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1

Copperbelt Bemba:
A sketch grammar

Daisuke Shinagawa

東京外国語大学
アジア・アフリカ言語文化研究所

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Daisuke Shinagawa

Research Institute for Languages and Cultures of Asia and Africa

ILCAA Intensive Language Course 2023 “Bemba” Textbook 1
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Research Institute of Languages and Cultures of Asia and Africa (ILCAA),
Tokyo University of Foreign Studies
3-11-1, Asahi-cho, Fuchu-shi, Tokyo, 183-8534
Japan

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Foreword

This small volume is an outcome of ILCAA's Intensive Language Course (ILC) which was held for three weeks from the 21st of August to the 8th of September 2023. The aim of the course was to provide participants with practical occasions to describe a less-studied language through a linguistic field method. The target of description was a contemporary variety of the Bemba language spoken in the Copperbelt region of Zambia, which is often referred to as Copperbelt Bemba in the linguistic literature and known to be one of the most widely used lingua francas in Zambia.

This book thus covers the basic grammatical components of Copperbelt Bemba which were able to be investigated within the three-week course. The topics included are the noun class system and agreement patterns, basic predicates, pronominal forms, adjectival expressions, tense and aspect forms of verbs, basics of verbal derivation, and morphosyntactic structures of basic relative clauses.

As one of the seven officially recognised regional languages in Zambia, Bemba has a standard variety, which has an orthography established through Bible translation by European missionaries, who also composed classic grammar books in the early to mid 20th century. It is also taught as a subject and used as a medium of instruction in primary education. This 'Standard' Bemba, however, is based on the varieties spoken in the homeland of the Bemba people, which is located in the northeastern part of the country. Copperbelt Bemba (CB), on the other hand, historically split from the 'original' Northern Bemba around the 1920s when a large amount of the population migrated into Copperbelt province, and it has grown as a language of wider communication in the area by gaining a larger speaker population with different linguistic backgrounds. Through this historical process, Copperbelt Bemba has developed interesting linguistic features ranging from phonology to morphology and syntax, some of which may saliently deviate from the Northern Bemba system. While several specific components of CB grammar, especially the interface between phonology, including tone, and morphosyntax, have been robustly studied in the context of contemporary linguistics, this book is probably the first publication of a grammatical sketch of CB that covers a core range of basic components of its morphosyntax and is motivated to be a typologically informed description.

I hereby acknowledge the following people who contributed in one way or another to the process of writing this volume. I would like to offer appreciation to Subila Chilupula, the co-lecturer who took a role as a language consultant, for her efforts throughout the entire process of preparation, teaching, and processing data. I also express my deepest gratitude to our two consultants, Maiwase and Denis, who participated in the research sessions conducted in Kitwe in Copperbelt province in February 2023, for providing various examples and intuitive insights into the grammar of the language, which are invaluable in the process of analysis. All the students were not only enthusiastic about actively participating in the course, but even after the course they willingly committed to the process of writing this grammar sketch as well as of compiling the data material on nominal tone of the language, which is being published to accompany this volume. I hereby acknowledge all of them for their commitment and contribution in various ways: Sakura Ishikawa, Tsubasa Takahashi, Toshio Tôyama, Ryota Ueno, and Ayaka Yamamoto. I am also indebted to Makoto Furumoto, who kindly took the role of an adviser as a specialist of Bantu linguistics, for sharing various insights with us during the course. My sincere thanks also go to the staff members of ILCAA in charge of the language course, namely Etsuko Izumi, Sachiko Tanaka, and Hitomi Yasumoto, among many others including, particularly, Koki Amitani, who served as a teaching assistant of the entire course. Without their support, the course could not have been done successfully. The manuscript has

been carefully proofread by Allison Silver Adelman. I am very grateful for her precise work and insightful suggestions, which greatly enhanced the clarity and precision of the text. Toose Muzungaile, an exchange student from the University of Zambia and an active speaker of this language, was kind enough to check through the accuracy of the phonological description as well as the morphosyntactic well-formedness of all examples cited in this volume. Her last-minute support was very helpful for improving the quality of the description and thus deserves much appreciation. If there nevertheless remain errors and shortcomings, they are of course my own responsibility. Lastly, I would like to express my special thanks to Nancy Kula and Lutz Marten for generously sharing their typological description on the morphosyntactic features of Bemba based on the set of morphosyntactic parameters developed by Guérois et al. (2017).

I hope this small grammar sketch will be recognised as useful referential material on the grammar of Copperbelt Bemba, especially by those who are unfamiliar with the Bantu languages. It is also my hope that this volume will be helpful for readers to have a better understanding of the structural diversity of Bantu languages, which has always attracted generations of Bantuists and motivated their research.

March 2024
The author

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0. Introduction

0.1 Phylogenetic classification

Bemba (ISO 639-3: bem) is a language that belongs to the Bantu language family, consisting of some 500 language varieties spoken in the vast area of Sub-Saharan Africa, which are phylogenetically classified into the Benue-Congo branch of the Volta-Congo group of the Niger-Congo linguistic phylum (Hammarström 2019). In the traditional referential system established by Guthrie (1967–71), and its updated version by Maho (2009), the language is classified into the 'Bemba group' (M40) with the code M42. It is also addressed in the literature (cf. Nurse & Philippson [2003: 170]; Bastin et al. [1999: 219]) that M40 languages are grouped together with the 'Bisa-Lamba' group (M50) and a single language from the adjacent N zone Senga (N21b) to form an immediate branch of genetic affinity, which is labelled 'Sabi' in Hammarström et al. (2023), following the original adaptation of the name by Ahmed (1996).

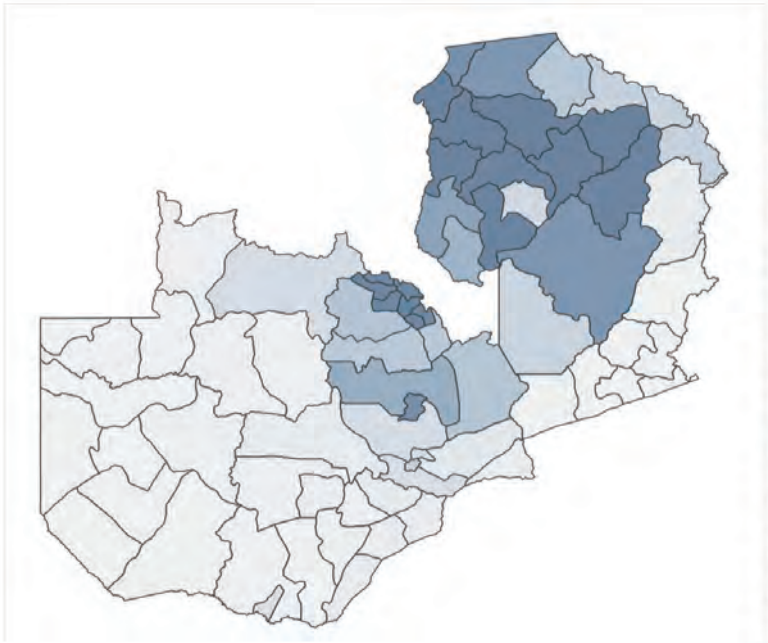
Map 0-1: Geographical area of the Northern Bemba speaking communities
Source: https://www.ethnologue.com/language/bem/ (retrieved on 2023-09-14)

As shown in Map 0-1, the 'homeland' variety of Bemba is spoken in the northeastern part of the present Zambia including the Northern, Luapula, and Muchinga provinces, and the variety spoken in the area is the basis of its standardised variety.

Copperbelt Bemba (abbreviated as CB hereafter) is a variety that sprang from the Northern Bemba when a large population of Bemba speaking people migrated into the Copperbelt region due to the growth of the mining industry, which started around the 1920s. Spitulnik and Kashoki (2001: 81) state that it has become "well established as the lingua franca of the Copperbelt region" by gaining a larger speaker population with different linguistic backgrounds through "extensive urban-urban migration, inter-ethnic marriage, and the high degree of multilingualism in this country". Through this historical process, CB has developed unique linguistic features, some of which may significantly deviate from those in Northern Bemba. It is this variety, spoken contemporarily in the Copperbelt region, that this volume aims to describe.

0.2 Sociolinguistic background

The standardised variety, which is based on the Northern Bemba spoken in the Bemba homeland, is one of seven officially recognised regional languages in Zambia, with the other languages being Kaonde, Lozi, Lunda, Luvale, Nyanja, and Tonga, as prescribed in the Citizenship of Zambia Act.[1] As an official language, it is not only taught as a subject but also used as a medium of instruction in primary education. While the Roman script had been introduced through the process of Bible translation by the missionaries as early as in the late 19th century, it was relatively recently that the currently used orthography was established with the official publication of *Zambian languages: Orthography Approved by the Ministry of Education*, which was published in 1977 (cf. Spitulnik & Kashoki 2001).



Language	# of speakers	% of population
Bemba	3,727,677	28.9%
Tonga	1,585,877	12.3%
Tumbuka	1,445,111	11.2%
Chewa (Nyanj..	1,305,434	10.1%
Lozi	741,755	5.7%
Lunda	520,643	4.0%
Other langua..	464,474	3.6%
Luvale	416,725	3.2%
Lala-Bisa	379,548	2.9%
Nyamwanga	299,337	2.3%
Nsenga	292,814	2.3%
Mambwe-Lun..	276,006	2.1%
Kaonde	189,173	1.5%
Lamba	189,059	1.5%
Kunda	172,360	1.3%
Ila	150,976	1.2%
Ushi (Aushi)	132,887	1.0%
Soli	88,383	0.7%
Mbunda	77,004	0.6%
English	67,818	0.5%
Taabwa	62,831	0.5%
Lenje	56,770	0.4%
Bwile	49,996	0.4%
Ngoni	44,625	0.3%
Simaa	40,963	0.3%
Nkoya	29,116	0.2%

Map 0-2: Geographical plot of density of Bemba speaking population (based on the 2010 census). Source: https://translatorswithoutborders.org/languages-of-zambia-interactive-en (retrieved on 2023-09-14)

In contrast, spreading out from the homeland and expanding its geographical range into the Copperbelt region, CB has developed as a lingua franca exclusively used in the region, especially in urban centres such as Ndola and Kitwe. According to Spitulnik and Kashoki (2001: 81), Bemba, notably its urban variety called 'Town Bemba', had gained this status by the end of the 1940s. Moreover, as a recent survey[2] shows, the sociolinguistic presence of the

[1] The official status of the seven languages is legally prescribed in 'The Citizenship of Zambia Act'. Section 16 (d) in Part IV of the Act, titled 'Persons entitled to be registered as citizens', requires applicants for Zambian citizenship to have "an adequate knowledge of the English language or any language commonly used by the indigenous inhabitants of Zambia", and the seven language are identified as such in Section 17 in Part II of Subsidiary Legislation. The entire document of the act is accessible at: https://www.parliament.gov.zm/sites/default/files/documents/acts/Citizenship%20of%20Zambia%20Act.pdf

[2] The global non-profit organisation called Translators without Borders (TWP) publishes online resources and demographic data on languages in Zambia based on the results of national censuses. For more information, see https://translatorswithoutborders.org/language-data-for-zambia

language seems to be still growing as the lingua franca spoken by the largest population of speakers in Zambia.

0.3 Literature

A large amount of literature on Bemba from a variety of different categories has been published since the early 20th century. The earliest works include classic grammar books written by missionaries, such as Robertson (1904) and Schoeffer (1907). Missionary publications continued throughout the mid and late 20th century, e.g., 1950s through the 60s saw a series of publications of concise or educational grammars by Van Sambeek (1955), Sims (1959), and Hoch (1963), as well as an English–Bemba dictionary by White Fathers (1954/1991). Educational textbooks were also published in the late 20th century, including the Peace Corps' (1995) manual for Special Lessons in Bemba. A brief overview on its linguistic features as well as its historical and sociolinguistic background by Spitulnik and Kashoki (2001) is a useful reference with a selected bibliography. Comprehensive information on the literature of the language to date is available on Glottolog (Hammarström et al. 2023) [https://glottolog.org/resource/languoid/id/bemb1257].

Besides such missionary works and general resources, there is plenty of literature on linguistic analyses of various aspects of Bemba. At least three categories of literature should be mentioned as useful and insightful resources for the description and analysis of the language. The first category is the traditional work of Bantu linguistics. This includes a series of Malcolm Guthrie's work, such as analyses on the tonal structure of the language (Guthrie 1945), and on the vocabulary with tonal and morphological annotations, which was later edited by Michael Mann (Guthrie & Mann 1995), who himself published an outline grammar of the language (Mann 1977).

The second category is the pioneering work on the formal analysis of its morphosyntax based on the generative approach. This includes Givón (1972), which is based on his doctoral thesis (Givón 1969) that focuses on the three key components of the grammar of this language, as well as of the Bantu languages in general, namely the nominal structure, the agreement patterns, and the verbal structure and typology of the verbs. Though it is not from a generativist approach, Hyman's (1995) analysis of the morphosyntactic process known as 'imbrication' should also be included here as it is clearly theoretically, as well as typologically, informed.

The third is a series of studies that follow the second group in terms of their theoretically motivated analyses but that also develop at the interface between phonology including tonology, on the one hand, and the various components of morphosyntax on the other. This direction of study is robustly led by Nancy Kula, e.g., Kula (2002) develops a theoretically driven analysis of phonological processes attested in specific contexts of verbal derivation, while Kula (2017) analyses the inflectional process known as the conjoint/disjoint alternation in relation to the patterns of phonological phrasing. She also addresses and sheds new light on a wide range of issues, including phonological investigation of the segmental system based on phonetic observations (Hamann & Kula 2015), tone and phrasal phonology (Bickmore & Kula 2013; Kula & Bickmore 2015; Kula & Hamann 2017), and verbal morphosyntax (Kula & Marten 2010; Marten & Kula 2012, 2014), among many others. These studies are recommended to readers for further discussion and theoretical treatments of specific topics.

1. Phonology

This chapter introduces some basic features of segmental and suprasegmental phonology of Copperbelt Bemba (CB) mostly based on the phonetic description by Hamann & Kula (2015). Throughout this grammar sketch, examples are given in phonemic description with explicit annotation of the contrast of tone and vowel length. Tonal annotation is based on the surface realisation. Following the usual convention, high tones are marked by an acute accent [v́] and, where necessary, middle and downstepped high tones are marked by [v̄] and [ꜜv́], respectively. Phonetic descriptions are provided where necessary in IPA broad description with [skwe: ˈbɪækɪt͡s]. *Italics* are used to refer to surface realisation forms, while /slashes/ are used to indicate either a single phoneme or descriptions with morphological boundaries, e.g., as in *pákáti* /pa-kati/ ‘in the middle’.

1.1 Consonants

According to Hamann & Kula (2015), the following consonants are identified as distinctive phonemes in the Bemba phonemic inventory. Note, however, that there may be dialectal variations both in terms of the phonetic realisation of each phoneme as well as in the phonemic organisation as a system. Note also that different analyses may yield different configurations of the phonemic system (e.g., ‘cluster’ vs. ‘unit’ analyses for the nasal cluster mentioned in Section 1.1.1.2).

Table 1-1: Inventory of consonant phonemes (based on Hamann & Kula 2015: 62)

		Bilabial	Labial-dental	Alveolar	Palato-Alveolar	Palatal	Velar	Labial-Velar
Obstruents	Plosive	p		t			k	
	Fricative	b [β]	f	s	sh [ʃ]			
	Affricate				c [t͡ʃ]			
Prenasalised obstruents	Plosive	mp mb		nt nd			nk ng [ŋk] [ŋg]	
	Fricative		mf	ns	nsh [nʃ]			
	Affricate				nc nj [nt͡ʃ] [nd͡ʒ]			
Sonorants	Nasal	m		n		ny [ɲ]	ng’ [ŋ]	
	Approximant					y [j]		w
	Lateral			l				

1.1.1 Obstruents

1.1.1.1 Voiceless plosive: /p, t [t~t͡s], k; mp, nt, nk [ŋk]/

CB has three distinctive voiceless stops in terms of place of articulation, i.e., /p, t, k/, all of which can be preceded by a corresponding homorganic nasal, i.e., /mp, nt, nk [ŋk]/. The voiceless alveolar /t/ is usually pronounced with a strong frication before /i/, e.g., *ukútíńtá* [ukút͡síntá] 'to stretch, pull'. The following tables present examples of word forms that contain each phoneme in different morphophonemic environments, namely word-initial, stem-initial, and stem-internal. Relevant information from Guthrie & Mann's (1995) *A Vocabulary of Icibemba*, is also provided where available (indicated by 'G: pp').

Table 1-1-1: /p/

Word-initial	Stem-initial: $\mathbf{C_1}V_1C_2V_2$	Stem-internal: $C_1V_1\mathbf{C_2}V_2$
pákáti /pa-kati/ 'in the middle'	*ámápeya* /a-ma-peya/ 'shoulders' cf. icí|peá 'shoulder-blade' (G: 69)	*úkúkapa* /u-ku-kapa/ 'to blink' cf. -káp- (íliinsó) 'wink' (G: 33)
pá⁺mó /pa-mo/ 'together'	*úlúpala* /u-lu-pala/ 'bald head' cf. úmu|mpála 'head shaved bald' (G: 66)	*ukúpáápá* /u-ku-paap-a/ 'to give birth to' cf. -paap- (G: 65)

Table 1-1-2: /t/

Word-initial	Stem-initial: $\mathbf{C_1}V_1C_2V_2$	Stem-internal: $C_1V_1\mathbf{C_2}V_2$
tombolíílo /tomboliilo/ 'tadpole' cf. tombo-líílo (G: 106)	*kaatombolíílo* /ka-tomboliilo/ 'small tadpole'	*ukúkótá* /u-ku-kot-a/ 'to become aged' cf. -kot- (G: 38)
túúkóndo /tu-kondo/ 'fingers' [pred. form] cf. ící|kóndó 'great toe' (G: 36)	*úkútapa* /u-ku-tapa/ 'to fetch' cf. -táp- 'draw (water)' (G: 102)	*úkúpita* /u-ku-pit-a/ 'to pass' cf. -pít- 'go through' (G: 73)

Table 1-1-3: /k/

Word-initial	Stem-initial: $\mathbf{C_1}V_1C_2V_2$	Stem-internal: $C_1V_1\mathbf{C_2}V_2$
kafúńdísha /ka-fundisha/ 'teacher' cf. ka|fúndishá	*ákákonkote* /a-ka-konkote/ 'a praying mantis'	*úkútuka* /u-ku-tuk-a/ 'to insult' cf. -túk- 'abuse' (G: 108)

kólwé /ka-olwe/ 'monkey' cf. kolwé (G: 35)	*úkúkanika* /u-ku-kanik-a/ 'to spread to dry'	*úkúpika* /u-ku-pika/ 'to knock' cf.-pík- 'shoot with (bow)' (G: 71)

Table 1-1-4: /mp/

Stem-internal: $C_1V_1\mathbf{C_2}V_2$
ukúsámpá /u-ku-samp-a/ 'to scuffle/grab' cf. -samp- 'scramble for (things)' (G: 82)
ukútámpá /u-ku-tamp-a/ 'to start; begin as week' cf. -tamp- (G: 100)

Table 1-1-5: /nt/

Stem-internal: $C_1V_1\mathbf{C_2}V_2$
ukúsúntá /u-ku-sunt-a/ 'to limp' cf. -sunt- (G: 98)
ukútíntá /u-ku-tinta/ 'to stretch, pull' cf. -tint- 'hold (rope) tight by pulling' (G: 105)

Table 1-1-6: /nk/

Stem-internal: $C_1V_1\mathbf{C_2}V_2$
ukúshíńká /u-ku-shink-a/ 'to block'
ukútúńká /u-ku-tunka/ 'to poke' cf. -tunk- 'incite to quarrel' (G: 109)

1.1.1.2 Voiced plosive: /mb, nd, ng [ŋg]/

No voiced stops can stand alone in CB, i.e., voiced stops should always be preceded by a homorganic nasal, suggesting that all voiced stops should be phonemically analysed as a prenasalised consonant, i.e., the nasal-consonant sequence (NC; hereafter /N/ stands for a homorganic non-syllabic nasal as an archiphoneme) can be analysed as a single 'unit' phoneme. On the other hand, NC can also be analysed as a consonant cluster, as CB allows homorganic nasals to be followed by a wide range of obstruents including voiceless stops and fricatives. For more discussion on the 'cluster/compositional' analysis of NC, which is basically followed in the following description, see Kula (1999), and Hamann & Kula (2015). Note also that NC in general does not occur in stem-initial position, as pointed out by Hamann & Kula (2015: 63).[3]

[3] "As complex segments, prenasalized obstruents cannot occur in initial position lexically but may be morphologically derived in this position, with the nasal being a separate morpheme" (Hamann & Kula 2015: 63).

Table 1-1-7: /mb/

Stem-internal: $C_1V_1\mathbf{C_2}V_2$
ukúlámbá /u-ku-lamb-a/ 'to become dirty' cf. -lamb- 'become filthy' (G: 44)
ukúlúmbá /u-ku-lumb-a/ 'to cheer' cf. -lumb- 'praise' (G: 51)

Table 1-1-8: /nd/

Stem-internal: $C_1V_1\mathbf{C_2}V_2$
úkúpinda /u-ku-pind-a/ 'to ask for money back' cf. -pínd- 'sue' (G: 72)
ukúpéńdá /u-ku-pend-a/ 'to count' cf. -pend- (G: 70)

Table 1-1-9: /ng/

Stem-internal: $C_1V_1\mathbf{C_2}V_2$
ukúshíńgá /u-ku-shing-a/ 'to apply'
ukúléńgá /u-ku-leng-a/ 'to cause' cf. -leng- (2) 'make to be' (G: 47)

There are two phonological processes pertaining to the voiced NC that are worth noting. One is about the simplification process of two successive voiced NCs, which is widely recognised under the name of Ganda's law (or Meinhof's law) in Bantu literature. In CB, a voiced NC is reduced to a single N, when followed by another voiced NC, as illustrated in the following examples from Hamann & Kula (2015: 64).

(1) Ganda's law in Bemba (Hamann & Kula 2015: 64)
   a. /ì-ŋ-gòːmbè/ [ìŋòːmbé] ∗[ìŋgòːmbé] 'cow, cattle'
   b. /m-βóːmb-è/ [móːmbè] ∗[mbóːmbè] 'I should work'
   c. /n-láːnd-è/ [náːndè] ∗[ndáːndè] 'I should speak'

Another process that should be noted here is about the production of a voiced NC. As shown in (2), sonorants such as voiced fricatives and approximants are hardened to corresponding voiced stops after /N/.

(2) Post-nasal hardening of sonorants in Bemba (Hamann & Kula 2015: 63)
   /N/+/l/ → [nd] /N-lima/ [ndìmà] 'I cultivate'
   /N/+/b/ (=[β]) → [mb] /N-bila/ [mbìlà] 'I sew'
   /N/+/w/ → [ŋg͡w] /N-wamja/ [ŋg͡wàmjà] 'I clean'
   /N/+/y/ → [nd͡ʒ] /N-ya/ [nd͡ʒ(j)à] 'I go'

Furthermore, /N/ can be 'decomposed' into an NC when followed by a vowel. As illustrated in (3), /N/ becomes /nj/ when followed by a front vowel (i.e., /i/ and /e/) while it becomes /ng/ when followed by a non-front vowel (Hamann & Kula 2015: 63).

(3) Nasal hardening (N → NC/_V) in Bemba (Hamann & Kula 2015: 63)
   /N/+{i, e} → [nd͡ʒ] /N-isula/ [nd͡ʒìsùlà] 'I open'
   /N/+{o, u, a} → [ŋg] /N-ubula/ [ŋgùbùlà] 'I peel'

Note however that this process is not applied to any morpheme boundary, e.g., in general TAM markers do not trigger hardening of SM_{1SG} *N*-, i.e., /N-alii.../ > [naliː...], i.e., the hardening process seems to be selectively applicable to specific types of morphological boundaries.

1.1.1.3 Fricative and affricate: /b [β], f, s, sh [ʃ, ɕ], c [t͡ʃ, t͡ɕ], mf [ɱf], ns, nsh [nʃ, nɕ], nc [nt͡ʃ, nt͡ɕ], nj [nd͡ʒ, nd͡ʑ]/

All fricatives except for bilabial /b/ [β] are voiceless and they can be preceded by a homorganic nasal. While the postalveolar affricate /c/ [t͡ʃ, t͡ɕ] can also be preceded by a homorganic nasal, its voiced counterpart /j/ [d͡ʒ] only appears in post-nasal position. The coronal /sh/, /c/, and /j/ are clearly palatalised as [ɕ], [t͡ɕ], and [ʑ] before /i/ and /y/. In the orthography /c/ is also spelled as 'ch' in proper nouns.

Table 1-1-10: /b/

Word-initial	Stem-initial: $\mathbf{C_1}V_1C_2V_2$	Stem-internal: $C_1V_1\mathbf{C_2}V_2$
baakasukúlu /baa-ka-sukulu/ 'students'	*ukúbílá* /u-ku-bil-a/ 'to sew' cf. -bil- (G: 7)	*úkúloba* /u-ku-lob-a/ 'to fish' cf. -lób- 'fish' (G: 48)
báána /ba-ana/ 'children' [pred. form] cf. úmw|aná (G: 2)	*ukúbólá* /u-ku-bol-a/ 'to become rotten' cf. -bol- (G: 7)	*ukúlúbá* /u-ku-lub-a/ 'to get lost' cf. -lub- 'lose way' (G: 50)

Table 1-1-11: /f/

Word-initial	Stem-initial: $\mathbf{C_1}V_1C_2V_2$	Stem-internal: $C_1V_1\mathbf{C_2}V_2$
fulúnyémba /fulunyemba/ 'chameleon' cf. lufwí-ŋŋembá {lu|fúí-ngenbá} (G: 50)	*úkúfulwa* /u-ku-ful-w-a/ 'to get annoyed' cf. -fúl- 'cry the loss of' (G: 20)	*insófú* /i-N-sofu/ 'elephant' cf. in|sofu (G: 93)
fúúbéfuube /fuube-fuube/ 'fog'	*ukúfúútá* /u-ku-fuut-a/ 'to erase' cf. -fuut- 'beat (bark) for string; rub out (writing)' (G: 24)	*imyémfú* /i-mi-emfu/ 'beard' cf. umw|efu (G: 16)

According to Hamann & Kula (2015: 64), /f/ does not frequently occur especially before non-high vowels, suggesting that the phoneme is available only as a result of the phonological process where stop consonants are fricativised when followed by high vowels, which can be historically traced back to the so-called 'super high' vowels (cf. Maddieson & Sands 2019; Hyman 2019), i.e., the synchronic /fu/ sequence may well be diachronically traced back either to **ku-*, **pu-*, or **tu-*. Note also that this process of fricativisation is synchronically actively triggered by, e.g., the causative suffixes *-i* and *-ish* (traced back to **-i̯*, and **-i̯ci*, respectively).

