly cases in which an initial glide is itself consonantal and is not preceded by any other consonants, as shown in (8a). This can be proven by the facts that in these cases the /w/ and /y/ are not a tone-bearing unit, and they can be followed by vowels of all qualities, which shows that they function as the initial consonants (see in Table 2.3 below that vowel successions are quite restricted), though they can be originally derived from vowels.

(8) a. ki-woo 'to help'
ki-yaala 'to peel'

b. ntswíi 'fish (*sg.*)'
ki-byáala 'to command'

For the sequences C**w**V and C**y**V as in (8b), the glides should be considered as derived from underlying vowels (i>y; u>w) but no longer function as vowels, as they cannot bear tones and there are oppositions between C**w**V/C**y**V and C**u**V/C**i**V which also differ in duration, see the examples in (9a). The sequences C**w**e and C**w**VCV are allowed, but we will see in section 2.1.2 that the vowel succession **u-e** is not allowed and only identical V_1V_2 succession occurs in CVVCV, which set the glides apart from the true vowels. The glides in these sequences can neither be equated to the consonants /w/ and /j/, as the latter can be followed by any vowels, while in the C**w**V sequence, the V is limited to /i/, /e/ and /a/, and the C cannot be anterior consonants (/n/, /t/, /d/); for the C**y**V sequence, the choice of C is more free but the V can only be /a/ and /e/ (Paulian 1975: 59). Due to the limited distribution of intervocalic consonants and constraints on the syllable structure (see momentarily in this section), the sequence VGV is not attested.

The C**w**V can in some cases labialise and palatalise the initial consonant, /s/, /ts/ and /dz/ are realised as [ʃʷ], [tʃʷ] and [dʒʷ] respectively when followed by the glide /w/, as illustrated in (9b). Moreover, as we will see shortly in section 2.1.2, in C**w**V the glide can trigger labialisation on the following vowel /i/, which is realised as [y]. The stem-initial sequences C**w** and C**y** are often considered to be derived from a merge of a Proto-Bantu nominal prefix and a root, in which case the vowel is usually lengthened (see section 2.3.1).

(9) a. ki-kwâ 'to die'
ki-kúa 'to bring up a child'
li-pya 'gamble'
pia 'fetish'

b. ki-sweeke [ki-ʃwɛɛgɛ] 'to hide'
ki-swaaka [ki-ʃwaaga] 'to wash'
tswaala(-tswaala) [tʃwaala] 'quickly, fast'
dzwiá [dʒɥá] 'hole'

2.1.1.3 Constricted articulation 'ChVV'

Next I introduce a somehow special articulation of the initial CVV-shape syllable, which is commonly attested in Kukuya words. I follow Paulian's orthography to put an **h** between the initial C and the VV sequence to symbolise this "marked" articulation. According to the calculation in Paulian (1975), C**h**VV has almost the same frequency of occurrence as the non-marked CVV syllable. In the fieldwork I observed that while the elder speakers can easily distinguish C**h**VV from CVV, this contrast is being lost among younger speakers who also know less vocabularies of the language. A similar phenomenon is reported in Kristensen et al. (1986) in their phonological sketch of Teke-Eboo (B74), in which they refer to this modified articulation as "glottalised consonants" that are realised with strong aspiration but they did not provide solid generalisations.

This modified articulation can be described as the narrowing of the passage of airflow between the initial consonant and the VV sequence, and this stricture triggers a fricative-like offglide (Hyman 1987: 326), not only influencing just one segment but affecting both the realisation of the consonant and the vowels. This "constricted" /C**h**/ only occurs when a stem-initial consonant is followed by a VV sequence and can contrast with the non-modified initial consonant in the same syllable structure CVV, see the minimal pairs in (10a). The consonant in this C**h**VV can be any of the initial consonants except the alveolar stops, and the first vowel in the VV sequence cannot be /a/.

(10) a. ki-kée [ki-kée] 'to be dry'
ki-k**h**ée [ki-k$^{\text{ʃj}}$íe] 'to try'
ki-kúa [ki-kúa] 'to raise (a child)'
ki-k**h**úa [ki-k$^{\text{fw}}$úa] 'to weed the grass'

b. mu-pf**h**íili [mu-pf$^{\text{ʲ}}$íili] 'widower'
ki-b**h**iima [ki-b$^{\text{zj}}$i:ma] 'corpse'
b**h**ooko [b$^{\text{w}}$o:ko] 'fear'
ng**h**uunú [ŋg$^{\text{vw}}$u:nu] 'forest field' (Paulian 1975: 76)

This marked articulation can influence the realisation of the consonant,

which also depends on the quality of the following vowels. From the examples in (10) we see that when the passage of the airflow is narrowed, a friction occurs between C and VV and C is realised as [Cj] or [Cw] when followed by a front vowel or back vowel respectively. The constriction can also trigger affrication of the plosive consonants, as summarised in the Table 2.2. [p^f] and [b^v] never occur before back vowels, possibly because of the existence of the phonemes /pf/ and /bv/. More examples are given in (11a).

	before front vowel	before back vowel	Example
Ch	[C**j**]	[C**w**]	
/**k**/ (/**nk**/ and /**ng**/)	[k^{sj}]	[k^{fw}]	ki-k**h**úula [ki-k^{fw}úula] 'to depend'
/**p**/, /**b**/ (/**mb**/)	[p^{sj}], [b^{zj}]	–	b**h**iima [ki-b^{zj}i:ma] 'corpse'
/**j**/	[z^j]	[$ʒ^w$]	yhoomi [ʒwo:mi] 'grasshopper'
/**s**/,/**ts**/,/**dz**/	[ʃ], [tʃ], [dʒ]		ki-tshuuma [ki-tʃu:mu] 'tree rat'

Table 2.2: The realisation of C**h** before different vowel qualities

The modified articulation can also cause a tension on the following vowels. According to Paulian's transcription, while the non-modified VV sequences are realised as [ɪ:], [ɛ:], [ʊ:] and [ɔ:] (also see section 2.2.2), <**h**ii> and <**h**uu> are realised as [^{y}i:] and [^{w}u:] when the VV sequence bears the same tone and [^{y}iɪ] and [^{w}uʊ] with a contour tone; <**h**ee> and <**h**oo> are realised as [^{y}ie] and [^{w}uo] in C**h**VV, while as [ye:] and [wo:] in C**h**VVCV when the vowels bear the same tone, see some examples in (11b).

(11) a. ki-ts**h**uumu [ki-tʃu:mu] 'tree rat'
ki-y**h**iila [ki-z^yi:la] 'to last'
y**h**oomi [$ʒ^w$o:mi] 'grasshopper'
ng**h**eemé [ŋg^{zy}e:mé] 'dogfish'

b. ki-k**h**úu [ki-k^{fw}úʊ] 'axe'
ki-k**h**íina [ki-k^{sy}íina] 'get blocked'
ki-l**h**eeme [ki-lye:mɛ] 'become clear'
ki-k**h**óolo [ki-k^wúolɔ] 'crow (cock)' (Paulian 1975: 78)

The <h> in this environment does not seem to be a segmental phoneme, as its presence can influence both the consonant and the vowels in different ways, but its own features are difficult to schematise, as it is not realised as simple aspiration or palatalisation. It seems more appropriate to describe

this <h> as a modified articulation that influences the initial CVV-unit *as a whole*. Diachronically, Paulian noticed that most of the stems C**h**VV(CV) in Kukuya with this modified articulation originated from the Proto-Bantu stems that had intervocalic NC consonants, and the occurrence of <h> thus is due to the loss of a stem-medial consonant and the compensatory lengthening of the V_1; when the stem vowel is /a/, <h> does not occur, see some comparisons in (12).

(12)

Proto-Bantu	*Teke-Kukuya*
*-bimba 'corpse'	/ki-b**h**iima/
*-cimb- 'to catch'	/ki-s**h**iima/
*-dond- 'to follow'	/ki-l**h**oono/
*-banjí 'arrow'	/li-báí/

Paulian also proposed an alternative interpretation of this constricted articulation that it could be triggered by two very high vowels, which cause the friction between the initial consonant and these vowels.

2.1.1.4 Intervocalic consonants

In the intervocalic positions in a Kukuya word, consonants have a very limited distribution compared to the initial position. Only six consonant phonemes can occur stem-internally, as summarised in Table 2.3 below. While all the six phonemes can occur at C_2 position, only /p/, /m/ and /k/ can occur at C_3. The loss of consonants after C_1 is commonly seen in many Zone A and B languages.

Consonant lenition is often attested in the intervocalic positions. /p/ and /k/ are never aspirated intervocalically. /p/ is often realised intervocallically as voiced [b] or approximant [β], while /k/ is realised as [ɡ] or [ɣ], which vary among speakers and depend on the speed of utterance. In rapid speech, intervocalic /m/ and /n/ can often be dropped and nasalise the following vowel (see vowel nasalisation in section 2.1.2). A stem-internal /t/ is always pronounced as an apical tap [ɾ] as in the word *taara* /taata/ 'father', which is never attested in the stem-initial position. Given the fact that intervocalic

	Bilabial	**Dental**	**Velar**
Oral	p	t	k
Nasal	m	n	
Lateral		l	

Table 2.3: Intervocalic consonants in Teke-Kukuya (Paulian 1975: 88)

positions have a too restricted consonant system to include a phoneme that is distinctive from all the consonant inventories in the initial position, I treat [r] as an variant of /t/ while in orthography I always transcribe it as <**r**>. According to Paulian's calculation, /l/ is the most frequently occurring intervocalic consonant.

C_1	C_2
/n/	/l/
/ŋ/	/k/
/d/	/t/
/mv/,/ɱ/	/m/
/bv/, /ɱ/,/ŋ/,/ɲ/	/p/

Table 2.4: Prohibited C_1-C_2 combinations in Kukuya

There are some restrictions on the combination of consonants in different positions. For the CV(V)CV shape, the possibilities of C_1-C_2 combinations are relatively free, so I just list in Table 2.4 those which are prohibited. The combinations of C_2-C_3 in CVCVCV are much more limited so I list all the possibilities according to Paulian (1975)'s calculation in Table 2.5. We can notice that in CVCVCV shape the choice of C_2 is more restricted than in CVCV, anterior consonants are not allowed in C_2 while central consonants are not allowed in C_3, only /k/ can occur in both positions. Nasal and oral consonants exclude each other in C_2-C_3 combinations, and C_2 and C_3 cannot be identical.

As for the combinations of C_1-C_2-C_3 in CVCVCV, only the initial /w/, /t/, /l/, /s/, /k/ allow all the six possible C_2-C_3 combinations above. See some

C_2	C_3
/t/	/p/,/k/
/l/	/p/,/k/
/k/	/p/
/n/	/m/

Table 2.5: C_2-C_3 combinations in Kukuya

illustrative examples in (13).

(13) ki-téleke /ki-téleke/ 'to prepare, to cook'
séneme /séneme/ 'six'
ki-kokobo /ki-kokopo/ 'to calm down'
ki-téreke /ki-téteke/ 'to tremble'

To summarise, in this subsection we see that while the full inventory of consonants are allowed in the initial position, the intervocalic positions have only a very reduced consonant system and even the same phoneme has different realisations when occurring initially and intervocalically. The reduced consonant system in the intermediate positions may be due to a neutralised realisation such as voiceless and voicing of the initial consonants. Next I introduce the vowel system of the language.

2.1.2 Vowels

Kukuya employs a five-vowel system as summarised in Table 2.6. The phonemes /i/, /e/, /o/ and /u/ can have variants with regard to different degrees of openness. /i/ is often realised as a high front vowel but as [ɪ] for some speakers, /e/ is realised as an intermediate vowel between the [e] and [ɛ], /o/ can vary between [o] and [ɔ], /u/ can vary from [u] to [ʊ], which depend on different speakers from various regions and may be influenced by the vowel qualities of the vowels in other Teke varieties that they have contact with.

Orthography	Phoneme	Description	Example
i	[i]	high front unrounded	ki-síka [ki-síka] 'to make excited'
e	[e]∼[ɛ]	(low-)mid front unrounded	mu-yeni [mu-jeni] 'visiter'
a	[a]	low front unrounded	mbaá [-mbaá] 'fire, heat'
o	[o]∼[ɔ]	(low-)mid back unrounded	ki-tô [ki-tô] 'to arrive'
u	[u]	high back rounded	bu-bui [bu-bui] 'youth'

Table 2.6: Phonemic vowels in Teke-Kukuya

There is no close front rounded vowel phoneme /y/ but we can often encounter it as an allophone, as in the language name 'Ki-kukuya' /ki-kwíkwía/ [ki-kykya]. This allophone [y] occurs when the stem-initial syllable starts with C**w** and the following vowel successions are /i/, /ii/, /ee/ or /ia/, and is triggered by the glide /w/ that labialises the following front vowel, as in the words *tswíi* /tswíi/ [-tʃyi] 'ear', *ki-dzwídzwáali* /ki-dzwídzwáali/ [ki-dʒydʒwáali] '(small) injury' and *dzwiá* /dzwiá/ [dʒyá] 'hole'.

2.1.2.1 Vowel combination and coalescence

All the five vowel phonemes can occur in different positions on the stem but there are restrictions on their combinations. For the V_1-V_2 combination in CVCV shape, V_1 and V_2 can be any of the five vowels when the two vowels are identical; /i/ as V_2 can combine with any V_1; and only high vowels can combines with /a/ as V_2. These possible combinations are summarised by Paulian in Table 2.7 below, and I don't find exceptional cases in my data. The V_1 and V_2 combination patterns in CVCV are exactly the V_1-V_3 combinations that are allowed in CVCVCV, the V_1-V_2 successions allowed in CVV, and the V_1-V_3 combinations in CVVCV. Based on these facts, I distinguish only the initial vowel (V_i) and final vowel (V_f) in the table.

The intermediate vowel (V_m) in CVCVCV behaves like a "neutral" vowel and does not affect the occurrence of V_i-V_f, while the realisation of V_m, on the contrary, depends on the V_i-V_f combination. V_m is the same as V_i and V_f when these are identical; V_m is realised as the same as V_i when V_i is a high vowel and V_f is /a/; V_m is realised as V_f when V_i is not a high vowel and V_f is /i/; when V_i and V_f are both high vowels, V_m can be realised as either V_i

V_i \ V_f	**i**	**e**	**a**	**o**	**u**
i	+		+		
e	+	+			
a	+		+		
o	+			+	
u	+		+		+

Table 2.7: The combination patterns of V_i-V_f
(adapted from Paulian 1975: 104)

or V_f. Some examples of the realisation of V_m in CVCVCV are given in (14). In spite of these rules, V_m is often realised simply as a schwa [ə] in natural speech.

(14) ki-feréke /ki-fetéke/ 'small hole'
mu-nkonomo /mu-nkonomo/ 'punch'
ki-binima /ki-binima/ 'go to search'
mu-sáliki /mu-sáliki/ 'shout, scream'
ki-dzulibi /ki-dzulipi/ 'door'

In $CV_1V_2CV_3$, the V_2 is always realised as identical to V_1, and successions of different vowels are not allowed. I suppose that there is no phonological contrast between short and long vowels. The V_2 in CVVCV should be treated as independent of V_1 but is not part of a long vowel for the following reasons. First, as we will see shortly on the tonal system (see 2.2.1) that in CVVCV with LHL tone pattern, the H tone is distributed to V_2, so the tones on V_1 and V_2 are not necessarily the same; the tone on V_1 is always fixed while V_2 is subject to tone change rules such as H tone plateauing (see the rule application in (24) below), which also indicates that V_1-V_2 is not a long vowel but vowel succession, as seen in (15b). In addition, in the derivation of diminutive nominals (see section 2.3.1) in which the first syllable is reduplicated, only CV_1 can be doubled even if the stem has an initial CVV syllable, as shown in (15c).

(15) a. ki-tene [ki-tɛnɛ] 'to knead'
ki-teene [ki-tɛːnɛ] 'to respond'
ki-pura [ki-pura] 'to plow'
ki-puura [ki-puːra] 'to hide behind' (Paulian 1975: 111)

b. ki-baáma [ki-baáma] 'to wake up (suddenly)'
li-báani 'the beginning'
li-báání líí 'the beginning of'

c. mbaa 'fire'
ki-mbu-mbaa 'small fire'
nkwíírí 'medicine (by witchcraft)'
nkwí-nkwíírí 'ineffective medicine'

Based on these facts, I treat the identical VV sequence in CVVCV as two vowels rather than one long vowel. It is noteworthy that in CVV the vowels are not necessarily identical as in CVVCV and the V_1-V_2 combination actually corresponds to V_i-V_f which is subject to the occurrence restrictions in Table 2.7.

Vowel coalescence is a phonological phenomenon in which two adjacent vowels cause each other to change (Harford 1997). This can occur across the boundary of nominal or verbal prefixes within and across words, and is commonly attested with a prefix and a vowel-initial stem. Some examples are illustrated in (16) and (17). In (16a) the vowel in the word *nzó* 'house' corresponds to the V_1 on a stem and is maintained when followed by the class 9 connective marker *aa*, which also results from the stem-initial prominence (see section 2.2.2); in (16b) the final vowel of the word *ngúku* 'mother' corresponds to the V_2 which is non-accentuated, thus it disappears when combined with the connective marker.

(16) nzó aa me [nzɔ́ɔ-mɛ] 'my house'
ngúku aa we [ngúɡaː-ɥɛ] 'your mother'

In rapid speech and also depending on individual speakers, the contact of adjacent vowels can change the quality of both of them, some general rules would be /**u**/+/**a**/>/**o**/ and /**i**/+/**a**/>/**e**/. In (17a) we see that the bilabial stop

/b/ is dropped when it is not stem-initial, and the contact between adjacent /a/ and /u/ across morpheme boundaries triggers the realisation of /o/; in (17b) the class 7 relative marker *ki-* is merged with the remote past tense marker *â-* and is realised as *keê-* (see the formation of relative clauses in section 2.5).

(17) a. yɛ̌ ŋa bu-lá búú baarí [yɛ̌-ŋo-lló:ba:rī]
go 16.LOC 14-village 14.CONN 2.people
'go to the village of the people' (Paulian 1975: 146)

b. ki-ko **keê**-li **â**-n-ték-í me
7-clothes 7REL.RPST-COP RPST-1SG.SM-sell-PST 1SG.PRO
'the clothes that I had sold'

2.1.2.2 Nasalised vowels

Nasalisation is not a contrastive feature of vowels in Kukuya but only appears in certain phonetic environments. The nasalised vowels have been reported as occurring frequently in the Teke group since Guthrie's fieldwork in the 1950s (Guthrie 1960, 1971), and some preliminary comparative works and description on the nasalised vowels in different Teke varieties were conducted in Hombert (1986, 1987) and Paulian (1994) and later in several manuals by SIL Congo (2013, 2016, 2020). Compared to other Teke varieties such as Ngungwel (B72a), Ndzindziu (B74a) and Ibali (B75), Kukuya (B77a), Fuumu (B77b), Iyaa (B73) and Tege (B71) seem to be located in an earlier stage of vowel nasalisation, which may reflect their relatively isolated linguistic situation. In Fuumu, the vowel nasalisation has not even started (at the moment of Hombert's studies). According to my observation, in Kukuya the nasalised vowels as the realisation of nasal stops are just optional but is commonly attested in casual speech, which remains almost the same situation as forty years ago in the first documentation on this language.

The presence of nasalised vowels is one characteristic of the Teke cluster, and some universal tendencies of the vowel nasalisation process are observed in different varieties (Hombert 1986, 1987; Raharimanantsoa 2012). The nasalisation happens first with the stems that have *-V_1mbV_2 or *-

Underlying	Nasalised	Translation
ki-yíma	[ki-yʊ́ɔ̃]	'to sing'
ki-yéeme	[ki-yɛ́ɔ̃]	'to sleep'
ki-téneme	[ki-tɛ́ɔ̃]	'to stand'
ki-tshoomó	[ki-tsɔɔ̃]	'to think'
bi-táámí	[bi-táɔ̃]	'fun (pl.)'
mpfúúmú	[-mpfúɔ̃]	'chief, king'

Table 2.8: Examples of vowel nasalisation in Kukuya

V_1mV_2 reflexes in Proto-Bantu. More concretely, the nasalisation occurs first when the V_1 preceding a **labial** nasal is **low**, and at a later stage the nasalisation process happens with high vowels and with dental nasals. Velar nasals in Proto-Bantu disappeared without any traces of nasalisation on its adjacent vowels in Teke (Pacchiarotti et al. forthcoming). For the reflexes *-V_1mbV_2 and *-V_1mV_2, the nasalisation process happens earlier in the former, as the prenasalised stops often become plain nasals with compensatory lengthening of the preceding vowel and long vowels are affected before short vowels in nasalisation. The quality of the nasalised vowel is more often conditioned solely by the V_1 independent of the V_2. These generalisations are also borne out in Kukuya, as illustrated in the examples in Table 2.8.

In Kukuya, the vowel nasalisation is attested with all qualities of V_1 and happens with intervocalic nasal consonants /m/ and /n/, but never triggered by stem-initial nasal consonants. The intervocalic labial nasal can influence all the adjacent vowels but nasalise only the V_2 and V_3. As we see in the table above, the final vowels are often rounded as [ɔ̃] when being nasalised and the labial nasal can also the labialise V_1 as in the word *ki-yíma* 'to sing'. Vowel nasalisation can also be triggered by prefixes that starts with a labial nasal, as show in the class 1 adjectival concord prefix *mu-* in (18a). There is another optional casual speech rule by which a bilabial [b] may be deleted if it is not stem-initial, as shown in (18b). In this case the final vowel is also rounded by the dropped labial stop, it remains to be studied whether and how this is related to the vowel nasalisation process.

(18) a. mwáana wu-mu-kái 'a girl, *lit.* a female child' [ŋ́áanawɔ̃kái]
b. ki-yáaba [ki-jáao] 'to know'
ki-kaba [ki-kao] 'to share'

2.1.3 Syllable structure

All the possible syllable shapes in Kukuya are listed in Table 2.9 with examples. In the table, C stands for an oral consonant and is distinguished from a nasal consonant N. A morpheme consisting of one nasal is only attested for 1SG subject marker and class 9/10 concord prefix which must be attached to the stem. The syllable shape of V(V) is only allowed for functional categories such as possessive markers. It should be noted that the prenasalised consonants and glides only occur in the stem *initial* syllable, so if we unify the oral C, NC and CG as one unique onset C, Kukuya has in fact only two syllable types, namely CVV and CV. I include the CVV (NCVV, CGVV) shape here as a syllable type, but it only occurs in the stem structure (N)C(G)VVCV in which V_2 is always identical to V_1, and when the CVV occurs as a stem by itself, it should be divided into two syllables, i.e. CV-V.

Syllable	Examples
VV	áá 'of' (cl.3/10)
CV	ko 'banana'
CVV	ki-yéeme 'to sleep'
NCV	ndé 'she/he/it'
NCVV	mbaa 'fire' nkaaka 'grandmother'
CGV(V)	dzwiá 'hole' myáaka 'hands, arms'
(N)CGV(V)	nkwíi 'firewood' nkweéme 'praying mantis'

Table 2.9: The syllable shapes in Kukuya

A nominal or verbal stem in Kukuya can have maximally three moras, and

if we consider the oral and prenasalised consonants and the glides as the stem-initial onset, Kukuya only distinguishes five types of stem structures, namely CV, CVV, CVCV, CVVCV and CVCVCV, as exemplified in Table 2.10 below. This phonological constraint on the syllable structure may be associated with the loss of productive verb derivational extensions in this language.