Table 1-1-12: /s/

Word-initial	Stem-initial: $\mathbf{C_1}V_1C_2V_2$	Stem-internal: $C_1V_1\mathbf{C_2}V_2$
suúla /sul-a/ 'disregard!' cf. -súúl- 'despise, ignore' (G: 98)	*ákásuba* /a-ka-suba/ 'sun' cf. áka|súbá (G: 96)	*úkúlasa* /u-ku-las-a/ 'to prick/hit' cf. -lás- 'wound' (G: 45)
subá /sub-a/ 'apply (lotion etc.)!' cf. -sub- 'rub on (oil)' (G: 85)	*íńsóka* /i-N-soka/ 'snake' cf. ín|sóká (G: 93)	*ukúpóósá* /u-ku-poos-a/ 'to throw' cf. -poos- 'throw away' (G: 75)

Table 1-1-13: /sh/

Word-initial	Stem-initial: $\mathbf{C_1}V_1C_2V_2$	Stem-internal: $C_1V_1\mathbf{C_2}V_2$
sháani /shaani/ 'how'	*ukúshílá* /u-ku-shila/ 'to draw' cf. -shil- 'make a mark, draw a line' (G: 89)	*ukúséshá* /u-ku-sesh-a/ 'to move something' cf. -senk- 'abate a little, as river; move a way a little (from fire)' (G: 87)
shoobá /shooba/ 'tease!'	*ukúshéétá* /u-ku-sheet-a/ 'to chew' cf. -sheet- (G: 88)	*ukúláńshá* /u-ku-land-i-a/ 'to chat with (chat-CAUS)' cf. -lansh- (G: 45)

As for the palatal affricates, it should be noted that /(n)c/ and /nj/ rarely occur in the stem-final position. The only item with a stem-final /nj/ in Guthrie & Mann (1995) is *-cínj-*, which has two (apparently unrelated) meanings, namely i) 'change (money)' and ii) 'circumcise'. This may suggest that this form might have been introduced through borrowing.[4]

Table 1-1-14: /c/

Word-initial	Stem-initial: $\mathbf{C_1}V_1C_2V_2$	Stem-internal: $C_1V_1\mathbf{C_2}V_2$
cíísóté /ci-sote/ 'hat' [pred. form] cf. ici|sote (G: 97)	*úkúcita* /u-ku-cit-a/ 'to do' cf. -cít- (G: 15)	*úkúca* /u-ku-c-a/ 'to dawn' cf. -ć- {kí-} (G: 11)

[4] Though it may not be sufficiently validated through a rigid phonological correspondence, the first meaning might have originated from English *change*, while the meaning of 'circumcise' might have come from the Swahili verb *-chinja* 'slaughter'.

cóóní /ci-oni/ 'bird' cf. icu|uni 'small bird' (G: 112)	*úkúceba* /u-ku-ceb-a/ 'to look around' cf. -céb- 'look around, glance behind' (G: 11)	*ukóócá* /u-ko-oc-a/ 'to roast' cf. -oc- {-oki} 'burn' (G: 63)

Table 1-1-15: /mf/

Stem-internal: $C_1V_1\mathbf{C_2}V_2$
ulúpémfu /u-lu-pemfu/ 'cockroach' cf. úlu|pemfu (G: 70)
ímfímfi /i-N-fimfi/ 'darkness' cf. ím|fiifí (G: 124)

Table 1-1-16: /ns/

Stem-internal: $C_1V_1\mathbf{C_2}V_2$
ukúdóńsá /u-ku-dons-a/ 'to pull'
ukúsáńsá /u-ku-sans-a/ 'strain filter; sprinkle (water) with hand' cf. -sans- (G: 83)

Table 1-1-17: /nsh/

Stem-internal: $C_1V_1\mathbf{C_2}V_2$
úkútensha /u-ku-tend-i-a/ 'to tend to the sick' cf. -ténd- 'groan, moan'; ín|téndá 'illness' (G: 103)
áménshi /a-ma-inshi/ 'water' cf. áma|inshí (G: 28)

Table 1-1-18: /nc/

Affix boundary
íńcénde /i-N-cende/ 'region, space' cf. ín |céndé 'space, room' (G: 12)
íńcito /i-N-cito/ 'work' cf. ín|cíto (G: 15)

Table 1-1-19: /nj/

Affix boundary	Stem-internal: $C_1V_1\mathbf{C_2}V_2$
íńjińga /i-N-jinga/ 'bicycle'	*úkúcinja* /u-ku-cinj-a/ 'change (money); circumcise' cf. -cínj- (G: 14)
injílí /i-N-jili/ 'warthog' cf. in|jili {in|gili} (G: 29)	

1.1.2 Sonorants

1.1.2.1 Nasal: /m, n, ny [ɲ], ng' [ŋ]/

CB has four phonemically contrastive nasal sounds, namely bilabial /m/, alveolar /n/, palatal /ny/ [ɲ], and velar /ng'/ [ŋ]. As pointed out by Hamann & Kula (2015: 64), /ŋ/ seems not to occur word initially.

Table 1-1-20: /m/

Word-initial	Stem-initial: $\mathbf{C_1}V_1C_2V_2$	Stem-internal: $C_1V_1\mathbf{C_2}V_2$
mwáána /mu-ana/ 'child' [pred. form] cf. úmw|aná (G: 2)	*ukúmína* /u-ku-min-a/ 'to swallow' cf. -min- (G: 55)	*úkúfuma* /u-ku-fum-a/ 'to go out' cf. -fúm- (G: 21)
múútíma /mu-tima/ 'heart' [pred. form] cf. úmu|tímá (G: 105)	*úkúmona* /u-ku-mon-a/ 'to see' cf. -món- (G: 55)	*ukwíínámá* /u-ku-inam-a/ 'to bend' cf. -inam- 'bend over' (G: 28)

Table 1-1-21: /n/

Word-initial	Stem-initial: $\mathbf{C_1}V_1C_2V_2$	Stem-internal: $C_1V_1\mathbf{C_2}V_2$
nó⁺ḿbá /nomba/ 'now'	*úkúniina* /u-ku-niin-a/ 'to climb, ascend' cf. -níín- (G: 59)	*úkúpusana* /u-ku-pus-an-a/ 'to differ' cf. -pús-an 'become different' (G: 77)
náani /nani/ 'who'	*ukúnúńká* /u-ku-nunk-a/ 'to stink' cf. -nunk- 'emit odour' (G: 61)	*úkúpona* /u-ku-pon-a/ 'to fall' cf. -pón- 'fall; happen' (G: 74)

Table 1-1-22: /ny/

Word-initial	Stem-initial: $\mathbf{C_1}V_1C_2V_2$	Stem-internal: $C_1V_1\mathbf{C_2}V_2$
–	*úkúnyunga* /u-ku-nyung-a/ 'to sieve' cf. ulu|nyungo 'sieve' (G: 62)	*úkútiinya* /u-ku-tiin-i-a/ 'to frighten' cf. -tíín- 'fear'; -tííny- *cs.* (G: 105)
–	*akányéélélé* /a-ka-nyeelele/ 'food ant' cf. aka|nyeelele → in|nyeelele (G: 62)	*ukúpényá* /u-ku-pen-i-a/ 'to cause to go crazy' cf. -pen- 'become mad' (G: 70)

As mentioned in 1.1.1.2, Hamann & Kula (2015: 64) clarify that phonemic homorganic nasal /N/ can be realised either as /nj/, when followed by front vowels or glides, or as /ng/ when followed by non-front counterparts (see the nasal 'hardening' rule in (3)). This may partly explain the apparent lack of the word-initial /ny/, which may be produced through the palatalisation process of word-initial /N/, e.g., class 9/10 prefix (see Section 2.2.5), which is, however, ruled out due to the hardening rule in this language.

Table 1-1-23: /ng'/

affix-boundary	Stem-initial: $\mathbf{C_1}V_1C_2V_2$	Stem-internal: $C_1V_1\mathbf{C_2}V_2$
ing'ómbé /i-N-gombe/ 'cow' cf. iŋ|ŋombe 'cattle' (G: 63)	*umúng'ó* /u-mu-ng'o/ 'thief' cf. úmu|ŋó (G: 63)	*úkúnung'una* /u-ku-nung'un-a/ 'to lead (dog) astray' cf. -núŋun- (G: 62)
íŋ́g'ánda /i-N-ganda/[5] 'house' cf. íŋ|ŋandá (G: 63)	*amáng'wíng'wí* /a-ma-ng'wing'wi/ 'reechoing of voices in forest' cf. amá|ŋwiŋwí (G: 63)	*akányéng'ene* /a-ka-nyeng'ene/ 'very small brown ant' cf. áka|néŋéné (G: 59)

Note that, as Hamann & Kula (2015: 64) point out, /ng'/ [=ŋ] does not appear at least in the word-initial position of a noun, but it can occur intervocalically as a class 9/10 prefix preceded by the augment *i-* and followed by a stem-initial vowel after deletion of the stem onset consonant caused by the NC simplification rule formulated in (1), which is illustrated by *ing'ómbé* and *íng'ánda*.

1.1.2.2 Approximants: /y [j], w, l/

There are three approximant phonemes, namely palatal /y/ [=j], labio-velar /w/, and alveolar lateral approximant /l/. They are all hardened in post-nasal position to become NC /nd͡ʒ/, /ng/, and /nd/, respectively.

Table 1-1-24: /y/

Word-initial	Stem-initial: $\mathbf{C_1}V_1C_2V_2$	Stem-internal: $C_1V_1\mathbf{C_2}V_2$
yá˖nó /ya-no/ 'that (DEM.HP$_6$)'	*ukúyá* /u-ku-y-a/ 'to go (toward)' cf. -y- {-i-} 'go' (G: 113)	*ukúláyá* /u-ku-lay-a/ 'to bid farewell' cf. -lay- 'promise; ask for permission to leave' (G: 45)
yoobe /i-obe/ 'yours (PP$_9$-POSS.2)'	*uyu* /u-ju/ 'this person (DEM.CD$_1$)'	*ukúfwáyá* /u-ku-fway-a/ 'desire, search for' cf. -fway- (G: 25)

[5] Note that the stem form of this word can also be interpreted as *-anda* if the nasal hardening rule in (3) can be applied to the class 9/10 prefix *N-*. However, this may contradict the fact that the plural form of *íng'ánda* has /y/ as a stem-initial consonant, i.e., *amáyánda*. Here I tentatively adopt the position that the stem has an initial consonant /g/ which is weakened in non-postnasal position.

Table 1-1-25: /w/

Word-initial	Stem-initial: $\mathbf{C_1}V_1C_2V_2$	Stem-internal: $C_1V_1\mathbf{C_2}V_2$
weesu /u-esu/ 'ours' (PP$_{1,3}$-POSS.1PL)	*ukúwáámá* /u-ku-waam-a/ 'to be (look, taste) nice' cf. -waam- 'become suitable, fitting' (G: 112)	*ukúlówá* /u-ku-low-a/ 'to bewitch' cf. -low- 'bewitch' (G: 49)
wéélo /weelo/ 'diamonds (in playing cards)' cf. |wéelo (G: 113)	*icíwááyá* /i-ci-waaya/ 'dried roasted maize'	*úkúlowa* /u-ku-low-a/ 'to be sweet' cf. -lów- 'become sweet to the taste' (G: 50)

Table 1-1-26: /l/

Word-initial	Stem-initial: $\mathbf{C_1}V_1C_2V_2$	Stem-internal: $C_1V_1\mathbf{C_2}V_2$
leesá /leesa/ 'God' cf. |leesa (G: 46)	*ukúlóléélá* /u-ku-loleel-a/ 'to wait' cf. -loleel- 'look for, expect' (G: 48)	*ukúbólá* /u-ku-bol-a/ 'to rot' cf. -bol- 'become rotten' (G: 7)
líisa /li-isa/ 'when'	*úkúloba* /u-ku-lob-a/ 'to fish' cf. -lób- (G: 48)	*úkútoola* /u-ku-tool-a/ 'to pick up' cf. -tóól- (G: 107)

Labio-velar /w/ and palatal /y/ stand in post-consonantal position as a glide. They can be preceded by stops, fricatives, nasals and the lateral approximant /l/.

Table 1-1-27: Phonotactic distributions of /y/ and /w/ after C

	/y/; [j]	/w/; [w]
C [–voice; +stop] _	*úlúkopyo* 'eyelash'	*úkútwi* 'ear'
C [+voice; +stop] _	*úlúpembya* 'horned beatle'	*ímbwa* 'dog'
C [–voice; +fric] _	*ukúlééfyá* 'to become long'	*ifwe* 'we' (PRON.1PL)
C [+voice; +fric] _	n.a. (i.e., */by/ [βj])	*úbwáato* 'canoe'
C [+voice; +nasal] _	*imyémfú* 'beard'	*úmwáaka* 'year'
C [+voice; +lateral] _	*lyonse* 'always'	kólwé 'monkey'

1.2 Vowels

1.2.1 Short vowels

CB has a phonemic system with five contrastive vowels, /a/, /e/, /i/, /o/, and /u/, as shown in the following example of a minimal contrastive quintuplet.

Table 1-2-1: Five phonemic vowels

/i/	*úkúpinda*	'to collect debt'
/e/	*ukúpéńdá*	'to count'
/a/	*ukúpáńdá*	'to put to use' (witchcraft/thoughts)
/o/	*ukúpóńdá*	'to stomp'
/u/	*ukúpúńdá*	'to shout'

1.2.2 Vowel length contrast

Though it is not reflected in the orthography, vowel length is phonemically contrastive as illustrated in the following examples from Hamann & Kula (2015: 64).

Table 1-2-2: Vowel length contrast

/i/	*lilá*	'cry!'	vs.	/ii/	*lííla*	'enjoy!'
/e/	*pé↓lá*	'grind!'	vs.	/ee/	*pééla*	'give!'
/a/	*lá↓lá*	'crack/break!'	vs.	/aa/	*láála*	'sleep!'
/o/	*bolá*	'be rotten!'	vs.	/oo/	*bóóla*	'hit/knock!'
/u/	*tú↓lá*	'make hole!'	vs.	/uu/	*túúla*	'make offer!'

As in many Bantu languages, the vowels are phonetically recognised as being 'lengthened'[6] before an NC (Hyman 2019: 139) and thus the phonemic contrast of vowel length is neutralised in a pre-NC position. Note, however, that in the following description, long vowels resulting from coalescence of a vowel sequence at morphemic boundaries (cf. Section 1.2.3) are described as VV even before an NC, whereas a morpheme-internal vowel before an NC is considered as a (phonemic) single vowel, e.g., *íng'ánda yaandi* //i-N-ganda i-andi// [íŋâːnda jaːndi] 'my house'.

[6] However, it should also be noted that according to Hamann & Kula (2015: 66), acoustic measurements clearly indicate that 'lengthened' vowels before an NC tend to have a phonetic length closer to a phonemic short vowel than to a phonemic long vowel.

Table 1-2-3: Phonemic chart of contrastive vowels

	Front (unrounded)	Central (unrounded)	Back (rounded)
High	/i/, /ii/		/u/, /uu/
Mid	/e/, /ee/		/o/, /oo/
Low		/a/, /aa/	

1.2.3 Vowel consequence and hiatus (coalescence)

In CB, long vowels frequently result from the combination of two short vowels as shown in the following examples.

Table 1-2-4: Long vowels as a coalesced hiatus at morpheme boundaries

áméenshi	//a-ma-inshi//	'water'
abééní	//a-ba-eni//	'visitors; strangers'
amáánó	//a-ma-ano//	'wisdom'
akóóní	//a-ka-oni//	'small bird'
amóólú	//a-ma-ulu//	'legs'

Surface realisation of underlying hiatus combinations can be generalised as in the table below (cf. Hamann & Kula 2015: 65).

Table 1-2-5: Possible realisation patterns of vowel coalescence

	V_2				
V_1	i	e	a	o	u
i	*ii*	*yee*	*yaa*	*yoo*	*yuu*
e	*ee*	*ee*	*yaa*	*yoo*	*yoo*
a	*ee*	*ee*	*aa*	*oo*	*oo*
o	*wee*	*wee*	*waa*	*oo*	*oo*
u	*wii*	*wee*	*waa*	*oo*	*uu*

1.3 Tone

1.3.1 Nominal tone

As in most Bantu languages, tone is an essential part of the Bemba phonology. It is used to denote not only semantic contrasts of lexical elements but also different grammatical functions. The following examples from Guthrie & Mann (1995) illustrate the lexical tonal patterns of nouns.

Table 1-3-1: Comparative list of tone patterns of disyllabic nominal stems (cf. Guthrie & Mann 1995: xi–xii)

	Type-I	Type-IIa	Type-IIb	Type-IIc
tonal description by G	-ØØ	-ØH	-HH	-HØ
in isolation	*umúlímí* ‘farmer’ cf. umu|limi (G: 47)	*ílíino* ‘tooth’ cf. íli|inó (G: 28)	*ákásuba* ‘sun’ cf. áka|súbá (G: 96)	*úlú↓kópyo* ‘eyeblow’ cf. úlu|kópyo (G: 38)
predicative form	*múúlímí*	*lííno*	*káásúba*	*lúúkopyo*
immediately after verb	*umulimi*	*ílíino*	*ákásuba*	*úlúkopyo*
before adnominal	*umúlímí*	*ílíino*	*ákásuba*	*úlúkopyó*

It should first be noted that Type-I nouns, where a flat high tone realises from the second tone-bearing unit (TBU) to the end of the word in isolated speech, can be analysed to have no underlying high tone as their lexical property. This analysis may partly be supported by the fact that no high tone is realised in the post-verbal position. This may further suggest that the surface high flat tone realised on the toneless nouns is assumed to be a result of the spreading of a H tone associated with the noun class prefix. This high tone, which realises only when there is no other high tone specified in the same tonal domain, in turn, spreads to the word-final position in an unbounded fashion.

In contrast, the Type-II nouns have an underlying high tone as part of their lexical property and are further categorised into three subgroups depending on patterns of their alignment, which may or may not be differentiated in specific environments (e.g., Type-IIa and Type-IIc may realise in different tonal patterns in isolation, while the underlying difference between Type-IIa and Type-IIb seems to be neutralised).

High tones can be shifted or spread under specific conditions. For example, a lexical high tone assigned to Type-IIa and Type-IIb nominal stems with a canonical CVCV syllable structure usually realises as a word-initial high tone doublet in isolation form, as in *ílíino* and *ákásuba*. However, the high tone doublet always shifts to the next TBU when followed by a stem-internal long vowel, e.g., *umúsáalu* ‘vegetables’ (rather than *úmúsaalu*). This rightward shift can also be triggered by a stem-internal NC, which is generally said to cause lengthening of the preceding vowel, e.g., as in *icíbémba* ‘the Bemba language’. For more information and data on nominal tone patterns, see the collection of materials accompanying this volume[7].

1.3.2 Verbal tone patterns (infinitive)

The lexical contrast of tone is also attested in verbs; however, it appears to be simpler than that of nominal tones. As in many Bantu languages, a verbal lexical high tone seems to be only assigned to a stem-initial (root) syllable. Thus, the verbs can simply be classified into two types, namely a H-verb with a lexical high tone underlyingly assigned to the stem-initial position and a Ø-verb to which no lexical high tone is underlyingly assigned. The following is an illustration of tonal patterns of infinitive forms of both types in different morphosyntactic environments.

[7] Shinagawa, D., R. Ueno, T. Takahashi, T. Tôyama, S. Ishikawa, and A. Yamamoto. 2024. *Copperbelt Bemba: A collection of phonetic material on nominal tone patterns.* Tokyo: ILCAA.

Table 1-3-2: Tone patterns of infinitive verbs

		monosyllabic stem	disyllabic stem
H-verb	w/o OM	*úkúmona* /u-ku-mon-a/ 'to see'	*úkúpolela* /u-ku-pol-el-a/ 'to recover for'
	with OM_1	*ukúmúmona* /u-ku-mu-mon-a/ 'to see her/him'	*ukúmúpolela* /u-kú-mú-pol-el-a/ 'to recover for her/him'
	with OM_2	*úkú↓bámóná* /u-ku-ba-mon-a/ 'to see them'	*úkúbapóléla* /u-ku-ba-pol-el-a/ 'to recover for them'
Ø-verb	w/o OM	*ukúpátá* /u-ku-pat-a/ 'to hate'	*ukúsékéshá* /u-ku-sek-esh-a/ 'to make laugh'
	with OM1	*ukúmúpátá* /u-ku-mu-pat-a/ 'to hate her/him'	*ukúmúsékéshá* /u-ku-mu-sek-esh-a/ 'to make her/him laugh'
	with OM2	*úkúbapáta* /u-ku-ba-pat-a/ 'to hate them'	*úkúbasékésha* /u-ku-ba-sek-esh-a/ 'to make them laugh'

Based on these facts, the following generalisation can be tentatively assumed. In Ø-verbs, a H tone, which is associated with the class prefix *ku-*, spreads rightwards in an unbounded fashion, as in *ukúpátá* and *ukúmúpátá*, etc. However, the spreading is apparently blocked[8] by the presence of another underlyingly H tone, e.g., one assigned to OM_2, which itself realises on the following TBU, as in *úkúbapáta*. In contrast, the lexical high tone assigned to H-verbs is realised as a high tone doublet on the two word-initial TBUs, as in *úkúmona* and *úkúponela*. If they take a toneless OM, the H tone doublet shifts rightward for one TBU, as in *ukúmúmona* and *ukúmúponela*. An underlying H associated with a H-toned OM may realise either as a downstepped flat H tone spreading to the final syllable, as in *úkú↓bámóná*, or as a H tone doublet realised on the following TBU, as in *úkúbapóléla*. However, as a general tendency, all the underlying high tones that follow the initial high tone, i.e., those associated with the underlying H of high-toned OM in this case, tend to be clearly reduced or even completely dropped in natural speech. For further discussion on tonal phenomena in CB, see Bickmore and Kula (2013).

[8] Spreading may also be blocked by other factors including restrictions caused by a specific syllable structure. See 6.1.3. and 6.2.3 for observations on tonal processes attested in finite verbal forms.

2. Nouns and noun classes

CB has a typical Bantu noun class system that classifies nouns into 10 major pairs of classes, or 'genders', which are morphologically identified by noun class prefixes (CP). Each noun class triggers grammatical agreement with adnominal elements, including adjectives, associatives (a.k.a. possessive linkers), and demonstratives, and with predicates including the verb.

2.1 Basic structure of the noun

Bantu languages can be classified into two types in terms of their basic nominal structures, i.e., languages with an augment (AUG), which is an initial vowel preceding the CP, and those without. Bemba is classified into the former type, i.e., the morphological template of the Bemba noun consists of two pre-stem slots, namely Pr-1 for AUG and Pr-2 for CP, followed by a nominal stem.

As shown in Table 2-1, Bemba nominal forms are further categorised into three basic structure types. Type-I is a structure where both pre-stem slots are occupied by corresponding morphemes. This is a default nominal form when used as a full NP except for those in specific noun classes, as shown in 2.2. Type-II is another structure where the Pr-2 slot is empty, and in the absence of AUG, the vowel of CP is compensatorily lengthened. This is a typical nominal form when used as a predicate nominal. The last one, Type-III, is a structure where Pr-1 is obligatorily filled by a (locative or derivational) CP but Pr-2 may or may not be occupied depending on the inherent class of the nominal stem. This type is the templatic structure of locative nouns, i.e., those in locative noun classes cl. 16, 17, and 18.

Table 2-1: Basic structural types of Bemba nouns

	Pr-1	Pr-2	Stem	
Type-I	*á-* AUG V	*ká-* NCP_{12} CV	*suba*	'the sun'
Type-II		*káá-* NCP_{12} CVV	*súba*	'it's the sun'
Type-III	*ku-* NCP_{17} CV	*mú-* NCP_{3}- (CV)	*shí*	'in the village'

The difference of these structural types may affect the phonological realisation of the preceding word. This will be briefly discussed in 2.2.10.

2.2 Noun classes

2.2.1 Classes 1/2 and 1a/2a

In the Bantu noun class system, classes 1 and 2, whose CP are reconstructed in Proto-Bantu as **mu-* and **ba-*, respectively, by Meeussen (1967: 97)[9], are the classes for person nouns. Their subclasses 1a **Ø-* and 2a **baa-* are semantically characterised as a gender for kinship terms in many Bantu languages (cf. Katamba 2003). The following is a list of selected nouns morphologically identified as cl. 1/2 and 1a/2a nouns in CB.

Table 2-2-1: A list of selected nouns in cl. 1/2 and 1a/2a

	sg.	pl.	gloss	cf. Guthrie & Mann (1995)
(a)	*úmwáanakashi* u-mu-ana-kashi	*ábáanakashi* a-ba-ana-kashi	'woman'	úmw|anákáshí 'woman'
(b)	*úmwáaume* u-mu-a-ume	*ábáaume* a-ba-a-ume	'man (male person)'	áka|lúmé 'male...'
(c)	*úmúkashi* u-mu-kashi	*ábákashi* a-ba-kashi	'wife'	úmu|káshí 'wife'
(d)	*úmúlume* u-mu-lume	*ábálume* a-ba-lume	'husband'	úmu|lúmé 'husband'
(e)	*úmwáana* u-mu-ana	*ábáana* a-ba-ana	'child'	úmw|aná 'child (of)'
(f)	*umúlímí* u-mu-lim-i	*abálímí* a-ba-lim-i	'farmer'	umu|limi 'cultivator' -lim- 'cultivate'
(g)	*taatá* Ø-taata	*baataatá* baa-taata	'(my) father'	|taatá 'my father'
(h)	*keembá* Ø-ka-imba	*baakeembá* baa-ka-imba	'singer'	|keembíla 'singer'
(i)	*kasukúlu* Ø-ka-sukulu	*baakasukúlu* baa-ka-sukulu	'student'	–

The forms from (a) through (f) can be identified as cl. 1/2 nouns through the shape of their pre-stem morphemes, i.e., cl. 1 *u-mu-* and cl. 2 *a-ba-*, respectively. (a) is apparently a compound noun consisting of the stem (e) *-ana* followed by (c) *-kashi*. (b) seems also to be a compositional form that contains *-a*, which may be related to the associative stem, preceding the lexical stem (d) *-lume*. As shown in (f), agent nouns can be derived from verbal roots, in this case *-lim-* 'cultivate', through affixation of the agentive suffix *-i* (**-ị*); these are typical members of cl 1/2 nouns.

In contrast, the forms (g)–(i) are identified as cl. 1a/2a nouns based on their pre-stem shapes, i.e., *Ø-* for the singular vs. *baa-* for the plural. As shown in these examples, one of the salient structural features of cl. 1a/2a nouns is that they do not have AUG in their initial position. More precisely, cl. 1a/2a nouns seem to follow the Type-III structure of the nominal morphological template shown in Table 2-1. This interpretation can be justified by several processes of morphological alternation, which will be discussed in the following sections.

Another striking feature of cl. 1a/2a nouns is that the prefix *ka-*, which is homophonous with the cl. 12 prefix, is used as a stem-generating morpheme. According to Schadeberg and Bostoen

[9] Reconstructed forms of CP in the following sections are, unless otherwise stated, based on Meeussen (1967).

(2019: 195), this form can be traced back to what is reconstructed as a 'person-marker' at the proto-Niger-Congo stage by Greenberg (1963: 152).

2.2.2 Class 3/4

Class 3/4 nouns (PB **mu-/ *mi-*), identified as such through the shape of AUG and CP, include the following.

Table 2-2-2: A list of selected nouns in cl. 3/4

	sg.	pl.	gloss	cf. Guthrie & Mann (1995)
(a)	*úmútima* u-mu-tima	*ímítima* i-mi-tima	'heart'	úmu|tímá
(b)	*úmúti* u-mu-ti	*ímíti* i-mi-ti	'medicine'	úmu|tí 'tree; pole; medicine'
(c)	*umúńgá* u-mu-unga	*imyúńgá* i-mi-unga	'thorn'	umu|unga 'thorn tree *in gen*'
(d)	*umúshí* u-mu-shi	*imíshí* i-mi-shi	'village'	umu|shi
(e)	*úmúcila* u-mu-cila	*ímícila* i-mi-cila	'tail'	úmu|cílá
(f)	*umúsáalu* u-mu-saalu	*imísáalu* i-mi-saalu	'vegetable'	umú|saalú (*no pl.*) 'edible leaves *in gen.*'
(g)	*umúmáná* u-mu-mana	*imímáná* i-mi-mana	'river'	umu|mana
(h)	*umwéeshi* u-mu-eshi	*imiyéeshi* i-mi-eshi	'moon'	úmw|eshí
(i)	*umúshílá* u-mu-shila	*imíshílá* i-mi-shila	'path'	umu|shila 'root'

The form of the pre-stem element of cl. 3 is identified as *u-mu-* and that of cl. 4 as *i-mi-*. Semantically, as in many other Bantu languages, many terms denoting natural phenomena and plant-related items seem to belong to this gender. Note, however, that the common form denoting 'tree' throughout Bantu languages, (b) *úmúti*, tends to be used to refer to 'medicine', while 'tree' is lexicalised by the derived form *ícímuti*, which belongs to cl. 7.

Note also that cl. 4 nouns rather consistently follow the agreement patterns triggered by cl. 10 nouns, as discussed in the following sub-sections of this chapter.

2.2.3 Class 5/6

Nouns that can be identified as belonging to class 5/6 (PB **i̧-/ *ma-*) through the shape of the pre-stem elements include the following.

Table 2-2-3: Selected nouns in cl. 5/6

	sg.	pl.	gloss	cf. Guthrie & Mann (1995)
(a)	*ílíni* i-li-ni	*ámáni* a-ma-ni	'egg'	íli|ní

(b)	*ílíino* i-li-ino	*áméeno* a-ma-ino	‘tooth’	íli|inó
(c)	*ílínso* i-li-inso	*áménso* a-ma-inso	‘eye’	íli|insó
(d)	*ilíbwé* i-li-bwe	*amábwé* a-ma-bwe	‘stone’	ili|bwe
(e)	*ilítábá* i-li-taba	*amátábá* a-ma-taba	‘maize’	ama|taba
(f)	*ilúbá* i-Ø-luba	*amálúbá* a-ma-luba	‘flower’	i|luba
(g)	*ílóba* i-Ø-loba	*amálóba* a-ma-loba	‘earth’	í|lobá ‘soil, earth for daub’
(h)	*ibálá* i-Ø-bala	*amábálá* a-ma-bala	‘field’	i|bala ‘garden’
(i)	*ibúúlá* i-Ø-buula	*amábúúlá* a-ma-buula	‘leaf’	i|buula

As shown in (a)–(e), the forms of pre-stem morphemes are *i-li-* for cl. 5 and *a-ma-* for cl. 6. Note, however, that there seems to be a rather consistent rule that the CP *li-* of cl. 5 basically drops before a polysyllabic stem as shown in (f)–(i), which makes (e) an exceptional form. Semantically, many common cl. 5/6 nouns attested through Eastern Bantu languages are also included in the noun class system of CB, e.g., paired body parts, liquids, etc.

As shown in 2.3, cl. 5/6 are also productively used in the noun-to-noun derivation process, where the replacement or stacking of CP 5/6 renders the evaluational connotations like augmentativity and derogativity. From a functional perspective, cl. 5 is used as a functional head denoting temporal concepts, e.g., *limo* /li-mo/ {PP$_5$-one} ‘some day’, *lyoonse* /li-onse/ {PP$_5$-all} ‘all the time, always’.

2.2.4 Class 7/8

Nouns that can be identified as cl. 7/8 (PB **ki-*/ **bi̱-*) through the shape of pre-stem elements include the following.

Table 2-2-4: A list of selected nouns in cl. 7/8

	sg.	pl.	gloss	cf. Guthrie & Mann (1995)
(a)	*icísóté* i-ci-sote	*ifísóté* i-fi-sote	‘hat’	ici|sote
(b)	*ícípuna* i-ci-puna	*ífípuna* i-fi-puna	‘chair’	ící|puna
(c)	*ícítele* i-ci-tele	*ífítele* i-fi-tele	‘chicken coop’	icí|telé ‘dovecot, chicken-house’
(d)	*icíńtú* i-ci-ntu	*ifíńtú* i-fi-ntu	‘thing’	ici|ntu
(e)	*icííbí* i-ci-ibi	*ifííbí* i-fi-ibi	‘door’	ici|ibi

(f)	*icítábó* i-ci-tabo	*ifítábó* i-fi-tabo	‘book’	
(g)	*icísábó* i-ci-sabo	*ifísábó* i-fi-sabo	‘fruit’	ici|sabo ‘succulent fruit, such as pumpkin’
(h)	*icóóní* i-ci-oni	*ifyóóní* i-fi-oni	‘bird’	icu|uni ‘small bird’
(i)	*icíkopábelúti~ icíkopabéluti* i-ci-kopabuluti		‘Copperbelt Bemba (language)’	

The forms of the pre-stem elements are identified as *i-ci-* for cl. 7 and *i-fi-* for cl. 8. As in many Eastern Bantu languages, many lexical items denoting artifacts belong to this gender. As shown in 2.3, cl. 7/8 can also be used in the derivational morphology, denoting evaluational connotations including augmentativity, derogativity, and ameliorativity, e.g., *ícímukashi* (*~icímúkashi*) ‘a great wife’.

2.2.5 Classes 9/10 and 9/6

Nouns identified as cl. 9/10 (PB **n-*/ **n-*) through the shape of the pre-stem elements are listed in Table 2-2-5.

Table 2-2-5: A list of selected nouns in cl. 9/10 and 9/6

	sg.	pl.	gloss	cf. Guthrie & Mann (1995)
(a)	*íńkó↓kó* i-N-koko	*íńkó↓kó* i-N-koko	‘chicken’	ín|kókó ‘chicken’
(b)	*íńkálamo* i-N-kalamo	*íńkálamo* i-N-kalamo	‘lion’	ín|kálámó ‘lion’
(c)	*ingwéná* i-N-gwena	*ingwéná* i-N-gwena	‘crocodile’	iŋ|ŋwena ‘crocodile’
(d)	*insófú* i-N-sofu	*insófú* i-N-sofu	‘elephant’	in|sofu ‘elephant’
(e)	*inámá* i-N-nama	*inámá* i-N-nama	‘meat’	in|nama ‘meat’
(f)	*íḿbwa* i-N-bwa	*íḿbwa* i-N-bwa	‘dog’	ím|bwá ‘dog’
(g)	*impóótó* i-N-pooto	*impóótó* i-N-pooto	‘pot’	
(h)	*ingómá* i-N-goma	*ingómá* i-N-goma	‘drum’	iŋ|ŋoma ‘drum’
(i)	*íńg’ánda* i-N-ganda	*amáyánda* a-ma-yanda	‘house’	íŋ|ŋandá ‘house’

As reconstructed in Proto-Bantu, cl. 9 and cl. 10 share the homophonic CP *N-*, which is homorganic to the following consonant. The shape of AUG is *i-*, which is also a common form in neighbouring languages but is pronounced very weakly. From the prosodic point of view, the AUG-CP sequence *i-N-* rather consistently behaves as a single TBU, i.e., the initial H tone

doublet (cf. 1.3) realises on the entirety of the pre-stem elements plus the following initial syllable of the stem, as illustrated in (b) *íńkálamo* 'lion' and (i) *íńg'ánda* [íŋâˑnda] 'house', which can also be seen as an illustration of Meinhof's rule as an NC simplification process (cf. 1.1.2.1)[10].

Concerning the semantics, many of the animal nouns are affiliated with this gender. Artifacts, including borrowing terms are also allocated to this gender. While the canonical plural counterpart of cl. 9 is cl. 10, several cl. 9 nouns are identified to have cl. 6 as their plural counterpart[11], as in (i) *íńg'ánda* vs. *amáyánda*.

2.2.6 Classes 11/6 and 11/10

Nouns that can be identified as cl. 11 (PB **du*-) in terms of their pre-stem shape include the following.

Table 2-2-6: A list of selected nouns in cl. 11/6 and 11//10

	sg.	pl.	gloss	cf. Guthrie & Mann (1995)
(a)	*ulúkásá* u-lu-kasa	*amákásá* a-ma-kasa	'foot'	ulu|kasa
(b)	*úlúlimi* u-lu-limi	*ámálimi* a-ma-limi	'tongue'	úlu|límí
(c)	*úlúbalála* u-lu-balala	*ámábalála* a-ma-balala	'groundnut'	úlu|bálála
(d)	*ulúpwá* u-lu-pwa	*amápwá* a-ma-pwa	'aubergine'	úlu|pwa 'wild egg-fruit' [sic]; ulu|pwa 'family'
(e)	*ulúsápátó* u-lu-sapato	*amásápátó* a-ma-sapato	'shoe'	
(f)	*ulúkóńdé* u-lu-konde	*inkóńdé* i-N-konde	'banana'	in|konde
(g)	*úlúpi* u-lu-pi	*ámápi* a-ma-pi	'palm of hand, slap'	ú|lupi
(h)	*ulútánda* u-lu-tanda	*amátánda* a-ma-tanda	'star'	ulú|tandá
(i)	*ulúpílí* u-lu-pili	*amápílí* a-ma-pili	'mountain'	ulu|pili 'hill'

The form of the pre-stem element of cl. 11 nouns is identified as *u-lu*-, and its plural counterpart can either be cl. 6 or cl. 10, with the former being relatively dominant. Regarding the semantics, one may find longness and thinness as part of the semantic content of this gender, as widely shared with many Bantu languages (see, e.g., Maho 1999: 76; Katamba 2003: 115).

[10] However, this is not the case if the stem is identified as a vowel-initial form, *-anda*. If one takes this interpretation, then this form can be seen as a manifestation of nasal hardening (cf. 1.1.2.1).

[11] According to Maho (1999: 174), the cl. 9/6 pairing "has a very wide and fairly dense distribution", which "covers all of the Bantu area except the south-western and extremely north-eastern parts."

2.2.7 Class 12/13

Nouns that can be identified as cl. 12/13 (PB **ka-*/ **tu-*) through the shape of their pre-stem elements include the following.

Table 2-2-7: A list of selected nouns in cl. 12/13

	sg.	pl.	gloss	cf. Guthrie & Mann (1995)
(a)	*ákásuba* a-ka-suba	–	'sun'	áka|súbá
(b)	*akáséḿbé* a-ka-sembe	*utúséḿbé* u-tu-sembe	'tsetse fly'	áka|shémbélé {|síé} 'tsetse'
(c)	*akáńsúusu* a-ka-nsuusu	*utúńsúusu* u-tu-nsuusu	'bat'	áka|súúsu 'small bat *in gen.*'
(d)	*akápyélélé* a-ka-pyelele		'whistle'	aka|pyelele
(e)	*akányélélé* a-ka-nyelele	*utúnyélélé* u-tu-nyelele	'ant'	aka|nyeelele
(f)	*akákóndo* a-ka-kondo	*utúkóndo* u-tu-kondo	'toe, finger'	ící|kóndó 'great toe'; áka|kóndó 'other toe' (G: 36)
(g)	*akóóní* a-ka-oni	*utóóní* u-tu-oni	'small bird'	icu|uni 'small bird *in gen.*'
(h)	*akápémfu* a-ka-pemfu	*utúpémfu* u-tu-pemfu	'small cockroach'	úlu|pemfu 'cockroach'
(i)	*ákákoko* a-ka-koko	*útúkoko* u-tu-koko	'chick'	ín|kókó

The forms of the pre-stem elements are identified as *a-ka-* for cl. 12 and *u-tu-* for cl. 13, the regular plural counterpart of cl. 12. As shown in (g)–(i), this gender is productively used to derive diminutive nouns. The process of noun-to-noun derivation will be discussed in 2.3.

2.2.8 Class 14 (/6 or /10)

Nouns identified as cl. 14 (PB **bu-*) based on the pre-stem shape include the following.

Table 2-2-8: A list of selected nouns in cl. 14/6

	sg.	pl.	gloss	cf. Guthrie & Mann (1995)
(a)	*úbúsuma~ ubúsúma* u-bu-suma		'beauty'	ící|sumá 'good thing'
(b)	*úbúpe* u-bu-p-e		'gift'	-ṕ- {-pá-} 'give'
(c)	*úbúkali* u-bu-kali		'strength'	úbu|kálí 'fierceness' -kálip- 'become fierce, angry'
(d)	*ubúńtú* u-bu-ntu		'humanity'	ubú|ntu-nsé 'humanness'

(e)	*úbúfumu* u-bu-fumu		‘chieftainship’	ím|fúmú ‘chief’
(f)	*ubóówá* u-bu-oa		‘mushroom’	ubo|oa ‘mushroom’
(g)	*ubúbénshi* u-bu-benshi		‘termite’	úbu|bénshí ‘worker termites’
(h)	*úbúlweéle* u-bu-lweele	*ámálweéle* a-ma-lweele	‘disease’	
(i)	*úbúshiku* u-bu-shiku	*ínshíku* i-N-shiku	‘day, night’	ín|shíkú ‘day’, úbu|~ ‘night’

The form of the pre-stem element is identified as *u-bu-*. As shown in the examples, this gender is productively used as a derivational class of abstract nouns, as illustrated in (a) *úbúsuma* ‘beauty’ vis-à-vis *ícísuma* (*~icísúma*) ‘good thing’, (d) *ubúńtú* ‘humanity’ vis-à-vis *umúńtú* ‘person’, and (e) *úbúfumu* ‘chieftainship’ vis-à-vis *ímfúmu* ‘chief’. However, the examples of (b) *úbúpe* ‘gift’ and (c) *úbúkali* ‘strength’ should rather be described as an example of verb-to-noun derivation and adjective-to-noun derivation, respectively.

Associated with the semantic feature, nouns that denote concrete entities rather than abstract notions, e.g., (f) *ubóówá* ‘mushroom’ and (g) *ubúbénshi* ‘termite’, are treated as mass nouns, i.e., cl. 14 nouns in general tend to lack a singular–plural distinction. However, those which can be used to refer to a countable entity may have a corresponding plural form, which can be either cl. 6, as illustrated in (h), or cl. 10, as in (i).

2.2.9 Class 15/6

Nouns identified as belonging to cl. 15 (PB **ku-*) based on the shape of their pre-stem elements, which is a small set of nouns as reconstructed in Proto-Bantu, include the following.

Table 2-2-9: A list of selected nouns in cl. 15/6

	sg.	pl.	gloss	cf. Guthrie & Mann (1995)
(a)	*úkúboko* u-ku-boko	*ámáboko* a-ma-boko	‘hand’	úku|bókó ‘arm’
(b)	*ukúúlú* u-ku-ulu	*amóólú* a-ma-ulu	‘leg’	uku|ulu
(c)	*úkwáapa* u-ku-apa	*ámáapa* a-ma-apa	‘armpit’	úkw|apá
(d)	*úkútwi* u-ku-twi	*ámátwi* a-ma-twi	‘ear’	úku|twí
(e)	*úkúmona* u-ku-mon-a	–	‘to see’	-món-
(f)	*ukúláńdá* u-ku-land-a	–	‘to talk’	-land- ‘chat, talk’

The form of the pre-stem element of cl. 15 nouns is identified as *u-ku-*, while the corresponding plural class is identified as cl. 6. The lexical items (a)–(d) are all reconstructed in PB as cl. 15/6

nouns, namely *-*bókò* ‘arm; hand; front paw’, *-*gòdò* ‘leg; hind leg’, *-*jápà* ‘armpit’, *-*túì* ‘ear’ (cf. Bastin et al. 2002 = BLR3 online vers.)

As in the most typical noun class systems in present-day Eastern Bantu languages, cl. 15 is used as a class for infinitive verb forms.

2.2.10 Classes 16, 17, 18

There is a series of CP that attach to an AUG-less noun form to derive a locative noun, which may functionally serve as a locative adverbial phrase. As in the vast majority of southeastern Bantu languages, CB also makes use of three locative classes, which are cl. 16 (**pa*-), cl. 17 (**ku*-), and cl. 18 (**mu*-).

Table 2-2-10: A list of selected nouns in cl. 16/17/18

	forms	gloss	cf. Guthrie & Mann (1995)
(a)	*pásukúlu* pa-Ø-sukulu	‘at a/the school’	
(b)	*kumálíkeeti* ku-Ø-malikeeti	‘to a/the market’	
(c)	*múng’ánda* mu-N-ganda	‘in a/the house’	íŋ|ŋandá

As shown in Table 2-2-10, the forms of the locative CP are cl. 16 *pa*-, cl. 17 *ku*-, and cl. 18 *mu*-, and they do not have a corresponding AUG; thus forms like **a-pa*-, **u-ku*-, and **u-mu*- are all structurally ill-formed. On the other hand, a locative class CP attaches to the following inherent CP of the nominal stem, which is slotted in the Pr-1 position, rather than replacing it, as illustrated in (c) *múng’ánda* {mu-N-ganda}. This is why locative nouns are structurally classified as a different type (Type-III) than a full NP in other classes (Type-I) as shown in Table 2-1. One of the consequences of this structural difference may be reflected in the vowel length of the preceding word.

(4) a. *icísóté cáá mwáana*
i-ci-sote ci-a mu-ana
AUG-7-hat PP$_7$-ASSC 1-child
‘a hat of a child’

b. *umúti wá kukáasama*
u-mu-ti u-a ku-Ø-kasama
AUG-3-medicine PP$_3$-ASSC 17-9-Kasama
‘a (type of) medicine of/from Kasama’

In (4a), the form preceding the AUG-less noun *mwáana* is the genitive connective linker meaning ‘of’, which is also called an Associative (ASSC) in the terminology of Bantu linguistics (cf. 2.4.2). As AUG structurally drops after ASSC, the ASSC can retain its underlying two-morae length by occupying the empty Pr-1 slot of the following noun caused by the dropping of the AUG. In contrast, the underlying length is apparently shortened before a locative noun as illustrated in (4b). This (blocking) effect can be explained by postulating that the Pr-1 slot is occupied by the locative CP, leaving no room for ASSC to keep its underlying length.

In terms of their grammatical function, the locative nouns often play the role of a locative adverbial as in (5).

(5) a. *íńkálamo íkálaala páńg'ánda*
i-N-kalamo i-ka-laal-a pa-N-ganda
AUG-9-lion SM9-FUT3-sleep-FV 16-9-house
'A lion will sleep at the house'
b. *páng'ánda páá ḿfúmu*
pa-N-ganda pa-a N-fumu
16-9-house PP16-ASSC 9-chief
'at the chief's house'
c. *pán'gánda pá↓lyá palááleńkálamo*
pa-N-ganda pa-lya pa-Ø-laal-a i-N-kalamo
16-9-home PP16-DEM.D SM16-PRS.CJ-sleep-FV AUG-9-lion
'A lion sleeps at that house (Lit: At that house sleeps a lion)'

Note however that their morphosyntactic status should be described as that of a noun since, for example, they can be the syntactic head of ASSC and trigger grammatical agreement with it as illustrated in (5b). Also, as in (5c), the locative noun *páng'ánda* triggers agreement shown on the SM slot of the verb. This construction, which is specifically referred to as Formal Locative Inversion (FLI) in the literature of Bantu linguistics (Marten & Van der Wal 2014: 323–324), is a clear piece of evidence that locative nouns are explicitly treated as nominal arguments.

2.3 Derivation

As mentioned in 2.2, some specific CP can be used in the process of noun-to-noun derivation, e.g., cl. 12 *ka-* is productively used to derive diminutive nouns. As shown in the following table, the derivational CP can i) attach to the CP of the base noun, e.g., (a) *akámwáana*, or ii) replace it, e.g., (b) *ákáana*.

Table 2-3-1: Noun-to-noun derivation by cl. 12 *ka-*

	sg.	pl.	gloss
(a)	*akámwáana* a-ka-mu-ana AUG-12-1-child	*utúbáana* u-tu-ba-ana AUG-13-2-child	'small child'
(b)	*ákáana* a-ka-ana AUG-12-child	*útwáana* u-tu-ana AUG-13-child	'small child'
(c)	*akámúti* a-ka-mu-ti AUG-12-3-tree	*utúmúti* u-tu-mu-ti AUG-13-3-tree	'small tree'
(d)	**akati* a-ka-ti AUG-12-tree	**ututi* u-tu-ti AUG-13-tree	Intd: 'small tree'
(e)	*akákútwi* a-ka-ku-twi AUG-12-15-ear	*utúmátwi* u-tu-ma-twi AUG-13-6-ear	'small ear'
(f)	*ákátwi* a-ka-twi AUG-12-ear	*útútwi* u-tu-twi AUG-13-ear	Intd: 'small ear'

(g)	*pakáyánda* pa-ka-yanda 16-12-house	'at the small house'
(h)	*kukáyánda* ku-ka-yanda 17-12-house	'towards the small house'
(i)	*mukáyánda* mu-ka-yanda 18-12-house	'in the small house'

While the choice between the attachment strategy (AT) and the replacement strategy (RP) seemingly has nothing to do with any semantic differentiation, the strategies can be contrastive at least in the following two contexts.

First, there is a structural restriction on the application of RP, i.e., while AT apparently can be applied to any base nouns, RP seems to be only selectively applied to cl. 1/2 nouns, or more broadly animate nouns, e.g., *akóóní* 'small bird' and *ákákoko* 'chick' (cf. Table 2-2-7).

Second, the distinction of the two strategies can be associated with the expression of specificity of the referent, i.e., AT is more naturally used in a context where the referent is explicitly identified in the present discourse context, while RP is used to denote an indefinite referent, e.g., *ícíkashi* 'a huge wife' vs. *ícímukashi* (~*icímúkashi*) 'this huge wife'. This interpretation is supported by another observation that AT forms may more readily be used as part of pragmatic expressions or may be avoided in the presence of the intended referent to avoid an emotional conflict.

The following table summarises the structural contrast between RP and AT with the semantic connotation of each noun class that can be used in a derivational process to express evaluational meanings.

Table 2-3-2: Structural difference between RP vs. AT
with semantic connotations associated with each noun class (base noun: *ú-mú-kashi* 'wife')

cl.	RP [–ref. specific]	AT [+ref. specific]	semantic connotation
2	*á-bá-kashi*		'respectful' (honorific)
5	*í-lí-kashi*	*í-lí-mu-kashi* (~*i-lí-mú-kashi*)	'useless; shameful' (pejorative)
7	*í-cí-kashi*	*í-cí-mu-kashi* (~*i-cí-mú-kashi*)	'huge' (augmentative), 'great' (ameliorative), 'ugly; stupid; useless' (pejorative)
12	*á-ká-kashi*	*á-ká-mu-kashi* (~*a-ká-mú-kashi*)	'small' (diminutive) 'silly; stupid' (pejorative)

2.4 Pronominal agreement

Noun class system is in the heart of the Bantu morphosyntax as providing the basis for grammatical agreement, which occurs within a noun phrase, as well as between a predicate and nominal arguments. This section provides the description of the former, while the latter will be dealt with in Section 2.5.

2.4.1 Adjectives

It is generally assumed that in many Bantu languages a word class that can be labelled as an adjective, i.e., an adnominal word that semantically modifies its head noun and morphologically takes an agreement marker that refers to it, tends to consist of a small set of lexemes (Van de Velde 2019: 258). In many present-day Bantu languages as well as in the reconstructed system of Proto-Bantu, adjective stems take CP to show agreement with a head noun. In CB, however, adjective stems take a pronominal prefix (PP) , which is different in shape from CP in several classes and regularly occurs as an agreement marker with other pronominal stems including demonstratives, except for the case of cl. 1 head nouns, where CP is used as a coreferential marker. This pattern of agreement with each noun class is illustrated in the following, where the adnominal forms (in the left column) and predicative forms (in the right column) are contrastively shown (See Chapter 5 for more information on adjectival expressions in general).

Table 2-4: List of agreement forms of the adjective *-suma* 'good'

	adnominal forms	predicative forms
cl. 1	*umúlímí umúsúma* u-mu-lim-i u-mu-suma AUG-1-farm-NMLZ.AG AUG-1-good 'a good farmer'	*umúlímí múúsúma* u-mu-lim-i mu-suma AUG-1-farm-NMLZ.AG 1-good 'a farmer is good'
cl. 2	*abálímí abásúma* a-ba-lim-i a-ba-suma AUG-2-farm-NMLZ.AG AUG-PP$_2$-good 'good farmers' 'a respected farmer'	*abálímí báásúma* a-ba-lim-i ba-suma AUG-2-farm-NMLZ.AG PP$_2$-good 'farmers are good/ a (respected) farmer is good'
cl. 3	*umúti uúsúma* u-mu-ti u-u-suma AUG-3-medicine AUG-PP$_3$-good 'good medicine'	*umúti úúsúma* u-mu-ti u-suma AUG-3-medicine PP$_3$-good 'medicine is good'
cl. 4	*imíti ishísúma* i-mi-ti i-shi-suma AUG-4-medicine AUG-PP$_{10}$-good 'good medicines'	*imíti shíísúma* i-mi-ti shi-suma AUG-4-medicine PP$_{10}$-good 'medicines are good'
cl. 5	*ilíni ilísúma* i-li-ni i-li-suma AUG-5-egg AUG-PP$_5$-good 'a good egg'	*ilíni líísúma* i-li-ni li-suma AUG-5-egg PP$_5$-good 'an egg is good'
cl. 6	*amáni ayásúma* a-ma-ni a-ya-suma AUG-6-egg AUG-PP$_6$-good 'good eggs'	*amáni yáásúma* a-ma-ni ya-suma AUG-6-egg PP$_6$-good 'eggs are good'
cl. 7	*icísóté icísúma* i-ci-sote i-ci-suma AUG-7-hat AUG-PP$_7$-good 'a nice hat'	*icísóté cíísúma* i-ci-sote ci-suma AUG-7-hat PP$_7$-good 'a hat is nice'

cl. 8	*ifísóté ifísúma*	*ifísóté fíísúma*
	i-fi-sote i-fi-suma	i-fi-sote fi-suma
	AUG-8-hat AUG-PP$_8$-good	AUG-8-hat PP$_8$-good
	‘nice hats’	‘hats are nice’
cl. 9	*ińkóko iísúma*	*ińkóko íísúma*
	i-N-koko i-i-suma	i-N-koko i-suma
	AUG-9-chicken AUG-PP$_9$-good	AUG-9-chicken PP$_9$-good
	‘a good chicken’	‘a chicken is good’
cl. 10	*ińkóko ishísúma*	*ińkóko shíísúma*
	i-N-koko i-shi-suma	i-N-koko shi-suma
	AUG-10-chicken AUG-PP$_{10}$-good	AUG-10-chicken PP$_{10}$-good
	‘good chickens’	‘chickens are good’
cl. 11	*ulúkásá ulúsúma*	*ulúkásá lúúsúma*
	u-lu-kasa u-lu-suma	u-lu-kasa lu-suma
	AUG-11-foot AUG-PP$_{11}$-good	AUG-11-foot PP$_{11}$-good
	‘a good foot’	‘a foot is good’
cl. 12	*ákákondo akásúma*	*ákákondo káásúma*
	a-ka-kondo a-ka-suma	a-ka-kondo ka-suma
	AUG-12-toe AUG-PP$_{12}$-good	AUG-12-toe PP$_{12}$-good
	‘a good toe’	‘a toe is good’
cl. 13	*útúkondo utúsúma*	*útúkondo túúsúma*
	u-tu-kondo u-tu-suma	u-tu-kondo tu-suma
	AUG-13-toe AUG-PP$_{13}$-good	AUG-13-toe PP$_{13}$-good
	‘good toes’	‘toes are good’
cl. 14	*ubóówá ubúsúma*	*ubóówá búúsúma*
	u-bu-owa u-bu-suma	u-bu-owa bu-suma
	AUG-14-mushroom AUG-PP$_{14}$-good	AUG-14-mushroom PP$_{14}$-good
	‘good mushrooms’	‘mushrooms are good’
cl. 15	*úkúbokó ukúsúma*	*úkúbokó kúúsúma*
	u-ku-boko u-ku-suma	u-ku-boko ku-suma
	AUG-15-hand AUG-PP$_{15}$-good	AUG-15-hand PP$_{15}$-good
	‘a good hand’	‘a hand is good’
cl. 16	*páng’ánda apásúma*	*páng’ánda páásúma*
	pa-N-ganda a-pa-suma	pa-N-ganda pa-suma
	16-9-house AUG-PP$_{16}$-good	16-9-house PP$_{16}$-good
	‘at a nice house’	‘it’s nice at the house’
cl. 17	*kúsukúlu ukúsúma*	*kúsukúlu kúúsúma*
	ku-Ø-sukulu u-ku-suma	ku-Ø-sukulu ku-suma
	17-5-school AUG-PP$_{17}$-good	17-5-school PP$_{17}$-good
	‘to a good schoool’	‘it’s good at a school’
cl. 18	*múng’ánda umúsúma*	*múng’ánda múúsúma*
	mu-N-ganda u-mu-suma	mu-N-ganda mu-suma
	18-9-house AUG-PP$_{18}$-good	18-9-house PP$_{18}$-good
	‘in a nice house’	‘it’s nice in a house’

It is clearly shown that the predicate form of the adjective is regularly derived from a corresponding adnominal form by dropping its AUG. This is parallel with a structural contrast

between a full noun vs. predicate noun, i.e., Type-I vs. Type-II of the nominal template in Table 2-1. The two forms are slightly different in terms of tonal patterns. Putting occasional irregularities aside, the general tonal template seems to be $_{Pr\text{-}1}$[V]-$_{Pr\text{-}2}$[CV́]-*súma* for adnominal forms vs. $_{Pr\text{-}2}$[CV́V́]-*súma* for predicative forms.

Concerning class-specific features, what is salient is that cl. 4 nouns trigger an agreement pattern identical to that of cl. 10, e.g., *imíti ishísúma* 'good medicines' vs. *ińkóko ishísúma* 'good chickens'. As shown in the following sections, it is quite consistent that the cl. 4 nouns trigger the cl. 10 agreement pattern within the NP domain.

As for cl. 5, it is described in 2.2.3 that its CP regularly drops before a polysyllabic stem. In contrast, cl. 5 PP does not drop even before a polysyllabic adjectival stem. This clearly shows that they should be distinct in terms of morphological behaviour although the segmental shape is identical. On the other hand, there is a difference in shape between CP and PP in cl. 9/10, i.e., CP 9/10 *N*- vs. PP_9 *i*-/ PP_{10} *shi*-. Finally, it should be noted that cl. 1 is the only exception in that CP *mu*- is used as an agreement marker of adjectival stems instead of PP *u*-.

2.4.2 Associatives

Associatives (ASSC), also referred to by the more general term 'connective linkers', form a word class that serves to connect two nominal constituents which are in the relation of possessor and possessee, i.e., a functional equivalent of 'of' in 'X of Y'. As with other adnominal forms, ASSC must agree with the noun class property of the head noun. The agreement patterns with each noun class are illustrated in the following.

Table 2-5: List of agreement forms of ASSC

		short forms		long forms	
cl. 1	*umúlími*	*wá kukáasama*		*uwáa kukáasama*	
	u-mu-lim-i	u-a	ku-kasama	u=u-a	ku-kasama
	AUG-1-farmer	PP_1-ASSC	17-Kasama	SPEC=PP_1-ASSC	17-Kasama
	'a farmer from/of Kasama'				
cl. 2	*abálími*	*bá kukáasama*		*abáa kukáasama*	
	a-ba-lim-i	ba-a	ku-kasama	a=ba-a	ku-kasama
	AUG-2-farmer	PP_2-ASSC	17-Kasama	SPEC=PP_2-ASSC	17-Kasama
	'farmers from/of Kasama'				
cl. 3	*umúti*	*wá kukáasama*		*uwáa kukáasama*	
	u-mu-ti	u-a	ku-kasama	u=u-a	ku-kasama
	AUG-3-medicine	PP_3-ASSC	17-Kasama	SPEC=PP_3-ASSC	17-Kasama
	'a medicine from/of Kasama'				
cl. 4	*imíti*	*shá kukáasama*		*isháa kukáasama*	
	i-mi-ti	shi-a	ku-kasama	i=shi-a	ku-kasama
	AUG-4-medicine	PP_{10}-ASSC	17-Kasama	SPEC=PP_{10}-ASSC	17-Kasama
	'medicines from/of Kasama'				
cl. 5	*ilíni*	*lya*[12] *ńkókó*		*ílya ńkókó*	
	i-li-ni	li-a	N-koko	i=li-a	N-koko
	AUG-5-egg	PP_5-ASSC	9-chicken	SPEC=PP_5-ASSC	9-chicken

[12] Whereas the vowel length of this ASSC form is expected to be long, i.e., *lyaa*, the length becomes neutralised caused by the following NC onset of *ńkókó*.