Most loan words are adapted to the syllable structures allowed in Kukuya, while there are many exceptions, see some examples in (19). We see cases in which an epenthetic vowel does not need to occur to create a CV syllable, as in the word *doktóori* 'doctor', and a non-initial syllable can surface in the CVV shape, as in the word *mu-políisi* 'policeman'.

(19) doktóori 'docteur' (Fr.)
tabúlu 'table' (Fr.)
mu-políisi 'police' (Fr.)
li-kóoli 'école' (Fr.)
búku 'book' (Eng.)
lopitáali 'hospital' (Fr.)
mangúlu 'mango' (Fr.)

Stem structure	Examples
CV	ki-wâ 'to give'
CVV	li-meé 'stone' dzwiá 'hole'
CVCV	bu-ndúku 'friendship'
CVVCV	ki-fúula 'to ask' myáaka 'hands, arms'
CVCVCV	ki-bóloko 'to be broken' ki-kwereke 'to punch'

Table 2.10: The stem types in Kukuya

In this section I have provided an overview of the segmental phonology of Kukuya, including the consonant and vowel inventories, their distribution on a stem and phonetic modifications in various conditions. We see that

while the stem-initial position can have full inventory of consonants and vowels, the intervocalic positions have a very reduced consonant system. So far we have an impression that in a Kukuya word stem, various types of fixed combinations are exploited. For example, exactly six combinations are allowed for the C_2-C_3 in CVCVCV (see Table 2.5), eleven possible combinations of V_i-V_f (see Table 2.7) are attested, and five types of stem syllable structures are observed. We will see in the next section that this preference on fixed combinations also exists in the tonal system of this language.

2.2 Prosody

Kukuya is a tonal language and the tone patterns can encode lexical and grammatical distinctions. What is of particular interest here is the fact that in Kukuya there are five **fixed tonal melodies** which are L, H, LH, HL and LHL. These tone patterns are assigned to certain prosodic domains, and we will see evidence that there is both a lexical and a postlexical prosodic domain in this language. This postlexical domain is somehow unusual in that a prefix-stem sequence, which is the most common shape of a grammatical word, does not stand for a phonological word. Instead, all the prefixes join the **preceding stem** to form a prosodic domain. In addition, a stem-initial prominence interacts with the tonal system as well as the phonetic realisation of consonants and vowels. These prosodic properties of Kukuya were first described in Paulian (1975) and were further discussed in Hyman (1987). In this section, I first introduce the tonal system and then I discuss the stem-initial prominence.

2.2.1 Tone

Kukuya distinguishes two contrastive pitch levels that are transcribed as high tone (H) and low tone (L). The tonal system in Kukuya is intriguing in that a certain phonological domain is assigned one of five fixed tone patterns independently of the number of the tone-bearing units (TBU) that it contains. In other words, the H tone and L tone in this language have combined into different schemes which are assigned to a certain phonological unit in regular ways without exceptions, which is comparable to the four tone schemes in Mandarin Chinese that are distributed on the syllable level. As we will see shortly, the realisation of the tone patterns also depends on whether they occur before a pause or are followed by other elements, and the phonological domain that a tone pattern is assigned to is also fixed but can be extended beyond the syllable and stem level to cross over the word boundaries. In this subsection, I first present the distribution of the tone patterns on lexical stems, then I discuss the prosodic domain beyond the lexical word level. I will also introduce different types of grammatical tones

in this language.

2.2.1.1 Lexical tone pattern realisation

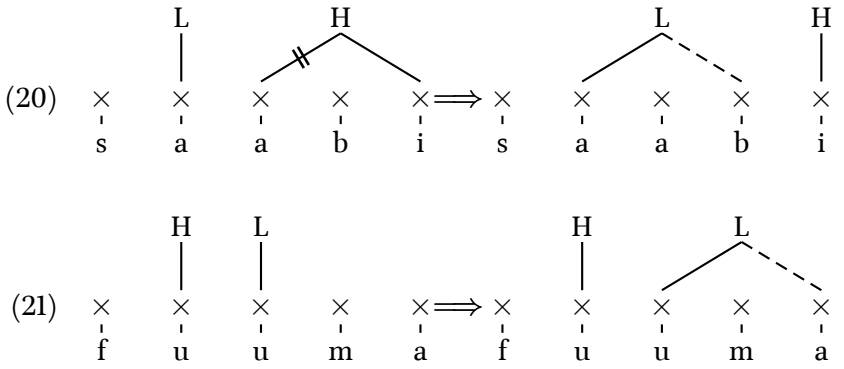
The realisation of the five tone patterns on different syllable structures of lexical stems are presented in Table 2.11, when the stems are followed by other stems without any prosodic break. We notice that in all these five tone patterns a H tone can occur only once, which may be accounted for by an economy principle as H tone is often considered as marked while L tone is default in many Bantu languages (Marlo and Odden 2019).

Tone pattern	Realisation on different stems	Examples
H	CV́, CV́V́, CV́CV́, CV́V́CV́, CV́CV́CV́	*mi-táámí* 'fun'
L	CV, CVV, CVCV, CVVCV, CVCVCV	*ki-lili* 'tear'
HL	CV̂, CV́V, CV́CV, CV́VCV, CV́CVCV	*ki-fúuma* 'to buy'
LH	CV̌, CVV́, CVCV́, CVVCV́, CVCVCV́	*ki-saabí* 'roof'
LHL	CV̌, CVV̂, CVCV̂, CVV́CV, CVCV́CV	*ki-palâ* 'to go out'

Table 2.11: The tone patterns in Kukuya and their realisation on lexical stems (when followed by another stem)

We start by looking from the table how these tone patterns are mapped onto the lexical stems of different numbers of syllables. Here I refer to a stem as the verb or noun root plus the final vowel excluding any prefixes. Hyman (1987) observed that the mapping fashion of the five tone patterns to the stem is left-to-right and one-to-one which follows exactly the association conventions proposed in Goldsmith's (1976) autosegmental phonology. When the number of tones and moras are the same, each tone is just distributed on the respective mora, e.g. the LH pattern on a CVCV́ stem. When there are more moras than tones, then copy the L tone (if present) to the next syllable until the whole tone pattern is distributed to all moras, e.g. the HL pattern on a CV́CVCV stem and the LH pattern on a CVCVCV́ stem; when there are more tones than moras, then assign all the remaining tones to the rightmost mora, e.g. the LHL pattern on a CVCV̂ stem.

To illustrate, for example the LH tone pattern on the noun *ki-saabí* 'the roof'. When LH is assigned to a stem with three moras, it cannot be realised as LHH but instead LLH is attested, whereby a L tone is copied to the next syllable and the remaining H tone is assigned to the last syllable, as shown in (20). For the HL tone pattern on the verb stem *ki-fúuma* 'to buy', the same L tone copying rule is applied as in (21).



When a stem occurs before a prosodic break, i.e. not immediately followed by any other element, a final H tone is always lowered to a mid tone, as illustrated in Table 2.12. A L tone remains unchanged when occurring utterance-finally and when the number of moras are not fewer than tones. The avoidance of H tone on a vowel that is adjacent to a pause is also a general tendency in Bantu languages (Hyman 2001; Downing 2019). This utterance-final H tone lowering rule also provides strong evidence on establishing the five autosegmental tone schemes that are independent of their TBUs.

As illustrated in the table, when H tone lowering occurs before a pause, all and only the moras of the H part in a tone pattern are affected, as shown in the words *mi-tāāmī* 'fun' and *ki-saabī* 'roof' which have underlying H and LH tone pattern respectively (see their tonal realisation before another stem in Table 2.11). This fact supports that we are dealing with a H autosegment as (part of) a tone melody that affects on the whole phonological domain rather than multiple successive H tones, in which case only the H tone of the final mora would be lowered.

Tone pattern	Realisations before pause	Examples
H	CV̄, CV̄V̄, CV̄CV̄, CV̄V̄CV̄, CV̄CV̄CV̄	*mi-tāāmī* 'fun'
L	CV, CVV, CVCV, CVVCV, CVCVCV	*ki-lili* 'tear'
HL	**CV́**, CV́V, CV́CV, CV́VCV, CV́CVCV	*ki-fúuma* 'to buy'
LH	CV̀, CV̀V̄, CV̀CV̄, CV̀VCV̄, CV̀CVCV̄	*ki-saabī* 'roof'
LHL	**CV̌**, **CV̌V́**, **CV̌CV́**, CV̌V́CV, CV̌CV́CV	*ki-palâ* 'to go out'

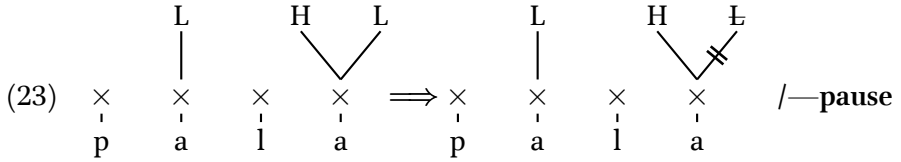
Table 2.12: Realisation of tone patterns in Kukuya lexical stems (before a prosodic break)

An example of the utterance-final H tone lowering is given in (22) on the verb *ki-fúuma* 'to buy'. In (22a), when there is an element being focused in an immediate preverbal position, a verb-final H tone occurs (also see chapter 4 section 4.3) and raises the HL tone pattern on the verb as H, due to the H tone plateauing effect. This verb-final H tone can only be detected when there is a following nominal prefix on its object complement, onto which this H tone can spread. When the verb appears utterance-finally as in (22b), this final H tone undergoes lowering which bleeds the H tone plateauing rule, and the verb just surfaces with its original HL tone pattern.

(22) a. Taará ku dzándú ká-**fúúm-í** **má**-lí.
1.father 17.LOC 5.market 1SM.PST-buy-PST 6-wine
'Father bought the wine AT THE MARKET.'

b. Taará ma-lí ku dzándú ká-**fúum-i**.
1.father 6-wine 17.LOC 5.market 1SM.PST-buy-PST
'Father bought the wine AT THE MARKET.' [*ki-fúuma* 'to buy']

A noteworthy exception in the table above is the realisation of HL and LHL tone patterns before a pause. We see that when there are fewer moras than tones in a stem before a pause (as the stems in bold in the table), the final L tone in HL and LHL patterns is disassociated, as in the word *ki-palá* 'to go out' with the underlying LHL tone. This final L tone deletion rule is illustrated in (23). When this rule is applied and renders a H tone exposed on the final mora, we see that the H tone lowering rule is not applicable and the stem surfaces with a final H tone before the pause.



2.2.1.2 Postlexical prosodic domain

We now move on to see how the tone schemes are realised on a lexical stem when it is followed by a *prefix*. I present the analysis proposed in Paulian (1975) and Hyman (1987) that a stem together with the prefix on the following word form a prosodic domain to which the five tone patterns are assigned. When a stem is followed by a word with a H tone prefix or any H tone functional markers (in bold), the realisation of the tone patterns on the preceding stem is summarised in Table 2.13.

Tone pattern	Realisations before a H prefix	Examples
H	CV́, CV́V́, CV́CV́, CV́V́CV́, CV́CV́CV́	*bi-táámí* ***bíí*** *báana* 'fun of children'
L	CV, CVV, CVCV, CVVCV, CVCVCV	*ki-lili* ***kíí*** *me* 'my tear'
HL	CV́, CV́V́, CV́CV́, CV́V́CV́, CV́CV́CV́	*ki-fúúmá* ***báa-ntaba*** 'to buy goats'
LH	CV, CVV, CVCV, CVVCV, CVCVCV	*ki-saabi* ***kíí*** *nzó* 'roof of the house'
LHL	CV, CVV, CVCV, CVVCV, CVCVCV	*ki-beneme* ***kíí*** *me* 'my new born'

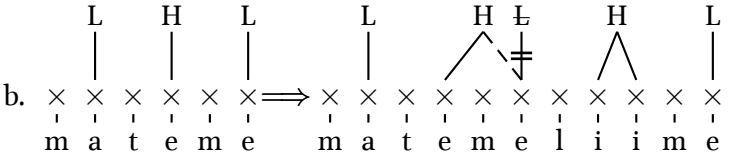
Table 2.13: The realisation of different tone patterns in Kukuya on lexical stems (when followed by a H tone prefix)

From the table we notice that the stems with HL, LH and LHL tone patterns, regardless of their syllable structure, are realised as H, L and L respectively when followed by a H prefix. Paulian (1975) and Hyman (1987) accounted for these tone changes by assuming that the sequence *stem+prefix* constitutes a postlexical prosodic domain in Kukuya, which the five fixed tone patterns are mapped onto. The tone modifications on the surface is to avoid some tone occurrences that are not allowed within the five tone pattern. Recall that an autosegmental H tone can occur only once in a tone scheme and successions of more than one segmental H tones in a contour tone pattern are prohibited, we exclude the surface tone realisations *HLH,

*LHH and *LHLH in a postlexical prosodic domain, which can be triggered by a H tone prefix following the stem. See the illustrations below which are adapted from Hyman (1987), where '|' indicates the boundary of a prosodic domain.

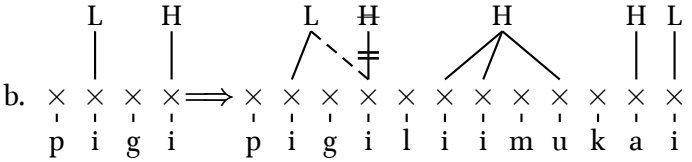
In (24) we find that when followed by a H tone connective marker *líí-*, the lexical stem with an underlying HL tone pattern is realised as H-H. This tone modification is due to the fact that a HLH tone pattern is not allowed in a prosodic domain of the language, thus the L tone on the mora is deleted and then either the preceding H tone spreads to this mora or the L tone is raised to H by the adjacent H tones. This is also known as H tone plateauing (Hyman and Katamba 2010) which is also the case in example (24a) above.

(24) a. ma-téme(**HL**) ⟹ ma-|témé líí (**H**) | me 'my hoes'



The tonal realisation of a LH stem followed by a H tone prefix is illustrated in (25). We see that in this case the L tone copying rule as in (21) is applied, which may be due to the Obligatory Contour Principle (OCP) in which two consecutive H tones are avoided. What is unexpected here is that the L tone does not replace the first H tone on the connective marker and a surface L-L-H-H tone sequence is allowed in the postlexical domain. In (25) we also notice that the H tone on the connective marker spreads to the following nominal prefix *mu-* that has a default L tone, which results multiply linked H tones to which the L tone on the stem cannot spread. Given this exception, Hyman (1987) proposed that the L tone spreading rule just does not apply in the postlexical domain and interpreted the tonal realisations in (24) and (25) as any tone must be deleted when preceded by any tone and followed by a H tone in the postlexical domain, thus collapsing the H tone plateauing and L tone copying rules, as schematised in (26).

(25) a. pigí (**LH**) ⟹ pigi líí mú- (**LH**) | kái 'raphia palm of the woman'



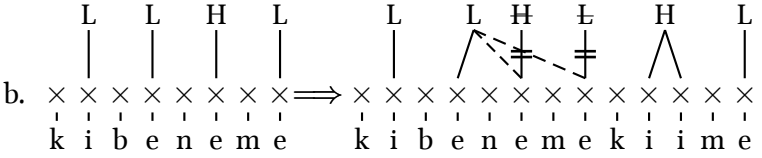
(26) a. HL + H→H ... H
LH + H→L ... H

b. *Tone deletion in the postlexical domain* (Hyman 1987: 323)

$$T \rightarrow [\varnothing] \,/\, T\_\_\_H$$

As for a LHL stem followed by a H tone prefix, which is shown in (27), according to Hyman (1987) its realisation as LH can be interpreted as the rule in (26) applying iteratively, deleting the final L tone and the H tone on the stem, then the initial L tone may spread to these moras the tones of which are deleted. It does not seem to be case that the LHL tone pattern is assigned to the whole postlexical prosodic domain, otherwise we would expect the surface L-H-L-L or L-L-H-L tone sequences on this domain.

(27) a. ki-benéme (**LHL**) ⟹ ki- | beneme kíí (**LH**) | me 'my newborn'



From the examples above we also notice that the prefix of a nominal stem has nothing to do with the tonal realisation of this stem. For example in the possessive construction in (24) above, the prefix plus the stem surface a L-H-H sequence but the L tone of the prefix never spreads rightwards. This extra-prosodic status of the initial prefix further supports that the postlexical prosodic domain in Kukuya consists of a stem and a following prefix, while the prefix of the stem itself does not join into the prosodic domain of the stem. Since the prefix cannot spread its tone to the right, and the tone spreading rule is assumed to be always in a left-to-right fashion, we find that the tone on the first mora of the stem is stable (except when it bears a H tone and occurs utterance-finally, which undergoes lowering). I

will discuss further on the particularity of the stem-initial mora in section 2.2.2.

In Paulian (1975) and Hyman (1987; 2007)'s data and analysis of the postlexical prosodic domain, they mainly took into account the nominal phrases, for example a nominal stem followed by a prefix such as an connective marker or a demonstrative marker, while the prosodic domain within VP was not illustrated in much detail. Only one relevant example (28a) is found in Paulian (1975), in which she demarcated three prosodic domains within the sentence (the domain boundary is marked by '|'): the subject together with the subject marker, the verb stem, and the object (with no segmental prefix). The LH tone pattern on the subject is modified as L-L because of the rule in (26) above. Example (28b) is extracted from Hyman (2007) and the HL subject *téme* followed by the H tone subject marker is subject to H tone plateauing.

(28) a. |pigi lí:|pî| mba:
5.raphia 5SM.PST-get.PST 9.fire
'the raphia palm was on fire' (Paulian 1975: 141)

b. Mà-tém**é** máá-bvì.
6-hoe 6SM.PST-fell.PST
'The hoes fell.' (Hyman 2007: 208)

I suppose that the prefix on an object complement also forms a prosodic domain with the preceding verb stem in the way subject and subject prefix do, and this is borne out in (29) and (30). In (29) the HL tone pattern on the preverbal object is changed to H, when followed by a H tone subject prefix on the verb. In (30) the tone pattern on the relative verb also shifts from HL to H, due to the emergence of a verb-final floating H tone in non-subject relatives, and the H tone is also carried onto the following nominal prefix of the object.

(29) Ndé má-**láálá káá**-fúum-i.
1.PRO 6-orange 1SM.PST-buy-PST
'S/He bought the ORANGES.' [*ma-láala* 'oranges']

(30) mi-fémé mi-kíí-fúúm-**í** **mú**-kái
4-pig 4REL-7SM.PST-buy-PST 1-woman
'the pigs that the woman bought' [*ki-fúuma* 'to buy']

So far I have presented the assignment of the five autosegmental tone schemes to stems of different syllable structures in both the lexical and postlexical prosodic domains, as well as some associated tone distribution and modification rules. Following Paulian (1975) and Hyman (1987), I have shown that in Kukuya a postlexical prosodic domain consists of a stem plus a following prefix. In the previous subsections I mainly introduced the representation of lexical tones, but we have also encountered grammatical tones such as the final H tone on a non-subject relative verb. Next I present more cases of different types of grammatical tones.

2.2.1.3 Grammatical tones

In section 2.1.3 I have shown that a nominal or verbal stem in Kukuya can contain maximally three moras, which may lead to the loss of some TAM affixes and all the verbal extensions. This result of shortened shape of the stem and morphological attrition could enhance the role of tones, since some grammatical categories carried by the lost morphemes need to be marked in an alternative way (Nurse 2008). In this subsection, I introduce the application of grammatical tones in Kukuya, most of which are floating tones. I will present the metatony effect, grammatical tones for TAM marking, predicative H tone and tone patterns in relative clauses.

Let us first consider the so-called metatony effect in Kukuya. Metatony can be defined as a tonal process whereby in certain TA forms a H tone replaces a L or falling (HL) tone on post-radical syllables (which corresponds to the final vowel of a verb stem in Kukuya) as well as on a following non-accentuated L tone syllable, if and only if the verb is followed by other material such as object or adverbial (Meeussen 1967; Nurse 2008; Hyman and Lionnet 2011). In (31), we find that when immediately followed by an object, the tone on the final vowel of the infinitive verb is substituted by a H tone, and the nominal prefix of the object which has a default L tone

also carries a H tone. This metatony effect is also seen in SVO sentences in non-past tenses with the final vowel **-a**, as shown in (32).

(31) a. *ki-*ɲɯ*wâ* 'to drink'
*ki-*ɲɯ*wá* ***má****-keé* 'to smoke tobacco'
b. *ki-wolo* 'to take away'
ki-woló **mú**-káli 'to marry a woman'
c. *ki-mana* 'to finish'
ki-maná **mú**-sála 'to finish a work'

(32) Ná mvúla me kâ-m-fúúm-**á** **bí**-ko.
every 1.year 1SG.PRO IMPF-1SG.SM-buy-FV 8-clothes
'Every year I buy clothes.' [*ki-fúuma* 'to buy']

One problem that arises here is that if we assume the prefix on the object to join the preceding verb stem to form a prosodic domain, the surface L-H-H tone sequences in (31b, c) seem to be incompatible with the realisation rules of the five tone patterns proposed above, and the tone deletion rule in (26) does not work either, since the H tone in between is not deleted. One possible explanation would be that the H tones on the final vowel and the prefix of the object in (31) are more likely an epiphenomenon of the metatony effect, in other words these H tones are derived rather than underlying. This is different from the examples above such as (25) in which a LH stem is followed by an connective marker with an **underlying** H tone that feeds the conditions for the tone deletion rule to be applied, since a L-H-H sequence violates the allowed tone realisation patterns **at the underlying level**. In (31) the L-H-H sequence only violates the Obligatory Contour Principle **at the surface level**, thus is tolerated. At the underlying level, the postlexical prosodic domains in (31b, c) consist of a L tone verb stem and L tone nominal prefix, which is a licit underlying L-L-L sequence prior to metatony. So what matters here is the difference on the legitimacy of consecutive tone combinations at the underlying level and the surface level.

A crucial function of grammatical tones is to encode different TAM configurations of a sentence. In Kukuya, the tones that are used to mark TAM

distinctions are usually placed on the subject marker as well as verb-finally. In the recent past tense example (33a), we see that the class 2 subject marker takes a H tone. In the remote past sentence (33b), in addition to the use of the auxiliary *âli*, the tone on the subject marker shifts to HL. In these two past tense sentences we notice that the metatony effect does not show up, which may indicate that there is a floating grammatical L tone which replaces the metatonic H tone. In the future tense (33c) the tone on the subject maker is also HL, while a verb-final H tone appears and spreads onto the following prefix, which may be just the metatonic H tone. From these examples we see that both grammatical H and L tones are involved in tense marking. Mood distinctions such as imperative and subjunctive are also tonally marked, see a detailed description in section 2.4.2.

(33) a. Bó **báá**-fúum-**i** **ma**-ko.
2.PRO 2SM.PST-buy-PST 6-banana
'They bought some bananas.' [recent past]

b. Bó âli **báa**-fúum-**i** **ma**-keé.
2.PRO RPST 2SM.RPST-buy-PST 6-tobacco
'They had bought some tobacco.' [remote past]

c. Bó lí **báa**-fúúm-**á** **má**-nzó.
2.PRO FUT 2SM.FUT-buy-FV 6-house
'They will buy some houses.' [far future]

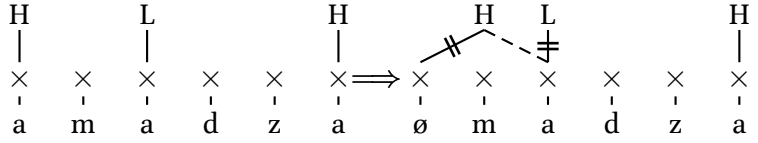
Relative clauses are also marked by means of grammatical tones. In both subject and non-subject relatives, the REL-SM sequence on the verb always surfaces with a LH tone scheme. Subject relatives differ from non-subject relatives in the verbal tone. We see that in the non-subject relative (34a) which is repeated from (30), there is an emergent verb-final H tone which triggers H tone plateauing on the verbal tone and spreads onto the following nominal prefix; while in the subject relative (34b) this H tone does not appear. The tone pattern of a negative sentence is also discerned from an affirmative, on which I refer to more detail in section 2.5.

(34) a. mi-féme mi-kíí-fúúm-**í** **mú**-kái
4-pig 4REL-7SM.PST-buy-PST 1-woman
'the pigs that the woman bought'
b. mu-kái wŭ-fúum-i mi-féme
1-woman 1REL-buy-PST 4-pig
'the woman who bought the pigs'

Grammatical tones are also attested on nominal prefixes which have default L tone in the citation form. The nominal prefix of predicative NP and the concord prefix of a predicative adjective bear a H tone, as shown in the examples in (35a). A preverbal focused NP also takes a H tone prefix, as shown in (35b) (see their connections in chapter 4).

(35) a. mu-tí 'a tree'
Mú-tí. 'It is a tree.'
ma-téme **ma**-bvé 'good hoes'
Ma-téme **má**-bvé. 'The hoes are good.'
Ndé **mú**-tsúli. 'S/He is a goldsmith.'
b. (*Did the woman give the fish to the DOGS?*)
Mu-kái baa-ntsúi **bá**a-ndzulí káá-wî.
1-woman 2-fish 2-cat 1SM.PST-give.PST
'The woman gave the fish to the CATS.'

The H tone on a predicative NP may have its origin in a H tone augment marking predication which was lost later, while the H tone was retained and was attached to the nominal prefix. The potential derivation of the predicative H tone on the word *ma-dzá* 'water', which may have an augment ***a**- in an earlier stage, is illustrated in (36).

(36)


To summarise, in this subsection I have discussed the lexical and postlexical prosodic domains onto which the five tone patterns are distributed, as well

as different types of grammatical tones in Kukuya. We have already noticed that there is no interaction between a prefix and a consonant-initial stem in this language, and that the first mora on a stem is never subject to tone changes. In the next subsection we consider in detail how this stability of the stem-initial mora charaterises the prosodic system of the language.

2.2.2 Stem-initial accent

In the introduction of the segmental phonology, we have seen that the initial syllable of a stem shows greater licensing capacity for both onset consonants and vowels than other syllables, and tone realisation presented above also shows that the tone on the stem-initial mora is always stable. In this subsection I describe this interesting phenomenon in Kukuya, which is labeled as the "positional prominence" or "stem-initial accent" (Hyman 2007, 2015; Lionnet 2017). Here I adopt the term "accent" and refer it to an abstract property that can influence the licensing potential of consonants and vowels as well as the realisation of tone patterns. There are many other Northwest Bantu languages that have been reported as having a stem-initial accent, for example in many zone A languages an "exaggeration" of the duration of the initial consonants is attested (Idiatov and Van de Velde 2016), which can influence the whole realisation of the initial mora. Since Northwest Bantu languages often impose size constraints on their prosodic stems, the role of the stem-initial syllable may be enhanced.

Here I summarise some phonological properties of the stem-initial mora in Kukuya, some of which we have already encountered in the description above:

- the full inventory of consonants (thirty-one phonemic consonants as in Table 2.1) can occur as the onset of the initial syllable, as opposed to only six "archi-phonemes" that are allowed in other positions in the stem; while the voiceless initial consonants are often realised with aspiration, it is not attested with intervocalic consonants; consonant lenition occurs in intervocalic positions but never in the initial position;

- the "constricted articulation" which can influence the realisation of the whole syllable is only attested within the stem-initial position;
- the initial consonants /m/, /n/ and /l/ are always geminated in deliberate speech as in (37), though this gemination could become hard to notice in rapid utterance; for other initial oral consonants, according to Paulian (1975: 137) there is a very slight pause preceding them in preparation for the accentuated initial syllable, which means that the duration of initial consonants is relatively lengthened;

  (37) ki-lóbo [ki-llɔ́bɔ] 'to fish'
  ki-na [ki-nna] 'moment'

- a nasal consonant in the stem-initial position never triggers nasalisation on its neigbouring vowels, while intervocalic nasals can do; the deletion of bilabial consonants /m/ and /b/ as a casual speech rule is never applied to the initial consonant (see section 2.1.2);
- the domain-initial tone is always immutable: it is never affected by any tone that occurs to its left or right; the predicative H tone cannot be imposed to the stem-initial mora, as shown in (38) ; it is realised as a floating H tone by a movement of the larynx before the articulation when the initial consonant is oral, and is realised on a geminated consonant when it is nasal or lateral; the only exception is that a stem with underlying H tone pattern is subject to the utterance-final lowering rule which is also applied to the initial mora;

  (38) papí [ˊpapí] 'it is a wing'
  meé [ḿɛɛ́] 'it is a forging stone' (Paulian 1975: 137)

- the vowel reduction operates on V_2 which is an immediately postaccentual unaccentuated mora, such that /a/ in this position is often realised as a schwa, which is also similar to that typically found in stress languages;

A prefix, as an unaccentuated unit, does not fall into the same phonological domain with the stem that it selects, though they constitute one grammatical word. Some segmental evidence could suggest the prefix to be phonologically autonomous from the stem. Here we consider the prefixes including

noun class prefixes, adnominal concord prefixes, connective markers and subject markers.

- the possible shapes of prefixes in Kukuya are CV and CVV, while VV shape is only attested in connective markers, which may be due to diachronic phonological reduction; interestingly, the C in all the prefixes is restricted to /b/, /k/, /m/ and /l/ which is a subset of the six consonants allowed in the intervocalic positions of the stem; this may just be coincidental considering that these prefix shapes are attested cross-Bantu and have been reconstructed, so we cannot ascribe the limited consonant inventory on the prefixes to the same restrictions on the intervocalic consonants; however this fact still clearly sets the prefix apart from the stem, as the constraints on consonant combinations within the stem do not apply to prefixes;

- the vowels in a prefix may be /i/, /a/ and /u/; according to the restricted vowel combinations on the stem (see Table 2.7), the vowel combination **u-o-o** in the words in (39) is not allowed stem-internally, which means that the prefix must be domain-external;

  (39) bu-nóno [bu-nnóno] 'selfishness'
  mu-kokó [mu-kokó] 'king'

- the /m/ and /l/ on the prefixes are never geminated, which shows that they are never assigned with prosodic accent; the prefixes with nasal consonant /m/ can nasalise the adjacent vowels in the utterance; and the prefixes with /b/ are often reduced to V in casual speech with the bilabial stop being dropped; the prefix /k/ is subject to lenition and is often realised as [ɡ] or sometimes [ɣ] when preceded by other elements; these phenomena clearly reflect domain-internal properties of the prefix rather than the initial accent;

Based on these facts presented above, the phonological prominence of the stem-initial syllable in a prosodic domain and the autonomous domain-internal characters of the prefix are clearly demarcated. The accentuated stem-initial mora functions as the core of the prosodic domain, attracting all the non-accentuated elements that follow it until the next accentuated

mora. The non-accentuated prosodic status of the prefix leads it to join the preceding stem to form a prosodic domain. It is not clear from the diachronic point of view how the maximality constraint on the syllables of a stem is associated with the stem-initial accent and the analytic tendency of Northwest Bantu, which may need to be carried out in future research.

To conclude this section on the prosody system of the language, some key rules and principles are summarised in (40). I have shown that there are five independent tone melodies that are regularly assigned onto a certain prosodic domain under some distribution rules. This prosodic domain can be lexical which is just the lexical stem of a nominal or a verb, or postlexical which consists of the stem with the following prefix of the next word. Like in many other Northwest Bantu languages, there is always a stem-initial accent delimiting the left boundary of a prosodic domain in Kukuya, which reflects the phonological strengthening of the accented material, both segmentally and tonally.

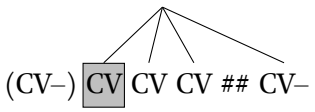
(40) a. *Autosegmental tone patterns in Kukuya*
L, H, LH, HL, LHL

b. *Low tone copying rule*
Copy the L tone (if present) to the next syllables until the whole tone pattern is distributed to all moras.

c. *Tone deletion in the postlexical domain* (Hyman 1987: 323)

$$T \rightarrow [\varnothing] \,/\, T\_\_\_H$$

d. *Stem-initial accent and postlexical prosodic domain:*
stem + prefix(es) on the next word



2.3 Nominal morphology

This section describes the nominal morphology of Kukuya. I first provide an overview on the noun class system of the language, as well as the rules in nominal derivation. Then I look into the structure of noun phrases, discussing the form and use of the connective, demonstrative, adjective, quantifiers, numerals, interrogatives and pronouns. A table on the concord relations within noun phrases is given at the end of this section.

2.3.1 Noun classes

Nominals in Kukuya have the common property of Bantu languages as belonging to different noun classes which are morphologically distinguished by the nominal prefixes, verbal agreement and concord with modifiers in the noun phrase. In the generative tradition, noun classes in Bantu are considered as a grammatical gender system with gender-specific spell-out of number features (Carstens 2008, 2011). Throughout the thesis, I refer to the noun classes using the numbering system established in Meinhof and Van Warmelo (1906/1932). In this subsection, I first provide a brief overview of each noun class, and how they are grouped into different singular/plural gender pairs. Then I present different types of nominal derivation, such as verb-to-noun derivation, compound nouns and the formation of diminutives. Since Paulian (1975) has conducted a very comprehensive description on the noun class system of this language, my presentation here is also based on her analysis, especially on her calculation of the frequency of each class, with my own observations and new data collected in the fieldwork.

2.3.1.1 Noun classes overview

The phonological shape of a noun class prefix in Kukuya can be CV-, ∅- or a nasal, and the underlying tone on it is always L. The vowel on the prefix is lengthened before a prenasalised consonant NC, thus CV- becomes CVV-, which can be interpreted as a compensatory lengthening due to the

moraicity of the nasal which contributes to a unit of length and transfers it to the preceding vowel (Clements 1986; Hyman 2018: 139). A list of all the noun classes with examples is given in Table 2.14. Next I present the morphological and semantic properties of each noun class.

Class	Prefix	Examples
1	∅-/*mu-*	*mpúku* 'rat'; *mu-ndziá* 'foreigner'
2	*ba-*	*ba-bhii* 'hunters'; *baa-mbvi* 'grey hair'
3	*mu-*	*mu-tíma* 'heart'; *muu-ŋaa* 'whistle'
4	*mi-*	*mi-dza* 'roots'; *mhiilí* 'feet, legs'
5	∅-/*li-*	*dzukí* 'frog'; *li-fukí* 'smell of an animal'
6	*ma-*	*ma-kilá* 'blood'; *maa-mphiini* 'magic power'
7	*ki-*	*ki-sáani* 'orphan'; *kii-ndomó* 'sheep'
8	*bi-*	*bviila* 'possessions, food'; *bi-bu* 'covers, shells'
9	N-	*ngwaalí* 'morning'; *mfúra* 'envy'
10	N-	*nsaá* 'seeds'; *mpeé* 'fish scales, shells'
14	*bu-*	*bu-sú* 'face'; *buu-pfúru* 'shame'

Table 2.14: Noun classes in Kukuya

Class 1

The class 1 nominals are characterised by taking either the prefix *mu-*, or starting with a nasal with no separable prefix, see example words in (41).

(41) a. *mu-bhii* 'hunter' (*ki-bhia* 'to hunt')
mu-pfúuru 'elder person'
mu-ndziá 'foreigner'
mu-tsúli 'goldsmith' (*ki-tsúla* 'to forge')

b. *mbuurú* 'person'
nzálí 'river'
ngampíka 'younger twin'
nkaná 'acne'

The shape in (41b) without the prefix *mu-* is quantitatively much more attested (85% according to Paulian) in class 1 nouns, while the prefix *mu-*

mainly occurs with derived nouns. These are plausibly former class 9 nouns which have been reclassified in class 1 mainly on the basis of animacy as in other Teke varieties (cf. Hyman et al. 2019; Bollaert et al.), but Kukuya seems to have gone a step further by also reclassifying inanimate nouns of class 9.

Class 2

The prefix of a class 2 nominal is typically *ba-*, which can be realised as *baa-* when the stem begins with N or NC, i.e. when the prefix is used to pluralise a class 1 noun in group (41b). The shorter prefix *ba-* alternates with the class 1 prefix *mu-*. Some examples of class 2 nouns are shown below:

(42) a. *ba-bhii* 'hunters'
ba-tsúli 'blacksmiths'
ba-boli 'lazy persons'
ba-téléké 'grandsons'

b. *baarí* 'persons'
baa-nkéle 'siblings'
baa-mbvi 'grey hair'
baa-nzálí 'rivers'
baa-mpúri 'eye boogers'

From (41) and (42) we can also see that while class 1 and 2 in Bantu typically refer to humans and some animals, it is also the case in Kukuya but not restricted to it.

Class 3

A class 3 noun takes the prefix *mu-* which is of the same shape as the class 1 prefix, which is realised as *muu-* before prenasalised NC and nasals /m/ and /ŋ/. The short form *mu-* is usually attested when the noun is derived, even the stem starts with a nasal. Some examples are given in (43):

(43) a. *mu-tíma* 'heart'
mu-bilí 'kola tree'

mu-ŋaani 'threat' (*ki-ŋaani* 'to threat')
mu-ŋono 'sound of rain' (*ki-ŋono* 'to rumble')
mu-miká 'trial' (*ki-miká* 'to try')

b. *muu-ŋaa* 'whistle'
muu-mhuuku 'pestle'
muu-nkáání 'letter'

In many Teke varieties, class 1 and class 3 have merged, which may be due to their identical nominal prefix shape (Hyman et al. 2019), and this tendency is also observed in Kukuya. However, class 3 can still be distinguished from class 1 by its plural class 4 counterpart and the H tone connective marker that is different from class 1 (see section 3.2.1).

Class 4

The prefix of class 4 nouns takes the short shape *mi-* when alternating with the class 3 prefix *mu-*, and is lengthened as *mii-* when replacing *muu-*. See examples in (44):

(44) a. *mi-tí* 'trees'
mi-dza 'roots'
mi-bvî 'maggots'
mi-lá 'intestines'
myáaka 'hands, arms'

b. *mhiílí* 'feet, legs'
mii-mfi 'farts'
mii-ŋeé 'grasshoppers'

Semantically, class 3 and 4 nominals in Kukuya can have miscellaneous referents, most of which are plants (32.7% according to Paulian's calculation), insects and small animals, things of vegetable origin or related to soil, as well as body parts.

Class 5

A class 5 noun takes the prefix *li-*, which is realised as *lii-* when the initial

consonant of the stem is a prenasalised NC or nasal, and more commonly it surfaces with no prefix when the stem begins with an oral consonant. See the examples in (45):

(45) a. *li-nsá* 'tear'
li-fukí 'smell of an animal'
li-yŭ 'peanut'
lii-mpí 'kidney'

b. *beemé* 'pigeon'
dzukí 'frog'
fungúla 'key'
búku 'portion'

As we will see shortly, the class 5 nouns without prefix have their plural counterparts in class 6, while the nouns with the prefix *li-* form a gender pair with class 10.

Class 6

The prefix of class 6 nouns typically has the shape *ma-*, which again is realised as *maa-* before a prenasalised or nasal consonant, and as *ma-* before an oral consonant. Some examples are illustrated in (46):

(46) a. *ma-táki* 'buttocks'
ma-lá 'villages'
ma-kilá 'blood'
ma-fungúla 'keys'
mhííni 'teeth'

b. *maa-ndoko* 'misfortune'
maa-ɲúru 'bodies'
maa-mphiini 'magic power'
maa-mpópi 'jugements' (*ki-wópo* 'to juge')

The class 5 and 6 nominals can form a singular/plural pair, whose semantic content is very diverse: they can refer to plant names, animals and body

parts. I will show later that a class 6 noun can also form a gender pair with many other noun classes (see Table 2.15 below), or it can refer to mass or abstract nouns and under that reading does not have any singular counterpart.

Class 7

The prefix of class 7 nouns is *ki-*, which is again lengthened as *kii-* before prenasalised and nasal consonants as well as in derived nouns. See some examples in (47):

(47) a. *ki-sáani* 'orphan'
ki-tuura 'spit'
ki-fúla 'wind'
ki-ku-ko 'small banana' (diminutive)

b. *kii-mfíli* 'nail'
kii-ŋee 'sour fruit'
kii-ndomó 'sheep'
kii-taará 'paternal family' (*taará* 'father')

The class 7 nouns in Kukuya usually refer to miscellaneous "things" and "objects", the words *ki-lóko* 'thing' and *ki-má* 'what' also belong to class 7. Diminutives and some other derived nominals also take the class 7 prefix, as will be shown later in the nominal derivation rules. We will see in the rest chapters, a class 7 subject marker can function as the default subject marking strategy in many cases when the subject of a sentence is unknown but inferably non-human. An infinitive verb in Kukuya also takes the prefix *ki-* which is formally identical to the class 7 nominal prefix. I will show in section 2.4 that infinitives does not behave like typical nominals in Kukuya.

Class 8

The prefix of class 8 nouns is realised as *bi-* or *bii-*, which alternate with the class 7 prefixes *ki-* and *kii-* respectively. Note that the class 8 prefix *bi-* is realised as *bvi-* when it is inseparable from the stem. Some examples are given below:

(48) a. *bi-bu* 'covers, shells'
bi-pee 'seats'
bi-búnu 'heels'
bviila 'possessions, food'
bvhiibí 'weed'

b. *bii-míi* 'bladders'
bii-na 'moments'
bii-bu-báana 'small children'

The class 8 nominals in Kukuya form a gender pair only with class 7, which can refer to objects, plants, small animals and especially birds. This is exceptional to the other plural noun classes which can match with multiple classes, as seen in Table 2.15.

Class 9

Class 9 nouns systematically lack a separable prefix and overwhelmingly start with a prenasalised consonant. Some examples are given in (49):

(49) *mpáki* 'branch'
mpúru 'anger'
ngwaalí 'morning'
mbuka 'place'
mfáríbá 'armpit'
ŋkúúlá 'road'
nsilí 'curse'
mfúra 'envy'

Except for some class 9 nouns that do not have number opposition (see the discussion below), the plural counterparts of all other class 9 nouns are in class 6. A semantic generalisation of the class 9/6 gender pair is that it does *not* include animals, plant names or humans, some abstract notions related to supernatural powers are included in this pair.

Class 10

The nouns of class 10 also begin with a prenasalised consonant, just similar to the class 9 nouns. Some example are given below in (50):

(50) *mfú* 'hair (pl.)'
nzála 'claws, nails'
nzŭ́ 'peanuts'
mpúpí 'peanut skins'
nsaá 'seeds'
nsísálá 'eyelashes'
mpeé 'fish scales, shells'

Class 10 is a plural class, and all the plural nominals of this class have their singular counterparts in class 5 nouns which take the prefix *li-*. This class 5/10 gender pair mainly contains nominals of fruits as well as objects of long and thin shape. We notice that in this gender pair, the prefix *li-* on the singular nouns in class 5 seems to be replaced by a nasal prefix in the plural forms in class 10, as seen from the oppositions in *li-yŭ́* (cl.5)/*nzŭ́* (cl.10) 'peanut(s)' , *li-yála* (cl.5)/*nzála* (cl.10) 'claw(s), nail(s)' and *li-saá* (cl.5)/*nsaá* (cl.10) 'seed(s)'. It is likely that class 10 nouns have a nasal prefix |N|- which has fused with the noun stem and becomes inseparable, also triggering the neutralisation on the initial continuant oral consonant (see the rules in (6) in section 2.1).

Class 14

The prefix of class 14 nouns is *bu-*, which is commonly attested as *buu-* when the noun is derived from other classes and has no separable prefix in its original form (see the discussion on the lengthening of noun class prefixes below). Again, some examples of this noun class are given here:

(51) a. *bu-lá* 'village, city'
bu-ka 'cassava'
bu-tá 'gun'
bu-sú 'face'

bu-tí 'mascot'

b. *buu-ɲama* 'animacy'
buu-mpalá 'adultery'
buu-pfúru 'shame'
buu-tsúku 'night'
buu-koló 'this evening'

Most class 14 nominals express abstract meaning (without magic connotation) or are related to time expressions, thus do not have plural forms, while this class also includes some nouns such as names of mushrooms which have their plural counterparts in class 6.

There are two points that I want to discuss a bit further here on the shape of the nominal prefixes. The first is the occurring condition of the long prefix CVV-. We have seen above that CVV- is realised before prenasalised initial consonants, which can be explained by the compensatory lengthening due to the integration of the nasal which counted as a unit of length into the stem. To explain, for example the class 9 nouns all start with an NC, we can propose that there exists a structural prefix for class 9 which is |N|, and the initial NC can be interpreted as the result of the fusion of |N| and a noun stem that begins with an oral consonant. The prefix |N| cannot be separated from the initial NC, since the plural class 6 prefix *maa-* cannot substitute |N| but is attached to it. The class 6 prefix is realised as *maa-* because the prosodic length that the |N| should contribute is compensated by lengthening the preceding vowel.

Under this analysis, the noun stems that take a CVV- shape prefix and start with NC should be assumed to have this structural prefix |N|, thus unifying the occurring condition of the long prefix. However, we have also encountered cases in class 7 and 14 in which the CVV- prefix appears when the nominal is derived from other classes. To account for this, Paulian (1975) further suggested that the derivation process may involve two intermediate stages in which the original noun takes the nasal prefix |N| and then takes the class 7 and 14 derivational prefixes *ki-* and *bu-*, and compensatory lengthening happens, resulting the long realisation of the prefixes. Since there is no clear clue on the ever existence of the prefix |N| in these cases,

and we also see that in class 1 and 3 the derived nouns instead take the short form of the prefix, it remains a puzzle why long prefix is used in class 7 and 14, I leave this for further research.

The other question is how to deal with the nouns whose nominal prefix CV- seems to be merged with the stem and becomes inseparable, such as the words in (52) which are all realised as CVVCV shape.

(52) *mhéele* (cl.1) 'moonlight'
báana (cl.2) 'children'
mhiilí (cl.4) 'legs, feet'
maalí (cl.6) 'oil'
mhíini (cl.6) 'teeth'
kyaali (cl.7) 'chicken nest'
bvhiila (cl.8) 'things, possessions'

Paulian (1975) proposed an abstract morphophoneme |Y| for all the nouns of this type and supposed that the noun stems that start with |Y| are always fused with the class prefix CV-, for example *bvhiila* is underlyingly |bi-Yila| and *maalí* is |ma-Yalí|. The |Y| is realised phonologically by lengthening the V_1 of the noun stem and the constricted articulation of the first syllable (see section 2.1.1). Here I just present this hypothesis but leave more analysis for future studies.