	‘a chicken’s egg’				
cl. 6	*amáni*	*ya ńkókó*		*áya ńkókó*	
	a-ma-ni	ya-a	N-koko	a=ya-a	N-koko
	AUG-6-egg	PP$_6$-ASSC	9-chicken	SPEC=PP$_6$-ASSC	9-chicken
	‘a chicken’s eggs’				
cl. 7	*icísóté*	*cáá mwáana*		*icáá mwáana* (*~ícaa mwáana*)	
	i-ci-sote	ci-a	mu-ana	i=ci-a	mu-ana
	AUG-7-hat	PP$_7$-ASSC	1-child	SPEC=PP$_7$-ASSC	1-child
	‘a hat of a child’				
cl. 8	*ifĩsóté*	*fyáá mwáana*		*ifyáá mwáana* (*~ífyaa mwáana*)	
	i-fi-sote	fi-a	mu-ana	i=fi-a	mu-ana
	AUG-8-hat	PP$_8$-ASSC	1-child	SPEC=PP$_8$-ASSC	1-child
	‘hats of a child’				
cl. 9	*inkóko*	*yá kukáasama*		*iyáa kukáasama*	
	i-N-koko	i-a	ku-kasama	i=i-a	ku-kasama
	AUG-9-chicken	PP$_9$-ASSC	17-Kasama	SPEC=PP$_9$-ASSC	17-Kasama
	‘a chicken from Kasama’				
cl. 10	*inkóko*	*shá kukáasama*		*isháa kukáasama*	
	i-N-koko	shi-a	ku-kasama	i=shi-a	ku-kasama
	AUG-10-chicken	PP$_{10}$-ASSC	17-Kasama	SPEC=PP$_{10}$-ASSC	17-Kasama
	‘chickens from Kasama’				
cl. 11	*ulúkásá*	*lwáa bakúlu*		*úlwaa bakúlu*	
	u-lu-kasa	lu-a	ba-kulu	u=lu-a	ba-kulu
	AUG-11-foot	PP$_{11}$-ASSC	2-big	SPEC=PP$_{11}$-ASSC	2-big
	‘a foot of an adult’				
cl. 12	*akákóndo*	*káá mwáana*		*ákaa mwáana*	
	a-ka-kondo	ka-a	mu-ana	a=ka-a	mu-ana
	AUG-12-toe	PP$_{12}$-ASSC	1-child	SPEC=PP$_{12}$-ASSC	1-child
	‘a toe of a child’				

cl. 13	*utúkóndo*	*twáá báana*		*útwaa báana*	
	u-tu-kondo	tu-a	ba-ana	u=tu-a	ba-ana
	AUG-13-toe	PP_{13}-ASSC	2-child	SPEC=PP_{13}-ASSC	2-child
	‘toes of a child’				
cl. 14	*ubóówá*	*bwá kukáasama*		*ubwáa kukáasama*	
	u-bu-owa	bu-a	ku-kasama	u=bu-a	ku-kasama
	AUG-14-mushroom	PP_{14}-ASSC	17-Kasama	SPEC=PP_{14}-ASSC	17-Kasama
	‘mushrooms from/of Kasama’				
cl. 15	*ukúbokó*	*kwá kuliiláko*		*úkwaa kuliiláko*	
	u-ku-boko	ku-a		u=ku-a	
	AUG-15-hand	PP_{15}-ASSC		SPEC=PP_{15}-ASSC	
		ku-liila=ko		ku-liila=ko	
		17-eat.APPL=$ENCL_{17}$		17-eat.APPL=$ENCL_{17}$	
	‘the hand of eating’				
cl. 16	*páng’ánda*	*páá ḿfúmu*		*apáá ḿfúmu* (*~ápaa mfúmu*)	
	pa-N-ganda	pa-a	N-fumu	a=pa-a	N-fumu
	16-9-house	PP_{16}-ASSC	9-chief	SPEC=PP_{16}-ASSC	9-chief
	‘at the house of the chief’				
cl. 17	*kúng’ánda*	*kwáá ḿfúmu*		*ukwáá ḿfúmu* (*~úkwaa mfúmu*)	
	ku-N-ganda	ku-a	N-fumu	u=ku-a	N-fumu
	17-9-house	PP_{17}-ASSC	9-chief	SPEC=PP_{17}-ASSC	9-chief
	‘towards the house of the chief’				
cl. 18	*múng’ánda*	*mwáá ḿfúmu*		*umwáá ḿfúmu* (*~úmwaa mfúmu*)	
	mu-N-ganda	mu-a	N-fumu	u=mu-a	N-fumu
	18-9-house	PP_{18}-ASSC	9-chief	SPEC=PP_{18}-ASSC	9-chief
	‘in the house of the chief’				

As shown in Table 2-5, there are two series of forms that can be identified as an associative/ connective linker: one is a CV(V)-shaped ‘short’ form as in (6a) and the other is a VCVV-shaped ‘long’ form as in (6b). While both forms serve the same function as a genitive connector, they express different connotations in terms of the information status of the referent. For example, (6a) refers to any, unspecified farmer who is from Kasama, while (6b) is typically used to specify that the referent is the one from Kasama among other farmers from different places.

(6) a. *umúlímí wá kukáasama*
u-mu-lim-i u-a ku-kasama
AUG-1-farmer PP_1-ASSC 17-Kasama
‘a farmer from/of Kasama’
b. *umúlímí uwáa kukáasama*
u-mu-lim-i u=u-a ku-kasama
AUG-1-farmer SPEC=PP_1-ASSC 17-Kasama
‘the farmer from/of Kasama’ (when specifying who is the one from Kasama)

Similarly, the long form is used to introduce a contrastive focus with which the speaker specifies the referent that is expected to be identified in the discourse.

(7) a. *uyú úmuti wá kwíísa*
uyu u-mu-ti u-a ku-isa
DEM.SP$_3$ AUG-3-medicine PP$_3$-ASSC PP$_{17}$-which
'Where do these medicines come from?'
b. *úmúti uwáa kukáasama*
u-mu-ti u=u-a ku-kasama
AUG-3-medicine SPEC$_3$=PP$_3$-ASSC PP$_{17}$-Kasama
'these medicines from Kasama (not from other places)'

Another important observation is about the co-occurrence restriction with a demonstrative form. Interestingly, whereas the short form co-occurs with a demonstrative that modifies the head noun as in (8a), the long form cannot occur in the same syntactic environment, as shown in (8b).

(8) a . *umúlímí úyú wa kukáasama*
u-mu-lim-i uyu u-a ku-kasama
AUG-1-farmer DEM.CD$_1$ PP$_1$-ASSC 17-Kasama
'this farmer from Kasama'
b. *umulimi uyu uwaa kukaasama

This co-occurrence restriction, together with the specifiability of the referent encoded by the long form, clearly implies that the long form itself contains an element that plays a role as the specifier of a referent like a determiner or a demonstrative itself. One of the possible interpretations, based on these facts, is that the initial vowel element consisting of the long form can be identified as a relic, or a fossilised descendant, of a short demonstrative, which may be traced back to the shortest demonstrative form, which is identical to the form of PP, reconstructed in Proto-Bantu as a 'weak anaphoric' marker (Meeussen 1967: 107).

Thus in this grammar sketch, the long form is morphologically analysed as the form consisting of the short form, which is ASSC itself, and the preceding proclitic which is tentatively labelled as specifier (SPEC), i.e., {SPEC$_x$=PP$_x$-ASSC$_x$}. It is also tentatively assumed that the lengthening of the stem vowel may be explained by a certain type of minimality constraint that disallows a monosyllabic host of any clitic[13]. More intensive investigation is needed to describe the whole process of the lengthening mechanism of this language (for further information about a similar distinction between short vs. long forms, see Van de Velde [2019: 263]).

2.5 Verbal agreement

Along with the noun class system, an agglutinating template of verbal morphology is another common feature shared across Bantu languages (except for a small group of relatively analytic languages spoken along the northwestern border of the Bantu area). The template is generally formulised as follows.

Table 2-6: Morphological template of Bantu verbs (cf. Meeussen 1967; Nurse 2008; Güldemann 2022)

Pre-stem markers	Stem cluster

[13] For further information about the segmental adjustment relevant to cliticisation from a typological perspective, see Plank (2005), Schiering (2006), and Mohammadirad (2022).

PREIN	IN	POSTIN	PRERAD	RAD	EXT	PREFIN	FIN	POSTFIN
-4	-3	-2	-1	0	1	2	3	4
NEG, TMA, etc.	SM	NEG, TMA, etc.	OM	Root	Derivation	TMA	TMA	Clause type, etc.

Grammatical agreement between verbs and nominal arguments is marked on the pre-stem slots. Agreement with a subject noun is marked on the Subject Marker (SM) slot, while coreference with object NP(s) is shown in the Object Marker (OM) slot.

2.5.1 Subject agreement

The agreement patterns with different noun class subjects, as well as with different speech participant subjects (i.e., 1SG, 1PL, 2SG, 2PL) are illustrated in the following.

Table 2-7: List of SM followed by CV-shaped TAM (with a Ø-toned verb stem)

	sg.	pl
1 pers.	*nkeesá* N-ka-is-a SM_{1SG}-FUT3-come-FV 'I will come'	*tukeesá* tu-ka-is-a SM_{1PL}-FUT3-come-FV 'We will come'
2 pers.	*ukeesá* u-ka-is-a SM_{2SG}-FUT3-come-FV 'You (sg.) will come'	*mukeesá* mu-ka-is-a SM_{2PL}-FUT3-come-FV 'You (pl.) will come'
cl. 1/2	*umúlímí akéesá* u-mu-limi a-ka-is-a AUG-1-farmer SM_1-FUT3-come-FV 'A farmer will come'	*abálímí bakéesá* a-ba-limi ba-ka-is-a AUG-2-farmer SM_2-FUT3-come-FV 'Farmers will come'
cl. 3/4	*úmúcila úká[14]pona* u-mu-cila u-ka-pon-a AUG-3-tail SM_3-FUT3-fall-FV 'A tail will fall'	*ímícila shíkápona* i-mi-cila shi-ka-pon-a AUG-4-tail SM_{10}-FUT3-fall-FV 'Tails will fall'
cl. 5/6	*ílíni líkápona* i-li-ni li-ka-pon-a AUG-5-egg SM_5-FUT3-fall-FV 'An egg will fall'	*ámáni yákápona* a-ma-ni ya-ka-pon-a AUG-6-egg SM_6-FUT3-fall-FV 'Eggs will fall'
cl. 7/8	*icísóté cíkápona* i-ci-sote ci-ka-pon-a AUG-5-hat SM_7-FUT3-fall-FV 'A hat will fall'	*ifísóté fíkápona* i-fi-sote fi-ka-pon-a AUG-5-hat SM_8-FUT3-fall-FV 'Hats will fall'
cl. 9/10	*íńkóko íkápona* i-N-koko i-ka-pon-a AUG-9-chicken SM_9-FUT3-fall-FV 'A chicken will fall'	*íńkóko shíkápona* i-N-koko shi-ka-pon-a AUG-9-chicken SM_{10}-FUT3-fall-FV 'Chickens will fall'

[14] An initial H doublet in this environment, i.e., H-toned SM with a H-toned verb stem in FUT3, can also be realised as [H↓H].

cl. 11/10	*ulúkóńdé lúkápona*	*íńkóńdé shíkápona*
	u-lu-konde lu-ka-pon-a	i-N-konde shi-ka-pon-a
	AUG-11-banana SM_{11}-FUT3-fall-FV	AUG-10-banana SM_{10}-FUT3-fall-FV
	'A banana will fall'	'Bananas will fall'
cl. 12/13	*akóóní kákápona*	*utóóní túkápona*
	a-ka-oni ka-ka-pon-a	u-tu-oni tu-ka-pon-a
	AUG-12-bird SM_{12}-FUT3-fall-FV	AUG-13-bird SM_{13}-FUT3-fall-FV
	'A small bird will fall'	'Small birds will fall'
cl. 14	*ubóówá búkápona*	
	u-bu-owa bu-ka-pon-a	
	AUG-14-mushroom SM14-FUT3-fall-FV	
	'A mushroom will fall'	
cl. 15/6	*úkúboko kúkápona*	*ámáboko yákápona*
	u-ku-boko ku-ka-pon-a	a-ma-boko ya-ka-pon-a
	AUG-15-arm SM_{15}-FUT3-fall-FV	AUG-6-arm SM_{6}-FUT3-fall-FV
	'An arm will fall'	'Arms will fall'
cl. 16	*pán'gánda pá↓lyá palááleńkálamo*	
	pa-N-ganda pa-lya pa-Ø-laal-a i-N-kalamo	
	16-9-home PP_{16}-DEM.D SM_{16}-PRS.DJ-sleep-FV AUG-9-lion	
	'A lion sleeps at that house (Lit: At that house sleeps a lion)'	
cl. 17	*kún'gánda kú↓lyá kulááleńkálamo*	
	ku-N-ganda ku-lya ku-Ø-laal-a i-N-kalamo	
	17-9-home PP_{17}-DEM.D SM_{17}-PRS.DJ-sleep-FV AUG-9-lion	
	'A lion sleeps towards/in that house (Lit: Towards that house sleeps a lion)'	
cl. 18	*mún'gánda mú↓lyá mulááleńkálamo*	
	mu-N-ganda mu-lya mu-Ø-laal-a i-N-kalamo	
	18-9-home PP_{18}-DEM.D SM_{18}-PRS.DJ-sleep-FV AUG-9-lion	
	'A lion sleeps in that house (Lit: In that house sleeps a lion)'	

As in the reconstructed forms in Proto-Bantu, SM in this language seems to retain the tonal distinction, i.e., SM for all the speech participants are not associated with an underlying high tone, as no marked high tone assumed to be associated with SM is realised in the examples[15] *nkeesá, ukeesá, tukeesá, mukeesá*, while SM for class nouns have an underlying high tone which seems to be realised on the following syllable, at least in the same environment with a Ø-tone verb, *-is-a* 'come', cl. 1: *akéesá*, cl. 2: *bakéesá*.

When followed by the vowel-initial TAM, the SM's high vowels are realised as glides when its onset consonant does not have the feature [+alv].

(9) Glide formation at SM-TAM boundary: i, u → y, w/ (C [–alv])]$_{SM}$ __$_{TAM}$[a

[15] However, I also confirmed the pitch pattern with a high tone on the second TBU, i.e., *nkéesá* etc., from a consultant who speaks a different variety, suggesting that the tonal distinction between H-toned vs. Ø-toned SM might become neutralised in some varieties.

Table 2-8: List of SM followed by v-initial TAM (with a Ø-toned verb stem)

	sg.	pl
1 pers.	*nalááísá* N-alaa-is-a SM_{1SG}-FUT1-come-FV 'I will come'	*twaalááísá* tu-alaa-is-a SM_{1PL}-FUT1-come-FV 'We will come'
2 pers.	*waalááísá* u-alaa-is-a SM_{2SG}-FUT1-come-FV 'You (sg.) will come'	*mwaalááísá* mu-alaa-is-a SM_{2PL}-FUT1-come-FV 'You (pl.) will come'
cl. 1/2	*umúlímí áalááísá* u-mu-limi a-alaa-is-a AUG-1-farmer SM_1-FUT1-come-FV 'A farmer will come'	*abálímí báalááísá* a-ba-limi ba-alaa-is-a AUG-2-farmer SM_2-FUT1-come-FV 'Farmers will come'
cl. 3/4	*umúcila wáaláapona* u-mu-cila a-alaa-pon-a AUG-3-tail SM_3-FUT1-fall-FV 'A tail will fall'	*imícila sháaláapona* i-mi-cila shi-alaa-pon-a AUG-4-tail SM_{10}-FUT1-fall-FV 'Tails will fall'
cl. 5/6	*ílíni lyáaláapona* i-li-ni li-alaa-pon-a AUG-5-egg SM_5-FUT1-fall-FV 'An egg will fall'	*ámáni yáaláapona* a-ma-ni ya-alaa-pon-a AUG-6-egg SM_6-FUT1-fall-FV 'Eggs will fall'
cl. 7/8	*icísóté cáaláapona* i-ci-sote ci-alaa-pon-a AUG-5-hat SM_7-FUT1-fall-FV 'A hat will fall'	*ifísóté fyáaláapona* i-fi-sote fi-alaa-pon-a AUG-5-hat SM_8-FUT1-fall-FV 'Hats will fall'
cl. 9/10	*inkóko yáaláapona* i-N-koko i-alaa-pon-a AUG-9-chicken SM_9-FUT1-fall-FV 'A chicken will fall'	*inkóko sháaláapona* i-N-koko shi-alaa-pon-a AUG-9-chicken SM_{10}-FUT1-fall-FV 'Chickens will fall'
cl. 11/10	*ulukonde lwáaláapona* u-lu-konde lu-alaa-pon-a AUG-11-banana SM_{11}-FUT1-fall-FV 'A banana will fall'	*inkonde sháaláapona* i-N-konde shi-alaa-pon-a AUG-10-banana SM_{10}-FUT1-fall-FV 'Bananas will fall'
cl. 12/13	*akóóní káaláapona* a-alaa-oni alaa-alaa-pon-a AUG-12-bird SM_{12}-FUT1-fall-FV 'A small bird will fall'	*utóóní twáaláapona* u-tu-oni tu-alaa-pon-a AUG-13-bird SM_{13}-FUT1-fall-FV 'Small birds will fall'
cl. 14	*uboowa bwáaláapona* u-bu-owa bu-alaa-pon-a AUG-14-mushroom SM14-FUT1-fall-FV 'A mushroom will fall'	
cl. 15/6	*ukúboko kwáaláapona* u-ku-boko ku-alaa-pon-a AUG-15-arm SM_{15}-FUT1-fall-FV 'An arm will fall'	*amáboko yáaláapona* a-ma-boko ya-alaa-pon-a AUG-6-arm SM_6-FUT1-fall-FV 'Arms will fall'

2.5.2 Object agreement

The following is a list of object concord markers coreferring to a nominal object in different classes, as well as to different speech participants. As in the case of SM, the tonal property of each OM seems to generally inherit that reconstructed for Proto-Bantu, i.e., L (/Ø/) for singular persons, i.e., 1st and 2nd person singular and cl. 1, while all others are H (Meeussen 1967: 97) as shown in the examples in Table 2-9.

Table 2-9: List of SM followed by CV-shaped TAM (with a high-toned verb stem)

	sg.	pl
1 pers.	*baacím↓móná* ba-aci-N-mon-a SM_2-PST2-OM_{1SG}-see-FV 'They saw me'	*baacítúmóná* ba-aci-tu-mon-a SM_2-PST2-OM_{1PL}-see-FV 'They saw us'
2 pers.	*naacíku↓móná* n-aci-ku-mon-a SM_{1SG}-PST2-OM_{2SG}-see-FV 'I saw you (sg.)'	*naacímímóná* n-aci-mi-mon-a SM_{1SG}-PST2-OM_{2PL}-see-FV 'I saw you (pl.)'
cl. 1/2	*naacímu↓móná* n-aci-mu-mon-a SM_{1SG}-PST2-OM_1-see-FV 'I saw him/her'	*naacíbámóná* n-aci-ba-mon-a SM_{1SG}-PST2-OM_2-see-FV 'I saw them '
cl. 3/4	*naacíúmóná* n-aci-u-mon-a SM_{1SG}-PST2-OM_3-see-FV 'I saw it'	*naacíshímóná* n-aci-shi-mon-a SM_{1SG}-PST2-OM_{10}-see-FV 'I saw them'
cl. 5/6	*naacílímóná* n-aci-li-mon-a SM_{1SG}-PST2-OM_5-see-FV 'I saw it'	*naacíyámóná* n-aci-ya-mon-a SM_{1SG}-PST2-OM_6-see-FV 'I saw them'
cl. 7/8	*naacícímóná* n-aci-ci-mon-a SM_{1SG}-PST2-OM_7-see-FV 'I saw it'	*naacífímóná* n-aci-fi-mon-a SM_{1SG}-PST2-OM_8-see-FV 'I saw them'
cl. 9/10	*naacíímóná* n-aci-i-mon-a SM_{1SG}-PST2-OM_9-see-FV 'I saw it'	*naacíshímóná* n-aci-shi-mon-a SM_{1SG}-PST2-OM_{10}-see-FV 'I saw them'
cl. 11	*naacílúmóná* n-aci-lu-mon-a SM_{1SG}-PST2-OM_{11}-see-FV 'I saw it'	
cl. 12/13	*naacíkámóná* n-aci-ka-mon-a SM_{1SG}-PST2-OM_{12}-see-FV 'I saw it'	*naacítúmóná* n-aci-tu-mon-a SM_{1SG}-PST2-OM_{13}-see-FV 'I saw them'

cl. 14	*naacíbúmóná* n-aci-bu-mon-a SM_{1SG}-PST2-OM_{14}-see-FV 'I saw it/them'
cl. 15/6	*naacíkúmóná* n-aci-ku-mon-a SM_{1SG}-PST2-OM_{15}-see-FV 'I saw it'
cl. 16	*naacípámóná* n-aci-pa-mon-a SM_{1SG}-PST2-OM_{16}-see-FV 'I saw it (there)'
cl. 17	*naacíkúmóná* n-aci-ku-mon-a SM_{1SG}-PST2-OM_{17}-see-FV 'I saw it (there)'
cl. 18	*naacimúmóná* n-aci-mu-mon-a SM_{1SG}-PST2-OM_{18}-see-FV 'I saw inside it (there)' cf. *naacímónámo* n-aci-mon-a=mo SM_{1SG}-PST2-see-FV=LOC 'I saw it (there)'

Unlike the subject concord, which is a process of genuine agreement in that SM is structurally obligatory irrespective of the presence of a full NP subject within the same clause, the nature of object concord may vary from language to language. In languages where the co-occurrence of OM and a corresponding overt object NP is ungrammatical (e.g., Herero [R30] and Chaga-Vunjo [E62], according to Marten & Kula 2012: 240), OM should be identified as a cliticised pronoun rather than a pure agreement marker (for more discussion, see Duranti 1979; Hyman & Duranti 1982; Bresnan & Mchombo 1987; Baker 2016). According to Marten and Kula (2012), this kind of co-occurrence restriction does not work in Bemba, suggesting that the OM in this language can be identified as a mechanical agreement marker rather than a pronominal element.

(10) Cooccurrence of OM and a corresponding overt object NP (Marten & Kula 2012: 240)
N-alíí-mú-món-a Chisanga
SM_{1SG}-PST3-OM_{1}-see-FV Chisanga
'I saw Chisanga'

However, some of our data seem to suggest that the structural well-formedness of the co-occurrence may not always be secured. In the following examples of impersonal passive constructions with an applicative verb, the presence of a post-verbal overt object, *ábáana*, causes an unintended reading.

(11) a. *bálábeepíkila ífyaakúlya kúmwéeni*
ba-la-ba-ipik-il-a i-fyaakulya ku-mweeni

SM$_2$-PRS.DJ-OM$_2$-cook-APPL-FV AUG-8.food 17-1.guest
'Food is cooked for them by the guest'

b. *ábáana bálábeepíkila ífyaakúlya kúmwéeni*
a-ba-ana ba-la-ba-ipik-il-a i-fyaakulya ku-mweeni
AUG-2-child SM$_2$-PRS.DJ-OM$_2$-cook-APPL-FV AUG-8.food 17-1.guest
'Food is cooked for children by the guest'

c. ?? *ifyáakúlya fílábeepikilwa ábáana kúmwéeni*
i-fyaakulya fi-la-ba-ipik-il-w-a a-ba-ana ku-mweeni
AUG-8.food SM$_8$-PRS.DJ-OM$_2$-cook-APPL-PASS-FV AUG-2-child 17-1.guest
?? 'Food gets cooked on its own for children by the guest'

On the other hand, Marten & Kula (2012) point out that generally Bemba does not allow two object markers in a single verb form, suggesting that the language can be classified as an 'object asymmetric' language, in a sense that only one object can be treated as a primary object, unlike an 'object symmetric' language, where both direct and indirect objects can equally enjoy the status (cf. Bresnan & Moshi 1990).[16]

(12) General unavailability of double OM in Bemba (Marten & Kula 2012: 245)

a. * N-àlíí-mù-yà-péél-à
SM$_{1SG}$-PST3-OM$_1$-OM$_6$-give-FV
Intd: 'I gave him it (e.g. water).'

b. * N-àlíí-yà-mù-péél-à.
SM$_{1SG}$-PST3-OM$_6$-OM$_1$-give-FV
Intd: 'I gave him it (e.g. water).'

The object asymmetric nature[17] suggested by (12) is also illustrated by the following examples, where only the object that is introduced by the applicative morphology, which is the cl. 2 noun *abaana* in the following example, is licensed to be i) placed in the 'IAV' (immediately after the verb) position as in (13a), as well as to be ii) object-marked on the verb as in (14a).

(13) a. *báleepíkila ábáana ífyaakúlya*
ba-la-ipik-il-a a-baana i-fyaakulya
SM$_2$-PRS.DJ-cook-APPL-FV AUG-2.children AUG-7.food
'They cook food for children'

b. * baleepikila ifyaakula abaána

(14) a. *balábeepíkila ífyaakúlya*
ba-la-ba-ipik-il-a i-fyaakulya
SM$_2$-PRS.DJ-OM$_2$-cook-APPL-FV AUG-7.food

[16] However, under certain restricted conditions, e.g., where both OMs refer to animate referents, double object marking can be allowed, as illustrated in the following example from Marten and Kula (2012: 245):
Mù-kà-bá-mú-éb-él-á=kó
SM$_{2PL}$-FUT3-OM$_2$-OM$_1$-tell-APPL-FV=17
'You will tell them for him.'
For further discussion on how object a/symmetry can be affected by various morphosyntactic and semantic factors across Bantu languages, see Marten and Kula (2012), Jerro (2015), and Van der Wal (2017a).

[17] Another criterion which is included in the most common set of the three criteria to examine the status of object symmetry is the passivisability of the object NP (cf. Hyman & Duranti 1982).

b. * balafiipikila abaana
ba-la-fi-ipik-il-a a-baana
SM$_2$-PRS.DJ-OM$_7$-cook-APPL-FV AUG-2.children

2.6 Demonstratives

The demonstrative system is organised by at least four-way distinction, as illustrated in (15 a–d).

(15) a. *umúlími úyú*
u-mu-lim-i u-yu
AUG-1-farmer AUG-PP$_1$
'this farmer (near me)'
b. *umúlími ú$^{\downarrow}$nó*
u-mu-lim-i u-no
AUG-1-farmer PP$_1$-DEM.SP
'this farmer (near me but far from you)'
c. *umúlími úyó*
u-mu-lim-i u-yu-o
AUG-1-farmer AUG-PP$_1$-DEM.HP
'that farmer (far from me, near you)'
d. *umúlími ú$^{\downarrow}$lyá*
u-mu-lim-i u-lya
AUG-1-farmer PP$_1$-DEM.D
'that farmer (far from both)'

As shown in the translation, the distinction is based on the relative distance between the referent and both or either of the speech participants. The basic distinction is bipartite, i.e., far from both speech participants or close to them, or more specifically to the speaker, which is expressed through the distinction between *úyú* and *ú$^{\downarrow}$lyá* in (15a) and (15d), respectively. Based on this bipartite contrast, the latter is labelled 'distal' (DEM.D), while the former is labelled 'counter-distal' (DEM.CD).

The secondary distinction is about referring to something in between the speech participants, i.e., something which is close to the speaker but far from the hearer vs. something which is out of reach for the speaker but near the hearer. This distinction is expressed through the two distinct forms, namely *ú$^{\downarrow}$nó*, which is labelled here as 'speaker-proximate' (DEM.SP) vs. *úyó*, labelled 'hearer-proximate' (DEM.HP), as illustrated in (15b) and (15c), respectively.

These four series, however, seem not to be used evenly. According to the consultants, there is a salient tendency for DEM.SP to be waned out and replaced by DEM.CD. However, what should be noted is that DEM.SP is quite productively used as a locative as well as temporal demonstrative, e.g., cl. 17 *kú$^{\downarrow}$nó* can be frequently used to refer to the (mental) area that is within reach of the speaker but not occupied by others, while *únó mwáaka* is an idiomatic expression meaning 'this year'.

A list of all the forms of the four series in all different classes is provided in the following table.