In the above I have briefly displayed the forms and semantic content of noun classes (not including the locative classes) in Kukuya. I also mentioned that as typical in Bantu, noun classes in Kukuya are characterised by a series of binary complementary oppositions that are always realised as singular-plural pairs, which is also referred to as grammatical genders in Bantu. We have also observed that singular and plural noun classes are not paired in an "one-to-one" fashion, i.e. a noun class can form a gender pair with multiple other classes respectively, which may be explained by the historical loss and merging of different noun classes. A certain noun class in different gender pairs may also encode distinctive semantic properties. I summarise the main gender pairs in Kukuya in Table 2.15. I also include isolated noun classes that do not have number distinction, which mainly

Gender	Prefix	Examples	Semantics
1/2	∅-, *mu-*/*ba-*	*mpúku* *baa-mpúku* 'rat(s)'	mainly humans, animals
3/4	*mu-*/*mi-*	*mu-bilí* *mi-bilí* 'kola tree(s)'	plants, insects, small animals
5/6	∅-/*ma-*	*taabi* *ma-taabi* 'puddle(s)'	plants, animals, miscellaneous
7/8	*ki-*/*bi-*	*ki-sáani* *bi-sáani* 'orphan(s)'	objects, birds, plants, body parts
9/6	|N|-/*ma-*	*ndoko* *maa-ndoko* 'misfortune(s)'	abstract, magic, non-animal/plant
5/10	*li-*/|N|-	*li-saá* *nsaá* 'seed(s)'	fruits, long and thin objects
14/6	*bu-*/*ma-*	*bu-sú* *ma-sú* 'face(s)'	miscellaneous, mushroom names
5	∅-, *li-*	*li-fukí* 'smell of animal'	abstract, miscellaneous
6	*ma-*	*ma-kilá* 'blood'	liquid
9	|N|-	*nsilí* 'curse'	abstract, magic
14	*bu-*	*buu-ndúku* 'friendship'	derived abstraction

Table 2.15: Singular/plural pairs in Kukuya

include nominals encoding abstract meaning or referring to uncountable things. Some marginal pairs that only have one or two entries are not listed.

Locative classes 16, 17 and 18

There are three locative class-like morphemes *ŋa*, *ku* and *mu* in Kukuya which correspond to the Proto-Bantu locative prefixes **pa-*, **kʊ-* and **mʊ-* of classes 16, 17 and 18. Nevertheless, in Kukuya these three morphemes are most commonly attested as preposition-like elements which are placed before a noun phrase where necessary, while they can also appear as prefixes in the verbal and clausal domains, but never as real locative class prefixes in the nominal domain. In this part, I will show that while these three morphemes have maintained some typical uses of locative classes (thus I still gloss them with the numbers 16, 17 and 18), some extended functions are innovated. Simple examples of their prepositional use are first given in (53).

(53) *ŋa nzó* 'in the house'
ŋa ngwaalí 'in the morning'

ŋa bulá ba 'in this village'
ku kíí me 'in my place'
ku dzándu 'at the market'
mu ntsié 'on foot'
mu mu-súru 'in the forest'
mu nkólónkóló 'slowly'
ki-mwáálá má-dzá mu nsakí 'to water (on) the fruits'

Semantically, the functions of these three locative markers are not restricted to distinguishing the positions of references as their typical use in Bantu, but they have developed other functions as prepositions. Some examples on the use of the class 16 locative marker *ŋa* are given in (54). *ŋa* is the only one of the three that can be used pronominally, meaning "here" as in (54a). In most other cases, *ŋa* functions as a proximal locative marker, or a temporal preposition. We will also see in section 2.5 that *ŋa* can be cliticised onto a complementiser and select conditional or temporal clauses.

(54) a. We á-síil-i **ŋa** mu ma-tsúku
2SG.PRO 2SG.SM.PST-stay-PST 16.PRO 18.LOC 6-day
kwê?
how.many
'You stayed here for how many days?'

b. Mwáana áá-bvĭ ntsína **ŋa** kaarí aa
1.child 1SM.PST-fell.PST 9.ground 16.LOC 9.middle 9.CONN
maa-ntsieme máá nká ma-máa-sî kingá mu-tí.
6-antler 6.CONN 1.deer 6REL-6SM.PST-do.PST like 3-tree
'The child sat between the antlers of the deer which look like a tree.'

c. Gilbert â-kalá **ŋa** mbuká yi-báa-dzhiik-á
Gilbert 1SM.FUT-stay 16.LOC 9.place 9REL-2SM.FUT-bury-FV
ku mfaí bu-kyá.
17.LOC 9.Brazzaville 14-tomorrow
'Gilbert will stay at the place where (people) bury in Brazzaville tomorrow.'

The class 17 *ku* usually has a prepositional use for distal referents according to the speakers. Some examples with different placements of the class 17 *ku* are given in (55). The *ku-* as a verbal prefix, when occurring on a relative verb, is the only of the three which retains the locative reading, as in (55b, c). I will present more innovated functions of *ku-* as a verbal prefix in the description of relative clauses.

(55) a. We **ku** ndúku aa we kí-má ké
2SG.PRO 17.LOC 1.friend 1.CONN 2SG.PRO 7-what 7.PRO
á-fúum-i?
2SG.SM.PST-buy-PST
'What did you buy from your friend?'

b. **ku** nzó **kŭ**-lí we
17.LOC 9.house 17REL-be 2SG.PRO
'in the house where you are'

c. **Kŭ**-dzií me píri líi-kab-a ɲama
17REL-please 1SG.PRO 1.SG.COMP 1PL.SM.FUT-share-FV 1.animal
ku nzó aa we.
17.LOC 9.house 9.CONN 2SG.PRO
'Where I like is to share the animal in your house.'

The class 18 *mu* has the most diverse functions among the three, notably expressing cause and reason. Some examples on its use as a reason preposition are illustrated in (56). We notice that the *mu* must select a nominal or a nominalised element, as seen from the relativisation strategy in (56c), which shows that it is indeed used as a preposition.

(56) a. Mi-pará mi-kíí-wí taará míí-bol-í
4-money 4REL-7SM.PST-give.PST 1.father 4SM.PST-rot-PST
mu mvúla.
18.LOC 3.rain
'The money that father gave rotted because of the rain.'

b. Ndé áá-síik-i me **mu** ma-kâ-n-sá
1.PRO 1SM.PST-thank-PST 1SG.PRO 18.LOC 6REL-IMPF-1SG.SM-do
me ndé.
1SG.PRO 1.PRO
'He thanked me for what I (usually) do for him.'

c. Mwáana li ya kí-sáábí **mu** taará **wǔ**-fúum-i
1.child COP with 7-happiness 18.LOC 1.father 1REL-buy-PST
ndé ntaba.
1.PRO 1.goat
'The child is happy that father bought him/her a goat.'

To express "can, be able to", a verb-like element *-kuki* is always used and it must be followed by *mu*, which then selects an infinitive. The exact category of *-kuki* is still not clear to me. Two example sentences are given in (57).

(57) a. Me wu-m-péénà mí-pará ka-n-kukí **mu**
1SG.PRO 1REL-1SG.SM-lack 4-money NEG-1SG.SM-can 18.LOC
ki-tsúa nzó ni.
INF-build 9.house NEG
'I who lack money cannot build a house.'

b. Ki-kí-kukí mvá **mu** ki-sâ kí-má ke?
7REL-7SM-can 1.dog 18.LOC INF-do 7-what 7.PRO
'What can the dog do?'

There are also other functions of the class 18 *mu*, two of which are illustrated in (58). In (58a), *mu* is used to express comparison, indicating in which aspect the two elements are compared. In (58b), the "*mu*+infinitive' structure is used as a common way of expressing progressive in this language (Bastin 1989; De Kind et al. 2015).

(58) a. Ma-yéle má-lur-á mphiini **mu** mpáani.
6-intelligence 6SM-surpass-FV 9.magic.force 18.LOC 9.power
'Intelligence is more powerful than magic force.'

b. Mwáana wúna **mu** **kâ-lil-á** tíí
1.child only 18.LOC 1SM.IMPF-cry-FV until
ku-kí-yi-bvúruk-a ngúku.
17REL-7SM-IMPF-return-FV 1.mother
'The child kept crying until mother returned.'

Syntactically, *ŋa-*, *ku-* and *mu-* can all occur as verbal prefixes, either being attached to a complementiser or appearing as a relative pronoun, as seen from examples in (55) above and in (59). However, a prepositional phrase headed by these three morphemes can never trigger subject marking on the verb, which is also shown in (59) where the phrase headed by *mu* is only indexed on the relative verb but not on the matrix verb. In the next subsection, I will show that these three locative morphemes also show concord in demonstratives, thus on the one hand they behave like prepositions, while in some situation they can also function as the prefixes of locative DPs.

(59) **Mu** Marí **mu**-káá-túr-í ndzií **kí**-bi.
18.LOC 1.Mary 18REL-1SM.PST-steal-PST 9.money 7SM-bad
'That Mary stole the money is bad.'

In this subsection I have provided an overview of the noun class system in Kukuya, also having addressed some relevant questions. Next I introduce the nominal derivation rules.

2.3.1.2 Nominal derivation

In this part I describe the process of different types of nominal derivation in Kukuya. First I introduce derivation between nominals and verb-to-noun derivation, then I describe the formation of diminutives and compound nouns.

The singular-plural opposition is not the only correlation among different noun classes. One noun stem can be selected by different class prefixes to derive different semantic fields. The examples in (60) show that the gender

pair class 3/4 that includes plants and trees can derive the names of their fruits by replacing the class prefixes by those of class 5/10.

(60) a. *mu-sakí* (cl.3) 'safou tree'
li-sakí (cl.5) 'safou fruit'
b. *mi-bónomo* (cl.4) 'aubergine trees'
li-bónomo (cl.5) 'aubergine fruit'
mbónomo (cl.10) 'aubergine fruits'

In (61) the noun roots *-wéle* and *-boli* may encode qualitative meanings 'poor' and 'lazy'. When they are selected by class 1/2 prefixes, the derived nouns refer to the people with particular characters; when they take the class 14 prefix, the resulted nouns express the abstract concepts of these qualities.

(61) a. *mu-wéle* (cl.1) 'poor person'
bu-wéle (cl.14) 'poverty'
b. *ba-boli* (cl.2) 'lazy persons'
bu-boli (cl.14) 'laziness'

As in many other Bantu languages, nominals in Kukuya can also be derived from verbs. In (62) and many examples above, we see that nouns of different classes are derived from verbs by class prefix shifting. This verb-to-noun derivation is also encoded by shifting the final vowel ***-a*** to a suffix ***-i***, which according to the vowel combination restrictions (see Table 2.7 above) can be combined with all the stem-initial vowels. Here I treat the infinitives as derived in the way that the verb roots being nominalised by the class 7 prefix *ki-*.

(62) a. *mu-tsúli* (cl.1) 'blacksmith'
ki-tsúla (cl.7) 'to forge'
b. *mu-ŋaani* (cl.3) 'threat'
ki-ŋaana (cl.7) 'to threat'
c. *ma-kúa* (cl.6) 'slander words'
ki-kúa (cl.7) 'to malign'

d. *mpópi* (cl.9) 'judgement'
ki-wópo (cl.7) 'to judge'
e. *li-búru* (cl.5) 'seed, fruit'
ki-búra (cl.7) 'to engender, to bear'

Instead of maintaining diminutive classes such as class 12 and 19 of Proto-Bantu, Kukuya employs an alternative interesting way of deriving diminutive nominals. The diminutives all take the class 7/8 prefixes *ki-* and *bi-* which substitute the prefixes of the original noun. The form of a diminutive always surfaces with partial doubling of the noun stem, in which the first syllable of the stem is reduplicated (see Gibson et al. 2017; Goes and Bostoen 2021 on similar ways of diminutive formation in the Kikongo Language Cluster). Some examples are given below:

(63) *kii-ku-ko* 'small banana'
bii-bû-baana 'small children'
ki-bǐ-bilí 'small lola tree'
ki-sî-saka 'small gourd'
ki-mbu-mbaa 'little fire'
ki-nzû-nzo 'small house'
ki-yŭ-yŭ 'small peanut'

When the class 7/8 prefixes are attached to a noun with no separable prefix or the |N|, they are realised as long form as in the first words in (63). We also observe that the vowel in the reduplicated first syllable of the stem is in some cases modified, for example the diminutive form of *mbaa* 'fire' is *ki-mbu-mbaa*. The tone pattern of the reduplicated syllable and the original stem also co-vary in diminutives, as the diminutive form of *báana* 'children' is realised as *bii-bû-baana*. The relevant vowel modification rules are illustrated in (64), while the tone change rules are summarised by Paulian (1975: 193) in Table 2.15, which I also checked and confirmed in the fieldwork.

(64) *Vowel change in the reduplicated syllable of diminutives*
i, e > **i**
u, o > **u**
a > **i** or **u**

Original tone	Example	Derived tone	Example
L	*ɲama* 'animal'	L-L	*kii-ɲi-ɲama* 'small animal'
LH	*bilí* 'kola tree'	LH-LH	*kii-bǐ-bilí* 'small kola tree'
H	*li-báá* 'latte'	H-H	*ki-bú-báá* 'a little latte'
HL	*mu-lúmi* 'husband'	HL-L	*ki-lû-lumi* 'small huaband'
H	*nzó* 'house'	HL-L	*ki-nzû-nzo* 'small house'

Table 2.16: Tone patterns in diminutives

We can see from the table that the tone on the reduplicated syllable is just copied from the tone pattern of the whole original stem. The stem just keeps its original tone pattern in the diminutive form, except when the stem is HL or when it is monosyllabic and H, in both cases the stem is realised as L in the diminutive form.

As is common for diminutive derivation, on the semantic level the derived diminutives do not always have the reading of the "smaller" counterparts of the original nominals but can have various interpretation, which includes derision as well as slight appreciation, as shown in (65).

(65) a. *mpúru* 'anger'
ki-mpû-mpuru 'ineffective anger'

b. *mu-ngwa* 'salt'
ki-ngu-ngwa 'a little salt'

c. *mbaa* 'fire'
ki-mbu-mbaa 'fire that burns well'

d. *nkwíírí* 'medicine'
ki-nkwí-nkwíírí 'effective medicine'

e. *ki-se* 'good flavour'
ki-si-se 'very good flavour'

f. *mwáana* 'child'
kii-mû-mwaana 'insupportable child'

In many Teke varieties including Kukuya, there are also compound nouns that are formed by the combination of independent words, which can be

written together with a hyphen as one word. Most of the compound nouns are animals, plant names and birds. Common ways of deriving a compound noun are the repetition of noun stem or the connection of two stems by a connective marker *-a-*. Some examples are given in (66).

(66)

ngu-balaka 'uncle'	*nzala-nsa* 'pride'
musali-ntsie 'farmer'	*ki-mpala-mpala* 'lizard'
kolo-kolo 'sorry'	*poro-poro* 'porridge'
dongo-dongo 'ocra'	*nzala-ngonomo* 'black centipede'
bhii-a-we 'we and you'	*ntsie-a-tswii* 'ear-drum'
nga-nzó 'owner of a/the house'	*ba-ŋómo-a-ŋómo* 'stars'

Having established the noun class system of the language and the composition of nominals, in the next subsection I extend the description to noun phrases.

2.3.2 Noun phrase

In this subsection, I provide a description on the structure of noun phrases. I present all the elements that can modify the head noun within a noun phrase, which include connective markers, demonstratives, adjectives, quantifiers, numerals and interrogatives. I show the functions of each adnominal modifier respectively and their concord patterns with the head noun. I also introduce the use of independent pronouns.

2.3.2.1 Connective

The connective (also referred to as "associative") marker is a linker that syntactically and semantically connects two nominals in which the former functions as the head and the latter functions as a modifier. The connective element always agrees with the head noun in noun class. Some simple examples of connective constructions are given in (67). When the connect-

ive element bears H tone, this H tone always spreads onto the following nominal prefix.

(67) a. ki-mpfúúmú kíí mú-kokó
7-chief 7.CONN 1-king
'power of a/the king'

b. mi-ŋwa míí yúlu
4-mouth 4.CONN 5.nose
'nostrils'

c. li-bakí líí baarí
5-network 5.CONN 2.people
'connection of people'

d. bi-bu bíí mfúlu
8-cover 8.CONN 1.tortoise
'shells of tortoise'

e. mbona aa ŋginíma
1.tire 1.CONN 9.bicycle
'tire of a/the bicycle'

Many Teke languages make use of two sets of two connective markers, which is also the case in Kukuya. I follow the grammar guide by SIL Congo on Teke-Eboo (B74) (2016, 2020) to distinguish the two sets as "basic form" and "emphatic form". The concord morphology of the two sets of connective markers with each nouns class is shown in Table 2.16. There are no connective markers for locative classes. It is interesting to see that formally the basic set corresponds to the shape of subject markers of each class, while the emphatic set is identical to relative markers (see section 2.4.2). Note that all the connective markers bear H tone except for class 1 and 9, and class 1 and 3, class 9 and 10 connective markers are distinguished tonally.

In most cases the basic and emphatic forms of connective markers are interchangeable, but there are clear cases in which the emphatic form is required when the connective construction is focused. In (68) we see that in a possessive construction, the basic form cannot be used when when the possessor is the inherently focal pronoun *ná* 'who', instead the emphatic form

Class	Basic	Emphatic
1	aa	wuu
2	báá	ba báá
3	áá	wuu
4	míí	mi míí
5	líí	li líí
6	máá	ma máá
7	kíí	ki kíí
8	bíí	bi bíí
9	aa	yii
10	áá	yii
14	búú	ba búú

Table 2.17: The connective markers in Kukuya

should be used. Sometimes the speakers pronounce the class 1 *wuu* as *wu-á* or *wá*, which indicates that this emphatic use in fact involves relative marking (see section 2.5.4). In example (69), the class 9 emphatic form *yii* is used instead of the basic form *aa*, since the connective phrases are focused in the alternative question.

(68) a. mu-lúmi aa me
1-husband 1.CONN 1SG.PRO
'my husband'

b. *mu-lúmi aa ná
1-husband 1.CONN 1.who
Int: 'whose husband'

c. mu-lúmi wuu ná
1-husband 1.CONN.EMP 1.who
'whose husband'

d. kii-ndomo ki-kíí ná
7-sheep 7-7.CONN.EMP 1.who
'whose sheep'

e. mfulá yii bu-ní
9.calabash 9.CONN.EMP 14-which
'which (type) of calabash'

(69) Ndé nzó **yii** taará wo **yii** mu-káli
1.PRO 9.house 9.CONN.EMP 1.father or 9.CONN.EMP 1-wife
káá-tsú-i?
1SM.PST-build-PST
'Did he build a house for father or for the wife?'

Paulian (1997: 219) noted that the basic connective may encode a closer relation of the two nominals than the emphatic form, as shown in example (70), in which the use of the two sets of connective markers triggers different interpretation. More research should be conducted on the occurring conditions of emphatic connective markers.

(70) a. mbŏ aa ntaali
9.ring 9.CONN 1.snake
'ring of a/the snake'
b. mbŏ yii ntaali
9.ring 9.CONN.EMP 1.snake
'trace of a/the snake'

When the connective marker takes the shape VV (class 1/3/9/10), it is prosodically merged with the preceding head noun in casual speech, as shown in the examples below. In (71), the VV connective marker is realised by lengthening the final vowel of the head noun (citation forms in brackets), whose tone is also influenced by that of the connective element.

(71) a. ku nz**óo** we
17.LOC 9.house.CONN 2SG.PRO
'in your house' (*nzó* 'house')

b. ntsú**u** taará
1.chicken.CONN 1.father
'chicken of father' (*ntsúú* 'chicken')

c. mu-t**íí** **mú**-kái
3.tree.CONN 1-woman
'tree of a/the woman' (*mu-tí* 'tree')

The connective construction can convey various semantic relations in Kukuya, of which the most common is to express possessive, as in many examples above. See more examples in (72). The relation between the two linked nominals is not restricted to denoting possession as in (72a), but can mean that an object constitutes one part of the other in a broader sense, as in the rest of the phrases.

(72) a. bi-pfú bíí me
8-hat 8.CONN 1SG.PRO
'my hats'

b. pǐpě líí ŋúki
5.sweet.taste 5.CONN 1.bee
'sweet taste of honey'

c. ma-tsúi ma-níni máá mú-tí
6-leaf 6-big 6.CONN 3-tree
'big leaves of a/the tree'

d. ki-dzulibí kíí nzó
7-door 7.CONN 9.house
'door of a/the house'

e. mu-tsúlá áá mbhielé
3-handle 3.CONN 9.knife
'handle of a/the knife'

f. ki-tsúlú kíí ndáka
7-solution 7.CONN 9.problem
'solution of a/the problem'

Some examples on the other uses of the connective element are listed in

(73). In (73a) the noun *mu-kái* 'woman' adds specifying information to the head *ki-ɲuní* 'old person'; in (73b) the head noun functions as the unit of measuring the quantity of the other referent; in (73c) the modifying noun *mu-tí* 'tree' brings to light the material of which the bowl is made; the connective in (73d) introduces a purpose or usage; and in (73e) the "connective+numeral" construction is the equivalent of an ordinal number.

(73) a. ki-ɲuní kíí mú-kái
7-old.person 7.CONN 1-woman
'old lady'

b. beke líí nselé
5.bundle 5.CONN 10.straw
'a bundle of straw'

c. nkhíe yii mu-tí
9.bowl 9.CONN 3-tree
'wooden bowl'

d. nkwî aa mbaá
9.firewood 9.CONN 3.fire
'firewood (for fire)'

e. tsúku líí mwóolo
5.day 5.CONN two
'the second day'

The connective maker is also frequently seen to be used by itself, without an overt head noun. In (74) the class 10 connective construction *yii me* has the reading of "my words", in which the head noun *ndaka* (cl.10) "words" is elided; and in (75) the class 7 connective phrase *kíí ndé* is another common expression which means "someone's own home".

(74) Kalí we yúk-i [**yii** **me**], kéné we
COND 2SG.PRO listen-PST 9.CONN 1SG.PRO EMP 2SG.PRO
ka-wéén-á bí-lokó bvíí we ni.
NEG-lack-FV 8-thing 8.CONN 2SG.PRO NEG
'If you listened to my words, you would not lose your properties.'

(75) Mu-pfúuru [**kíí** **ndé**] káá-síir-i ŋáa.
1-uncle 7.CONN 1.PRO 1SM.PST-stay-PST 16.DEM.II
'The uncle stayed here at his home.'

2.3.2.2 Demonstratives

Kukuya employs three series of demonstrative markers which can be used to distinguish spatial and temporal deixis according to the point of reference and the direct availability of the speaker, which are summarised in Table 2.18. The first set corresponds to English "this", the second type is a medial demonstrative which is translational equivalent to English "that", and the third type can be translated as "that (over there)" in English. The demonstrative markers always follow the noun that they modify in a noun phrase. In glossing, I use I, II and III to distinguish the three.

Class	I	II	III
1	wu	wúa	wuúra
2	ba	báa	baára
3	wu	wúa	wuúra
4	mi	mía	miíra
5	li	lía	liíra
6	ma	máa	maára
7	ki	kía	kiíra
8	bvi	bvía	bviíra
9	yi	yía	yiíra
10	yi	yía	yiíra
14	ba	búa/báa	baára
16	ŋa	ŋáa	ŋaára
17	ku	kúa	kuúra
18	mu	múa	muúra

Table 2.18: The demonstrative markers in Kukuya

The first type of demonstratives is used to denote a referent that is spatially

or temporally proximal to the speakers' surroundings or that is the current topic of conversation, referring to some entity that is given in the discourse. As shown in the table, this type has the shortest form of the three and always bear a L tone. Some sentences in which this type of demonstrative is used are shown in (76) and (77).

(76) Mwáana **wu** ná áá-yii ndé?
1.child 1.DEM.I 1.who 1SM.PST-bring.PST 1.PRO
'Who brought this child?'

(77) Ma-dzá **ma** ka-má-li tsítsie ni.
6-water 6.DEM.I NEG-6SM-COP clean NEG
'This water is not clean.'

The second type is used to refer to an entity which is not necessarily remote from the speakers, but is not directly accessible in the discourse context. This type of demonstratives can also have discourse-linking anaphoric function referring to the referent that is already mentioned in the context. Two examples on its anaphoric use are given in (78) and (79).

(78) (*Will father send the parcel to Brazzaville?*)
Ambú, taará mu-dzilá **wúa** Ngo káa-wéek-e.
no 1.father 3-parcel 3.DEM.II Ngo 1SM.FUT-send-FV
'No, father will send the parcel to NGO.'

(79) Me ki-n-wî me ma-táli ma-bííbí, kéne
1SG.PRO COND-1SG.SM-give.PST 2SG.PRO 6-sunshine 6-few EMP
we tsúuk-i ndáká **yía.**
2SG.PRO solve-SBJV 9.problem 9.DEM.II
'If I had given you much time, you should have solved that problem.'

This type II demonstratives can also be used pronominally, as in example (80), in which the class 14 demonstrative pronoun refers to the fact/manner that s/he has eaten a plate of rice.

(80) Ndé á-maá-dzá saaní líí lóoso, ndé kukí mu ki-dzá
1.PRO 1SM.PERF-eat 5.plate 5.CONN 5.rice 1.PRO can 18.LOC INF-eat
mă-lúr-a **búa**.
6REL-surpass-FV 14.DEM.II
'S/He has already eaten a plate of rice, and s/he can eat more than that.'

The third type of demonstratives is least commonly seen and refers to entities or locations that are distant from the speakers. The most frequently attested one is the class 16 demonstrative *kuúra*, whose final vowel can be lengthened if the speaker would like to emphasise the far distance. Two examples on this type of distal demonstratives are given in (81) and (82).

(81) Yă baarí **kuúra** ba-bá-kâ-wo-ó mvá mu
with 2.people 17.DEM.III 2REL-2SM-IMPF-help-FV 1.dog 18.LOC
ki-búr-a.
INF-give.birth-FV
'There are people over there who are helping the dog bearing babies.'

(82) Báana **baára** mu ki-má bá-kâ-bvúnum-a?
2.children 2.DEM.III 18.LOC 7-what 2SM-IMPF-gather-FV
'Why are the children over there gathering together?'

2.3.2.3 Adjectives

There is only a limited set of adnominal modifiers that can function as true adjectives in Kukuya, which can be further divided into two types: the invariant adjectives and the ones that can show concord with the head nouns. In (83) I list all the invariant adjectives in Kukuya that I have in my corpus, whose forms never change and never show concord with the head noun, for example in *mu-ŋwa bvaí* 'open mouth' and *baarí mpima* 'crowded people'.

(83)

bvaí 'open'	*ngoli* 'free'
mpima 'tight'	*mwe* 'alive'
nziimi 'many, much'	*paála* 'flat'
pi 'calm, quiet'	*tsítsie* 'clear'

The other closed set of adjectives follow the head nouns they modify and show concord with them in noun class. These agreeing adjectives and some examples are shown in (84), while the concord prefixes of each noun class are summarised in Table 2.19. These agreeing adjectives can derive their corresponding abstract notions by taking the class 14 prefix *bu-*, for example *bu-níni* 'bigness' and *bu-bvé* 'beauty'.

(84) a.

-bvé 'good'	*-bí* 'bad'
-níni 'big'	*-la* 'long'
-pfii 'short'	*-kima* 'other'
-ŋaríki 'new'	*-tsiina* 'whole'
-bíibi 'little, few'	*-khiele* 'small'
-bui 'yellow, immature'	*-kulu* 'old'
-mfe 'cold'	*-ke* 'several'
-lîlakâ 'numerous'	*-bíi* 'green, fresh'

b. *tsúku li-**tsiina*** 'whole day'
*nzǔ n-**kima*** '(the) other peanuts'
*mu-siá wu-**pfii*** 'short rope'
*nzalí wu-**bíibi*** 'small river'
*má-lúa ma-**níni*** 'big disease'

From the table, we see that the adnominal concord prefixes are formally identical to the proximal demonstrative markers, except for the class 9/10, whose concord prefix is always a nasal which assimilates with the following consonant in the place of articulation. Though the concord prefixes usually occur as a single morpheme as in the table, it is also common to see a complex concord form, in which the head noun is indexed twice on the modifier and formally looks like a subject relative (see section 2.5.3), as shown in the examples in (85). This was elsewhere described as the CONN NPrefix-adjective construction for Kikongo languages (Baka 2000; Bouka 1998).

Class	Concord	Class	Concord
1	wu-/mu-	2	ba-
3	wu-/mu-	4	mi-
5	li-	6	ma-
7	ki-	8	bi-
9	N-	10	N-
14	bu-		

Table 2.19: The adnominal concord prefixes of adjectives in Kukuya

(85) *mbuurú* ***wu-mu****-bvé* 'a/the good person'
nzó ***yi-m****-bvé* 'a/the good house'
ki-dzulibí ***ki-ki****-níni* 'a/the big door'
búku li-lí-kúlú 'a/the old book'

Beyond the adjectives in the two limited sets in (84), descriptive meanings can be expressed by various other means in Kukuya. In (86) the translational adjectives are expressed by using a subject relative clause.

(86) a. mvúla **wǔ-ya**
1.year 1REL-come
'next year'

b. mwáana **wǔ-wéén-á** má-yéle
1.child 1REL-lack-FV 6-intelligence
'stupid child'

c. ki-ko **ki-kíí**-baak-i
7-loincloth 7REL-7SM.PST-be.torn-PST
'torn clothes'

d. ki-baká **ki-kí** ya má-mpirí nziimi
7-wall 7REL-7SM with 6-colour many
'colourful wall'

Another common strategy to express specifying meaning is to use a relative marker plus the preposition *yǎ* 'with' whose underlying tone pattern is LH

but can donate the H tone to the following prefix. For example, the concept "a deep river" can be literally expressed as "a river that has/is with depth" and "a tall person" as "a person who has/is with height". Some examples are given in (87).

(87) a. ŋjama wŭ yă mpúru
1.animal 1REL with 9.anger
'dangerous animal'

b. nzáli wŭ yă dzika
1.river 1REL with 9.depth
'a deep river'

c. mbuka yii ya kí-dziimi
9.place 9REL with 9.shade
'a shady place'

d. mbuurú wŭ ya mú-téle ndziimi
1.person 1REL with 3-height much
'a very tall person'

e. tshoo li-líí yă ŋkali
5.food 1REL-5AGR with 9.bitterness
'bitter food'

To express comparison on a certain quality between two entities, the word *ki-lura* 'to surpass' is frequently used, and the class 18 preposition *mu* brings into the aspect that A surpasses B, as illustrated in examples (88) and (89).

(88) Ngo **lur-í** kii-mbúli mu **ntsiini**.
1.leopard surpass-PST 7-lion 18.LOC 9.speed
'A leopard (runs) faster than a lion.'

(89) Mu-kúlu **lur-í** me mu mvúla tíri.
1-elder surpass-PST 1SG.PRO 18.LOC 1.year three
'My brother is three years older than me.'

To express superlative, a similar construction is used, except that it does not

need to show comparison with another element. In (90), "the longest one" is expressed as "the one that surpasses the length".

(90) Me ya má-téme mpúomo, me m-wî
1SG.PRO with 6-hoe eight 1SG.PRO 1SG.SM-give.PST
li-lií-lur-i **bu-la** ndúku.
5REL-5SM.PST-surpass-PST 14-length 1.friend
'I have eight hoes, I gave the longest one to a friend.'

2.3.2.4 Quantifiers

Kukuya does not employ a large amount of quantifiers. In this part I introduce the form and use of the universal quantifier "all" and the expressions of "each/every". Quantifiers are a subset of adjectives in Kukuya, which refer to certain amounts of entities, and we have already seen the expressions of "many/much" and "few/little" above in (84) as adjectives, I don't discuss them further here.

The universal quantifier "all" always shows concord with the nominal that it modifies, resulting an amalgamated element whose concord prefix is not separable, as summarised in Table 2.20. According to Paulian's (1975: 203) analysis, this quantifier has the underlying root as -|Yoî| in which the abstract morphophoneme |Y| is represented by the constricted articulation **Ch** (see section 2.1.1.3) and the initial consonant is determined by the noun class prefix. Vowel coalescence also happens when the amalgamated word is formed. I don't discuss the formation of the words in the paradigm in detail here. Some examples of the universal quantifier are given in (91) and (92). To emphasise the universal reading, this quantifier can also be formally reduplicated, as in (92). As seen from the table, this quantifier can modify not only the countable nouns in the plural classes, but it can also modify singular nouns, meaning "the whole".

(91) Mpéle wu-kíí-yáab-i baarí **bhoî** áá-puum-i
1.priest 1REL-7SM.PST-know-PST 2.people 2.all 1SM.PST-get.lose-PST
mfúúlá ku ntsá mu-kééné.
9.way 17.LOC inside 3-desert
'The pastor that all the people knew lost his way in the desert.'

(92) Wu-kâ-bvúúr-á bí-lokó **bvheîbvheî** ngampu
1REL-IMPF-return-FV 8-thing 8.all 1.God
ndé-me-nkúlu.
1.PRO-1SG.PRO-oneself
'The one who reimburses all the things is the God himself.'

Class	'All'	Class	'All'
1	whoî	2	bhoî
3	whoî	4	mheî
5	lhoî	6	mhoî
7	kheî	8	bvheî
9	yhoî	10	yhoî
14	bhoî		

Table 2.20: The concord pattern of 'all'

To express "every/each", the quantifier *ná*, which has the same shape as the *wh*-word "who" (see the description on interrogatives shortly) is used and is placed before the noun it modifies. See two examples in (93) and (94).

(93) Mbuurú wu-kâ-tsúk-a maá-bí **ná** tsúku lii-nkíla
1.person 1REL-IMPF-talk-FV 6REL-bad every 5.day 5-tongue
líí-tsírik-i.
5SM-cut-PST
'The man who speaks bad words everyday was cut the tongue.'

(94) Taará ka-káá-ték-i **ná** ntsúi ni.
1.father NEG-1SM.PST-sell-PST every 1.fish NEG
'Father did not sell each fish.'

This quantifier *ná* has an invariable shape and never shows concord with the head noun. It can also follow the head noun if followed by a class 1 pronoun *ndé* which may have an emphatic function, as shown in (95).

(95) Ntaba **ná** **ndé** ŋa ntsá bu-lá ba báa-ték-e.
1.goat every 1.PRO 16.LOC inside 14-village 14.DEM.I 2SM.FUT-sell-FV
'Every goat in this village will be sold.'

"Other" or "another" is expressed by the adjectival quantifier *-kima* which shows concord with the head noun. As shown in (96), the modified noun *balaka* 'male person' does not form a closed set with the precedent subject.

(96) Mbuurú wu-kí-yéni mu-káli yă balaka **mu-kima** mí-kíí
1.person 1REL-7SM-go.away 1-wife with 1.man 1-other 4-curse
kâ-ló ná tsúku.
1SM.IMPF-curse every 5.day
'The person whose wife went away with another man curses everyday.'

When expressing "the other" element that is contrasted with a different entity in the same set, the quantifier *-mó* is used. In the context of example (97), two chicken are involved: one was caught, and the other survived.

(97) Ntsúú **wu-mó** wu-báá-bí siiba ndíri, ká we
1.chick 1-other 1REL-2SM.PST-refuse catch 1.COMP.say EMP 2SG.PRO
ŋa yi-seb-e.
16.PRO IMPF-laugh-FV
'The other chick which was not caught said, 'it was you who were laughing there!'

2.3.2.5 Numerals

The citation forms of cardinal numerals in Kukuya are listed in Table 2.21, and an example of the formation of a complex number is given in (98).

Numeral	Translation
nguumó	one
mwóolo	two
tíri	three
na	four
taaní	five
séneme	six
nsaama	seven
mpúomo	eight
wá	nine
khúumi	ten
ma-khúumi mwóolo	twenty
ma-khúumi ma-taaní	fifty
ma-khúumi wá yǎ nsaama	ninety-seven
nkámá	hundred
pfuuná	thousand

Table 2.21: The cardinal numerals in Kukuya

(98) pfuuná yǎ nkámá wá ya má-khúumi wá yǎ nsaama
thousand and hundred nine and 6-ten nine and seven
'1997'

Only the numbers from 1 to 6 can show concord with the head noun by taking the same set of concord prefixes as adjectives (see Table 2.18), for 7 to 10 the shapes of numerals are invariant, but the concord pattern maintains for the 1 to 6 single digits in a number bigger than 10, as shown in the (99). The concord patterns of "one" and "two" are exceptional and they are displayed in Table 2.22. It remains to be investigated what the *nga-* stands for in the various forms of numeral "one".

Class	One	Class	Two
1	nguumó	2	bhóolo
3	nguumó	4	mhéele
5	ngalimó	6	mhóolo
7	ngakimó	8	bvhéele
9	ngamó	10	yhóolo

Table 2.22: The nominal agreement pattern of 'one' and 'two'

(99) *báana **ba**-séneme* 'six children'
*mi-tí **mi**-na* 'four trees'
ma-ko nsaama 'seven bananas'
bi-lóko ma-khúumi mhóolo yă bvhéele 'twenty two objects'

Ordinal numerals consist of a connective marker and a cardinal number that displays concord with the class of the *plural* counterpart of the head noun, as shown in (100).

(100) a. tsúku líí mhóolo
5.day 5.CONN 6.two
'the second day'

b. mu-tí wuu mí-tíri
3-tree 1.CONN.EMP 4-three
'the third tree'

So far I have introduced all the adnomimal modifiers including connectives, demonstratives, adjectives, quantifiers and numerals. According to the speakers, the order of them can be highly flexible, despite that the connective marker has to occur immediately after the head noun or lastly, but not in between, as shown in (101).

(101) a. mjíibi áá-túr-i ma-téme **máá me ma-tíri**
1.thief 1SM.PST-steal-PST 6-hoe 6.CONN 1SG.PRO 6-three
ma-ŋwa ma-níni.
6-red 6-big
'The thief stole my three big red hoes.'

b. mjíibi áá-túr-i ma-téme **ma-tíri ma-ŋwa ma-níni**
1.thief 1SM.PST-steal-PST 6-hoe 6-three 6-red 6-big
máá me.
6.CONN 1SG.PRO
'The thief stole my three big red hoes.'

c. *mjíibi áá-túr-i ma-téme **ma-tíri máá me**
1.thief 1SM.PST-steal-PST 6-hoe 6-three 6.CONN 1SG.PRO
ma-ŋwa ma-níni.
6-red 6-big
Int: 'The thief stole my three big red hoes.'

2.3.2.6 Interrogatives

Next I present the interrogative words in Kukuya, which are listed in Table 2.22.

Interrogatives	English counterpart
ná	who
(kí)-má	what
ku-ní	where
bu-ní	how
-ní	which
munkí	when
mu ki-má	why
kwê	how many/much

Table 2.23: The interrogative words in Kukuya

To ease the presentation, in Table 2.23 I match the Kukuya interrogatives

with English *wh*-words. In fact, many interrogatives words have the same root but take different concord prefixes, which determines their interpretation. For example *ku-ní* 'where' and *bu-ní* 'how' are composed of the class 17 and class 14 concord markers *ku-* and *bu-* along with the interrogative morpheme *-ní* 'which', thus *ku-ní* and *bu-ní* literally mean 'which place' (where) and 'in which manner' (how).

Most commonly, the interrogative words are linearly placed immediately **before** the verb in a content question, which corresponds to a dedicated focus position in the Kukuya syntax, since *wh*-words are inherently focused. See more description and discussion on this in chapter 3, which are not the main aim of this section.

Next I present the forms and uses of the interrogative words in turn.

***ná* 'who'**

When asking about a person (or sometimes an animal), the interrogative word *ná* is used. This *wh*-word itself is in class 1 and has a plural counterpart *baa-ná* in class 2. Some examples on its occurrences are provided in (102)-(105). The sentence in (102) is an object question, while the embedded clause in (103) is a pseudo-cleft questioning on the subject.

(102) We **ná** á-mún-i ku mu-súru?
2SG.PRO 1.who 2SG.SM.PST-see-PST 17.LOC 3-forest
'Who did you see in the forest?'

(103) Ndé á-fúul-i me [ba-báá-dzwí ŋíibi **báa-na**].
1.PRO 1SM-ask-PST 1SG.PRO 2REL-2SM.PST-kill.PST 1.thief 2-who
'S/He asked me who (pl.) killed the thief.'

There is often a class 1 pronoun *ndé* immediately following *ná* when questioning an object, whose exact function is not yet clear to me. This is reminiscent of the quantifier *ná* 'every/each' which also co-occurs with a class 1 pronoun, as introduced above in (95). It is interesting to investigate whether

the quantifier *ná* and the interrogative *ná* are related or they are underlyingly the same.

(104) Nkaaká ma-désu **ná** ndé káá-wî?
1.grandmother 6-bean 1.who 1.PRO 1SM.PST-give.PST
'To whom did grandmother give the beans?'

(105) Ndé ki-bhiimá kíí ngúku ya **ná** ndé
1.PRO 7-corpse 7.CONN 1.mother with 1.who 1.PRO
kâ-dziik-a?
1SM.FUT-bury-FV
'With whom will s/he will bury the corpse of mother?'

"Whose" is expressed by an emphatic connective marker and *ná*, see examples in (68) above.

***kí-má* 'what' and *mu ki-má* 'why'**

The interrogative word for 'what' in Kukuya most commonly appears as the class 7 *ki-má*, which is used to question objects, animals as well as general events. Two examples are given in (106) and (107).

(106) We **kí-má** kâ-tsuom-ó ku ntsá mu-tíma áá
2SG.PRO 7-what IMPF-think-FV 17.LOC inside 3-heart 3.CONN
we?
2SG.PRO
'What are you thinking in your heart?'

(107) Taará ku ndúku aa ndé **kí-má** káá-fúum-i?
1.father 17.LOC 1.friend 1.CONN 1.PRO 7-what 1SM.PST-buy-PST
'What did father buy for his friend?'

Similar to the class 1 pronoun *ndé* that is placed after *ná* 'who', there is often a class 7 pronoun *ké* occurring immediately after *ki-má*, as shown in (108).

(108) Maamá kí-má **ké** kâ-dzií kí-yáab-a?
1.mother 7-what 7.PRO 1SM.IMPF-like INF-know-FV
'What does mother want to know?'

In fact, the interrogative *ki-má* consists of a root *-má* plus a class 7 prefix, and this root can *modify* nominals of various noun classes and shows concord with them, an agreeing pronoun also appears after this interrogative modifier. However, only the class 7 *ki-má* and its plural counterpart in class 8 (sometimes also class 6, depending on the content it refers to) are most commonly used as an interrogative *pronoun*. For other noun classes, when they are modified by *-má*, usually have the reading of 'what kind/type', for example *kíri lí-má ló* (cl.5) means 'what kind of chair', and *mu-ŋwa mú-má ndé* (cl.3) means 'what language'. Some examples of its pronominal use are given in (109) and (110), and the concord patterns are illustrated in Table 2.23. It should be noted that the concordial pronouns only occur after the interrogatives *ná* 'who' and *-má* 'what', but never with other *wh*-words or focused elements in a sentence.

(109) Bó **má-má** mó bá-kâ-tsúk-a?
2.PRO 6-what 6.PRO 2SM-IMPF-talk-FV
'What are they talking about?'

(110) Báana **bí-má** bvé báá-kil-a mu mbárá bí-baka?
2.children 8-what 8.PRO 2SM.PST-write-PST 18.LOC against 8-wall
'What did the children write on the wall?'

When asking about reasons, 'why' is expressed by a combination of the class 18 locative preposition *mu*, which is often used to introduce reason, and the interrogative word *ki-má*, so *mu ki-má* 'why' in Kukuya is literally 'for what'. Some examples are given below. We may also notice that the tone on the prefix of (*mu*) *ki-má* are realised differently when it is used as 'what' and 'why', I refer the readers to chapter 4 on the tone of the preverbal focused elements.

Class	'What'	Class	'What'
1	wu-má ndé	2	ba-má bó
3	wu-má ndé	4	mi-má ŋjé
5	li-má ló	6	ma-má mó
7	ki-má ké	8	bi-má bvé
9	yi-má yó	10	yi-má yó
14	bu-má bó		

Table 2.24: The concord patterns of 'what' in Kukuya

(111) Bá-kái **mu** **ki-má** bá-li yǎ buokó?
2-woman 18.LOC 7-what 2SM-be with 14.fear
'Why are the women frightened?'

(112) **Mu** **ki-má** ké kí-li yǎ nkelé ku mbali?
18.LOC 7-what 7.PRO 7SM-be with 9.noise 17.LOC 9.outside
'Why is there noise outside?'

***ku-ní* 'where'**

When asking about a place, the interrogative word *ku-ní* is always used, which is composed of the locative class 17 prefix *ku-* and the interrogative root *-ní* 'which', so literally it means 'which place'. Three examples on the use of *ku-ní* are shown in (113)-(115). Note that in the matrix clause, the interpretation of *ku-ní* is always associated with the place of the event related to the verb that it immediately precedes, so in (114) *ku-ní* is used to inquiring after the place where the addressee heard the news, rather than where the man under discussion died. In example (115), *ku-ní* functions as the head NP of a relative clause (see section 2.5.2) that expresses an embedded question.

(113) Joní mhiilí **ku-ní** míí-buok-i?
1.John 4.leg 17-which 4SM.PST-hurt-PST
'Where did John hurt the legs?'

(114) We maa-ndáká máa **ku-ní** á-yúk-i
2SG.PRO 6-problem 6.DEM.II 17-which 2SG.SM.PST-hear-PST
bóri mbuurú áá-kwî mu mbaá?
2.COMP 1.person 1SM.PST-die.PST 18.LOC 9.fire
'Where (place of hearing) did you hear that the man died of fire?'

(115) Me ka-n-yáab-i [**ku-ní** ku-m-bak-i
1SG.PRO NEG-1SG.SM-know-PST 17-which 17REL-1SG.SM-get-PST
me ma-dzá] ni.
1SG.PRO 6-water NEG
'I did not know where I (could) get water.'

***bu-ní* 'how'**

The interrogative word *bu-ní* can be translated as 'how' and is used to ask about the manner in which an action is accomplished, or the state of a person or an entity. This *wh*-word consists of the class 14 prefix, which is commonly associated with the manner of doing something, and the root *-ní*, so literally it means 'in which manner'. In this sense it should be grouped together with *ku-ní* as the 'which' interrogatives. Two examples are given in (116) and (117).

(116) Baa-nziá bu-ká bun-í bá-dzá?
2-foreigner 14-cassava 14-which 2SM-eat
'How do the foreigners eat the cassava?'

(117) Ndé nká bu-ní ká-siib-i?
1.PRO 1.antelope 14-which 1SM.PST-catch-PST
'How did s/he catch the antelope?'

***-ní* 'which one'**

The interrogative root *-ní* is used for discourse-linking questions 'which (one)' or 'what kind of'. It occurs after the noun that it modifies and takes the concordial prefixes. Two examples are given below.

(118) Mu-kái **wu-ní** wŭ-lak-í ndíri áá-mún-i Gilbert?
1-woman 1-which 1REL-say-PST 1.COMP 1SM.PST-see-PST Gilbert
'Which woman said that she saw Gilbert?'

(119) Baa-mángulu ba-káá-fúúm-í bó **ba-ni**?
2-mango 2REL-1SM.PST-buy-PST 1.PRO 2-which
'What kind of mangoes did s/he buy?'

***munkí* 'when'**

The interrogative word *munkí* is used for inquiring general time, and has an invariant form. Two examples on its use are given below. It would be interesting to investigate the origin of this temporal interrogative word, since in some other Teke varieties 'when' is expressed by the word *li-ní* 'which time' that seems to belong to the same set of interrogatives as *ku-ní* and *bu-ní*.