Table 2-10: List of DEM forms

		C.D.	S.P.	H.P.	D.
cl. 1	*umúlímí*	*úyú*	*ú↓nó*	*úyó*	*ú↓lyá*
	u-mu-limi	u-yu	u-no	u-yu-o	u-lya
	AUG-1-farmer	AUG-PP$_1$	PP$_1$-DEM.SP	AUG-PP$_1$-DEM.HP	PP$_1$-DEM.D
cl. 2	*abálímí*	*ábá*	*bá↓nó*	*ábó*	*bá↓lyá*
	a-ba-limi	a-ba	ba-no	a-ba-o	ba-lya
	AUG-2-farmer	AUG-PP$_2$	PP$_2$-DEM.SP	AUG-PP$_2$-DEM.HP	PP$_2$-DEM.D
cl. 3	*úmúti*	*uyu*	*uno*	*uyo*	*ú↓lyá*
	u-mu-ti	u-yu	u-no	u-yu-o	u-lya
	AUG-3-medicine	AUG-PP$_3$	PP$_3$-DEM.SP	AUG-PP$_3$-DEM.HP	PP$_3$-DEM.D
cl. 4	*ímíti*	*ishi*	*shino*	*isho*	*shí↓lyá*
	i-mi-ti	i-shi	shi-no	i-shi-o	shi-lya
	AUG-4-medicine	AUG-PP$_{10}$	PP$_{10}$-DEM.SP	AUG-PP$_{10}$-DEM.HP	PP$_{10}$-DEM.D
cl. 5	*ílíni*	*ili*	*lino*	*ilyo*	*lí↓lyá*
	i-li-ni	i-li	li-no	i-li-o	li-lya
	AUG-5-egg	AUG-PP$_5$	PP$_5$-DEM.SP	AUG-PP$_5$-DEM.HP	PP$_5$-DEM.D
cl. 6	*ámáni*	*aya*	*yano*	*ayo*	*yá↓lyá*
	i-li-ni	a-ya	ya-no	a-ya-o	ya-lya
	AUG-5-egg	AUG-PP$_6$	PP$_6$-DEM.SP	AUG-PP$_6$-DEM.HP	PP$_6$-DEM.D
cl. 7	*icísóté*	*ící*	*cí↓nó*	*ícó*	*cí↓lyá*
	i-ci-sote	i-ci	ci-no	i-ci-o	ci-lya
	AUG-7-hat	AUG-PP$_7$	PP$_7$-DEM.SP	AUG-PP$_7$-DEM.HP	PP$_7$-DEM.D
cl. 8	*ifísóté*	*ífí*	*fí↓nó*	*íyfó*	*fí↓lyá*
	i-fi-sote	i-fi	fi-no	i-fi-o	fi-lya
	AUG-8-hat	AUG-PP$_8$	PP$_8$-DEM.SP	AUG-PP$_8$-DEM.HP	PP$_8$-DEM.D
cl. 9	*inkóko*	*iyi*	*ino*	*iyo*	*cí↓lyá*
	i-N-koko	i-i	i-no	i-i-o	i-lya
	AUG-9-chicken	AUG-PP$_7$	PP$_7$-DEM.SP	AUG-PP$_7$-DEM.HP	PP$_7$-DEM.D
cl. 10	*inkóko*	*ishi*	*shino*	*isho*	*shí↓lyá*
	i-N-koko	i-shi	shi-no	i-shi-o	shi-lya
	AUG-10-chicken	AUG-PP$_4$	PP$_{10}$-DEM.SP	AUG-PP$_{10}$-DEM.HP	PP$_{10}$-DEM.D
cl. 11	*ulúkásá*	*úlú*	*lú↓nó*	*úló*	*lú↓lyá*
	u-lu-kasa	u-lu	lu-no	u-lu-o	lu-lya
	AUG-11-foot	AUG-PP$_{11}$	PP$_{11}$-DEM.SP	AUG-PP$_{11}$-DEM.HP	PP$_{11}$-DEM.D
cl. 12	*ákákondo*	*aka*	*kano*	*ako*	*ká↓lyá*
	a-ka-kondo	a-ka	ka-no	a-ka-o	ka-lya
	AUG-12-home	AUG-PP$_{12}$	PP$_{12}$-DEM.SP	AUG-PP$_{12}$-DEM.HP	PP$_{12}$-DEM.D
cl. 13	*útúkondo*	*utu*	*tuno*	*uto*	*tú↓lyá*
	u-tu-kondo	u-tu	tu-no	u-tu-o	tu-lya
	AUG-13-home	AUG-PP$_{13}$	PP$_{13}$-DEM.SP	AUG-PP$_{13}$-DEM.HP	PP$_{13}$-DEM.D
cl. 14	*ubóówá*	*úbú*	*bú↓nó*	*úbó*	*bú↓lyá*
	u-bu-owa	u-bu	bu-no	u-bu-o	bu-lya
	AUG-14-mushroom	AUG-PP$_{14}$	PP$_{14}$-DEM.SP	AUG-PP$_{14}$-DEM.HP	PP$_{14}$-DEM.D

cl. 15	*úkúboko*	*uku*	*kú↓nó*	*uko*	*kú↓lyá*
	u-ku-kondo	u-ku	ku-no	u-ku-o	ku-lya
	AUG-15-arm	AUG-PP$_{15}$	PP$_{15}$-DEM.SP	AUG-PP$_{15}$-DEM.HP	PP$_{15}$-DEM.D
cl. 16	*páng'ánda*	*apa*	*pano*	*apo*	*pá↓lyá*
	pa-N-anda	a-pa	pa-no	a-pa-o	pa-lya
	16-9-home	AUG-PP$_{16}$	PP$_{16}$-DEM.SP	AUG-PP$_{16}$-DEM.HP	PP$_{16}$-DEM.D
cl. 17	*kúng'ánda*	*uku*	*kuno*	*uko*	*kú↓lyá*
	ku-N-anda	u-ku	ku-no	u-ku-o	ku-lya
	17-9-home	AUG-PP$_{17}$	PP$_{17}$-DEM.SP	AUG-PP$_{17}$-DEM.HP	PP$_{17}$-DEM.D
cl. 18	*múng'ánda*	*umu*	*muno*	*umo*	*mú↓lyá*
	mu-N-anda	a-mu	mu-no	u-mu-o	mu-lya
	18-9-home	AUG-PP$_{18}$	PP$_{18}$-DEM.SP	AUG-PP$_{18}$-DEM.HP	PP$_{18}$-DEM.D

Based on the realisation, demonstrative forms can be abstracted down to the following structural template. Tonal patterns, when preceded by both H-nouns and Ø-nouns, are also presented.

Table2-11: Structural template of the demonstratives (TS: Tone spreading)

	CD	SP	HP	D
morphology	AUG-PP	PP-*no*	CD[AUG-PP]-*o*	PP-*lya*
Ø-noun	flat H (TS)	H↓H	flat H (TS)	H↓H
H-noun	flat L	flat L (or H↓H?)	flat L	H↓H

As summarised in the table, all demonstratives contain PP as an integral part that shows noun class-based agreement with its head noun. AUG, which appears as a constituent of CD, which in turn is nested in HP, is identical with the vowel of the following PP. This form can otherwise be described as a reduced PP, which can be identified as an allomorph that appears only before another PP, i.e., either as a reduplicant in the case of DEM.CD {PP-PP}, or as a clitic that forms a 'long associative', i.e., what is termed as SPEC in 2.4.2, which is morphologically described as {PP=PP-ASSC} based on this alternative interpretation.

2.7 List of agreement markers

The following is an exhaustive list of the nominal pre-stem elements, i.e., augment (AUG) and noun class prefix (CP), agreement markers including the verbal subject marker (SM) and object marker (OM), as well as pronominal prefixes (PP) , and demonstratives (DEM) , which are classified into counter-distal (CD), speaker-proximate (SP), hearer-proximate (HP), and distal (D). The table is sorted by speech participant categories, i.e., 1SG, 1PL, 2SG, 2PL, followed by noun classes. The tonal specification of each form is omitted except for SM and OM, both of which are assumed to inherit their tonal property reconstructed for Proto-Bantu based on the description given in Tables 2-7 and 2-8.

Table 2-12: Exhaustive list of nominal pre-stem elements, agreement markers, and demonstratives

	AUG	CP	ASSC	PP	SM	OM	DEM			
							CD	SP	HP	D
1SG					*Ǹ-*	*Ǹ-*				
1PL					*tù-*	*tú-*				
2SG					*ù-*	*kù-*				
2PL					*mù-*	*mí-*				
cl. 1	*u-*	*mu-*	*wa*	*u-/yu-*	*á-*	*mù-*	*uyu*	*uno*	*uyo*	*ulya*
cl. 2	*a-*	*ba-*	*ba*	*ba-*	*bá-*	*bá-*	*ba*	*bano*	*abo*	*balya*
cl. 1a	–	*Ø-*	*wa*	*u-/yu-*	*á-*	*mù-*	*uyu*	*uno*	*uyo*	*ulya*
cl. 2a	–	*baa-*	*ba*	*ba-*	*bá-*	*bá-*	*ba*	*bano*	*abo*	*balya*
cl. 3	*u-*	*mu-*	*wa*	*u-*	*ú-*	*ú-*	*uyu*	*uno*	*uyo*	*ulya*
cl. 4[18]	*i-*	*mi-*	*ya*	*(i-)*	*(í-)*	*(í-)*	*(iyi)*	*(ino)*	*(iyo)*	*(ilya)*
cl. 5	*i-*	*li-*	*lya*	*li-*	*lí-*	*lí-*	*ili*	*ino*	*liyo*	*ilya*
cl. 6	*a-*	*ma-*	*y*	*ya-*	*yá-*	*yá-*	*aya*	*yano*	*ayo*	*yalya*
cl. 7	*i-*	*ci-*	*ca*	*ci-*	*cí-*	*cí-*	*ici*	*cino*	*ico*	*cilya*
cl. 8	*i-*	*fi-*	*fya*	*fi-*	*fí-*	*fí-*	*ifi*	*fino*	*ifyo*	*filya*
cl. 9	*i-*	*N-*	*ya*	*i-*	*í-*	*í-*	*iyi*	*ino*	*iyo*	*ilya*
cl. 10	*i-*	*N-*	*sha*	*shi-*	*shí-*	*shí-*	*ishi*	*shino*	*isho*	*shilya*
cl. 11	*u-*	*lu-*	*lwa*	*lu-*	*lú-*	*lú-*	*ulu*	*uno*	*ulo*	*lulya*
cl. 12	*a-*	*ka-*	*ka*	*ka-*	*ká-*	*ká-*	*aka*	*kano*	*ako*	*kalya*
cl. 13	*u-*	*tu-*	*twa*	*tu-*	*tú-*	*tú-*	*utu*	*tuno*	*uto*	*tulya*
cl. 14	*u-*	*bu-*	*wa*	*bu-*	*bú-*	*bú-*	*ubu*	*buno*	*ubo*	*bulya*
cl. 15	*u-*	*ku-*	*kwa*	*ku-*	*kú-*	*kú-*	*uku*	*kuno*	*uko*	*kulya*
cl. 16	–	*pa-*	*pa*	*pa-*	*pá-*	*pá-*	*apa*	*panp*	*apo*	*palya*
cl. 17	–	*ku-*	*kwa*	*ku-*	*kú-*	*kú-*	*uku*	*kuno*	*uko*	*kulya*
cl. 18	–	*mu-*	*mwa*	*mu-*	*mú*	*mú-*	*umu*	*muno*	*umo*	*mulya*

[18] The original agreement markers, i.e., PP, SM, and OM, of cl. 4 are assumed to be *i-*. However, this is almost entirely replaced by cl. 10 *shi-*.

3. Basic predicates

This chapter describes a set of basic predicates, namely copulative, i.e., 'S is a X' (3.1); possessive, i.e., 'S has a X' (3.2); and the existential predicates, 'S is at/in/on... P' (3.3). While possessive predicates employ the verbal stem *-kwáat-* 'have' consistently through different tenses, other basic predicates can be non-verbal, in that they do not contain a verbal stem that is obligatorily inflected by any type of final vowel (FV).

3.1 Copulative predicates

CB has three main strategies to form copulative clauses, namely, the use of i) finite verb forms with the root *-b-* 'be, become', ii) the copula *-li*, and iii) nominal predicate forms, which are further classified into two structural types, i.e., nominal forms with a lengthened CP in the absence of AUG (= Type-II of the basic nominal structures formulated in Table 2-1 in Section 2.2), and those with the predicator clitic *ni=*, which replaces AUG. The latter strategy is selectively applied for nouns in classes 1a, 2a, and 9/10 which are marked by CP_{1a} *Ø-*, CP_{2a} *baa-*, and $CP_{9/10}$ *N-*, respectively.

(16) Structural types of copulative predicates 'S is X'
  a. [be] SM-TAM-√*b*-FV + X
  b. [COP] SM-*li* + X
  c. [PRED] X in a nominal predicate form (=(17)a or b)

(17) Structural subtypes of nominal predication
  a. $_{AUG}$[Ø-] $_{CP}$[CVV-] [stem]
  b. *ni=* $_{CP}$[Ø-/baa-/N-] [stem]

The reason why the predicator *ni=* should be assigned to the noun classes 1a/2a and 9/10 seems to be clear, i.e., the class prefixes of those classes are not CV- shaped and thus cannot make a distinction between the short (CV-) NP form and the long (CVV-) predicate form (see Table 2-1 in 2.1).

As shown in the following sections, the three main strategies in (16) (and other supplementary means) are selectively adopted to form a copulative clause depending on its polarity, tense category, and the inflectional properties of its subject, i.e., person, number, and noun classes.

3.1.1 Present tense

In the present tense, the copula *-li* (16b) and nominal predicate forms (16c) are used to form copulative clauses. As shown in the following examples, two strategies are largely complementarily distributed in terms of the inflectional properties of the subject noun.

3.1.1.1 Speech participant subjects

As shown in (18a) and (18c), the copula *-li* is used to make a copulative clause when the subject is a speech participant, i.e., 1SG, 1PL, 2SG, and 2PL. It should also be noted here that the mere coordination of an independent pronoun and a predicate form, which is grammatical for

class nouns, is not grammatically accepted for speech participant subjects, as illustrated in (18b) and (18d) for affirmative clauses and (18b′) and (18d′) for their negative counterparts.

(18) a. [COP.AFF] *ndi mulimi*
N-li mu-limi
SM$_{1SG}$-COP 1-farmer
'I am a farmer'

a′. [COP.NEG] *nshílí mulimi*
N-shi-li mu-limi
SM$_{1SG}$-NEG-COP 1-farmer
'I am not a farmer'

b. [PRED.AFF] * ine muulimi
ine mu-limi
PRON1SG 1-farmer

b′. [PRED.NEG] * ine tee muulimi
ine te mu-limi
PRON1SG NEG 1-farmer

c. [COP.AFF] *muli balimi*
mu-li ba-limi
SM$_{2PL}$-COP 2-farmer
'You (pl.) are farmers'

c′. [COP.NEG] *tamúlí balimi*
ta-mu-li ba-limi
NEG-SM$_{2PL}$-COP 2-farmer
'You (pl.) are not farmers'

d. [PRED.AFF] * imwe baalimi
imwe ba-limi
PRON2PL 2-farmer

d′. [PRED.NEG] * imwe tee baalimi
imwe te ba-limi
PRON2PL NEG 2-farmer

This type of identificational relation, i.e., 'S is a X', can also be expressed by a cleft-like sentence. As illustrated in (19a), the predicator *ni=* proclitics to an independent pronoun to make it a clefted head noun that is then encliticised by *=bo*[19], which is in turn modified by a following relative verb form. The same morphosyntactic template is used to express the copulative relation, as in (19b). As in (19c), however, the enclitic *=bo* can be omitted in a cleft-like copulative sentence, while the omission leads to ungrammaticality in the case of a canonical cleft sentence as shown in (19d).

(19) a. *ine ninéebo úleeimba*
ine ni=ine=bo u-lee-imb-a
PRON1SG PRED=PRON1SG=ENCL$_2$ PP$_1$-PROG-sing-FV
'It is I who is singing'

b. *ine ninéebo kásukúlu*
ine ni=ine=bo kasukulu
PRON1SG PRED=PRON1SG=ENCL$_2$ 1a.student
'I am a student' (Lit: 'It is I who is a student')

c. *ine niné kasukúlu*
ine ni=ine kasukulu
PRON1SG PRED= PRON1SG 1a.student
'I am a student'

d. *ine nine uleeimba
ine ni=ine u-lee-imb-a
PRON1SG PRED= PRON1SG PP$_1$-PROG-sing-FV
Intd: 'It is I who is singing'

Note, however, that this type of cleft-like construction to express a copulative identificational relation can be used for speech participant subjects only, i.e., it seems that only the speech

[19] This form is segmentally identical to the shortened form of the class 2 hearer-proximate demonstrative (DEM.HP). As mentioned in 9.3, the verbal enclitic apparently grammaticalised from DEM.HP plays the role of an (additional) relativiser, among various other morphosyntactic roles.

participant pronouns, namely 1SG *ine*, 1PL *ifwe*, 2SG *iwe*, and 2PL *imwe*, can be a head of this type of pseudo-cleft construction.

3.1.1.2 Class noun subjects

In contrast, the opposite is apparently true for affirmative copulative clauses for class nouns. As exemplified in (20a) and (20c), forms with the copula *-li* are structurally ill-formed and only the use of nominal predicate forms is grammatically accepted.[20] Note, however, that in negative contexts, the use of the copula may also be allowed basically for human subjects, as illustrated in (20a′) and (20c′).

(20) a. [COP.AFF] * ali mulimi
a-li mu-limi
SM_1-COP 1-farmer
Intd: 'S/he is a farmer'

a′. [COP.NEG] *tálí mulimi*
ta-a-li mu-limi
NEG-SM_1-COP 1-farmer
'S/he is not a farmer'

b. [PRED.AFF] *múúlímí*
mu-limi
1-farmer
'S/he is a farmer'

b′. [PRED.NEG] *tee múlímí*
te mu-limi
NEG 1-farmer
'S/he is not a farmer'

c. [COP.AFF] * bali balimi
ba-li ba-limi
SM_2-COP 2-farmer
Intd: 'They are farmers'

c′. [COP.NEG] *tabálí balimi*
ta-ba-li ba-limi
NEG-SM_2-COP 2-farmer
'They are farmers'

d. [PRED.AFF] *báálímí*
ba-limi
2-farmer
'They are farmers'

d′. [PRED.NEG] *tee balímí*
te ba-limi
NEG 2-farmer
'They are not farmers'

Note also that, as briefly summarised in (17), predicate forms for cl. 1a/2a and cl. 9/10 are different from those for other classes in that they take the nominal predicator *ni*=, which can be diachronically traced back to the 'predicative index' **ní* reconstructed in Meeussen (1967: 115). The forms in (21b) and (21b′) exemplify the nominal predicate form for the cl.1a noun *kasukúlu* 'student'.

[20] The ungrammaticality of the *-li* form with noun class subjects seems not to be straightforwardly explained. One may think that this can be caused by the (partial) weakness of tonal distinguishability. For example, SM_{2SG} and SM_3 are identical in terms of their segmental shape but different in their tonal property, i.e., only the latter is assumed to have an underlying specification of a high tone as such in the Proto-Bantu system, where subject markers for speech participants are low-toned while all the others are underlyingly high-toned (Meeussen 1967: 97). In the past tense forms, tonal differentiation between the two seems to be relatively clear between *waalí* /u-a-li/ 'You (sg.) were...' vs. *wáali* /ú-a-li/ 'S/he was...'. However, in the present tense form, which is morphologically formulated as SM-*li*, the surface tonal realisation may not be salient enough to distinguish the two forms, as this language allows a lexical high tone to realise as a high tone doublet (see 1.3), which may blur the tonal difference. In order to avoid this tonal ambiguity, the SM-*li* template might have become applicable only to low-toned subject markers, which are for speech participants. This explanation, however, cannot be sufficient because the SM-*li* template is actually used as an existential predicate for both 2SG and cl. 3 subjects, i.e., in existential clauses the two segmentally identical forms are differentiated solely by tone (cf. Section 3.3). A closer examination is thus needed to explain this structural restriction.

(21) a. [COP.AFF] * ali kasukulu
a-li kasukulu
SM1-COP 1a.student
Intd: 'S/he is a student'

a′. [COP.NEG] *tálí kasukúlu*
ta-a-li kasukulu
NEG-SM1-COP 1a.student
'S/he is not a student'

b. [PRED.AFF] *eena nikásukúlu*
eena ni=kasukulu
PRON1 PRED=1a.student
'S/he is a student'
*eena kasukulu

b′. [PRED.NEG] *eena téé kasukúlu*
eena te kasukulu
PRON1 NEG 1a.student
'S/he is not a student'

As suggested by the notation of (21b) and (21b′), the use of an independent pronoun is not structurally obligatory, but is rather associated with an implicit expression of the referent being compared with others, e.g., 'S/he is [also] a student' or '[Only] s/he is a student', etc. In this sense, the explicit occurrence of an independent pronoun may suggest the relevance of the information status of the referent.

3.1.1.3 Copulative clauses with locative SM

With a locative class SM, the copula *-li* is used to express the existence of an object or event in a specific location (P), i.e., 'S is at/in/on... P'. As illustrated in (22), SM16 *pa-* tends to be used for the existence of an object at a specifiable place, SM17 *ku-* is used to express the general existence of an event, and SM18 *mu-* indicates that something exists inside a space. These predicate forms are further described in Section 3.3.

(22) a. [COP.AFF] *pálí íbuúku pééteébúlo*
pa-li i-buku pa-i-tebulo
SM16-COP 5-book 16-5-table
'There is a book on the table'

a′ [COP.NEG] *tapáli ibuúku pééteébúlo*
ta-pa-li i-buku pa-i-tebulo
NEG-SM16-COP 5-book 16-5-table
'There is not a book on the table'

b. [COP.AFF] *kúlí málíkeeti kumúshi*
ku-li malikeeti ku-mu-shi
SM17-COP 9.market 17-3-village
'There is a market in the village'

b′. [COP.NEG] *takúli málikeeti kumúshi*
ta-ku-li malikeeti ku-mu-shi
NEG-SM17-COP 9.market 17-3-village
'There is not a market in the village'

c. [COP.AFF] *múlí íńkálamo múńpánga*
mu-li i-N-kalamo mu-N-panga
18-COP AUG-9-lion 18-9-forest
'There is a lion in the forest'

c′. [COP.NEG] *tamúli inkálamo múḿpánga*
ta-mu-li i-N-kalamo mu-N-panga
NEG-18-COP AUG-9-lion 18-9-forest
'There is not a lion in the forest'

Existence at a location can also be expressed through the verb forms with the root *-b-* 'be, become', which tends to be used to express the static existence of an event. In contrast, the SM-*li* form describes the same situation as a dynamic occurrence, or emergence, of an event, e.g., (22b) focuses on the aspect of a situation in which a market is now open and is taking place in the village, while (23a) describes the static existence of a market.

(23) a. [COP.AFF] *kwáalibá málíkeeti kumúshi*
ku-ali-b-a malikeeti ku-mu-shi
SM$_{17}$-PRS.STAT-be-FV 9.market 17-3-village
'There is a market in the village'

a′. [COP.NEG] *takwáaba málikeeti kumúshi*
ta-ku-a-b-a malikeeti ku-mu-shi
NEG-SM$_{17}$-NEG-be-FV 9.market 17-3-village
'There is not a market in the village'

3.1.1.4 Summary of the structures

Based on these observations, the basic structures of copulative clauses can be summarised in terms of the different inflectional properties of the subject, as in Table 3-1-1.

Table 3-1-1: Summary of the structure of copulative clauses in terms of noun class properties of the subject noun

Structural types			S.P. (= 1 and 2 pers.)		cl. 1a/2a, 9/10		other cl.	
			AFF	NEG	AFF	NEG	AFF	NEG
[COP]		SM-*li* + X	√	√	*	(*)	*	(*)
[PRED]	*ni*=	(PRON +) *ni*=X	*	*	√	√	*	*
	Ø-CVV-	(PRON +) X	*	*	*	*	√	√

Table 3-1-2 gives an exhaustive list of examples of copulative clauses in the present tense with different subjects in terms of their person, number, and noun classes.

Table 3-1-2: Copulative predicates in the present tense: 'S is X'

	types	AFF	NEG
[1SG=cl.1]	COP	*ndi mulimi*	*nshílí mulimi*
		N-li mu-limi	N-shi-li mu-limi
		SM$_{1SG}$-COP 1-farmer	SM$_{1SG}$-NEG-COP 1-farmer
		'I am a farmer'	'I am not a farmer'
	PRED	*ine muulimi	*ine tee muulimi
[1SG=cl.1a]	COP[21]	(*) *ndi kasukúlu*	(*) *nshílí kasukúlu*

[21] The grammaticality of the copula *-li* with a speech participant subject followed by a 1a/2a noun appears to be ambiguous probably due to two competing restrictions, i.e., i) the copula *li-*, rather than the predicate form, should be used with a speech participant subject, ii) the augment of the complement noun should drop after *li-*. The 'ungrammaticality' of this structure is clearly motivated by the latter, which applies only to the nouns with the structural contrast between an NP form with an AUG and a predicate form with the lengthened CP in the absence of AUG, which is missing in cl. 1a/2a nouns (and cl. 9/10 nouns). The lack of this contrast, in turn, may disqualify such nouns to be a complement of the copula.

	PRED	*niné kásukúlu*	*tee íné kasukúlu*
		ni=ine Ø-kasukulu	te ine Ø-kasukulu
		PRED=PRON.1SG 1a-student	NEG PRON.1SG 1a-student
		'I am a student'	'I am not a student'
[1PL=cl.2]	COP	*tuli balimi*	*tatúlí balimi*
		tu-li ba-limi	ta-tu-li ba-limi
		SM_{1PL}-COP 2-farmer	NEG-SM_{1SG}-COP 2-farmer
		'We are farmers'	'We are not farmers'
	PRED	*ifwe baalimi	*ifwe tee baalimi
[1PL=cl.2a]	COP	(*) *tuli baakasukúlu*	(*) *tatúlí baakasukúlu*
	PRED	*nifwé báakasukúlu*	*tee ífwé báakasukúlu*
		ni=fwe baa-kasukulu	te ifwe baa-kasukulu
		PRED=PRON.1PL 2a-student	NEG PRON.1PL 2a-student
		'We are students'	'We are not students'
[2SG=cl.1]	COP	*uli mulimi*	*taúlí mulimi*
		u-li mu-limi	ta-u-li mu-limi
		SM_{2SG}-COP 2-farmer	NEG-SM_{2SG}-COP 1-farmer
		'You are a farmer'	'You are not a farmer'
	PRED	*iwe muulimi	*iwe tee muulimi
[2SG=cl.1a]	COP	(*) *uli kasukúlu*	* *taúlí kasukúlu*
	PRED	*niwé kásukúlu*	*tee íwé kasukúlu*
		ni=iwe Ø-kasukulu	te iwe Ø-kasukulu
		PRED=PRON.2SG 1a-student	NEG PRON.2SG 1a-student
		'You are a student'	'You are not a student'
[2PL=cl.2]	COP	*muli balimi*	*tamúlí balimi*
		tu-li ba-limi	ta-mu-li ba-limi
		$SM2_{PL}$-COP 2-farmer	NEG-SM_{2PL}-NEG-COP 2-farmer
		'You are farmers'	'You are not farmers'
	PRED	*imwe baalimi	*imwe tee baalimi
[2PL=cl.2a]	COP	(*) *muli baakasukúlu*	(*) *tamúlí baakasukúlu*
	PRED	*nimwé báakasukúlu*	*tee ímwé báakasukúlu*
		ni=imwe baa-kasukulu	te imwe baa-kasukulu
		PRED=PRON.2PL 2a-student	NEG PRON.2PL 2a-student
		'You are students'	'You are not students'
[cl. 1]	COP	* ali mulimi	*tálí mulimi*
		a-li mu-limi	ta-a-li mu-limi
		SM_1-COP 1-farmer	NEG-SM_1-COP 1-farmer
		Intd: 'S/he is a farmer'	'S/he is not a farmer'
	PRED	*múúlímí*	*téé múlímí*
		mu-limi	te mu-limi
		1-farmer	NEG 1-farmer
		'S/he is a farmer'	'S/he is not a farmer'
[cl. 1a]	COP	* ali kasukulu	*tálí kasukúlu*
		a-li kasukulu	ta-a-li Ø-kasukulu
		SM_1-COP 1a.student	NEG-SM_1-COP 1a-student
		Intd: 'S/he is a student'	'S/he is not a student'
	PRED	*eená ní kásukúlu*	*eená téé kásukúlu*
		eena ni=Ø-kasukulu	ena te Ø-kasukulu
		PRON.1 PRED=1a-student	PRON.1 NEG 1a-student
		'S/he is a student'	'S/he is not a student'

[cl. 2]	COP	* bali balimi	*tabálí balimi*
		ba-li ba-limi	ta-ba-li ba-limi
		SM_2-COP 2-farmer	NEG-SM_2-COP 2-farmer
		Intd: 'They are farmers'	'They are not farmers'
	PRED	*báálímí*	*tee bálímí*
		ba-limi	te ba-limi
		2-farmer	NEG 2-farmer
		'They are farmers'	'They are not farmers'
[cl. 2a]	COP	* bali baakasukulu	*tabálí baakasukúlu*
		ba-li baa-kasukulu	ta-ba-li baa-kasukulu
		SM_1-COP 2a-student	NEG-SM_2-COP 2a-student
		Intd: 'S/he is a farmer'	'They are not students'
	PRED	*beena ni báakasukulu*	*beena tee báákásukúlu*
		beena ni=baa-kasukulu	beena te baa-kasukulu
		PRON.2 PRED=2a-student	PRON.2 NEG 2a-student
		'They are students'	'They are not students'
[cl. 3]	COP	* uli muti	(*) *tauli muti* [tone omitted][22]
		u-li muti	ta-u-li mu-ti
		SM_3-COP 3.medicine	NEG-SM_4-COP 3-medicine
		Intd: 'It's medicine'	'It's not medicine'
	PRED	*weená múúti*	*téé múti*
		u-ena mu-ti	te mu-ti
		PP_3-PRON 3-medicine	NEG 3-medicine
		'It's medicine'	'It's not medicine'
[cl. 4][23]	COP	* shili miti	(*) *tashili miti* [tone omitted]
		shi-li miti	ta-shi-li mi-ti
		SM_{10}-COP 4.medicine	NEG-SM_{10}-COP 4-medicine
		Intd: 'They are medicine'	'They are not medicine'
	PRED	*sheená mííti*	*téé míti*
		shi-ena mi-ti	te mi-ti
		PP_{10}-PRON4-medicine	NEG 4-medicine
		'They are medicine'	'They are not medicine'
[cl. 5]	COP	* lili lini	(*) *talili lini* [tone omitted]
		li-li li-ni	ta-li-li li-ni
		SM_5-COP 5-egg	NEG-SM_5-COP 5-egg
		Intd: 'It's an egg'	'It's not an egg'
	PRED	*lyéénáá lííni*	*téé líni*
		li-ena li-ni	te li-ni
		PP_5-PRON 5-egg	NEG 5-egg
		'It's an egg'	'It's not an egg'
[cl. 6]	COP	* yali mani	(*) *tayali mani* [tone omitted]
		ya-li ma-ni	ta-ya-li ma-ni
		SM_6-COP 6-egg	NEG-SM_6-COP 6-egg
		Intd: 'They are eggs'	'They are not eggs'

[22] As mentioned in 3.1.1.2, at least to some consultants, the use of copula *-li* in the identificational sentence can only be accepted for human noun subjects. This grammatical ambiguity is marked by (*) in this table. Note also that tonal annotations of these forms are omitted here.