(120) Ngúku mu-kíike **munkí** káá-yók-í má-dzá?
1.mother 1-baby when 1SM.PST-bath-PST 6-water
'When did mother bath the baby?'

(121) We ŋa tíí **munkí** â-kál-a?
2SG.PRO 16.PRO until when 2SG.SM.FUT-stay-FV
'Until when will you will stay here?'

***kwê* 'how many'**

The interrogative word *kwê* is used for asking the quantity of a entity, either countable or uncountable. Like *munkí* 'when', this *wh*-element also has an invariant form and always follows the noun that it modifies. See the examples below.

(122) Mii-ndéle ma-tsúku kwê míi-sál-a ŋa ntsá
4-foreigner 6-day how.many 4SM.FUT-work-FV 16.LOC inside
bu-lá ba?
14-village 14.DEM.I
'For how many days will the foreigners work in this village?'

(123) We mii-nkáání kwê â-kil-a?
2SG.PRO 4-letter how.many 2SG.SM.FUT-write-FV
'How many letters will you write?'

ka **+ interrogatives**

An intriguing fact on the interrogatives in Kukuya is when they occur in a non-preverbal position in an embedded clause, they must be preceded by a *ka* marker whose exact function is still unclear to me (I gloss it as emphatic ad hoc), as shown in the examples (124)-(127) below. It is also unknown if this *ka* can be categorised with any other homophonic *ka* markers in this language. It somehow seems that *wh*-word needs some additional licensing when it occurs in an A-position in the embedded context, which I leave for future research.

(124) Ba-ntsúú ba-kíí-ká-í *(ka) **ná** bá-yiká bá-bí?
2-chicken 2REL-7SM.PST-grill-PST EMP 1.who 2SM-IMPF 2-bad
'The chicken that who grilled is getting bad?'

(125) Ndé áá-som-í mu ki-ná kǐ-yi-tsúk-í
1.PRO 1SM.PST-enter-PST 18.LOC 7-moment 7REL-IMPF-speak-PST
we *(ka) **ma-má?**
2SG.PRO EMP 6-what
'He entered when you were saying what?'

(126) Mu-kái wǔ-fúum-í *(ka) **ki-má** ké báá-pfur-í?
1-woman 1REL-buy-PST EMP 7-what 7.PRO 2SM.PST-cheat-PST
'The woman who bought what was cheated?'

(127) Me mún-i mbuurú wu-kí-tǐ me
1SG.PRO 1SG.SM.see-PST 1.person 1-COMP '1SG.PRO
ka-n-yáab-i ndé *(ka) **ná** ni.
NEG-1SG.SM-know-PST 1.PRO EMP 1.who NEG
'I saw the person that I don't know who he was.'

2.3.2.7 Person and class pronouns

The independent pronouns including speech participants and noun class pronouns in Kukuya are listed in Table 2.24. The most common function of these pronouns is to serve as the pronominal arguments of the verb, referring back to a certain person or entity that has been given in the discourse, either in the previous or the same sentence. The class pronouns are also attested after the interrogatives *ná* 'who' and *-má* 'what', which I have shown above. Here I give two examples on the resumptive use of the pronouns.

Class/Person	Pronoun	Class	Pronoun
1st SG	me	2nd SG	we
1st PL	bhii	2nd PL	bé
1	ndé	2	bó
3	ndé	4	ŋ́jé
5	ló	6	mó
7	ké	8	bvé
9	yó	10	yó
14	bó	16	ŋa

Table 2.25: The independent pronouns in Kukuya

(128) **Me** ka-n-dzií ki-yé ku kíí ngúbalaka ni
1SG.PRO NEG-1SG.SM-like INF-go 17.LOC 7.CONN 1.uncle NEG
mu bu-kítĭ **ndé** kâ-nywí-a me ma-lí ndziimi.
18.LOC 14-COMP 1.PRO IMPF-make.drink-FV 1SG.PRO 6-wine much
'I don't like going to my uncle's house because he (usually) makes me to drink much wine.'

(129) Mi-fémé mí-kâ-tsuom-ó bóri **me** ŋ**é**
4-pig 4SM-IMPF-think-FV 2.COMP 1SG.PRO 4.PRO
â-n-siib-a.
FUT-1SG.SM-catch-FV
'The pigs think that I will catch them.'

To summarise, in this section I have introduced the nominal morphology, including noun classes and noun phrases. We see that adnominal modifiers show concord relations with the nominals in noun classes. As is well known, noun classes in Bantu are also indexed in the verbal domain via agreement. Next I present the verbal morphology and inflectional categories in Kukuya.

2.4 Verbal morphology and TAM

In this section, I describe the verbal morphology and TAM conjugations in Kukuya. I first display the structure of the verb, showing the inventories of the morphemes that can occur in each slot on a verb complex, namely the negative and relative prefixes, subject markers, tense and aspect markers and the final vowel. Then I present the tense/aspect/mood markings on the verb.

The structure of an agglutinating verb is very commonly attested across Bantu languages, and a formal template of different slots on the verb complex was proposed by Meeussen (1967: 108), which "exhibits a clear structure with definable elements occurring in a fixed order". A verb in Kukuya is not so "complex" as it makes use of a very restricted subset of the slots in Meeussen's template. The scheme of a Kukuya verb is illustrated in (130). I don't have an example that exploits all these slots, but I will show later that they can be clearly distinguished.

(130)

Pre-initial	**Initial**	**Formative**	**Limitative**	**Root**	**Final**
REL, NEG	SM	ASP	other prefixes	verb	FV

As seen from (130), there are only three pre-stem slots in Kukuya which correspond to the Pre-initial, Initial and the Formative positions in Meeussen (1967: 108) (also see Nurse 2008). There is no object marking on the verb and no productive verb derivational extensions. However, we can still recognise some traces of the ancient derivational suffixes which have been lexicalised and become inseparable.

In (131) I have listed some verb pairs, between which we can observe a systematic correlation in both meaning and form. I suppose that the verb forms in the right column can reflect some remnants of the ancient derivational extensions (also see Paulian 1998). For example, the ***l***/***k*** opposition in some of the pairs may reflect the Proto-Bantu -**ud* and -**uk* suffixes that encode the transitive/intransitive distinction. I don't discuss the reconstruction into detail here but just provide examples.

(131)

ki-múna 'to see'	*ki-múono* 'to meet'
ki-pálaba 'to make crack'	*ki-pákaba* 'to crack'
ki-kolobo 'to make calm'	*ki-kokobo* 'to calm'
ki-lelebe 'to loosen (a rope)'	*ki-lekebe* 'to become loose'
ki-dziika 'to bury'	*ki-dzuula* 'to get out of the ground'
ki-yíka 'to learn'	*ki-yúika* 'to teach'
ki-khúula 'to disconnect'	*ki-khúuka* 'to disengage'

Some verbal meanings are expressed by using a complex VO structure, most notably with the light verb *ki-tá* 'to launch'. Several examples are given in (132).

(132) *ki-tá bví* 'to throw'
ki-tá mí-táami 'to enjoy oneself'
ki-tá nzaamí 'to pray'
ki-tá mí-tári 'to witness'
ki-tá nzunimí 'to sweat'
ki-tá mú-dzéle 'to scream'
ki-múná má-kinima 'to suffer'
ki-múná bú-pfúru 'to feel ashamed'
ki-bvâ nsüna 'to sit down'

After some brief words on the verb roots and complex verbs, next I present the verb affixes in different slots in the template (130) in turn, following their linear order.

2.4.1 Verbal affixes

2.4.1.1 Pre-initial: negative and relative markers

The Pre-initial slot on a Kukuya verb can be filled by two kinds of elements, which are the negative prefix *ka-* and the relative pronouns, but they *cannot* co-occur simultaneously. The negative prefix *ka-* is often prefixed to the verb, preceding the subject marker, and it is always used along with a clause-final

negative particle *ni*. Two examples of negative sentences are shown in (133) and (134). It is interesting to see in (133) that the particle *ni* occurs twice, one appears immediately when the matrix clause ends, and the other in the final position of the whole sentence.

(133) Mwáana **ka**-ká-lí ya kí-sáabi **ni** mu
1.child NEG-1SM-be with 7-happiness NEG 18.LOC
bu-kíí-sí-i ngúku ndé mu ntsá nzó **ni**.
14REL-7SM.PST-leave-PST 1.mother 1.PRO 18.LOC inside 9.house NEG
'The child is not happy that mother left him alone in the house.'

(134) Me **ka**-n-kukí mu ki-sâ ndé kólokóli **ni** se
1SG.PRO NEG-1SG.SM-can 18.LOC INF-do 1.PRO excuse NEG even.if
káá-sak-í kólokóli ndziimá-ndziimi.
1SM.PST-search-PST excuse much-much
'I cannot forgive him even if he apologised several times.'

This negative prefix *ka-* is not always attached to the verb, but can also be placed before an NP constituent that it negates and has an independent prosodic status. In (135), the scope of negation is the preverbal subject NP, which is preceded by the negative marker *ka*. I would analyze the *ka* in (135) as a homophonous negative marker with a different morphological status, i.e., independent word instead of prefix.

(135) Ngo **ka** mú-bhií áá-dwî **ni**, nzokó
1.leopard NEG 1-hunter 1SM.PST-kill.PST NEG 1.elephant
á-dwî ndé.
1SM.PST-kill.PST 1.PRO
'The leopard was not killed by the hunter, an elephant killed it.'

The Pre-initial slot can also be occupied by a relative pronoun, which always agrees with the adjacent relativised NP in noun class and is prefixed to the verb. The paradigm of relative pronominal prefixes of each noun class is given in Table 2.25. We see that the shape of relative prefixes are identical to

the proximal demonstrative marker (see Table 2.17), with the only exception for class 14, whose relative prefix is *bu-* instead of *ba-*. There are no relative prefixes for person pronouns. Since the syntax of relative constructions will be discussed in more detail in section 2.5 as well as in chapter 5, here I only provide two examples to show the use of relative prefixes.

Class	Relative	Class	Relative
1	wu-	2	ba-
3	wu-	4	mi-
5	li-	6	ma-
7	ki-	8	bi-
9	yi-	10	yi-
14	bu-	16	ŋa-
17	ku-	18	mu-

Table 2.26: The relative prefixes in Kukuya

(136) Me ŋa m-bvî nsiina mu báana
1SG.PRO 16.PRO 1SG.SM-fall.PST 9.ground 18.LOC 2.children
ba-lí-maá-búr-a bhií.
2REL-1PL.SM-PERF-give.birth-FV 1PL.PRO
'I stay here for the children that we have given birth to.'

(137) Mwáana wu-mu-kái **wu**-kíí-kwí ngúku á-yika
1.child 1-1AGR-female 1REL-7SM.PST-die.PST 1.mother 1SM-IMPF
kí-lilá kâ-líl-a.
INF-cry 1SM.IMPF-cry-FV
'The girl whose mother died is crying.'

2.4.1.2 Subject (and tense) markers

The subject in Kukuya is always indexed by a subject marker in the Initial slot of the verb, except for verbs in the infinitive, narrative, and imperative

conjugations. A list of subject markers for all noun classes and persons is given in Table 2.26. We see that all the subject markers have underlying H tone, except for the 1st/2nd person plural subject markers with underlying L tone. The 1st person singular subject marker is always realised as a nasal that assimilates with the following consonant in the place of articulation; the 2nd person singular subject marker has a null form; and the subject markers for 1st and 2nd person plural are identical. The class 1 subject marker has two variants *á-* and *ká-*, the alternation of which will be discussed in chapter 5. The class 1 subject prefix *á-* is often omitted on the verb when the subject is the class 1 pronoun *ndé* 's/he', but is compensated by the lengthening of the final vowel of the latter.

Class/Person	**Subject marker**	**Class**	**Subject marker**
1st SG	N-	2nd SG	∅-
1st PL	li-	2nd PL	li-
1	á-/ká-	2	bá-
3	á-	4	mí-
5	lí-	6	má-
7	kí-	8	bí-
9	á-	10	á-
14	bú-		

Table 2.27: The subject markers in Kukuya

We also see from the table that compared to adnominal concord prefixes and relative prefixes, the subject markers in Kukuya seem to be more phonologically reduced, and class 9/10 subject markers do not show correlation with any of their concord markers in the nominal domain but seem to be merged with those of class 1/3.

As indicated in the glossing of many examples throughout the thesis, the subject marker is often realised as a combined subject and tense marker, in which the tense information is encoded by lengthening the vowel of the subject prefix and by grammatical tones, as shown in two additional examples in (138) and (139). We also see that though subject and tense marking can be combined, they can bear different tones. In (139) the

prefix *báa-* consists of a H tone subject marker *bá-* and a lengthened vowel with a grammatical L tone that encodes general future tense. This vowel lengthening strategy functions together with the alternation of final vowel on the verb to mark tense distinctions (see next subsection).

(138) Ndé kí-má **káá**-fúúm-í ki-**kíí**-fí nsáa?
1.PRO 7-what 1SM.PST-buy-PST 7REL-7SM.PST-end.PST 9.value
'What did he buy that has expired?'

(139) Munkí we kâ-tsuom-ó wurí bó **báa**-tô?
when 2SG.PRO IMPF-think-FV 2SG.COMP 2.PRO 2SM.FUT-arrive
'When do you think that they will arrive?'

This combined marker is also attested in some other Teke varieties, for example in Raharimanantsoa's study (2017) on the tense marking in Teke-Eboo (B74), she labeled this marker as the "subject-tense marker" (STM). I do not gloss this combined marker as separate morphemes, since in some cases the vowel lengthening is not easy to detect and its realisation depends on the vowel quality of the subject prefix. Some exceptions are when the subject marker is the 1st person singular **N-**, which has a phonological requirement for it to always follow a CV- or V- shape tense/aspect prefix but never precedes it. In this case, tense is marked via a separate marker *a-* preceding the nasal prefix, as shown in (140); when the subject marker is the null 2nd person singular, this tense marker *a-* just stands by its own as in (141).

(140) Me **a**-n-bólik-i Gilbert kíri.
1SG.PRO PST-1SG.SM-break-PST 1.Gilbert 5.chair
'I broke Gilbert's chair.'

(141) We me bu-ní **á**-swool-i?
2SG.PRO 1SG.PRO 14-which PST-find-PST
'How did you find me?'

The class 7 subject marker *ki-* serves as the default subject marking strategy in this language. It is used when there is no overt preverbal subject for the verb to agree with, and this default use is most notably seen on a copula, as in (142). An additional example is given in (143), in which the class 7 *ki-* functions as a default relative marking strategy, as there is no candidate in the sentence for the relative pronoun to agree with.

(142) Ka-**kí**-li ya kí-lóko ki-báá-sî ni.
NEG-7SM-COP with 7-thing 7REL-2SM.PST-do.PST NEG
'There was nothing that was done.'

(143) **Ki**-n-dzií me ki-dzá wúna ŋama.
7REL-1SG.SM-like 1SG.PRO INF-eat only 1.meat
'What I like to eat is only meat.'

2.4.1.3 TAM markers and other verbal prefixes

Next I introduce the verbal prefixes that occur between the subject marker and the verb root, which include aspect prefixes in Meeussen's Formative slot and some other verbal prefixes that may correspond to the Limitative slot. When any of these aspect prefixes are present on the verb, the final vowel of the verb always has the default form (see below on the final vowel).

Prefixes *kâ-*, *maá-*, and *yi-*

The prefix *kâ-* is the most commonly attested aspect prefix, which often expresses habitual meaning that specifies an action as taking place habitually or regularly, or it is used in a statement which is believed to be universally true. I analyze this *kâ-* marker with the overarching aspectual meaning of "imperfective" as opposed to *maá-* in the following section. Some examples are given below in (144)-(147). The *kâ-* in (144) specifies an action that occurs habitually every year; (145) is a statement on the speakers' daily life; (146) describes a fact on the woman's general way of walking. Example (147) is a Kukuya proverb on the spread of Christianity,

saying that though a leopard can always eat a messenger, but the messages s/he carries can ultimately remain en route. The tone pattern on the verb stem and the following prefix is the same as in the infinitive verb phrases, i.e. the metatonic H tone appears on the FV of the verb and the following nominal prefix.

(144) Ná mvúla me **kâ**-m-fúúm-á bí-ko.
every 1.year 1SG.PRO IMPF-1SG.SM-buy-FV 8-clothes
'Every year I buy clothes.'

(145) Bhií ba-lí-**kâ**-sál-á lí-**kâ**-bák-á mí-pará.
1PL.PRO 2REL-1PL.SM-IMPF-work-FV 1PL.SM-IMPF-get-FV 4-money
'We who work earn money.'

(146) Mu-kái wu-kíí-pí-í miilí mbaá **kâ**-dzalak-á
1-woman 1REL-7SM.PST-catch-PST 4.leg 9.fire 1SM.IMPF-walk-FV
yǎ mpúru.
with 9.anger
'The woman whose legs were burnt by fire walks with difficulties.'

(147) Ngo **kâ**-dzá ntúmá, mi-kiené
1.leopard 1SM.IMPF-eat 1.messenger 4-message
mií-siil-i mu mfúúlá.
4SM.PST-remain-PST 18.LOC 9.road
'The leopard eats the messenger, messages remained on the way.'

While expressing the career or common activities in one's daily life, the object is often seen fronted to the preverbal position as in (148), with the use of the habitual marker *kâ-*.

(148) (*answer to 'what do you do in your life?'*)

Me báa-ntabá **kâ**-n-ték-e.
1SG.PRO 2-goat IMPF-1SG.SM-sell-FV

'I sell goats.' (I am a goat-seller)

The prefix *kâ-* can also have the progressive reading, representing a situation in progress at and around reference time. The source of progressive reading may be an expansion from the general present that *kâ-* expresses. Some examples are given in (149)-(152). The similar *kâ-* prefix that is used to express habitual and progressive is also attested in other Teke varieties such as Teke-Eboo (SIL Congo, 2016, 2020).

(149) Mu-lúmi áá-yení mbhii, mu-kálí kâ-sál-á
1-husband 1SM.PST-go.PST 9.hunting 1-wife 1SM.IMPF-work-FV
nséke.
9.field

'The husband went for hunting, and the wife is cultivating in the field.'

(150) Me **kâ**-n-kín-a ŋa-kí-yím-á mú-kálí aa
1SG.PRO IMPF-1SG.SM-dance-FV 16REL-7SM-sing-FV 1-wife 1.CONN
me.
1SG.PRO

'I am dancing while my wife is singing.'

(151) ŋama wŭ-ból-í **kâ**-wá mfúúlá nsúli.
1.meat 1REL-decompose-PST 1SM.IMPF-give 9.road 9.smell

'The rotten meat is making the street smelly.'

(152) Yáal-a nzó, tál-a mwáana ki-kálá **kâ**-ya.
open-IMP 9.house see-IMP 1.child INF-stay 1SM.IMPF-come

'Open the door and see if the child is coming.'

To encode an event that happens habitually or is happening at the moment, the tense marker *kâ-* is used. Sometime it can be difficult to determine which interpretation is meant in specific.

The aspect prefix *maá-* encodes perfective aspect, specifying an action as already finished, which can be translated as 'have (done)'. This perfective prefix may have its lexical origin in the verb *ki-maná* 'to accomplish' and has been grammaticalised. Some examples of this prefix are given in (153)-(156).

(153) Mu-sálá wúa á-**maá**-fâ.
3-work 3.DEM.II 3SM-PERF-end
'The work has (been) finished.'

(154) Mbhielé wu-kíí-**maá**-pfíil-a maamá
3.knife 3REL-7SM.PST-PERF-abandon-FV 1.mother
báá-tól-i.
2SM.PST-take-PST
'The knife that mother has abandoned was picked up.'

(155) Ma-tála bu-lii-báan-i bhiáwe, me
AUX-see 14REL-1PL.SM.PST-begin-PST 1PL.PRO 1SM.PRO
ka-**maá**-n-sak-á kí-lóko ku we ni.
NEG-PERF-1SG.SM-search-FV 7-thing 17.LOC 2SG.PRO NEG
'See that since we started, I have not asked for anything from you.'

(156) Mbuurú wŭ-yi-n-tsuom-ó me pirí ya
1.person 1REL-IMPF-1SG.SM-think-FV 1SG.PRO 1SG.COMP with
má-lúa á-**maá**-kwâ.
6-disease 1SM-PERF-die
'The person who I was thinking that was ill has died.'

The prefix *yi-* is used to describe events that last over a period of time, or situations in which neither the beginning nor the end is mentioned, most

commonly in the past. I gloss it as "imperfective" but it also looks like a relative tense marker, such as situative or consecutive. This prefix may have its lexical origin in the word *ki-ye* 'to go'. Some examples are shown in (157)-(159). In (157), the prefix *yi-* is used to express past progressive, specifying a "singing" event that lasted for a long duration; in (158) *yi-* marks an unaccomplished action; in (159) the event "coming to do harm to the chief" may also have lasted for some time before the soldier detected and killed the suspect. I leave more on the functions of this prefix for future research.

(157) Ma-tsíka mu nkunkólo mu ma-táli mă wurí ma,
6-yesterday 18.LOC 9.evening 18.LOC 6-sunshine 6REL like 6.DEM.I
mu-kái á-**yi**-yím-á kí-pfupfumi kúko.
1-woman 1SM-IMPF-sing-FV 7-song loudly
'Yesterday evening at the same time, the woman was singing a song loudly.'

(158) Li-ká-**yi**-som-ó ndé, mu-káli aa ndé
5REL-1SM-IMPF-enter-FV 1.PRO 1-wife 1.CONN 1.PRO
á-maá-yéem-e.
1SM-PERF-sleep-FV
'When he returned, his wife had already fallen asleep.'

(159) Mu-mboró áá-dwî wŭ-**yi**-yá kí-sá mpfúúmú
1-soldier 1SM.PST-kill.PST 1REL-IMPF-come INF-do 1.chief
bu-bí.
14-badness
'The soldier killed the one who came to do harm to the chief.'

Negative *bíí-*

In the introduction on the Pre-initial slot, I mentioned that the negative prefix and the relative prefix cannot co-occur on the verb. In a relative clause, negation is usually expressed via the prefix *bíí-* (see other negation strategies of relative clauses in section 2.5.3) which has its origin in the

verb *ki-bía* 'to refuse', and I suppose that it has at least partially been grammaticalised as a negative auxiliary, since in most cases it does not express an intentional refuse but just inverts the polarity and it can be attached directly to the verb without the use of an infinitive prefix (as in (161)). Some examples are shown in (160)-(163). This auxiliary can also be used in matrix clauses to mark negation, as in example (163).

(160) Me n-dzií baarí ba-bá-**bí**-í kí-sá
1SG.PRO 1SG.SM-like 2.people 2REL-2SM-refuse-PST INF-do
má-ndáka maa-bi.
6-word 6-bad
'I like the people who do not complain.'

(161) Mbuurú wŭ-**bí**-fur-á líi-mpó áá-dzáam-i.
1.person 1REL-NEG-pay-FV 5-tax 1SM.PST-hide-PST
'The person who did not pay the tax hid himself.'

(162) Nkaaká bu-ka ná ndé káá-**bí-í** kí-wâ?
1.grandmother 14-cassava 1.who 1.PRO 1SM.PST-refuse-PST INF-give
'To whom didn't the grandma give the cassava?'

(163) Me se m-**bí** m-búon-o nzaami, me
1SG.PRO even.if 1SG.SM-refuse 1SG.SM-believe-FV 1.God 1SG.PRO
ka-kâ-n-dzwá bí-búólí ni.
NEG-IMPF-1SG.SM-kill 8-organism NEG
'Though I don't believe in God, I don't kill animals.'

Counterfactual *ku-*

The prefix *ku-* expresses a counterfactual meaning, which can usually be translated as 'could/should have (done)'. The origin of this morpheme is not clear to me. Two examples are given in (164) and (165).

(164) Ndé báá-**ku**-búk-í (ndé), yii-m-bí ndé á-maá-kwâ.
1.PRO 2SM.PST-CF-cure-PST 1.PRO 9REL-9-bad 1.PRO 1SM-PERF-die
'He could have been cured, unfortunately he has died.'

(165) Me ali a-n-**ku** n-yá ŋa mu mvúla
1SG.PRO RPST PST-1SG.SM-CF 1SG.SM-come 16.PRO 16.LOC 1.year
wŭ-fíŋa wu mu ki-ná kéki.
1REL-pass 1.DEM.I 18.LOC 7-moment same
'I should have been here at the same time last year'

2.4.1.4 Final vowel

In Kukuya, there are no verbal suffixes apart from the final vowel (FV). The FV appears as **-a** as its default form in infinitives and non-past tenses when the stem vowel is **a**, **i** or **u**, as a vowel copy suffix when the stem vowel is **e** or **o**, as shown in (166). As seen in many examples above, the FV occurs as **-i** in all past tenses regardless of the quality of the stem vowel, for presentation I show one more example in (167).

(166) *ki-bhúma* 'to empty'
ki-kúula 'to be older'
ki-sóo 'to search'
ki-téke 'to sell'
ki-khée 'to try'
ki-lheeme 'to become clear'
ki-bolo 'to rot'

(167) Me n-tsúúl-**í** mú-fiemé mu ki-wá ndzulí
1SG.PRO 1SG.SM-make.fall-PST 3-bottle 18.LOC INF-give 1.cat
buokó.
14.fear
'I made the bottle fall to scare the cat.'

Therefore, it seems that the FV alternation in Kukuya is used to encode

the past/non-past tense distinction, functioning together with the vowel lengthening tense prefix and grammatical tones like a circumfix. This is also what Nurse (2008) documented for some Bantu languages including Zone B which exploit the combination of two different positions such as TA and FV to carry one tense reference, where he notes that it is often "impossible to split the functions" of the two positions (Nurse 2008:81). However, in some grammar sketches of other Teke varieties, the FV is usually glossed as an aspect marker whereby **-a** and the vowel copy prefix encode imperfective and **-i** encodes perfective (Mouandza 2001 on Iyaa B73; Etsio 1999 and Raharimanantsoa 2012, 2017, 2020 on Eboo B74), or glossed as ambiguous between tense and aspect (Tsoue 2017 and Linton 2016 on Tege B71a; Calloc'h 1911 and Makouta-Mboukou 1976 on Fumu B77b). For Kukuya, in Paulian (1997: 213, 2001) she labelled the FV **-a** as MA '*marque d'aspect*' and **-i** as MTA '*marque de temps et d'aspect*'.

An apparent counterargument for the FV in Kukuya to be an aspect marker is that when an aspect *prefix* occurs, whether the prefix is the perfective/resultative **maá-** or the imperfective/durative **yi-**, the FV can only take the default form **-a** or the vowel copy suffix but can never be **-i**, which shows that the FV alternation does not function to distinguish aspects. However, this co-occurrence constraint on the aspect markers and the FV may be explained as that diachronically the aspect prefixes such as **maá-** and **yi-** were very likely to have been grammaticalised from lexical verbs *ki-mana* 'to finish' and *ki-ye* 'to go', then they were phonologically reduced and fused together with a following *infinitive* verb stem, which may have an impact on the synchronic realisation of the FV on the verb complex that it can only take the unmarked **-a** as in infinitives.

In addition to these inconsistent analyses on whether the function of FV in Teke is more towards tense or aspect marking, it should also be noted that the FV alternation is also attested in conditional and subjunctive clauses (also see next subsection). One example is given in (168), in which the verb in the subjunctive clause takes the FV **-i** which is not related to past tense marking, so I suppose that the FV can also be used to encode the subjunctive mood.

(168) Me ki-n-yáab-a pirí me bú-kíá
1SG.PRO DEP-1SG.SM-know-FV 1SG.COMP 1SG.PRO 1.tomorrow
â-ŋ-kwá, me n-ték-**i** bi-lóko bvíí me
FUT-1SG.SM-die 1SG.PRO 1SG.SM-sell-**SBJV** 8-thing 8.CONN 1SG.PRO
bvheî lo.
8.all today

'If I know that I will die tomorrow, I would sell all my things today.'

Based on the facts introduced above, I propose that the FV in Kukuya, at least for its modified form **-i**, should not be treated as a single suffix with one unique function, but may have multiple homophonic counterparts which may have originated from different historical suffixes, whose functions are not confined to tense (and possibly aspect) but also mood marking. The suffix **-i** used in the past tenses may originally have represented perfective or anterior, and since the semantic shift from anterior to past is commonly attested cross-linguistically, it can result in the ambiguity on whether the FV encodes tense or aspect or both (Nurse 2008: 95). For simplicity, and also due to the fact that in Kukuya the alternation of FV is overwhelmingly used to encode past/non-past distinction, I treat the FV as a tense suffix when aspect and mood are not marked in a sentence.

2.4.2 TAM conjugations

The Kukuya language can distinguish as least three degrees of future tenses and two degrees of past tenses; the habitual, perfective and imperfective aspects; as well as the indicative/subjunctive/imperative moods. The distinctions on tenses are mainly expressed by tonal strategies on the subject-tense prefix and the final vowel, with the help of some independent tense auxiliaries. In this subsection I mainly focus on tense expressions. Since I have discussed aspect expressions in the description of aspect prefixes in the previous subsection, aspect is not discussed again here.

2.4.2.1 Near future tense

The near future tense in Kukuya usually encodes events which take place several hours later on the same day, or on the next day. The tone pattern on the verb of this tense is summarised in Table 2.27, and two examples are given in (169) and (170), one with a 2nd person subject, the other with the class 1 subject. We see that the H tone on the final vowel has also spread onto the following nominal prefix, it is not clear whether this is just a metatony effect or it should be characterised as the grammatical tone that marks future tense.

In (169) the subject-tense prefix of 2SG singular is realised as a L tone prefix, which consists of the L tone subject marker and the L grammatical tone of future tense. While in (170), the tone on the STM is realised as HL, which is combined by the H tone subject agreement marker for a 3rd person subject and the grammatical L tone for future tense. We also see that the grammatical L tone does not delete the subject agreement H tone.

Verbal tone		
SM	tense tone	Final vowel
1st and 2nd person: L 3rd person: H	L	H

Table 2.28: The verbal tone pattern in the near future tense

(169) We **a**-fúúm-**á** **má**-ko?
2SG.PRO 2SG.FUT-buy-FV 6-banana
'You will buy some bananas?'

(170) Ndé ló **â**-fúúm-**á** **má**-ko.
1.PRO today 1SM.FUT-go-FV 6-banana
'S/He will buy some bananas today.'

A note is added here on the cases such as (171) in which there is a focused

element occurring in the immediate preverbal position. We see that here the 1st person plural subject-tense marker in the near future tense is realised as HL instead of L. I will show in chapter 4 that this insertion of an additional H tone is related to relative marking. In this subsection, the tone pattern that I display for each tense are restricted to canonical word order.

(171) Ngiemé ndíri a wu-mó ndíri ndúku, ka ki-bhiimá
1.bat 1.COMP PREP 1-other 1.COMP 1.friend EMP 7-corpse
kíí maamá [mu píriba] líi-dziik-á?
7.CONN 1.mother 18.LOC 9.night 1PL.FUT-bury-FV
'The bat says to the sunshine, 'are we going to bury the corpse of mother AT NIGHT?"

2.4.2.2 Immediate future tense

The immediate future tense is used to express an intention which will be realised in very short time, and is encoded via the SOV word order. Some examples are given in (172)-(174) with different kinds of subjects. The tone pattern on the verb in the immediate future tense is similar to that in the near future with 3rd person subjects, which have a HL subject-tense marker. For 1st and 2nd person subjects, the tone pattern on the STM is also realised as HL, which is due to the insertion of an additional H tone in SOV that I mentioned above.

(172) Bó **má**-ko **báa**-fúum-a.
2.PRO 6-banana 2SM.FUT-buy-FV
'They'll buy some bananas.'

(173) Ndé **má**-ko **kâ**-fúum-a.
1.PRO 6-banana 1SM.FUT-buy-FV
'S/He'll get some bananas.'

(174) Me nzó **â**-n-yé.
1SG.PRO 9.house FUT-1SG.SM-go
'I'll go home.'

In (173) when the subject is in class 1, we see that the subject marker shifts from *â-* to *kâ-*, which I will return to discuss in chapter 4 and 5. In causal speech, when the subject is 1SG/2SG as in (174), the STM *â-* can be optional and the speakers say that this vowel prefix can be just "swallowed".

2.4.2.3 Far future tense

The far future tense in Kukuya usually encodes events which will take place at least some days later or in the far future, it is not compatible with the time expressions such as "today" or "tomorrow". To mark this tense, an invariant auxiliary **lí** is placed before the verb, for some Kukuya speakers this auxiliary is pronounced as **lía.** The tone pattern of the far future tense on the verb is the same as that in the near future, which consists of the grammatical L tone on the STM and the H tone on the FV of the verb and the following prefix. See the examples in (175) and (176).

(175) Bhií lí **lii**-tsú-**á** **má**a-nzó.
1PL.PRO FUT 1PL.SM-build-FV 6-house
'We will build some houses.'

(176) Bó lí **báa**-fúúm-á **bí**-ko nziimi.
2.PRO FUT 2SM.FUT-buy-FV 8-clothes much
'They will buy many clothes.'

2.4.2.4 Recent past tense

The recent past tense in Kukuya usually encodes events which just took place several hours ago on the same day, or on the previous day. The tone

pattern of the recent past tense on the verb phrase is shown in Table 2.28. Some examples are given in (177)-(179).

Subject-tense prefix		FV+Prefix
SM	tense tone	grammatical tone
1st and 2nd person: ~~L~~ 3rd person: H	H	L

Table 2.29: The tone pattern of the recent past tense

(177) Bhií **líí**-fúum-**i** **ma**-ko.
1PL.PRO 1PL.SM.PST-buy-PST 6-banana
'We bought some bananas.'

(178) Me ló **á**-n-ká-i **ba**-ntsúú.
1SG.PRO today PST-1SG.SM-grill-PST 2-chicken
'Today I just grilled some chicken.'

(179) Bó **báá**-fúum-**i** **ma**-ko.
2.PRO 2SM.PST-buy-PST 6-banana
'They bought some bananas.'

In the above examples we find that the the grammatical H tone of recent past tense on the STM may have deleted and replaced the L tone of the 1st/2nd person subject markers, so the STM in (177) and (178) are realised as H rather than LH. In (179) the class 2 STM of recent past tense consists of a H subject marker and a grammatical H tone on the lengthened vowel, and is realised as a long prefix with H tone. In all these examples, the FV on the verb and the following nominal prefix surface as L, which may be due to a floating grammatical L tone that marks the past tense.

In the recent past tense, an optional auxiliary *âli* can be used and is often realised as **li** when contracted with the preceding subject, as shown

in (180). The presence of this auxiliary does not affect the tone pattern on the verb phrase. The speakers consider that there is no difference on the degree of past time reference whether there is the auxiliary or not, while the presence of the auxiliary may add some emphasis on the past tense. I leave the function of this auxiliary for further research.

(180) Bóó li báá-fúum-i ma-keé.
2.PRO PST 2SM.PST-buy-PST 6-tobacco
'They just bought some tobacco.'

2.4.2.5 Remote past tense

The remote past tense encodes the events that happened as least some days ago or very far in the past. This tense requires the presence of an auxiliary **âli**, and the grammatical tone on the STM is L, which is different from the grammatical H tone in the recent past tense. The tone pattern of remote past tense is schematised in Table 2.29, and some examples are given in (181) and (182).

In (181) the STM prefix of 1PL is realised as *lii-* which consists of the L subject marker and the grammatical L tone; while in (182) the STM for a class 2 subject consists of the H subject marker and the grammatical L tone, which is realised as HL. In both examples the FV on the verb and the following nominal prefix surface as L.

Subject-tense prefix		FV+Prefix
SM	grammatical tone	grammatical tone
1st and 2nd person: L 3rd person: H	L	L

Table 2.30: The tone pattern of the remote past tense

(181) Bhií **âli lii**-fúum-i ma-ko.
1PL.PRO PST 1PL.PST-buy-PST 6-banana
'We had bought some bananas.'

(182) Bó **âli báa**-fúum-i ma-keé
2.PRO PST 2SM.PST-buy-PST 6-banana
'They had bought some tobacco.'

2.4.2.6 Sequence of actions

To express a sequence of actions, a dependent tense marker is attested on the dependent verb, for 1st and 2nd SG subjects, this dependent marker is *ki-*, for other subjects this dependent marker appears as *kâ-*. Two examples are given in (183) and (184).

(183) Me **ki**-n-ténem-e, n-dá-a bi-ko.
1SG.PRO DEP-1SG.SM-stand.up-FV 1SG.SM-put.on-FV 8-clothes
'Having stood up, I put on the clothes.'

(184) Ndé **ká**-ya nzó, ndé télek-i bvi-kídzá.
1.PRO 1SM.DEP-come 9.house 1.PRO prepare- 8-food
'Having returned home, s/he prepared the food.'

2.4.2.7 Imperative and subjunctive

An imperative sentence in Kukuya is usually marked by using a bare verb form without subject marking, and the verb does not show metatony effect, which may indicate that there is a verb-final grammatical L tone marking the imperative mood, as shown in (185).

(185) a. Kúr-a ki-dzulibi!
close-IMP 7-door
'Close the door!'

b. Fúum-a ma-li!
buy-IMP 6-wine
'Buy the wine!'

In hortative imperative sentences which express a command to a 3rd person, as shown in (186), we see that for a singular subject it takes the subject marker *ká-* on the verb, while for a plural subject the class 2 SM *bá-* is used. In both cases there is no overt subject, and there is a verb-final grammatical L tone blocking the metatony.

(186) a. Ká-kúr-a ki-dzulibi!
1SM.IMP-close-IMP 7-door
'(Let) him close the door!'

b. Bá-fúum-a ma-li!
2SM.IMP-buy-IMP 6-wine
'(Let) them buy the wine!'

The subjunctive mood is encoded by modifying the FV of the verb from the default **-a** to **-i**, which is formally identical to a past tense marking. Two examples are shown in (187) and (188).

(187) Me n-dzií ndé yen**í** Mpúru.
1SG.PRO 1SG.SM-like 1.PRO go.SBJV 9.Europe
'I want that he goes to Europe.'

(188) Me ka-n-kukí mu ki-yé ŋa-kítĭ we kí-na
1SG.PRO NEG-1SG.SM-can 18.LOC INF-go 16-COMP 2SG.PRO 7-period
ka-á-kaal-**í** ndáka aa me ni.
NEG-2SG.SM-answer-SBJV 9.question 9.CONN 1SG.PRO NEG
'I cannot go if you don't answer my question now.'

To summarise, in this section I have shown how the verb complex is structured in Kukuya and what sorts of verbal affixes can occur on it. I also presented how different tenses, aspects and mood are expressed. Next I discuss some syntactic issues in this language.

2.5 Clause structure

In the final section of the grammar sketch, I present some syntactic issues in Kukuya. Since the canonical word order and deviation from it, which is influenced by information structure, are discussed in detail in chapter 3, and the syntax of relative constructions is analysed in chapter 5, I don't use much space to discuss them in this section but just give some brief description. I first introduce the forms and functions of different types of complementisers in Kukuya. Then I provide a description on the functions of various types of relative constructions and adverbial clauses. At the end of the section I shed some light on the non-verbal predication.

2.5.1 Complementisers

2.5.1.1 *Say*-complementiser

In this subsection, I introduce the *say*-complementiser that heads an embedded declarative complement clause. In a large number of Bantu languages, there is a type of complementiser which is diachronically derived from Proto-Bantu ***tì**, which in many languages has evolved into an element meaning "say" as well as a complementiser (Meeussen, 1967; Güldemann, 2002, 2008; Gluckman 2023). In some sources that document Bantu complementisers, this *say*-complementiser is mentioned as also related to "evidentiality'' (Botne 1995, 2020; Devos and Bostoen 2012).

In Kukuya, an embedded complement clause that is selected by the perceptive verbs such as "think", "see", "say" and "know" is commonly headed by a complementiser-like element, which at first glance seems to agree with the matrix subject in person and number. The forms of this agreeing complementiser are summarised in Table 2.30.

From the table we see that the agreement pattern of this complementiser is relatively exceptional, since it does not show obvious correlations with the subject agreement or adnominal concord prefixes. The forms of these

Person	singular	plural
1st	píri	píri
2nd	wurí	wurí
3rd	ndíri	bóri

Table 2.31: The forms of the complementiser *-ri*

complementisers seem to be derived from the contraction of person pronouns and an element *-rí*. for example *ndíri* is derived from "*ndé+rí*" and *wurí* from "*we+rí*", which still needs further research.

Some straightforward examples are shown in (189)-(192). In these examples, the complementiser agrees with the matrix subject in person and number.

(189) Ndé kâ-tsuom-ó **ndíri** mbuká taará á-fúum-i
1.PRO 1SM.IMPF-think-FV 1.COMP 9.bed 1.father 1SM.PST-buy-PST
ku dzándu.
17.LOC 5.market
'S/He thinks that the bed was bought by father in the market.'

(190) Mu-kiliŋomo ka-bir-á, baarí ba-bá-li ku
3-drum 3SM.DEP-sound 2.people 2REL-2SM-COP 17.LOC
ntáli bá-yuk-á mu-kiliŋomo báá-yáab-i
9.other.place 2SM-hear-FV 3-drum 2SM.PST-know-PST
bóri mpfúúmú wǔ-yi-lúa á-maá-kwâ.
2.COMP 1.chief 1REL-IMPF-sick 1SM-PERF-die
'The drum sounds, people who are in far places hear it and know that the chief who was ill has died.'

(191) Nzaamí â-lak-í **ndíri** li-bák-á kí-lóko,
1.God 1SM.RPST-say-PST 1.COMP 1PL.SM-get-FV 7-thing
li-káb-í baa-mó.
1PL.SM-share-SBJV 2-other
'God said (if) we get something we share with others.'

(192) Me n-dzwî li-bakí píri téme ku
1SG.PRO 1SG.SM-kill.PST 5-connection 1SG.COMP 5.hoe 17.LOC
kíí taará á-m-fu-í.
7.CONN 1.father PST-1SG.SM-put-PST
'I forgot that I put the hoe in father's place.'

This complementiser can never show class agreement. In example (193) where the matrix subject is in class 4, the complementiser takes the form *bóri*, which shows that it only reflect the number and person feature of the matrix subject.

(193) Mi-fémé mí-kâ-tsuom-ó **bóri** me ŋé
4-pig 4SM-IMPF-think-FV 2.COMP 1SG.PRO 4.PRO
â-n-siiba.
FUT-1SG.SM-attack
'The pigs think that I will attack them.'

When I asked the speakers about the meaning of this complementiser, they clearly said that it means "to say", and in many cases it can just replace the verb *ki-lák* 'to say', as shown in (194). However, its inflectional pattern is very different from a common verb; it can also co-occur with the verb 'to say', as shown in (191) above; but it cannot be modified by a manner adverb as in (195). Therefore I suppose that it has been grammaticalised and functions as a complementiser. Prosodically, there is often a clear intonation break after this complementiser.

(194) Me píri a ndé.
1SG.PRO 1SG.COMP PREP 1.PRO
'I said to him.'

(195) Ndé ndíri tswáatswáa.
1.PRO 1.COMP quickly
'S/He said 'be quickly'!' (*S/He spoke quickly.)

Interestingly, in many contexts this complementiser does not necessarily agree with the matrix subject, but it always agrees with the perspectival source of the embedded event, namely the logophoric center. In (196) and (197) the complementisers apparently do not agree with the matrix subject. The matrix verb in (196) is 'to believe' and the source of information is from the addressee, so the complementiser takes the 2SG form, which may literally means 'I don't believe that (you say)'; while in (197) the verb is 'to hear' and the source of the news is from some other people, so the complementiser takes the 3PL form, which has the reading of 'I heard that (they say)'. I suppose that the complementiser here agrees with a covert operator that is linked to the perspectival source of the embedded event. I leave the more elaborated analysis on the agreement patterns of these *say*-complementisers and selectional properties of the matrix verb for future research.

(196) Me ka-kâ-n-kiik-a **wu-rí** ba-lóbi ntsúi
1SG.PRO NEG-IMPF-1SG.SM-believe-FV 2SG.COMP 2-fisherman 1.fish
wúna ngúumo báá-lóob-i ni.
only 1.one 2SM.PST-fish-PST NEG
'I don't believe that the fishermen caught only one fish.'

(197) We á-yúk-i **bóri** mbuurú mu báa kuní
2SG.PRO PST-hear-PST 2.COMP 1.person 18.LOC 9.fire 17-which
káá-kwî?
1SM.PST-die.PST
'Where (the place of hearing) did you hear that the man died of fire?'

2.5.1.2 Embedded questions

When the embedded clause is a yes-no question, it is introduced by a complementiser *káli* 'if, whether', as shown in (198) and (199). Interestingly, in (199) we see that the complementiser *ndíri* and *káli* can co-occur, which is reminiscent of the similar 'if-that' co-occurrence in some Germanic languages, despite that the order of the two complementisers is just the reverse of that in Kukuya here. The shape of this complementiser *káli* is also identical to the conditional marker (see section 2.5.2.3 below).

(198) Maamá áa-fúul-i me **káli** me n-dzií ki-yé
1.mother 1SM.PST-ask-PST 1SG.PRO if 1SG.PRO 1SG.SM-like INF-go
tála bi-dziladzíli yǎ ndé.
look 8-film with 1.PRO
'Mother asked me if I want to go to watch the film with her.'

(199) Mpfúúmú wu-kâ-n-sál-á me kukí ndé
1.chief 1REL-IMPF-1SG.SM-work-FV 1SG.PRO PREP 1.PRO
áá-fúul-i me **ndíri káli** me maá-m-bák-á
1SM.PST-ask-PST 1SG.PRO 1.COMP if 1SG.PRO PERF-1SG.SM-get-FV
mú-pára.
3-money
'My patron whom I work for asked me if I have received the money.'

When the embedded clause is a *wh*-question, the interrogative word can either be placed in the immediate-before-verb position, as shown in (200) and (201); or what is embedded can be a relative clause that is headed by an interrogative element, as in example (202).

(200) Me ka-n-yáab-i bó ka **munkí** báa-tó ni.
1SG.PRO NEG-1SG-know-PST 2.PRO EMP when 2SM.FUT-arrive NEG
'I did not know when they would arrive.'

(201) Ndé ká-tsuom-ó ndíri **kí-má** kíí-wéén-i ku
1.PRO 1SM.IMPF-think-FV 1.COMP 7-what 7SM.PST-lack-PST 17.LOC
ndé.
1.PRO
'He thinks about what he lacked.'

(202) Me ka-n-yáabi **ku-ní** ku-m-báka me
1SG.PRO NEG-1SG-know-PST 17-which 17REL-1SG.SM-get-FV 1SG.PRO
ma-dzá ni.
6-water NEG
'I did not know (the place) where I could get water.'