[23] Class 4 agreement is usually not accepted as grammatical, i.e., *yeena miti. Instead, the class 10 form *sheena* is used in this context.

	PRED	*yéénáˊ mááni*	*téé máni*
		ya-ena ma-ni	te ma-ni
		PP$_6$-PRON 6-egg	NEG 6-egg
		'They are eggs'	'They are not eggs'
[cl. 7]	COP	* cili cisote	(*) *tacili cisote* [tone omitted]
		ci-li ci-sote	ta-ci-li ci-sote
		SM$_7$-COP 7-hat	NEG-SM$_7$-COP 7-hat
		Intd: 'It's a hat'	'It's not a hat'
	PRED	*céénáˊ cíísóté*	*tee cisóté*
		ci-ena ci-sote	te ci-sote
		PP$_7$-PRON 7-hat	NEG 7-hat
		'It's a hat'	'It's not a hat'
[cl. 8]	COP	* fili fiisote	(*) *tafili fiisote* [tone omitted]
		fi-li fi-sote	ta-fi-li ci-sote
		SM$_8$-COP 8-hat	NEG-SM$_8$-COP 8-hat
		Intd: 'They are hats'	'They are not hats'
	PRED	*fyéénáˊ fíísóté*	*tee fisóté*
		fi-ena fi-sote	te fi-sote
		PP$_8$-PRON 8-hat	NEG 8-hat
		'They are hats'	'They are not hats'
[cl. 9]	COP	* ili nkoko	(*) *taili nkoko* [tone omitted]
		i-li N-koko	ta-i-li N-koko
		SM$_9$-COP 9-chicken	NEG-SM$_9$-COP 9-chicken
		Intd: 'It's a chicken'	'It's not a chicken'
	PRED	*yéénáˊ níńkóˬkó*	*téé ńkóˬkó*
		i-ena ni=N-koko	te N-koko
		PP$_9$-PRON PRED=9-chicken	NEG 9-chicken
		'It's a chicken'	'It's not a chicken'
[cl. 10]	COP	* shili nkoko	(*) *taili nkoko* [tone omitted]
		shi-li N-koko	ta-i-li N-koko
		SM$_{10}$-COP 10-chicken	NEG-SM$_{10}$-COP 10-chicken
		Intd: 'They are chickens'	'They are not chickens'
	PRED	*shéénáˊ níńkóˬkó*	*téé ńkóˬkó*
		shi-ena ni=N-koko	te N-koko
		PP$_{10}$-PRON PRED=10-chicken	NEG 10-chicken
		'They are chickens'	'They are not chickens'
[cl. 11]	COP	* luli lukasa	(*) *taluli lukasa* [tone omitted]
		lu-li lu-kasa	ta-lu-li lu-kasa
		SM$_{11}$-COP 11-foot	NEG-SM$_{11}$-COP 11-foot
		Intd: 'It's a foot'	'It's not a foot'
	PRED	*lwéénáˊ lúúkásá*	*tee lúkásá*
		lu-ena lu-kasa	te lu-kasa
		PP$_{11}$-PRON 11-foot	NEG 11-foot
		'It's a foot'	'It's not a foot'
[cl. 12]	COP	* kali kakondo	(*) *takali kakondo* [tone omitted]
		ka-li ka-kakondo	ta-ka-li ka-kondo
		SM$_{12}$-COP 12-toe	NEG-SM$_{12}$-COP 12-toe
		Intd: 'It's a toe'	'It's not a toe'

	PRED	*kéénà káákóndo*	*téé káakondo*
		ka-ena ka-kondo	te ka-kondo
		PP$_{12}$-PRON 12-toe	NEG 12-toe
		‘It’s a toe’	‘It’s not a toe’
[cl. 13]	COP	* tuli tukondo	(*) *tatuli tukondo* [tone omitted]
		tu-li tu-kakondo	ta-tu-li tu-kondo
		SM$_{13}$-COP 13-toe	NEG-SM$_{13}$-COP 13-toe
		Intd: ‘They are toes’	‘They are not toes’
	PRED	*twéénà túúkóndo*	*téé tukondo*
		tu-ena tu-kondo	te tu-kondo
		PP$_{13}$-PRON 13-toe	NEG 13-toe
		‘They are toes’	‘They are not toes’
[cl. 14]	COP	* buli boowa	(*) *tabuli boowa* [tone omitted]
		bu-li bu-owa	ta-bu-li bu-owa
		SM$_{14}$-COP 14-mushroom	NEG-SM$_{14}$-COP 14-mushroom
		Intd: ‘They are mushrooms’	‘They are not mushrooms’
	PRED	*bwéénà bóówá*	*tee bóówá*
		bu-ena bu-owa	te bu-owa
		PP$_{14}$-PRON 14-mushroom	NEG 14-mushroom
		‘They are mushrooms’	‘They are not mushrooms’
[cl. 15]	COP	* kuli kuboko	(*) *takuli kuboko* [tone omitted]
		ku-li ku-boko	ta-ku-li ku-boko
		SM$_{12}$-COP 15-arm	NEG-SM$_{15}$-COP 15-arm
		Intd: ‘It’s an arm’	‘It’s not an arm’
	PRED	*kwéénà kúúbóko*	*téé kúbóko*
		ku-ena ku-boko	te ku-boko
		PP$_{15}$-PRON 15-arm	NEG 15-arm
		‘It’s an arm’	‘It’s not an arm’

3.1.2 Past tense

3.1.2.1 Speech participants and class noun subjects

In the past tense form, the copula *-li* is consistently used regardless of the difference between speech participant subjects and class noun subjects and of the polarity difference. Table 3-1-3 is an exhaustive list of the copulative predicates with all speech participant subjects and nouns belonging to cl. 1 through 15.

Table 3-1-3: Copulative predicates in the past tense: ‘S was X’

	AFF	NEG
[1SG=cl.1]	*naalí muulimi/ umulimi*	*nsháali muulimi*
	N-a-li u-mu-limi	N-shi-a-li mu-limi
	SM$_{1SG}$-PST-COP AUG-1-farmer	SM$_{1SG}$-NEG-PST-COP 1-farmer
	‘I was a farmer’	‘I was not a farmer’
[1PL=cl.2]	*twaalí baalimi/abalimi*	*tatwáali baalimi*
	tu-a-li a-ba-limi	ta-tu-a-li ba-limi
	SM$_{1PL}$-PST-COP AUG-2-farmer	NEG-SM$_{1PL}$-PST-COP 2-farmer
	‘We were farmers’	‘We were not farmers’

[2SG=cl.1]	*waalí muulimi/ umulimi*	*tawáali muulimi*
	u-a-li u-mu-limi	ta-u-a-li mu-limi
	SM_{2SG}-PST-COP AUG-1-farmer	NEG-SM_{2SG}-PST-COP 1-farmer
	'You were a farmer'	'You were not a farmer'
[2PL=cl.2]	*mwaalí baalimi/abalimi*	*tamwáali baalimi*
	mu-a-li a-ba-limi	ta-mu-a-li ba-limi
	SM_{2PL}-PST-COP AUG-2-farmer	NEG-SM_{2PL}-PST-COP 2-farmer
	'You (pl.) were farmers'	'You (pl.) were not farmers'
[cl. 1]	*áali muulimi/ umulimi*	*táali muulimi*
	a-a-li u-mu-limi	ta-a-a-li mu-limi
	SM_1-PST-COP AUG-1-farmer	NEG-SM_1-PST-COP 1-farmer
	'S/he was a farmer'	'S/he was not a farmer'
[cl. 1a]	*áali ni kasukúlu*	*táali kásukúlu*
	a-a-li ni=kasukulu	ta-a-a-li kasukulu
	SM_1-PST-COP PRED=1a.student	NEG-SM_1-PST-COP 1a.student
	'S/he was a student'	'S/he was not a student'
[cl. 2]	*báali baalimi/abalimi*	*tabáali baalimi*
	ba-a-li a-ba-limi	ta-ba-a-li ba-limi
	SM_2-PST-COP AUG-2-farmer	NEG-SM_2-PST-COP 2-farmer
	'They were farmers'	'They were not farmers'
[cl. 2a]	*báali báakasukúlu*	*tabáali báakasukúlu*
	ba-a-li baa-kasukulu	ta-ba-a-li baa-kasukulu
	SM_2-PST-COP 2a-students	NEG-SM_2-PST-COP 2a-student
	'They were students'	'They were not students'
[cl. 3]	*wáali múúti/úmúti*	*tawáali múúti*
	u-a-li u-mu-ti	ta-u-a-li mi-ti
	SM_3-PST-COP AUG-3-medicine	NEG-SM_3-PST-COP 4-medicine
	'It was medicine'	'It was not medicine'
[cl. 4]	*sháali mííti/ímíti*	*tasháali mííti*
	shi-a-li i-mi-ti	ta-shi-a-li mi-ti
	SM_{10}-PST-COP AUG-4-medicine	NEG-SM_{10}-PST-COP 4-medicine
	'They were medicines'	'They were not medicines'
[cl. 5]	*lyáali lííni/ílí↓ní*	*talyáali lííni*
	li-a-li i-li-ni	ta-li-a-li li-ni
	SM_5-PST-COP AUG-5-egg	NEG-SM_5-PST-COP 5-egg
	'It was an egg'	'It was not an egg'
[cl. 6]	*yáali mááni/ámáni*	*tayáali mááni*
	ya-a-li a-ma-ni	ta-ya-a-li ma-ni
	SM_6-PST-COP AUG-6-egg	NEG-SM_6-PST-COP 6-egg
	'They were eggs'	'They were not eggs'
[cl. 7]	*cáali ciisote/icisote*	*tacáali ciisote*
	ci-a-li i-ci-sote	ta-ci-a-li ci-sote
	SM_7-PST-COP AUG-7-hat	NEG-SM_7-PST-COP 7-hat
	'It was a hat'	'It was not a hat'
[cl. 8]	*fyáali fiisote/ifisote*	*tafyáali fiisote*
	fi-a-li i-fi-sote	ta-fi-a-li fi-sote
	SM_8-PST-COP AUG-8-hat	NEG-SM_8-PST-COP 8-hat
	'They were hats'	'They were not hats'

[cl. 9]	*yáali íńkó↓kó/níńkó↓kó*	*tayáali níńkó↓kó*
	i-a-li ni=/i-N-koko	ta-i-a-li ni=i-N-koko
	SM9-PST-COP PRED=/AUG-9-chicken	NEG-SM3-PST-COP PRED=AUG-9-chicken
	‘It was a chicken’	‘It was not a chicken’
[cl. 10]	*sháali íńkó↓kó/níńkó↓kó*	*tasháali níńkó↓kó*
	shi-a-li ni=/i-N-koko	ta-shi-a-li ni=i-N-koko
	SM10-PST-COP PRED=/AUG-10-chicken	NEG-SM10-PST-COP PRED=AUG-10-chicken
	‘They were chickens’	‘They were not chickens’
[cl. 11]	*lwáali luukasa/ulukasa*	*talwáali luukasa*
	lu-a-li u-lu-kasa	ta-lu-a-li lu-kasa
	SM11-PST-COP AUG-11-foot	NEG-SM11-PST-COP 11-foot
	‘It was a foot’	‘It was not a foot’
[cl. 12]	*káali káákóndo/ákákondo*	*takáali káákóndo*
	ka-a-li a-ka-kondo	ta-ka-a-li ka-kondo
	SM12-PST-COP AUG-12-toe	NEG-SM10-PST-COP 12-toe
	‘It was a toe’	‘It was not a toe’
[cl. 13]	*twáali túúkóndo/útúkondo*	*takáali túúkóndo*
	tu-a-li u-tu-kondo	ta-tu-a-li tu-kondo
	SM13-PST-COP AUG-13-toe	NEG-SM10-PST-COP 13-toe
	‘They were toes’	‘They were not toes’
[cl. 14]	*bwáali boowa/uboowa*	*tabwáali boowa*
	bu-a-li i-bu-owa	ta-bu-a-li bu-owa
	SM14-PST-COP AUG-14-mushroom	NEG-SM14-PST-COP 14-mushroom
	‘They were mushrooms’	‘They were not mushrooms’
[cl. 15]	*kwáali kúúbóko/úkúboko*	*takwáali kúúbóko*
	ku-a-li u-ku-boko	ta-ku-a-li ku-boko
	SM15-PST-COP AUG-15-arm	NEG-SM15-PST-COP 15-arm
	‘It was an arm’	‘It was not an arm’

What should be noted from a structural viewpoint is that AUG is generally expected to drop when a whole noun is a complement of the copula *-li*, i.e., when it is (part of) a nominal predicate that is a target of copulative identification. This may be supported by consultants’ explanations that the presence of AUG is associated with the hearer’s interpretation that the noun itself is a subject of existence (cf. 3.2), i.e., the whole clause sounds more like an existential sentence ‘there was an X’, while the form without AUG suggests that it is part of a nominal predicate, i.e., it sounds more like an identificational copulative sentence.

On the other hand, AUG is consistently observed to drop in negative clauses. This tendency of AUG to drop in the contexts of negation is also repeatedly observed in other types of predicates, including ordinary finite verb phrases.

3.1.2.2 Forms with locative SM

As in the present tense forms, the copula *-li* with the locative SM is used as an existential predicate. The following are some illustrating examples with $SM_{16–18}$ in affirmative and negative contexts.

(24) a. [COP.AFF] *páali íbuúku péeteebúlo*
pa-a-li i-buku pa-i-tebulo
SM$_{16}$-PST-COP 5-book 16-5-table
'There was a book on the table'

a′. [COP.NEG] *tapáali íbuúku péeteebúlo*
ta-pa-a-li i-buku pa-i-tebulo
NEG-PST-SM$_{16}$-COP 5-book 16-5-table
'There was not a book on the table'

b. [COP.AFF] *kwáali málíkeeti kumúshi*
ku-a-li malikeeti ku-mu-shi
SM$_{17}$-PST-COP 9.market 17-3-village
'There was a market in the village'

b′. [COP.NEG] *takwáali málíkeeti kumúshi*
ta-ku-a-li malikeeti ku-mu-shi
NEG-SM$_{17}$-PST-COP 9.market 17-3-village
'There was not a market in the village'

c. [COP.AFF] *mwáali íńkálamo múńpánga*
mu-a-li i-N-kalamo mu-N-panga
SM$_{18}$-PST-COP AUG-9-lion 18-9-forest
'There was a lion in the forest'

c′. [COP.NEG] *tamwáali íńkálamo múmpánga*
ta-mu-a-li i-N-kalamo mu-N-panga
NEG-SM$_{18}$-PST-COP AUG-9-lion 18-9-forest
'There was not a lion in the forest'

3.1.2.3 Summary of the structure

The morphological structures of copulative predicates in the past tense are simply summarised in Table 3-1-4.

Table 3-1-4: Summary of the structure of copulative clauses in the past tense

	PREIN	IN	POSTIN	STEM	X
PST AFF		SM-	***a-***	***li***	# (AUG-)N
NEG	***tá-***	SM-		***li***	# ~~AUG-~~N

3.1.3 Future tense

3.1.3.1 Speech participant and class noun subjects

In contrast to the present tense, where the copula *-li* and nominal predicate forms are used, as well as to the past tense, where the *-li* is always used as a copulative predicate form, the verbal stem *-b* 'be; become' is consistently used as a copulative predicate in the future tense, as shown in Table 3-1-5.

Table 3-1-5: Copulative predicates in the future tense: ‘S will be X’

	AFF	NEG
[1SG=cl.1]	*nkabá umulimi*	*nshaakabé umulimi*
	N-ka-b-a u-mu-limi	N-shi-a-ka-b-e u-mu-limi
	SM1SG-FUT3-be-FV AUG-1-farmer	SM1SG-NEG-NEG-FUT3-be-NEG AUG-1-farmer
	‘I will be a farmer’	‘I will not be a farmer’
[1PL=cl.2]	*tukabá abalimi*	*tatwaakabé abalimi*
	tu-ka-b-a a-ba-limi	ta-tu-a-ka-b-e a-ba-limi
	SM1PL-FUT3-be-FV AUG-1-farmer	NEG-SM1PL-NEG-FUT3-be-NEG AUG-2-farmer
	‘We will be farmers’	‘We will not be farmers’
[2SG=cl.1]	*ukabá umulimi*	*tawaakabé umulimi*
	u-ka-b-a u-mu-limi	ta-u-a-ka-b-e u-mu-limi
	SM2SG-FUT3-be-FV AUG-1-farmer	SM1SG-NEG-FUT3-be-NEG AUG-1-farmer
	‘You (sg.) will be a farmer’	‘You (sg.) will not be a farmer’
[2PL=cl.2]	*mukabá abalimi*	*tamwaakabé abalimi*
	mu-ka-b-a a-ba-limi	ta-mu-a-ka-b-e a-ba-limi
	SM2PL-FUT3-be-FV AUG-2-farmer	NEG-SM2PL-NEG-FUT3-be-NEG AUG-2-farmer
	‘You (pl.) will be farmers’	‘You (pl.) will not be farmers’
[cl. 1]	*ákába umulimi*	*taakabé úmúlímí*
	a-ka-b-a u-mu-limi	ta-a-a-ka-b-e u-mu-limi
	SM1-FUT3-be-FV AUG-1-farmer	NEG-SM1-NEG-FUT3-be-NEG AUG-1-farmer
	‘S/he will be a farmer’	‘S/he will not be a farmer’
[cl. 1a]	*ákába kásukúlu*	*taakabé kásukúlu*
	a-ka-b-a kasukulu	ta-a-a-ka-b-e kasukulu
	SM1-FUT3-be-FV 1a.student	NEG-SM1-NEG-FUT3-be-NEG 1a.student
	‘S/he will be a student’	‘S/he will not be a student’
[cl. 2]	*bákába abalimi*	*tabakabé ábálímí*
	ba-ka-b-a a-ba-limi	ta-ba-a-ka-b-e a-ba-limi
	SM2-FUT3-be-FV AUG-2-farmer	NEG-SM2-NEG-FUT3-be-NEG AUG-2-farmer
	‘They will be farmers’	‘They will not be farmers’
[cl. 2a]	*bákába báakasukúlu*	*tabaakabé báakasukúlu*
	ba-ka-b-a baa-kasukulu	ta-ba-a-ka-b-e baa-kasukulu
	SM2-FUT3-be-FV 2a-1a.student	NEG-SM2-NEG-FUT3-be-NEG 2a-1a.student
	‘They will be students’	‘They will not be students’
[cl. 3]	*úkába úmúti*	*tawaakabé úmúti*
	u-ka-b-a u-mu-ti	ta-u-a-ka-b-e u-mu-ti
	SM3-FUT3-be-FV AUG-3-medicine	NEG-SM3-NEG-FUT3-be-NEG AUG-3-medicine
	‘It will be medicine’	‘It will not be medicine’
[cl. 4]	*shíkába ímíti*	*tashaakabé ímíti*
	shi-ka-b-a i-mi-ti	ta-shi-a-ka-b-e i-mi-ti
	SM10-FUT3-be-FV AUG-4-medicine	NEG-SM10-NEG-FUT3-be-NEG AUG-4-medicine
	‘They will be medicines’	‘They will not be medicines’
[cl. 5]	*líkába ílíni*	*talyaakabé ílíni*
	li-ka-b-a i-li-ni	ta-li-a-ka-b-e i-li-ni
	SM5-FUT3-be-FV AUG-5-egg	NEG-SM5-NEG-FUT3-be-NEG AUG-5-egg
	‘It will be an egg’	‘It will not be an egg’

[cl. 6]	*yákába ámáni*	*tayaakabé ámáni*
	ya-ka-b-a a-ma-ni	ta-ya-a-ka-b-e a-ma-ni
	SM6-FUT3-be-FV AUG-6-egg	NEG-SM6-NEG-FUT3-be-NEG AUG-6-egg
	'They will be eggs'	'They will not be eggs'
[cl. 7]	*cíkába icisote*	*tacaakabé ícísóté*
	ci-ka-b-a i-ci-sote	ta-ci-a-ka-b-e i-ci-sote
	SM7-FUT3-be-FV AUG-7-hat	NEG-SM7-NEG-FUT3-be-NEG AUG-7-hat
	'It will be a hat'	'It will not be a hat'
[cl. 8]	*fíkába ifisote*	*tafyaakabé ífísóté*
	fi-ka-b-a i-fi-sote	ta-fi-a-ka-b-e i-fi-sote
	SM8-FUT3-be-FV AUG-8-hat	NEG-SM8-NEG-FUT3-be-NEG AUG-8-hat
	'They will be hats'	'They will not be hats'

As shown in the above examples, all complement nouns following the verbal predicate retain AUG, even in negative contexts unlike the position immediately after *-li*, where AUG is generally expected to drop especially in the contexts of negation.

3.1.3.2 Forms with a locative SM

Copulative forms inflected with a locative subject are used as an existential predicate in the present and past tense forms, as illustrated in (25).

(25) a. [COP.AFF] *pákaba íbuúku péeteebúlo*
pa-ka-b-a i-buku pa-i-tebulo
SM16-FUT3-be-FV 5-book 16-5-table
'There will be a book on the table'

a′. [COP.NEG] *tapaakabé íbuúku péeteebúlo*
ta-pa-a-ka-b-e i-buku pa-i-tebulo
NEG-SM16-NEG-FUT3-be-NEG 5-book 16-5-table
'There will not a book on the table'

b. [COP.AFF] *kukába málíkeeti kumúshi*
ku-ka-b-a malikeeti ku-mu-shi
SM17-FUT3-be-FV 9.market 17-3-village
'There will be a market in the village'

b′. [COP.NEG] *takwaakabé málíkeeti kumúshi*
ta-ku-a-ka-b-e malikeeti ku-mu-shi
NEG-SM17-NEG-FUT3-BE-NEG 9.market 17-3-village
'There will not be a market in the village'

c. [COP.AFF] *mukaba íńkálamo múńpánga*
mu-ka-b-a i-N-kalamo mu-N-panga
SM18-FUT3-be-FV AUG-9-lion 18-9-forest
'There will be a lion in the forest'

c′. [COP.NEG] *tamwaakabé íńkálamo múńpánga*
ta-mu-a-ka-b-e i-N-kalamo mu-N-panga
NEG-SM18-NEG-FUT3-be-NEG AUG-9-lion 18-9-forest
'There will not be a lion in the forest'

3.1.3.3 Summary of the structure

Copulative predicates in the future tense can thus be formulated as in the following table.

Table 3-1-6: Summary of the structure of copulative predicates in the future tense

	PREIN	IN	POSTIN	STEM	FV	X
PST AFF		SM-	***ka-***	***b***	***-a***	# AUG-N
NEG	***tá-***	SM-	***a-ka-***	***b***	***-e***	# AUG-N

3.1.4 Summary: A list of structures of copulative clauses

The following table summarises the basic morphological structures of copulative predicates in different categories of tense, polarity, and subject properties.

Table 3-1-7: List of morphosyntactic structures of copulative predicates in CB

	AFF		NEG	
	label	structure	label	structure
PRS	[COP] «S=S.P.»	SM-*li* + ~~AUG~~-X	[COP] «S=all»	*ta*-SM-*li* + ~~AUG~~-X
	[PRED] «S=C.N.»	+ ~~AUG~~-X	[PRED] «S=C.N.»	*tee* + ~~AUG~~-X
PST	[COP]	SM-*a-li* + (AUG-)X	[COP]	*ta*-SM-*a-li* + ~~AUG~~-X
FUT	[be]	SM-*ka-b-a* + AUG-X	[be]	*ta*-SM-*a-ka-b-e* + AUG-X

What seems to be significant is the restriction on the use of *-li* with class noun subjects in the present tense. It is also to be noted that generally the copula *-li* is used as a copulative predicate in the present and past tenses, while the verbal stem *-b-* is used consistently in the future tense. It should also be noted that AUG is generally dropped after the copula, except for in the case of PST.AFF where the process is optional, while it retains after the verb *-ba/-be*.

3.2 Possession verbs

CB has an independent lexical verb that denotes the subject's possession, i.e., *-kwáat-* 'have', unlike, e.g., Swahili [G42a] which utilises the preposition *na* 'with' to express possession in the absence of the 'have' verb in its lexicon. Details are given in the following sections.

3.2.1 Present tense

The following is a list of sentence forms meaning 'S has X' in the present tense, inflected with different subjects in terms of person, number, and noun classes.

Table 3-2-1: Possession verbs in the present tense: ‘S has X’

	AFF	NEG
[1SG]	*naalíkwáátá ábáana*	*nsháakwaatá ábáana*
	N-ali-kwaat-a a-ba-ana	n-shi-a-kwaat-a a-ba-ana
	SM_{1SG}-PRS.STAT-have-FV AUG-2-child	SM_{1SG}-NEG-NEG.IPFV-have-FV AUG-2-child
	‘I have children’	‘I do not have children’
[1PL]	*twaalíkwáátá ábáana*	*tatwáakwaatá ábáana*
	tu-ali-kwaat-a a-ba-ana	ta-tu-a-kwaat-a a-ba-ana
	SM_{1PL}-PRS.STAT -have-FV AUG-2-child	NEG-SM_{1PL}-NEG.IPFV-have-FV AUG-2-child
	‘We have children’	‘We do not have children’
[2SG]	*waalíkwáátá ábáana*	*tawáakwaatá ábáana*
	u-ali-kwaat-a a-ba-ana	ta-u-a-kwaat-a a-ba-ana
	SM_{2SG}-PRS.STAT -have-FV AUG-2-child	NEG-SM_{2SG}-NEG.IPFV-have-FV AUG-2-child
	‘You (sg.) have children’	‘You (sg.) do not have children’
[2PL]	*mwaalíkwáátá ábáana*	*tamwáakwaatá ábáana*
	mu-ali-kwaat-a a-ba-ana	ta-mu-a-kwaat-a a-ba-ana
	SM_{2PL}-PRS.STAT -have-FV AUG-2-child	NEG-SM_{2PL}-NEG.IPFV-have-FV AUG-2-child
	‘You (pl.) have children’	‘You (pl.) do not have children’
[cl. 1]	*áalikwaatá ábáana*	*táakwaatá ábáana*
	a-ali-kwaat-a a-ba-ana	ta-a-a-kwaat-a a-ba-ana
	SM_{1}-PRS.STAT -have-FV AUG-2-child	NEG-SM_{1}-NEG.IPFV-have-FV AUG-2-child
	‘S/he has children’	‘S/he does not have children’
[cl. 2]	*báalikwaatá ábáana*	*tabáakwaatá ábáana*
	ba-ali-kwaat-a a-ba-ana	ta-ba-a-kwaat-a a-ba-ana
	SM_{2}-PRS.STAT -have-FV AUG-2-child	NEG-SM_{2}-NEG.IPFV-have-FV AUG-2-child
	‘They have children’	‘They do not have children’
[cl. 3]	*umúmáná wáalikwaatá áméenshi*	*umúmáná tawáakwaatá áméenshi*
	u-mu-mana u-ali-kwaat-a	u-mu-mana ta-u-a-kwaat-a
	AUG-3-river SM_{3}-PRS.STAT -have-FV	AUG-3-river NEG-SM_{3}-NEG.IPFV-have-FV
	a-ma-inshi	a-ma-inshi
	AUG-6-water	AUG-6-water
	‘The river has water’	‘The river does not have water’
[cl. 7]	*icíimuti cáalikwaatéfisabo*	*icíimuti tacáakwaatéfisabo*
	i-ci-Vmuti ci-ali-kwaat-a	i-ci-Vmuti ta-ci-a-kwaat-a
	AUG-7-tree SM_{7}-PRS.STAT -have-FV	AUG-7-tree NEG-SM_{7}-NEG.IPFV-have-FV
	i-fi-sabo	i-fi-sabo
	AUG-7-fruits	AUG-7-fruits
	‘The tree has fruits’	‘The tree does not have fruits’
[cl. 9]	*inkóko yáalikwaatépíndo*	*inkóko tayáakwaatépíndo*
	i-N-koko i-ali-kwaat-a	i-N-koko ta-i-a-kwaat-a
	AUG-9-chicken SM_{9}-PRS.STAT -have-FV	AUG-9-chicken NEG-SM_{9}-NEG.IPFV-have-FV
	i-Ø-pindo	i-Ø-pindo
	AUG-5-wing	AUG-5-wing
	‘The chicken has a wing’	‘The chicken does not have a wing’

Regardless of the differences in the inflectional properties of subjects as well as the differences in polarity, the stem *-kwáat-* is consistently used. In affirmative contexts, the TAM marker *alí-*, which is identical to the PST4 marker at least in terms of its segmental shape, is employed to indicate present stative when used with stative verbs (see also Section 6.1.2), while in negation

the prefix *a-* is slotted in the pre-stem TAM slot. It should be also noted that AUG of the post-verbal object noun is consistently retained regardless of the polarity value. The structures of the present possessive forms can be formalised as in Table 3-2-2.