2.5.2 Relative constructions

In this subsection I provide a brief description on the forms and functions of relative constructions in Kukuya. I first introduce the structure of subject and non-subject relatives, then I present diverse functions of relative constructions for conditional, temporal and reason expressions. Since the agreement pattern of relatives will be analysed from a syntactic perspective in chapter 5 (section 5.3), here I don't discuss it in detail.

2.5.2.1 Subject and non-subject relatives

The verb in Kukuya relative constructions consists of a relative marker which agrees with the relativised NP in noun class, and a subject marker which can also agree with the subject, but depending on the relative position of the subject to the verb. The agreeing relative marker always takes the same shape as the proximal demonstratives (see section 2.3.2 and Table 2.25) and bears a L tone, while the subject marker always has a H tone. Some examples on the subject and non-subject relative clauses (in brackets) are given in (203)-(206).

(203) Amenda yă [**ko** líí ndé **li-lí**-maá-bol-ó].
1.Amenda with 5.banana 5.CONN 1.PRO 5REL-5SM-PERF-rot-FV
'Amenda has her banana that has rotten.'

(204) [Mu-kái **wŭ**-kwî mu ntsá ma-dzá] nkélé aa
1-woman 1REL-die.PST 18.LOC inside 6-water 1.sister 1.CONN
me.
1SG.PRO
'The woman who died in the river is my sister.'

(205) [Mi-féme mi-**kíí**-fúúm-í **mú-kái**] míí-bár-i.
4-pig 4REL-7SM.PST-buy-PST 1-woman 4SM.PST-escape-PST
'The pigs that the woman bought escaped.'

(206) Mbuká yi-**kíí**-sweek-í **mú-kái** ntséke ŋjíibi
9.place 9REL-7SM.PST-hide-PST 1.woman 9.product 1.thief
áá-swoolí (yó).
1SM.PST-find-PST 9.PRO
'The place where the woman hid food was found by the thief.'

From these examples, we see that in the subject relative (203), the relativised subject NP is preverbal, being indexed both by a relative marker and a subject marker. When the relativised subject is in class 1, as in (204), the class 1 SM is usually suppressed thus the relative marker bearing a rising tone. In the object relative (205) and adjunct relative (206), the relativised NPs agree with the relative pronouns, while the subjects are placed in a postverbal position and do not show canonical subject agreement, but a class 7 SM *kí-* appears on the verb. I introduce the structure of Kukuya non-subject relatives a bit more here.

In a Kukuya non-subject relative, the subject is always placed postverbally but can never be preverbal. The postverbal subject does not always show agreement on the verb, but the shape of SM varies according to the type of the subject. When the postverbal subject is the 1st and 2nd person

pronouns, the SM appears just as the agreeing subject markers (see Table 2.26 above on the shape of SMs), as shown in (207) and (208).

(207) Yă nkúmá ngámo yi-má-**n**-tá **me**.
with 9.story 9.one 9REL-AUX-1SG.SM-tell 1SG.PRO
'There is a story that I will tell.'

(208) Baa-mvá ba-**líí**-yií **bé** ná nkunkólo
2-dog 2REL-2PL.SM.PST-bring.PST 2PL.PRO every 9.evening
bá-kâ-bík-a.
2SM-IMPF-bark-FV
'The dogs that you(pl.) brought bark every evening.'

When the postverbal subject is a lexical DP or class pronoun, the SM slot can only be filled by a class 7 default subject marker *-kí-* but cannot show noun class agreement with the subject, as shown in (209a) and (209b).

(209) a. Ki-pfúo ki-kíí/*báá-télék-í bá-káli báa-nzulí
7-bread 7REL-7/*2SM.PST-prepare-PST 2-wife 2-cat
báá-dzí.
2SM.PST-eat.PST
'The bread that wives prepared was eaten by the cats.'

b. Bviila bvi-**kíí**/***míí**-dz-í ŋ**é**
8.food 8REL-7/*4SM.PST-eat-PST 4.PRO
'the food that they (the pigs) ate'

An exceptional case is when the postverbal subject is the class 1/2 pronouns *ndé* or *bó*, which can trigger either the default SM *kí-* or real subject agreement, as illustrated in (210). I will discuss these differential SM strategies in non-subject relatives further in chapter 5.

(210) a. Ntaba wu-**káá**/**kíí**-lélék-í **ndé** mu mbárá mú-tí
1.goat 1REL-1/7SM-tie-PST 1.PRO 18.LOC against 3-tree
á-maá-kol-o.
1SM-PERF-be.weak-FV
'The goat that s/he tied against the tree has become weak.'

b. bi-ko bi-**báa**/**kíi**-lí **báa**/**kíi**-ték-í **bó**
8-clothes 8REL-2/7SM.RPST-COP 2/7SM.RPST-sell-PST 2.PRO
'the clothes which they had sold'

Another co-referential relative pronoun may also follow the postverbal subject, but it is not obligatory, as the class 9 REL *yi* shown in (211). This clause-final use of the relativiser is also reported in Nsong (B85d, Koni Muluwa and Bostoen 2019).

(211) Mfúúlá yi-kâ-n-yé me **yi** báa-sinwá
9.road 9REL-IMPF-1SG.SM-go 1SG.PRO 9.REL 2-Chinese
báá-sî (yó).
2SM.PST-do.PST 9.PRO
'The road on which I am walking was built by the Chinese.'

A summarising table on the shape of SMs in Kukuya non-subject relatives is given in Table 2.32 below.

SM	1st	2nd	class 1/2 pronouns	others
SG	-N-	-Ø-	-ka-/-ki-	-ki-
PL	-li-	-li-	-ba-/-ki-	

Table 2.32: Subject marking in Kukuya non-subject relatives

In some cases the thematic relation between the extracted element and the subject can be rather complicated. In examples (212) and (213), the relativised NPs 'girl' and 'person' do not seem to be arguments of the verb 'to die' and 'to go away', but rather the experiencer of the whole event. In (214) the

head NP 'reason' is not an argument of the verb 'to cry', but some implicit thematic relations may be involved.

(212) [Mwáana wu-mu-kái wu-kíí-kwí ngúku]
1.child 1REL-1AGR-female 1REL-7SM.PST-die.PST 1.mother
á-yika kí-lílá kâ-líl-a.
1SM-IMPF INF-cry 1SM.IMPF-cry-FV
'The girl whose mother died is crying.'

(213) [Mbuurú wu-kíí-yení mu-káli yǎ baraka
1.person 1REL-7SM.PST-go.away.PST 1-wife with 1.man
mu-kimá] mí-kíi kâ-ló ná tsúku.
1-other 4-curse 1SM.IMPF-curse every 5.day
'The person whose wife went away with another man curses everyday.'

(214) [Ki-sáli ki-káá-líl-í ndé] ka-kí-li tsítsie ni.
7-reason 7REL-1SM.PST-cry-PST 1.PRO NEG-7SM-be clear NEG
'The reason why s/he cried is not clear.'

In a non-subject relative that involves more than two arguments, the subject is commonly placed right-adjacent to the verb, as shown in (215) and (216).

(215) Mwáana wu-mu-balaka wu-kíí-pfur-í **báa-ndúku**
1.child 1REL-1AGR-male 1REL-7SM.PST-cheat-PST 2-friend
taará á-dzií ki-yé bíta.
1.father 1SM-like INF-go revenge
'The boy whose father was cheated by friends wants to revenge.'

(216) Mu-kái wu-kíí-pí-í **miilí** mbaá kâ-dzalak-á
1-woman 1REL-7SM.PST-catch-PST 4.leg 9.fire 1SM.IMPF-walk-FV
yǎ mpúru.
with 9.force
'The woman whose legs were burnt by fire walks with difficulties.'

The relative marker is not always attached to an inflected verb, but can also be followed by a noun phrase to modify the head NP. In (217) the relative marker is followed by a noun phrase *míaka mi-lilá* 'long arms' to express 'long sleeved clothes'. The same fact is observed in (218), in which the intended meaning for *wŭ ngambú* may be 'the one who is the elder twin' and a copula seems to be elided between the relative marker and the noun phrase. The relative part in (219) has a non-restrictive reading, and we also see that the relative marker is followed directly by a noun phrase.

(217) Me n-lá-i ki-kó ki-kí-níni **ki-kí**
1SG.PRO 1SG.SM-wear-PST 7-clothes 7REL-7AGR-big 7REL-7AGR
míaka mi-lilá bu-kítí bi-mbú bí-níak-a ki-tsá
4.hand 4AGR-long 14-COMP 8-mosquito 8SM-abandon-FV INF-bite
me.
1SG.PRO
'I wore a big coat with long sleeves in order that the mosquitoes do not bite me.'

(218) Yă mpiiní ku me mu ki-yáaba pirí **bă**
with 9.force 17.LOC 1SG.PRO 18.LOC INF-know 1SG.COMP 2REL
báa-mbú **wŭ** ngambú **wŭ** ngampíka.
2-twin 1REL 1.elder.twin 1REL 1.younger.twin
'It is difficult for me to distinguish which is the elder twin and which is the younger.'

(219) ndúku aa me, **wŭ** mwáana aa mvá
1.friend 1.CONN 1SG.PRO 1REL 1.child 1.CONN 1.dog
'my friend, the puppy'

2.5.2.2 Complementiser *-kítĭ*

Relative constructions can also be expressed via a set of complementisers with the root *-kítĭ* that always agree with the head NP. The origin of this complementiser is not clear to me. We may notice that the root *-kítĭ* has

a HLH tone pattern that does not fit into the five tone melodies of the language, which may suggest that its *-kí-* part was possibly a prefix and *-tǐ* was the stem in some earlier stage.

This complementiser is used in both subject and non-subject relatives, as shown in (220)-(222). We see that in these examples the complementiser *-kítǐ* always agrees with the relativised NP in noun class. Since this relative marker is used independently and is not attached to the verb complex, in the non-subject relatives (221) and (222) the use of *-kítǐ* does not require inversion of the subject.

(220) Mwáana **wu-kítǐ** ba-búri ka-bá-dzií ndé ni
1.child 1-COMP 2-parent NEG-2SM-like 1.PRO NEG
áá-mar-í ŋa nzó.
1SM.PST-leave-PST 16.LOC 9.house
'The boy who is not liked by the parents left home.'

(221) Me n-sweék-í lóoro ŋa mbúka **yi-kítǐ**
1SG.PRO 1SG.SM-hide-PST 5.gold 16.LOC 9.place 9-COMP
wǔ-yáab-a yó wúna me-nkúlu.
1REL-know-FV 9.PRO only 1SG-oneself
'I hid the gold in a place that the one who knew it is only I myself.'

(222) Ya bí-na **bi-kítǐ** me ka-n-li ya
with 8-period 8-COMP 1SG.PRO NEG-1SG.SM-be with
baá-n-kab-a bó ki-sáábí kíí me ni.
2REL-1SG.SM-share-FV 2.PRO 7-happiness 7.CONN 1SG.PRO NEG
'There are some moments when I do not have the ones with whom I share my happiness.'

The *-kítǐ* is commonly seen in the negation of relative clauses. Since the negative prefix *ka-* can never appear on a relative verb, when expressing negation in a relative clause, the complementiser *-kítǐ* is used, which is followed by a non-relative verb form that allows the use of the negative prefix *ka-*, as shown in examples (223)-(226).

(223) Mbuurú **wu-kítĭ** ka-ká-fur-í mpákí ni
1.person 1-COMP NEG-1SM.PST-pay-PST 9.tax NEG
áá-dzáam-i.
1SM.PST-hide-PST
'The person who did not pay the tax hid himself.'

(224) Bhií ka-líí-wol-í baarí **ba-kítĭ**
1PL.PRO NEG-1PL,SM-take-PST 2.people 2-COMP
ka-bá-yáab-i ki-líra ni.
NEG-2SM-know-SBJV INF-read NEG
'We do not employ people who cannot read.'

(225) **Ki-kítĭ** we ka-á-dzií ki-múna ni kí-ma?
7-COMP 2SG.PRO NEG-PST-like INF-see NEG 7-what
'What didn't you see?'

(226) Ma-dzá **ma-kítĭ** ka-má-li má-bvé ni
6-water 6-COMP NEG-6SM-be 6AGR-good NEG
báá-yiir-i (mó).
2SM.PST-overthrow-PST 6.PRO
'The water which is not clean was overthrown.'

2.5.2.3 Adverbial clauses

Subordinate adverbial clauses in Kukuya are generally relative clauses and frequently involve the use of class 16 and 17 locative markers. Temporal clauses are usually expressed by using a class 16 relative prefix which does not agree with an overt NP. Two examples are shown in (227) and (228).

(227) **ŋa**-kíí-kín-á bá-kái, me
16REL-7SM.PST-dance-FV 2-woman 1SG.PRO
wu-kâ-n-yím-a.
1REL-IMPF-1SG.SM-sing-FV
'While the women are dancing, I am singing.'

(228) **ŋa**-n-som-í me nzó, maamá kí-ni
16REL-1SG.SM-enter-PST 1SG.PRO 9.house 1.mother 7-period
ka-ká-yi-bvúruk-a ni.
NEG-1SM-IMPF-return-FV NEG
'When I entered home, mother did not come back yet.'

To express 'until', the preposition *tíí* is used, which is followed by a relative construction with the class 17 relative prefix *ku-*, as shown in examples (229) and (230).

(229) Me n-kalá ŋa **tíí** **ku**-m-bak-á me
1SG.PRO 1SG.SM-stay 16.PRO until 17REL-1SG.SM-get-FV 1SG.PRO
wŭ-fur-á me tikí.
1REL-pay-FV 1SG.PRO 5.ticket
'I stay here until I have someone pay the ticket for me.'

(230) Mwáana wúna mu kâ-líla **tíí** **ku**-kí-yi-bvúruk-a
1.child only 18.LOC IMPF-cry until 17REL-7SM-IMPF-return-FV
ngúku.
1.mother
'The child remained crying until mother returned.'

The conditional meaning can be expressed by using the complementiser *ŋa-kítĭ* which also takes the class 16 prefix, as illustrated in (231) and (232).

(231) **ŋa-kítĭ** me ka-man-í bi-lokó bvi-kí-sá ló
16-COMP 1SG.PRO NEG-1SG.finish-SBJV 8-thing 8REL-7SM-do today
bu ni, bu-kía mpfúúmú aa me
14.PRO NEG 14-tomorrow 1.chief 1.CONN 1SG.PRO
â-béer-e me.
1SM.FUT-beat-FV 1SG.PRO
'If I do not finish the work today, my patron will punish me tomorrow.'

(232) Me ka-kâ-n-soom-ó nzó **ŋa-kítĭ** mu-káli
1SG.PRO NEG-IMPF-1SG.SM-enter-FV 9.house 16-COMP 1-woman
aa me ka-ká-yií mu ki-búon-o ni.
1.CONN 1SG.PRO NEG-1SM-come 18.LOC INF-apologize NEG
'I do not return home if my wife does not come to apologize.'

A conditional clause can also be expressed by using a particle *káli* which is formally identical to the complementiser for embedded yes-no questions, as shown in (233a). Another strategy is to use a L tone prefix *ki-* on the verb, whose primary use may be to mark clause dependency, see (233b). The two strategies expressing conditional meaning cannot be applied at the same time.

(233) a. **Káli** me n-yáaba pirí me bú-kíá
COND 1SG.PRO 1SG.SM-know-FV 1SG.COMP 1SG.PRO 14-tomorrow
á-ŋ-kwá, me n-ték-i bi-lóko bvíí
FUT-1SG.SM-die 1SG.PRO 1SG.SM-sell-SBJV 8-thing 8.CONN
me bvheî ló.
1SG.PRO 8.all today
'If I know that I will die tomorrow, I would spend all my money today.'

b. Me **ki**-n-yáaba pirí me bú-kíá
1SG.PRO DEP-1SG.SM-know-FV 1SG.COMP 1SG.PRO 14-tomorrow
â-ŋ-kwá, me n-ték-i bi-lóko bvíí
FUT-1SG.SM-die 1SG.PRO 1SG.SM-sell-SBJV 8-thing 8.CONN
me bvheî ló.
1SG.PRO 8.all today
'If I know that I will die tomorrow, I would spend all my money today.'

To express intention or purpose in Kukuya, the complementiser *-kítĭ* is used to introduce the aim of the action. It can take the class 14 or class 17 prefixes, as shown in (234) and (235).

(234) Me mpólo kâ-n-sak-á **bu-kítĭ** me
1SG.PRO 9.chance IMPF-1SG.SM-search-FV 14-COMP 1SG.PRO
m-pál-a.
1SG.SM-go.out-FV
'I'm looking for a chance for me to go out.'

(235) Mu-kái áá-lúok-i kúkó **ku-kítĭ** baari bhoî
1-woman 1SM.PST-shout-PST loudly 17-COMP 2.people 2.all
bá-yúk-á.
2SM-hear=FV
'The woman shouted loudly in order that all the people hear.'

The expression of reason is usually introduced by the class 18 preposition *mu*. It can be followed simply by a nominal phrase as the causer (see section 3.1.1 on the use of locative markers), or by a relative clause explaining the reason, which takes the class 14 relative prefix or the complementiser *bu-kítĭ*, as shown in (236)-(238).

(236) Maamá bu ká-tsiim-á nziimí **mu** **bu-kítĭ** ndé
1.mother 14.PRO 1SM.IMPF-regret-FV much 18.LOC 14-COMP 1.PRO
li á-wî ngálibakí ɲamá wu-mu-bi.
PST 1SM-give.PST 1.baby 1.meat 1REL-1AGR-bad
'The mother regret much that she gave the baby bad meat.'

(237) Mu-kokó mú-káli áá-tsilik-í mu-tswé **mu**
1-king 1-wife 1SM.PST-cut-PST 3-head 18.LOC
bu-kí-yi-sak-á ndé ki-woló mu-kái mu-kíma.
14REL-7SM-IMPF-search-FV 1.PRO INF-take 1-woman 1-other
'The king was cut the head by his wife because he looked for and married another woman.'

(238) Me yă ngúbalaka wu-kítĭ kâ-wá me mu-para
1SG.PRO with 1.uncle 1-COMP 1SM.IMPF-give 1SG.PRO 3-money
mu **bu**-m-wéén-á mú-káli.
18.LOC 14REL-1SG.SM-lack-FV 1-wife
'I have an uncle who often gives me money because I do not have a wife.'

The concessive meaning is expressed by the particle *se* which means 'though' or 'regardless of'. In (239) the particle is followed by a relative clause that takes the class 14 relative prefix. In (240) the meaning 'regardless of/however' is encoded by a fixed expression *se bálakí bóri* which literally means 'although they say that...'. In (241) 'unless' is expressed by a paraphrased phrase which literally means '(if) badness comes to him'.

(239) **Se** **bu-ká-kwí** ndé, ki-tóli kíí ndé
though 14REL-1SM.PST-die.PST 1.PRO 7-spirit 7.CONN 1.PRO
kíi-kal-á kí-na.
7SM.FUT-stay-FV 7-time
'Although he is dead, his spirit will last forever.'

(240) **Se bá-lak-í bóri** bu-kí-tsuom-ó maamá, me
though 2SM-say-PST 2-COMP 14REL-7SM-think-FV 1.mother 1SG.PRO
ka-n-kukí mu ki-sóó mí-tsúomi míí me ni.
NEG-1SG.SM-can 18.LOC INF-change 4-idea 4.CONN 1SG.PRO NEG
'However (they say that) mother thinks, I cannot change my ideas.'

(241) Ndé lí â-yá, [mu ki-bí kí-yá ndé] ndé
1.PRO FUT 1SM.FUT-come 18.LOC 7-badness 7SM-come 1.PRO 1.PRO
kâ-kalá ya má-lúa.
1SM.IMPF-stay with 6-illness
'He will come, unless he will still be sick.'

2.5.3 Copula and non-verbal predication

The most common strategy for non-verbal predication in Kukuya is to use the copula which generally has the form *-li* and takes the subject agreement prefixes. The copula is usually used to express identification, which includes equation and qualitative specification. Two examples are given in (242) and (243).

(242) Kímá ké kí-**li** mu ntsá nkíe?
7-what 7.PRO 7-COP 18.LOC inside 9.pot
'What is it in the pot?'

(243) Me ka-n-**li** Albert ni.
1SG.PRO NEG-1SG.SM-COP Albert NEG
'I am not Albert.'

Adjectives can also function as predicative and are introduced by the copula. In (244) the adjective *mú-bvé* agrees with the class 1 subject and serves as predicative introduced by the negative copula *ka-ká-li* that also agrees with the subject. While in (245) *mpémbe* has the reading of 'white' but does not take class 6 agreement with the subject, and only the clause-final copula

takes the agreeing prefix. This may be due to the fact that *mpémbe* is not a true adjective thus does not show any agreement.

(244) Mwáana wu-balaka ka-ká-**li** **mú-bvé** ni.
1.child 1-male NEG-1SM-COP 1AGR-good NEG
'The boy is not good-looking.'

(245) ŋjíini máá mwáana wu-mu-kái **mpémbe** má-**li**.
6.teeth 6.CONN 1.child 1-1AGR-female white 6-COP
'The teeth of the girl are white.'

In many cases of non-verbal predication, especially in affirmative sentences, the copula is just omitted. In (246) and (247) the predicative expression is realised by juxtaposing two NPs in which the prefix of the second NP bears a H tone. Example (248) expresses possessive meaning and the possessive phrase *máá biábe* 'of us' is predicative. The pseudo-cleft in (249) is formed by a free relative plus a predicative NP with a H tone prefix, and the copula is omitted. See more examples of cleft constructions in chapter 3 section 3.4.

(246) Ndé **mú**-tsúli.
1.PRO 1-goldsmith
'He is a goldsmith.'

(247) Ki-báka **kí**-báka, bu-bila.nkele **mú**u-nkwáárá.
7-obtain 7-obtain 14-question 3-keeping
'To obtain is to obtain, the question is (how) to keep.'
(Paulian 1975: 194, glossing added by the author)

(248) Ma-sáani ma-báa-níak-i máá biábe.
6-plate 6REL-2SM.PST-abandon-PST 6.CONN 1PL.PRO
'The plates that are abandoned are ours.'

(249) Kǐ-n-dzií me ki-nywâ **má**-dzá maa-mfé.
7REL-1SG.SM-please 1SG.PRO INF-drink 6-water 6-cold
'What I like to drink is cold water.'

In Kukuya, 'to have' is usually expressed by using the preposition *yǎ* in a non-verbal predication, which literally means 'be with', as shown in (250) and (251) whereby the copula is omitted. In (251), 'be happy' is expressed by *ya kí-sáabi* which is literally translated as 'with happiness'.

(250) Mu-tsúli ma-bíele **ya** mú-dzí wu-lilá wu-ŋwa.
1-forge 6-iron with 3-rope 3-long 3-red
'The blacksmith has a long red rope.'

(251) Mwáana wu-bá-wî bu-ká ka ná ndé **ya**
1.child 1REL-2SM-give.PST 14-cassava EMP 1.who 1.PRO with
kí-sáabi?
7-happiness
'The child that who gave cassava to is happy?'

I suppose that that in the examples above the copula is underlyingly present in the structure but is just unpronounced. As in examples (252) and (253), the copula *-li* can appear in negation and relative constructions.

(252) William ka-ká-**li** yǎ ntá nna ni, ndé ntá
William NEG-1SM-COP with 10.melon four NEG 1.PRO 10.melon
tíri ká-**li** yǎ yó.
three 1SM-COP with 10.PRO
'William does not have four melons, he has three melons.'

(253) Ndé ba-kái ba-ká-yááb-í ndé wúna ba-bá-**li**
1.PRO 2-woman 2REL-1SM-know-PST 1.PRO only 2REL-2SM-COP
ŋa ki-yínga.
16.LOC 7-festival
'He only knew the women who were at the festival.'