Table 3-2-2: Summary of the structure of the possession verbs in the present tense

		PREIN	IN	POSTIN	STEM	FV	X
PST	AFF		SM-	***alí-***	***kwáat***	***-a***	# AUG-N
	NEG	***tá-***	SM-	***a-***	***kwáat***	***-a***	# AUG-N

3.2.2 Past tense

Table 3-2-3 shows the past tense forms of the possessive verb *-kwáat-* inflected with all of the different speech participant subjects and selected noun class nouns.

Table 3-2-3: Possession verbs in the past tense: 'S had X'

	AFF	NEG
[1SG]	*naalíkwéété ábáana*	*nsháakweete ábáana*
	n-ali-kwaat-ile	n-shi-a-kwaat-ile
	SM_{1SG}- PRS.STAT-have-ANT	SM_{1SG}-NEG-NEG.IPFV-have-ANT
	a-ba-ana	a-ba-ana
	AUG-2-child	AUG-2-child
	'I had children'	'I did not have children'
[1PL]	*twaalíkwéété ábáana*	*tatwáakweete ábáana*
	tu-ali-kwaat-ile	ta-tu-a-kwaat-ile
	SM_{1PL}- PRS.STAT -have-ANT	NEG-SM_{1PL}-NEG.IPFV-have-ANT
	a-ba-ana	a-ba-ana
	AUG-2-child	AUG-2-child
	'We had children'	'We did not have children'
[2SG]	*waalíkwéété ábáana*	*tawáakweete ábáana*
	u-ali-kwaat-ile	ta-u-a-kwaat-ile
	SM_{2SG}- PRS.STAT-have-ANT	NEG-SM_{2SG}-NEG.IPFV-have-ANT
	a-ba-ana	a-ba-ana
	AUG-2-child	AUG-2-child
	'You (sg.) had children'	'You (sg.) did not have children'
[2PL]	*mwaalíkwéété ábáana*	*tamwáakweete ábáana*
	mu-ali-kwaat-ile	ta-mu-a-kwaat-ile
	SM_{2PL}-PRS.STAT-have-ANT	NEG-SM_{2PL}-NEG.IPFV-have-ANT
	a-ba-ana	a-ba-ana
	AUG-2-child	AUG-2-child
	'You (pl.) had children'	'You (pl.) did not have children'
[cl. 1]	*áalikweete ábáana*	*táakweete ábáana*
	a-ali-kwaat-a	ta-a-a-kwaat-ile
	SM_{1}-PRS.STAT-have-ANT	NEG-SM_{1}-NEG.IPFV-have-ANT
	a-ba-ana	a-ba-ana
	AUG-2-child	AUG-2-child
	'S/he had children'	'S/he did not have children'

[cl. 2]	*báalikweete ábáana*	*tabáakweete ábáana*
	ba-ali-kwaat-ile	ta-ba-a-kwaat-ile
	SM_2-PRS.STAT-have-ANT	NEG-SM_2-NEG.IPFV-have-ANT
	a-ba-ana	a-ba-ana
	AUG-2-child	AUG-2-child
	'They had children'	'They did not have children'
[cl. 3]	*umúmáná wáalikweete áméenshi*	*umúmáná tawáakweete áméenshi*
	u-mu-mana u-ali-kwaat-ile	u-mu-mana ta-u-a-kwaat-ile
	AUG-3-river SM_3-PRS.STAT-have-ANT	AUG-3-river NEG-SM_3-NEG.IPFV-have-ANT
	a-ma-inshi	a-ma-inshi
	AUG-6-water	AUG-6-water
	'The river had water'	'The river did not have water'
[cl. 7]	*icíímuti cáalikweete ifisabo*	*icíímuti tacáakweete ifisabo*
	i-ci-mu-ti ci-ali-kwaat-ile	i-ci-mu-ti ta-ci-a-kwaat-ile
	AUG-7-3-tree SM_7-PRS.STAT-have-ANT	AUG-7-3-tree NEG-SM_7-NEG.IPFV-have-ANT
	i-fi-sabo	i-fi-sabo
	AUG-8-fruit	AUG-8-fruit
	'The tree had fruits'	'The tree did not have fruits'
[cl. 9]	*inkóko yáalikweete ipíndo*	*inkóko tayáakweete ipíndo*
	i-N-koko	i-N-koko
	AUG-9-chicken	AUG-9-chicken
	i-ali-kwaat-ile i-i-pindo	ta-i-a-kwaat-ile i-i-pindo
	SM_9-PRS.STAT-have-ANT AUG-5-wing	NEG-SM_9-NEG.IPFV-have-ANT AUG-5-wing
	'The chicken had a wing'	'The chicken did not have a wing'

As in the present tense forms, affirmative forms are marked by the pre-verbal TAM *ali-*, while the prefix *a-* is used in negation, which is marked by the pre-initial negator *tá-*. What should be noted is that the past tense of the possessive verb is marked by the suffix *-ile*, which is slotted in the FV position, replacing the default FV *-a*.

As shown in the examples, the suffixation of *-ile* may cause a morphophonological process called 'imbrication', which fuses the suffix into the preceding stem. Imbrication consists of two main steps: i) replacing /l/ of *-ile* with the final consonant of the preceding stem that the suffix attaches to, i.e., in this case *-ile* > *-ite*, and ii) the loss of the consonant that replaces /l/ leads to the hiatus consisting of the stem vowel and /i/ of the suffix *-ile*, i.e., *kwa-ite* in this case, which may be eventually realised as a coalesced long vowel, as in *-kweete*. This process is attested in a wide range of Bantu languages, with the productivity and applicability of the process to different morphosyntactic contexts varying from one language to another (cf. Bastin 1983). Bemba is known to be a language where the process actively works in various morphological contexts (cf. Hyman 1995). Further information on the process will be provided in 6.2.4.2.

The templatic structure of the possessive verb in the past can thus be formulated as follows.

Table 3-2-4: Summary of the structure of the possession verbs in the past tense

		PREIN	IN	POSTIN	STEM	FV		X
PST	AFF		SM-	***alí-***	***kwáat***	***-ile***	#	AUG-N
	NEG	***tá-***	SM-	***a-***	***kwáat***	***-ile***	#	AUG-N

3.2.3 Future tense

The future tense forms of the possession verb *-kwáat-* with different types of subjects are given in Table 3-2-5.

Table 3-2-5: Possession verbs in the future tense: 'S will have X'

	AFF	NEG
[1SG]	*nkákwáátá ábáana*	*nshaakakwáátέ ábáana*
	N-ka-kwaat-a a-ba-ana	N-shi-a-ka-kwaat-e a-ba-ana
	SM_{1SG}-FUT_3-have-FV AUG-2-child	SM_{1SG}-NEG-NEG.IPFV-FUT_3-have-NEG AUG-2-child
	'I will have children'	'I will not have children'
[1PL]	*tukákwáátá ábáana*	*tatwaakakwáátέ ábáana*
	tu-ka-kwaat-a a-ba-ana	ta-tu-a-ka-kwaat-e a-ba-ana
	SM_{1PL}-FUT_3-have-FV AUG-2-child	NEG-SM_{1PL}-NEG.IPFV-FUT_3-have-FV AUG-2-child
	'We will have children'	'We will not have children'
[2SG]	*ukákwáátá ábáana*	*tawaakakwáátέ ábáana*
	u-ka-kwaat-a a-ba-ana	ta-u-a-ka-kwaat-e a-ba-ana
	SM_{2SG}-FUT_3-have-FV AUG-2-child	NEG-SM_{2SG}-NEG.IPFV-FUT_3-have-FV AUG-2-child
	'You (sg.) will have children'	'You will not have children'
[2PL]	*mukákwáátá ábáana*	*tamwaakakwáátέ ábáana*
	mu-ka-kwaat-a a-ba-ana	ta-mu-a-ka-kwaat-e a-ba-ana
	SM_{2PL}-FUT_3-have-FV AUG-2-child	NEG-SM_{2PL}-NEG.IPFV-FUT_3-have-FV AUG-2-child
	'You (pl.) will have children'	'You (pl.) will not have children'
[cl. 1]	*ákakwata ábáana*	*taakakwáátέ ábáana*
	a-ka-kwaat-a a-ba-ana	ta-a-a-ka-kwaat-a a-ba-ana
	SM_1-FUT_3-have-FV AUG-2-child	NEG-SM_1-NEG.IPFV-FUT_3-have-FV AUG-2-child
	'S/he will have children'	'S/he will not have children'
[cl. 2]	*bákakwata ábáana*	*tabaakakwáátέ ábáana*
	ba-ka-kwaat-a a-ba-ana	ta-ba-a-ka-kwaat-a a-ba-ana
	SM_2-FUT_3-have-FV AUG-2-child	NEG-SM_2-NEG.IPFV-FUT_3-have-FV AUG-2-child
	'They will have children'	'They will not have children'
[cl. 3]	*umúmáná úkakwata áméenshi*	*umúmáná tawaakakwáátέ áméenshi*
	u-mu-mana u-ka-kwaat-a	u-mu-mana ta-u-a-ka-kwaat-a
	AUG-3-river SM_3-FUT_3-have-FV	AUG-3-river NEG-SM_3-NEG.IPFV-FUT_3-have-FV
	a-ma-inshi	a-ma-inshi
	AUG-6-water	AUG-6-water
	'The river will have water'	'The river will not have water'
[cl. 7]	*icíímuti cíkakwaata ifisabo*	*icíímuti tacaakakwáátέ ífísábo*
	i-ci-mu-ti ci-ka-kwaat-a	i-ci-mu-ti ta-ci-a-ka-kwaat-a
	AUG-7-5-tree SM_7-FUT_3-have-FV	AUG-7-5-tree NEG-SM_7-NEG.IPFV-FUT_3-have-FV
	i-fi-sabo	i-fi-sabo
	AUG-8-fruit	AUG-8-fruit
	'The tree will have fruits'	'The tree will not have fruits'
[cl. 9]	*inkóko ikakwata ipíndo*	*inkóko tayaakakwáátέ ípíndo*
	i-N-koko i-ka-kwaat-a	i-N-koko ta-i-a-ka-kwaat-a
	AUG-9-chicken SM_9-FUT_3-have-FV	AUG-9-chicken NEG-SM_9-NEG.IPFV-FUT_3-have-FV
	i-Ø-pindo	i-Ø-pindo
	AUG-5-wing	AUG-5-wing
	'The chicken will have a wing'	'The chicken will not have a wing'

The future tense in the above examples is marked by the pre-stem TAM marker *ka-*, which is identified as FUT3 marker in Section 6.3. The alternation of the FV, i.e., *-a* in affirmative vs. *-é* in negative, is attested as a general pattern of FUT3 forms, which will be further described in Section 6.3. The following is the morphological template for the future forms of the possessive verb *-kwáat-*.

Table 3-2-6: Summary of the structure of the possession verbs in the future tense

		PREIN	IN	POSTIN	STEM	FV	X	
PST	AFF		SM-	***ka-***	***kwáat***	***-a***	#	AUG-N
	NEG	***tá-***	SM-	***a-ka-***	***kwáat***	***-é***	#	AUG-N

3.2.4 Summary: A list of structures

Table 3-2-7 is a summary of the morphological templates of the possessive stem *-kwáat-* in different tense and polarity categories. As shown in the table, the pattern of inflection is quite consistent and simple, i.e., the non-future forms are marked by *alí-* in affirmative and by *a-*, in addition to the negative pre-initial marker *tá-*, in negative. The tense can be distinguished by the FV *-a* in the present vs. *-ile* in the past, while the future tense of the possessive verb can be expressed by the FUT3 TAM marker *ka-*.

Table 3-2-7: Morphosyntactic structures of the possession verbs

		PREIN	IN	POSTIN	STEM	FV	X	
PST	AFF		SM-	***alí-***	***kwáat***	***-a***	#	+ AUG-X
	NEG	***tá-***	SM-	***a-***	***kwáat***	***-a***	#	+ AUG-X
PST	AFF		SM-	***alí-***	***kwáat***	***-ile***	#	+ AUG-X
	NEG	***tá-***	SM-	***a-***	***kwáat***	***-ile***	#	+ AUG-X
PST	AFF		SM-	***ka-***	***kwáat***	***-a***	#	+ AUG-X
	NEG	***tá-***	SM-	***ka-***	***kwáat***	***-é***	#	+ AUG-X

3.3 Existential predicates

The morphosyntactic patterns of existential predicates, i.e., those used in existential sentences that denote the existence of an object or event in a specific place, i.e., 'S is in/at/on P', show similarity to those of the copulative predicates described in 3.1 above: the copula *-li* is used in non-future contexts while the verb root *-b-* is used in the contexts of future tense.

3.3.1 Present tense

Table 3-3-1 shows illustrating examples of existential predicates in the present tense with different types of subject in terms of inflectional categories, i.e., person, number, and noun classes.

Table 3-3-1: Existential predicates in the present tense: ‘S is in P’

	AFF	NEG
[1SG]	*ndi múng’ánda*	*nshílí mung’anda*
	N-li mu-N-ganda	N-shi-li mu-N-ganda
	SM1SG-COP 18-9-house	SM1SG-NEG-COP 18-9-house
	‘I am in the house’	‘I am not in the house’
[1PL]	*tuli múng’ánda*	*tatúlí mung’anda*
	tu-li mu-N-ganda	ta-tu-li mu-N-ganda
	SM1PL-COP 18-9-house	NEG-SM1PL-COP 18-9-house
	‘We are in the house’	‘We are not in the house’
[2SG]	*uli múng’ánda*	*taúlí mung’anda*
	u-li mu-N-ganda	ta-u-li mu-N-ganda
	SM2SG-COP 18-9-house	NEG-SM2SG-COP 18-9-house
	‘You (sg.) are in the house’	‘You (sg.) are not in the house’
[2PL]	*muli múng’ánda*	*tamúlí mung’anda*
	mu-li mu-N-ganda	ta-mu-li mu-N-ganda
	SM2PL-COP 18-9-house	NEG-SM2PL-COP 18-9-house
	‘You (pl.) are in the house’	‘You (pl.) are not in the house’
[cl. 1]	*álí múng’ánda*	*tálí mung’anda*
	a-li mu-N-ganda	ta-a-li mu-N-ganda
	SM1-COP 18-9-house	NEG-SM1-COP 18-9-house
	‘S/he is in the house’	‘S/he is not in the house’
[cl. 2]	*bálí múng’ánda*	*tabáli mung’anda*
	ba-li mu-N-ganda	ta-ba-li mu-N-ganda
	SM2-COP 18-9-house	NEG-SM2-COP 18-9-house
	‘They are in the house’	‘They are not in the house’
[cl. 3]	*úlí múng’ánda*	*taúlí mung’anda*
	u-li mu-N-ganda	ta-u-li mu-N-ganda
	SM3-COP 18-9-house	NEG-SM3-COP 18-9-house
	‘It (cl. 3) is in the house’	‘It (cl. 3) is not in the house’
[cl. 7]	*cílí múng’ánda*	*tacílí mung’anda*
	ci-li mu-N-ganda	ta-ci-li mu-N-ganda
	SM7-COP 18-9-house	NEG-SM7-COP 18-9-house
	‘It (cl. 7) is in the house’	‘It (cl. 7) is not in the house’
[cl. 9]	*ílí múng’ánda*	*taílí mung’anda*
	i-li mu-N-ganda	ta-i-li mu-N-ganda
	SM9-COP 18-9-house	NEG-SM9-COP 18-9-house
	‘It (cl. 9) is in the house’	‘It (cl. 9) is not in the house’

As shown in the examples, the simple copula form SM-*li* is used as an existential phrase with a locative noun phrase following.

Table 3-3-2: Summary of the structure of the existential predicates in the present tense

	PREIN	IN	POSTIN	STEM	FV	X
PST AFF		SM-		***li***	#	AUG-N
NEG	***tá-***	SM-		***li***	#	AUG-N

3.3.2 Past tense

The following table is a list of existential predicates in the past tense form with different types of subjects, including all speech participant subjects as well as several different class noun subjects.

Table 3-3-3: Existential predicates in the past tense: 'S was in P'

	AFF	NEG
[1SG]	*naalí múng'ánda*	*nsháali múng'ánda*
	N-a-li mu-N-ganda	N-shi-a-li mu-N-ganda
	SM1SG-PST-COP 18-9-house	SM1SG-NEG-PST-COP 18-9-house
	'I was in the house'	'I was not in the house'
[1PL]	*twaalí múng'ánda*	*tatwáali múng'ánda*
	tu-a-li mu-N-ganda	ta-tu-a-li mu-N-ganda
	SM1PL-PST-COP 18-9-house	NEG-SM1PL-PST-COP 18-9-house
	'We were in the house'	'We were not in the house'
[2SG]	*waalí múng'ánda*	*tawáali múng'ánda*
	u-a-li mu-N-ganda	ta-u-a-li mu-N-ganda
	SM2SG-PST-COP 18-9-house	NEG-SM2SG-PST-COP 18-9-house
	'You (pl.) were in the house'	'You (pl.) were not in the house'
[2PL]	*mwaalí múng'ánda*	*tamwáali múng'ánda*
	mu-a-li mu-N-ganda	ta-mu-a-li mu-N-ganda
	SM2PL-PST-COP 18-9-house	NEG-SM2PL-PST-COP 18-9-house
	'You (pl.) were in the house'	'You (pl.) were not in the house'
[cl. 1]	*áali múng'ánda*	*táali múng'ánda*
	a-a-li mu-N-ganda	ta-a-a-li mu-N-ganda
	SM1-PST-COP 18-9-house	NEG-SM1-PST-COP 18-9-house
	'S/he was in the house'	'S/he was not in the house'
[cl. 2]	*báali múng'ánda*	*tabáali múng'ánda*
	ba-a-li mu-N-ganda	ta-ba-a-li mu-N-ganda
	SM2-PST-COP 18-9-house	NEG-SM2-PST-COP 18-9-house
	'They were in the house'	'They were not in the house'
[cl. 3]	*wáali múng'ánda*	*tawáali múng'ánda*
	u-a-li mu-N-ganda	ta-u-a-li mu-N-ganda
	SM3-PST-COP 18-9-house	NEG-SM3-PST-COP 18-9-house
	'It (cl. 2) was in the house'	'It (cl. 3) was not in the house'
[cl. 7]	*cáali múng'ánda*	*tacáali múng'ánda*
	ci-a-li mu-N-ganda	ta-ci-a-li mu-N-ganda
	SM7-PST-COP 18-9-house	NEG-SM7-PST-COP 18-9-house
	'It (cl. 7) was in the house'	'It (cl. 7) was not in the house'
[cl. 9]	*yáali múng'ánda*	*tayáali múng'ánda*
	i-a-li mu-N-ganda	ta-i-a-li mu-N-ganda
	SM9-PST-COP 18-9-house	NEG-SM9-PST-COP 18-9-house
	'It (cl. 9) was in the house'	'It (cl. 9) was not in the house'

In the past tense, the same copula, *-li*, is used with inflection by the pre-stem TAM *a-*, which may be labelled as the imperfective past marker, as it frequently appears in different categories of the imperfective aspect, in the sense of 'marked' aspectual categories, in contrast with perfective as a default aspectual category. Further information on aspect-sensitive markers including this morpheme will be provided in Chapter 7.

Table 3-3-4: Summary of the structure of existential predicates in the past tense

		PREIN	IN	POSTIN	STEM	FV	X
PST	AFF		SM-	***a-***	***li***	#	AUG-N
	NEG	***tá-***	SM-	***a-***	***li***	#	AUG-N

3.3.3 Future tense

Table 3-3-5 gives a list of illustrative examples of existential clauses in the future tense with different types of subjects.

Table 3-3-5: Existential predicates in the future tense: 'S will be in P'

	AFF	NEG
[1SG]	*nkabá múng'ánda*	*nshaakabé múng'ánda*
	N-ka-b-a mu-N-ganda	N-shi-a-ka-b-e mu-N-ganda
	SM_{1SG}-FUT_3-be-FV 18-9-house	SM_{1SG}-NEG-NEG.IPFV-FUT_3-be-NEG 18-9-house
	'I will be in the house'	'I will not be in the house'
[1PL]	*tukabá múng'ánda*	*tatwaakabé múng'ánda*
	tu-ka-b-a mu-N-ganda	ta-tu-a-ka-b-e mu-N-ganda
	SM_{1PL}-FUT_3-be-FV 18-9-house	NEG-SM_{1PL}-NEG.IPFV-FUT_3-be-NEG 18-9-house
	'We will be in the house'	'We will be in the house'
[2SG]	*ukabá múng'ánda*	*tawaakabé múng'ánda*
	u-ka-b-a mu-N-ganda	ta-u-a-ka-b-e mu-N-ganda
	SM_{2SG}-FUT_3-be-FV 18-9-house	NEG-SM_{2SG}-NEG.IPFV-FUT_3-be-NEG 18-9-house
	'You (sg.) will be in the house'	'You (sg.) will not be in the house'
[2PL]	*mukabá múng'ánda*	*tamwaakabé múng'ánda*
	mu-ka-b-a mu-N-ganda	ta-mu-a-ka-b-e mu-N-ganda
	SM_{2PL}-FUT_3-be-FV 18-9-house	NEG-SM_{2PL}-NEG.IPFV-FUT_3-be-NEG 18-9-house
	'You (pl.) will be in the house'	'You (pl.) will not be in the house'
[cl. 1]	*ákaba múng'ánda*	*taakabé múng'ánda*
	a-ka-b-a mu-N-ganda	ta-a-a-ka-ba-e mu-N-ganda
	SM_1-FUT_3-be-FV 18-9-house	NEG-SM_1-NEG.IPFV-FUT_3-be-NEG 18-9-house
	'S/he will be in the house'	'S/he will not be in the house'
[cl. 2]	*bákaba múng'ánda*	*tabaakabé múng'ánda*
	ba-ka-b-a mu-N-ganda	ta-ba-a-ka-ba-e mu-N-ganda
	SM_2-FUT_3-be-FV 18-9-house	NEG-SM_2-NEG.IPFV-FUT_3-be-NEG 18-9-house
	'They will be in the house'	'They will not be in the house'
[cl. 3]	*úkaba múng'ánda*	*tawaakabé múng'ánda*
	u-ka-b-a mu-N-ganda	ta-u-a-ka-b-e mu-N-ganda
	SM_3-FUT_3-be-FV 18-9-house	NEG-SM_3-NEG.IPFV-FUT_3-be-NEG 18-9-house
	'It (cl. 3) will be in the house'	'It (cl. 3) will not be in the house'
[cl. 7]	*cíkaba múng'ánda*	*tacaakabé múng'ánda*
	ci-ka-b-a mu-N-ganda	ta-ci-a-ka-b-e mu-N-ganda
	SM_7-FUT_3-be-FV 18-9-house	NEG-SM_7-NEG.IPFV-FUT_3-be-NEG 18-9-house
	'It (cl. 7) will be in the house'	'It (cl. 7) will not be in the house'

[cl. 9]	*ikaba múng'ánda*	*tayaakabé múng'ánda*
	i-ka-b-a mu-N-ganda	ta-i-a-ka-b-e mu-N-ganda
	SM9-FUT3-be-FV 18-9-house	NEG-SM9-NEG.IPFV-FUT3-be-NEG 18-9-house
	'It (cl. 9) will be in the house'	'It (cl. 9) will not be in the house'

As with the copulative predicates, the verbal root *-b-* 'be, become' in the future tense is marked by the FUT3 morpheme *ka-*. In the negative forms, the morpheme is preceded by the pre-stem marker *a-*, which also repeatedly appears in various negative imperfective contexts.

Table 3-3-6: Summary of the structure of existential predicates in the future tense

	PREIN	IN	POSTIN	STEM	FV	X
PST AFF		SM-	***ka-***	***b***	***-a***	# AUG-N
NEG	***tá-***	SM-	***a-ka-***	***b***	***-e***	# AUG-N

3.3.4 Summary: A list of structures

As Table 3-3-7 shows, the morphological template for existential predicates is quite simple and consistent. As in the possession verb phrase, the past tense is marked by the pre-stem *a-* while the future tense can be denoted through application of the PST3 template. The stem selection is also consistent, i.e., the copula *-li* for non-future and the verbal root *-b-* for future.

Table 3-3-7: Morphosyntactic structures of the existential predicates

	PREIN	IN	POSTIN	STEM	FV	X
PST AFF		SM-		***li***		# + AUG-X
NEG	***tá-***	SM-		***li***		# + AUG-X
PST AFF		SM-	***a-***	***li***		# + AUG-X
NEG	***tá-***	SM-	***a-***	***li***		# + AUG-X
PST AFF		SM-	***ka-***	***b***	***-a***	# + AUG-X
NEG	***tá-***	SM-	***a-ka-***	***b***	***-e***	# + AUG-X

4. Pronouns

This chapter provides a basic description about the three types of pronouns, namely i) independent pronouns, ii) possessive pronouns, and iii) interrogative pronouns (i.e., question words). One of the striking features in the system of pronouns is that there are independent forms not only for each speech participant but also for each of the noun classes. Further information will be provided in the following sections.

4.1 Independent pronouns

As already shown in several examples in Chapter 3, independent pronouns that refer to person and number of speech participants are identified as follows: [1SG] *ine*, [1PL] *ifwe*, [2SG] *iwe*, and [2PL] *imwe*, as given in Table 4-1-1.

Table 4-1-1: Forms of the independent pronouns referring to speech participants

	SG	PL
[1 pers.]	*tee íné kasukúlu*	*tee ífwé báakasukúlu*
	te ine Ø-kasukulu	te ifwe baa-kasukulu
	NEG PRON.1SG 1a-student	NEG PRON.1PL 2a-student
	‘I am not a student’	‘I am not a student’
[2 pers.]	*tee íwé kasukúlu*	*tee ímwé báakasukúlu*
	te iwe Ø-kasukulu	te imwe baa-kasukulu
	NEG PRON.2SG 1a-student	NEG PRON.2PL 2a-student
	‘You (sg.) are not a student’	‘You (pl.) are not a student’

These forms follow the common morphological template *i-X-e*, where X is identified as the form of SM, i.e., [1SG] *ine* {i-N-e}, [1PL] *ifwe* {i-tu-e}, [2SG] *iwe* {i-u-e}, [2PL] *imwe* {i-mu-e}. The fricativisation of *t* to *f* when followed by the first-degree vowels, which is a typical process of historical sound change called Bantu Spirantisation (cf. Schadeberg 1994–5), is quite active even in the synchronic system of this language, e.g., a parallel morphophonological process is triggered by affixation of the causative suffixes *-i* or *-ish* (cf. 8.2).

On the other hand, the pronominal forms referring to each of the noun classes are identified as follows: [cl. 1] *eena,* [cl. 2] *beena,* [cl. 3] *weena*, [cl. 4] *yeena*, [cl. 5] *lyeena*, [cl. 6] *yeena*, [cl. 7] *ceena*, [cl. 8] *fyeena*, [cl. 9] *yeena*, [cl. 10] *sheena*, [cl. 11] *lweena*, [cl. 12] *keena*, [cl. 13] *tweena*, [cl. 14] *bweena*, [cl. 15] *kweena*, all of which can be generalised into a common morphological structure PP-*ena*.

Table 4-1-2: Forms of the independent pronouns referring to class nouns

	SG	PL
[cl. 1(a)/2(a)]	*eena ni kásukúlu*	*beena ni baakásukúlu*
	ena ni=Ø-kasukulu	bena ni=baa-kasukulu
	PRON.1 PRED=1a-student	PRON.2 PRED=2a-student
	‘S/he is a student’	‘They are students’

[cl. 3/4]	*wéénáá múúti* u-ena mu-ti PP$_3$-PRON 3-medicine 'It's medicine'	*shéénáá mííti* shi-ena mi-ti PP$_{10}$-PRON 4-medicine 'They are medicines'
[cl. 5/6]	*lyéénáá lííni* li-ena li-ni PP$_5$-PRON 5-egg 'It's an egg'	*yéénáá máání* ya-ena ma-ni PP$_6$-PRON 6-egg 'They are eggs'
[cl. 7/8]	*céénáá cíísóté* ci-ena ci-sote PP$_7$-PRON 7-hat 'It's a hat'	*fyéénáá fíísóté* fi-ena fi-sote PP$_8$-PRON 8-hat 'They are hats'
[cl. 9/10]	*yéénáá níńkó$^{\downarrow}$kó* i-ena ni=N-koko PP$_9$-PRON PRED=9-chicken 'It's a chicken'	*shéénáá níńkó$^{\downarrow}$kó* shi-ena ni=N-koko PP$_{10}$-PRON PRED=10-chicken 'They are chickens'
[cl. 11]	*lwéénáá lúúkásá* lu-ena lu-kasa PP$_{11}$-PRON 11-foot 'It's a foot'	
[cl. 12/13]	*kéénáá káákóndo* ka-ena ka-kondo PP$_{12}$-PRON 12-toe 'It's a toe'	*twéénáá túúkóndo* tu-ena tu-kondo PP$_{13}$-PRON 13-toe 'They are toes'
[cl. 14]	*bwéénáá bóówá* bu-ena bu-owa PP$_{14}$-PRON 14-mushroom 'They are mushrooms'	
[cl. 15]	*kwéénáá kúúbóko* ku-ena ku-boko PP$_{15}$-PRON 15-arm 'It's an arm'	

4.2 Possessive pronouns

As shown in the following sections, unlike many Bantu languages[24] where possessive pronouns are assigned only for human possessors, i.e., speech participants and cl. 1/2 nouns, this language has independent possessive pronouns not only for human possessors but for class nouns.

[24] According to the database compiled by Marten et al. (2018), 17 out of 48 sample languages (35.4%) have distinct possessive pronominal forms for all noun classes and all speech act participants. Many of them are in Interlacustrine zone J or the southern zones including K, L, N, R, and part of S.

4.2.1 Adnominal form (‘one’s X’)

4.2.1.1 Human possessors

Table 4-2-1 shows the adnominal forms of possessive pronouns referring to human possessors, whose stem forms can be identified as follows: [1SG] *-andi*, [1PL] *-esu*, [2SG] *-obe*, [2PL] *-enu,* [cl. 1] *-akwe*, and [cl. 2] *-abo*.

Table 4-2-1: cl. 1/2 nouns with a possessive pronoun

	‘one’s X [cl. 1 = child]’	‘one’s X [cl. 2 = children]’
[1SG]	*úmwáana waandi* u-mu-ana u-andi AUG-1-child PP1-POSS1SG ‘my child’	*ábáana baandi* a-ba-ana ba-andi AUG-2-child PP2-POSS1SG ‘my children’
[1PL]	*úmwáana weesu* u-mu-ana u-esu AUG-1-child PP1-POSS1PL ‘our child’	*ábáana beesu* a-ba-ana ba-esu AUG-2-child PP2-POSS1PL ‘our children’
[2SG]	*úmwáana woobe* u-mu-ana u-obe AUG-1-child PP1-POSS2SG ‘your (sg.) child’	*ábáana boobe* a-ba-ana ba-obe AUG-2-child PP2-POSS2SG ‘your (sg.) children’
[2PL]	*úmwáana weenu* u-mu-ana u-enu AUG-1-child PP1-POSS2PL ‘your (pl.) child’	*ábáana beenu* a-ba-ana ba-enu AUG-2-child PP2-POSS2PL ‘your (pl.) children’
[cl. 1]	*úmwáana waakwe* u-mu-ana u-akwe AUG-1-child PP1-POSS1 ‘her/his child’	*ábáana baakwe* a-ba-ana ba-akwe AUG-2-child PP2-POSS1 ‘her/his children’
[cl. 2]	*úmwáana waabo* u-mu-ana u-abo AUG-1-child PP1-POSS2 ‘their child’	*ábáana baabo* a-ba-ana ba-abo AUG-2-child PP2-POSS2 ‘their children’
[PN]	*úmwáana waa kwa mwáape* u-mu-ana u-a AUG-1-child PP1-ASSC ku-a mwaape PP17-ASSC Mwape ‘Mwape’s child’	*ábáana baa kwa mwáape* a-ba-ana ba-a AUG-2-child PP2-ASSC ku-a mwaape PP17-ASSC Mwape ‘Mwape’s children’

As shown in the case where a possessor is indicated in a full noun, the additional preposition *kwa*, which is morphologically analysable as the associative of the locative class 17 and thus can be literally translated as ‘the place of’, should be inserted. However, the form is only used to introduce human nouns and not used for other nouns including animate nouns as illustrated in (26a–d).

(26) a. *úmwáana wáá ḿbwa*
u-mu-ana u-a N-bwa
AUG-1-child PP$_1$-ASSC 9-dog
'an offspring of a dog'
*umwaana waa kwa mbwa

b. *ábáana báá ḿbwa*
a-ba-ana ba-a N-bwa
AUG-1-child PP$_2$-ASSC 9-dog
'offsprings of a dog'

c. *ákáana káá ḿbwa*
a-ka-ana ka-a N-bwa
AUG-12-child PP$_{12}$-ASSC 9-dog
'a small baby of a dog'

d. *útwáana twáá ḿbwa*
u-tu-ana tu-a N-bwa
AUG-13-child PP$_{13}$-ASSC 9-dog
'small babies of a dog'

Possessive pronouns agreeing with other noun classes (cl. 3/4) are exemplified in Table 4-2-2.

Table 4-2-2: cl. 3/4 nouns with a possessive pronoun

	'one's X [cl. 3 = medicine]'	'one's X [cl. 4 = medicines]'
[1SG]	*úmúti waandi* u-mu-ti u-andi AUG-3-medicine PP$_3$-POSS1SG 'my medicine'	*ímíti shaandi* i-mi-ti shi-andi AUG-4-medicine PP$_{10}$-POSS1SG 'my medicines'
[1PL]	*úmúti weesu* u-mu-ti u-esu AUG-3-medicine PP$_3$-POSS1PL 'our medicine'	*ímíti sheesu* i-mi-ti shi-esu AUG-4-medicine PP$_{10}$-POSS1PL 'our medicines'
[2SG]	*úmúti woobe* u-mu-ti u-obe AUG-3-medicine PP$_3$-POSS2SG 'your (sg.) medicine'	*ímíti shoobe* i-mi-ti shi-obe AUG-4-medicine PP$_{10}$-POSS2SG 'your (sg.) medicines'
[2PL]	*úmúti weenu* u-mu-ti u-enu AUG-3-medicine PP$_3$-POSS2PL 'your (pl.) medicine'	*ímíti sheenu* i-mi-ti shi-enu AUG-4-medicine PP$_{10}$-POSS2PL 'your (pl.) medicines'
[cl.1]	*úmúti waakwe* u-mu-ti u-akwe AUG-3-medicine PP$_3$-POSS1 'her/his medicine'	*ímíti shaakwe* i-mi-ti shi-akwe AUG-4-medicine PP$_{10}$-POSS1 'her/his medicines'

[cl.2]	*úmúti waabo* u-mu-ti u-abo AUG-3-medicine PP$_3$-POSS2 'their medicine'	*ímíti shaabo* i-mi-ti shi-abo AUG-4-medicine PP$_{10}$-POSS2 'their medicines'
[PN]	*úmúti waa kwa mwáape* u-mu-ti u-a AUG-3-medicine PP$_3$-ASSC ku-a mwaape PP$_{17}$-ASSC Mwape 'Mwape's medicine'	*ímíti shaa kwa mwáape* i-mi-ti shi-a AUG-4-medicine PP$_{10}$-ASSC ku-a mwaape PP$_{17}$-ASSC Mwape 'Mwape's medicines'

4.2.1.2 Non-human possessors

Possessive pronouns are assigned not only to human agents, i.e., speech participants and cl. 1/2 nouns, but also to class nouns, i.e., there are independent forms of possessive pronouns referring to non-human possessors in each of the noun classes. This is illustrated in Table 4-2-3. Forms on the left column are phrases with a full noun possessor of each noun class, while the forms on the right column are those with a possessive pronoun referring to a corresponding noun class. As shown in the following examples, the pronominal expression of the possession referring to (non-human) noun classes is morphologically formulated as PP-*ko*.

Table 4-2-3: List of possessive pronouns for class nouns possessors

	'a name of [cl. 1–18]'	'its name'
cl.3	*ishína lyáámuti* i-Ø-shina li-a u-mu-ti AUG-5-name PP$_5$-ASSC AUG-3-medicine 'a name of a (type of) medicine'	*ishína lyaa uko* i-Ø-shina li-a u-ko AUG-5-name PP$_5$-ASSC PP$_3$-POSS 'its (cl.3) name'
cl.4	*ishína lyéémíti* i-Ø-shina li-a i-mi-ti AUG-5-name PP$_5$-ASSC AUG-4-medicine 'a name of (multiple) medicines'	*ishína lyaa shiko* i-Ø-shina li-a shi-ko AUG-5-name PP$_5$-ASSC PP$_{10}$-POSS 'their (cl. 4) name'
cl.5	*ishína lyeelibwe* i-Ø-shina li-a i-li-bwe AUG-5-name PP$_5$-ASSC AUG-5-stone 'a name of a stone'	*ishína lyaa liko* i-Ø-shina li-a li-ko AUG-5-name PP$_5$-ASSC PP$_5$-POSS 'its (cl. 5) name'
cl.6	*ishína lyaamabwe* i-Ø-shina li-a a-ma-bwe AUG-5-name PP$_5$-ASSC AUG-6-stone 'a name of stones'	*ishína lyaa yako* i-Ø-shina li-a ya-ko AUG-5-name PP$_5$-ASSC PP$_6$-POSS 'their (cl. 6) name'
cl.7	*ishína lyeecisote* i-Ø-shina li-a i-ci-sote AUG-5-name PP$_5$-ASSC AUG-7-hat 'a name of a hat'	*ishína lyaa ciko* i-Ø-shina li-a ci-ko AUG-5-name PP$_5$-ASSC PP$_7$-POSS 'its (cl. 7) name'

cl.8	*ishína lyeefisote* i-Ø-shina li-a i-fi-sote AUG-5-name PP$_5$-ASSC AUG-8-hat 'a name of hats'	*ishína lyaa fiko* i-Ø-shina li-a fi-ko AUG-5-name PP$_5$-ASSC PP$_8$-POSS 'their (cl. 8) name'
cl.9	*ishína lyeenkó↓kó* i-Ø-shina li-a i-N-koko AUG-5-name PP$_5$-ASSC AUG-9-chicken 'a name of a chicken'	*ishína lyaa iko* i-Ø-shina li-a i-ko AUG-5-name PP$_5$-ASSC PP$_9$-POSS 'its (cl. 9) name'
cl.10	*ishína lyeenkó↓kó* i-Ø-shina li-a i-N-koko AUG-5-name PP$_5$-ASSC AUG-10-chicken 'a name of chickens'	*ishína lyaa shiko* i-Ø-shina li-a shi-ko AUG-5-name PP$_5$-ASSC PP$_{10}$-POSS 'their (cl.10) name'
cl.11	*ishína lyoolusapato/ lyaalusapato* i-Ø-shina li-a u-lu-sapato AUG-5-name PP$_5$-ASSC AUG-11-shoe 'a name of a shoe'	*ishína lyaa luko* i-Ø-shina li-a lu-ko AUG-5-name PP$_5$-ASSC PP$_{11}$-POSS 'its (cl. 11) name'
cl.12	*ishína lyaakanyelele* i-Ø-shina li-a a-ka-nyelele AUG-5-name PP$_5$-ASSC AUG-12-ant 'a name of an ant'	*ishína lyaa kako* i-Ø-shina li-a ka-ko AUG-5-name PP$_5$-ASSC PP$_{12}$-POSS 'its (cl. 12) name'
cl.13	*ishína lyaatunyelele* i-Ø-shina li-a u-tu-nyelele AUG-5-name PP$_5$-ASSC AUG-13-ant 'a name of ants'	*ishína lyaa tuko* i-Ø-shina li-a tu-ko AUG-5-name PP$_5$-ASSC PP$_{13}$-POSS 'their (cl. 13) name'
cl.14	*ishína lyoobupe* i-Ø-shina li-a u-bu-pe AUG-5-name PP$_5$-ASSC AUG-14-gift 'a name of a gift'	*ishína lyaa buko* i-Ø-shina li-a bu-ko AUG-5-name PP$_5$-ASSC PP$_{14}$-POSS 'its (cl. 14) name'
cl.15	*ishína lyookúboko* i-Ø-shina li-a u-ku-boko AUG-5-name PP$_5$-ASSC AUG-15-arm 'a name of an arm'	*ishína lyaa buko* i-Ø-shina li-a u-ko AUG-5-name PP$_5$-ASSC PP$_{15}$-POSS 'its (cl. 15) name'
cl.16	*ishína lyaapano* i-Ø-shina li-a pa-no AUG-5-name PP$_5$-ASSC PP$_{16}$-DEM.HP 'a name of this place'	*ishína lyaa pako* i-Ø-shina li-a pa-ko AUG-5-name PP$_5$-ASSC PP$_{16}$-POSS 'its (cl. 16) name'
cl.17	*ishína lyaakuno* i-Ø-shina li-a ku-no AUG-5-name PP$_5$-ASSC PP$_{17}$-DEM.HP 'a name of this place'	*ishína lyaa kuko* i-Ø-shina li-a ku-ko AUG-5-name PP$_5$-ASSC PP$_{17}$-POSS 'its (cl. 17) name'
cl.18	*ishína lyaamuno* i-Ø-shina li-a mu-no AUG-5-name PP$_5$-ASSC PP$_{18}$-DEM.HP 'a name of this place (inside)'	*ishína lyaa muko* i-Ø-shina li-a mu-ko AUG-5-name PP$_5$-ASSC PP$_{18}$-POSS 'its (cl. 18) name'

4.2.2 Predicative forms (‘it’s one’s X’)

A predicative form of a noun phrase with a possessive pronoun is produced through the same process of predication used with a simple noun phrase, as shown in (17) in 3.1, i.e., i) by dropping AUG, which triggers compensatory lengthening of CP, or ii) by assignment of PRED *ni*= when a head noun is cl. 1a/2a or cl. 9/10, whose CP lacks the distinction between short and long forms. Illustrating examples are given in Table 4-2-4 for the case of cl. 1/2 head nouns, in Table 4-2-5 for cl. 3/4 head nouns, and in Table 4-2-6 for cl. 1a/2a head nouns.

Table 4-2-4: Predicate forms of cl. 1/2 nouns with a possessive pronoun

	‘it’s one’s X [cl. 1 = child]’	‘they are one’s X [cl. 2 = children]’
[1SG]	*mwaáná waandi* mu-ana u-andi 1-child PP1-POSS1SG ‘it’s my child’	*baáná baandi* ba-ana ba-andi 2-child PP2-POSS1SG ‘they are my children’
[1PL]	*mwaáná weesu* mu-ana u-esu 1-child PP1-POSS1PL ‘it’s our child’	*baáná beesu* ba-ana ba-esu 2-child PP2-POSS1PL ‘they are our children’
[2SG]	*mwaáná woobe* mu-ana u-obe 1-child PP1-POSS2SG ‘it’s your (sg.) child’	*baáná boobe* ba-ana ba-obe 2-child PP2-POSS2SG ‘they are your (sg.) children’
[2PL]	*mwaáná weenu* mu-ana u-enu 1-child PP1-POSS2PL ‘it’s your (pl.) child’	*baáná beenu* ba-ana ba-enu 2-child PP2-POSS2PL ‘they are your (pl.) children’
[cl.1]	*mwaáná waakwe* mu-ana u-akwe 1-child PP1-POSS1 ‘it’s her/his child’	*baáná baakwe* ba-ana ba-akwe 2-child PP2-POSS1 ‘they are her/his children’
[cl.2]	*mwaáná waabo* mu-ana u-abo 1-child PP1-POSS2 ‘it’s their child’	*baáná baabo* ba-ana ba-abo 2-child PP2-POSS2 ‘they are their children’
[PN]	*mwaáná waa kwa mwáape* mu-ana u-a 1-child PP1-ASSC ku-a mwaape PP17-ASSC Mwape ‘it’s Mwape’s child’	*baáná baa kwa mwáape* ba-ana ba-a 2-child PP2-ASSC ku-a mwaape PP17-ASSC Mwape ‘they are Mwape’s children’

Table 4-2-5: Predicate forms of cl. 3/4 nouns with a possessive pronoun

	'it's one's X [cl. 3 = medicine]'	'they are one's X [cl. 4 = medicines]'
[1SG]	*muúti waandi* mu-ti u-andi 3-medicine PP3-POSS1SG 'it's my medicine'	*miíti shaandi* mi-ti shi-andi 4-medicine PP10-POSS1SG 'they are my medicines'
[1PL]	*muúti weesu* mu-ti u-esu 3-medicine PP3-POSS1PL 'it's our medicine'	*miíti sheesu* mi-ti shi-esu 4-medicine PP10-POSS1PL 'they are our medicines'
[2SG]	*muúti woobe* mu-ti u-obe 3-medicine PP3-POSS2SG 'it's your (sg.) medicine'	*miíti shoobe* mi-ti shi-obe 4-medicine PP10-POSS2SG 'they are your (sg.) medicines'
[2PL]	*muúti weenu* mu-ti u-enu 3-medicine PP3-POSS2PL 'it's your (pl.) medicine'	*miíti sheenu* mi-ti shi-enu 4-medicine PP10-POSS2PL 'they are your (pl.) medicines'
[cl.1]	*muúti waakwe* mu-ti u-akwe 3-medicine PP3-POSS1 'it's her/his medicine'	*miíti shaakwe* mi-ti shi-akwe 4-medicine PP10-POSS1 'they are her/his medicines'
[cl.2]	*muúti waabo* mu-ti u-abo 3-medicine PP3-POSS2 'it's their medicine'	*miíti shaabo* mi-ti shi-abo 4-medicine PP10-POSS2 'they are their medicines'
[PN]	*muúti ˈwáá kwá mwáape* mu-ti u-a 3-medicine PP3-ASSC ku-a mwaape PP17-ASSC Mwape 'it's Mwape's medicine'	*miíti ˈsháá kwá mwáape* mi-ti shi-a 4-medicine PP10-ASSC ku-a mwaape PP17-ASSC Mwape 'they are Mwape's medicines'

Table 4-2-6: Predicate forms of cl. 1a/2a nouns with a possessive pronoun

	'it's one's X [cl. 1a = student]'	'they are one's X [cl.2a = students]'
[1SG]	*níkásukúlú waandi* ni=ka-sukulu u-andi PRED=1a-school PP1-POSS1SG 'it's my student'	*nibáákasukúlú baandi* ni=baa-ka-sukulu ba-andi PRED=2a-1a-school PP2-POSS1SG 'they are my students'
[1PL]	*níkásukúlú weesu* ni=ka-sukulu u-esu PRED=1a-school PP1-POSS1PL 'it's our student'	*nibáákasukúlú beesu* ni=baa-ka-sukulu ba-esu PRED=2a-1a-school PP2-POSS1PL 'they are our students'

[2SG]	*níkásukúlú woobe* ni=ka-sukulu u-obe PRED=1a-school PP$_1$-POSS2SG 'it's your (sg.) student'	*nibáákasukúlú boobe* ni=baa-ka-sukulu ba-obe PRED=2a-1a-school PP$_2$-POSS2SG 'they are your (sg.) students'
[2PL]	*níkásukúlú weenu* ni=ka-sukulu u-enu PRED=1a-school PP$_1$-POSS2PL 'it's your (pl.) student'	*nibáákasukúlú beenu* ni=baa-ka-sukulu ba-enu PRED=2a-1a-school PP$_2$-POSS2PL 'they are your (pl.) students'
[cl.1]	*níkásukúlú waakwe* ni=ka-sukulu u-akwe PRED=1a-school PP$_1$-POSS1 'it's her/his student'	*nibáákasukúlú baakwe* ni=baa-ka-sukulu ba-akwe PRED=2a-1a-school PP$_2$-POSS1 'they are her/his students'
[cl.2]	*níkásukúlú waabo* ni=ka-sukulu u-abo PRED=1a-school PP$_1$-POSS2 'it's their student'	*nibáákasukúlú baabo* ni=baa-ka-sukulu ba-abo PRED=2a-1a-school PP$_2$-POSS2 'they are their students'
[PN]	*níkásukúlú ˈwáá kwá mwáape* ni=ka-sukulu u-a PRED=1a-school PP$_1$-ASSC ku-a mwaape PP17-ASSC Mwape 'it's Mwape's student'	*nibáákasukúlú ˈbáá kwá mwáape* ni=baa-ka-sukulu ba-a PRED=2a-1a-school PP$_2$-ASSC ku-a mwaape PP17-ASSC Mwape 'they are Mwape's students'

4.2.3 Summary of the pronominal forms

The following is a summary of the independent pronouns referring to speech participants, whose morphological structure is generalised as *i*-SM-*e*, and those referring to class nouns, whose stem form is *-ena*, which takes PP to mark grammatical agreement with a head noun.

Table 4-2-7: List of pronominal forms

	Independent Pronouns S.P.: *i*-SM-*e* N.C.: PP-*ena*	Possessive Pronouns N.C.: PP-*ko*		Independent Pronouns S.P.: *i*-SM-*e* N.C.: PP-*ena*	Possessive Pronouns N.C.: PP-*ko*
1SG	*ine* //i-N-e//	*-andi*	1PL	*ifwe* //i-fu-e// (fu < *tu)	*-esu*
2SG	*iwe* //i-u-e//	*-obe*	2PL	*imwe* //i-mu-e//	*-enu*
cl. 1	*eena* //a-ena//	*-akwe*	cl. 2	*beena* //ba-ena//	*-abo*
cl. 3	*weena* //u-ena//	*uko* //u-ko//	cl. 4	*(yeena)* //i-ena//	*(iko)* //i-ko//
cl. 5	*lyeena* //li-ena//	*liko* //li-ko//	cl. 6	*yeena* //ya-ena//	*yako* //ya-ko//

cl. 7	*ceena* //ci-ena//	*ciko* //ci-ko//	cl. 8	*fyeena* //fi-ena//	*fiko* //fi-ko//
cl. 9	*yeena* //i-ena//	*iko* //i-ko//	cl. 10	*sheena* //shi-ena//	*shiko* //shi-ko//
cl. 11	*lweena* //lu-ena//	*luko* //lu-ko//			
cl. 12	*keena* //ka-ena//	*kako* //ka-ko//	cl. 13	*tweena* //tu-ena//	*tuko* //tu-ko//
cl. 14	*bweena* //bu-ena//	*buko* //bu-ko//			
cl. 15	*kweena* //ku-ena//	*kuko* //ku-ko//			
cl. 16	*peena* //pa-ena//	*pako* //pa-ko//			
cl. 17	*kweena* //ku-ena//	*kuko* //ku-ko//			
cl. 18	*mweena* //mu-ena//	*muko* //mu-ko//			

4.3 Interrogative pronouns

Several kinds of question words are identified; some are invariable forms, others take an agreement marker. The word *inshi* 'what' can be identified as a cl. 9 form, as it takes PRED *ni=* in a clause-initial position as illustrated in (27a[25]–b). When it appears in a post-verbal position, the clitic drops, as in (27c–d).

(27) [what]

a. *nińshí icitíka*
   ni=i-N-shi i-Ø-cit-ik-a
   PRED=AUG-9-what SM9-PRS.CJ-do-NEUT-FV
   'What happens?'

b. *nińshí iléécitíka*
   ni=i-N-shi i-lee-cit-ik-a
   PRED=AUG-9-what SM9-PROG-do-NEUT-FV
   'What is happening?'

c. *uléécitéénshi*
   u-lee-cit-a i-N-shi
   SM2SG-PROG-do-FV AUG-9-what
   'What are you doing?' [FOC on Pred]

d. *baléécitéénshi*
   ba-lee-cit-a i-N-shi

[25] It may be worth mentioning that the verb form in (27a) is inflected as a conjoint form although no post-verbal element follows. This may suggest that the interrogative pronoun underlyingly sits in a post-verbal position and it raises to a clause-initial position. For further analysis of syntactic features pertaining to the CJ/DJ alternation, see Kula (2017).

SM2-PROG-do-FV AUG-9-what
'What are they doing?' [FOC on Pred]

While *inshi* is generally used as an invariable form, it can be involved in a derivational process where an additional noun class prefix is attached to specify the property of the referent, as illustrated in (28)c.

(28) [what]
a. *níńshí ukweete?*
ni=i-N-shi u-kwaat-ile
PRED=AUG-9-what SM2SG-have-ANT
'What do you have?'
b. *ukweeteeńshi?*
u-kwaat-ile i-N-shi
SM2SG-have-ANT AUG-9-what
'What do you have?'
c. *cíńshí ukweete?*
ci-N-shi u-kwaat-ile
7-9-what SM2SG-have-ANT
'What do you have?'

Another interrogative form *naani* 'who' is used invariably, i.e., it does not take an agreement marker. Similarly, the word *shaani* 'how' is also identified as an invariable form.

(29) [who]
a. *niwé náani ishína?*
ni=u-e naani i-shina
FOC=SM2SG-be who AUG-5.name
'What is your name?' (Lit: 'Who are you (in terms of the name)?')
b. *niwéebo náani ishína?*
ni=u-e=bo naani i-Ø-shina
FOC SM2SG-be=REL2 who AUG-5-name
'What is your name?' (Lit: 'Who are you (in terms of the name)?')

(30) [how]
bakúíta áti sháani?
ba-Ø-ku-it-a ati shaani
SM2-PRS.CJ-OM2SG-call-FV COMP how
'What is your name?' (Lit: 'How do they call you?')

In contrast, there is an interrogative stem that takes an agreement marker. The stem *-isa* can denote a wide range of interrogative meaning with different class markers, e.g., the form with the locative cl. 17 marker *ku-isa* denotes a meaning of 'where', the form with the cl. 5 marker *li-isa* means 'when', and the form with cl. 8 marker *fi-isa*, or probably those with other class prefixes that can refer to inanimate 'things' as well, can mean 'which', as illustrated in (31), (32), and (33), respectively.

(31) [where]
ulééyákuísa?
u-lee-y-a ku-isa

SM2SG-PROG-go_toward-FV PP17-which
'Where are you going?'

(32) [when]
akéésa líisa?
a-ka-is-a li-isa
SM1-FUT3-come-FV PP5-which
'When will she come?'

(33) [which]
muléefwáaya ífyakúlya fíisa?
mu-lee-fwaay-a i-fi-akula fi-isa
SM2PL-PROG-want-FV AUG-8-food PP8-which
'Which food do you want?'

5. Adjectival expressions

This chapter provides a brief overview of adjectival expressions. Generally, the adjective as a word class has two basic functions, namely i) descriptive predication as an intransitive predicate or complement of a copula, and ii) adnominal modification as the modifier of the head of an NP (Dixon 2004: 10). As the predication forms of adjectives are presented in 2.4.1 and the process of nominal predication is described in Chapter 3, this chapter focuses on the adjectival expressions in the former sense.

5.1 N + adjective

Adjectives in Bantu are generally defined as adnominal words that take a series of agreement markers which follow a paradigm that is fully or nearly identical to the paradigm of noun class prefixes (Van de Velde 2019: 258). In most Bantu languages, adjectives defined as such are few in number (cf. Meeussen 1967: 104; Nurse & Philippson 2003: 9; Van de Velde 2019: 258). In the reconstructed system of Proto-Bantu, adjectives take a noun class prefix (CP) as a marker of agreement with a head noun. This is, however, slightly different from the case in Bemba. As shown in (34), and as already mentioned in 2.4.1, adjectives in CB basically take a pronominal prefix (PP) as an agreement marker, as illustrated in (34a), where the adjectival stem *-kulu* (PB **kod-ʊ*) takes the PP_9 *i-* instead of CP_9 *N-* as a marker showing agreement with the head noun *inkoko*. This applies for all other classes – e.g., cl. 3 PP *u-* instead of CP *mu-*; cl. 6 PP *ya-* instead of CP *ma-*; and cl. 10 (also used for cl. 4) PP *shi-* instead of CP *N-* – except for cl. 1 where agreement is indexed by the CP_1 *mu-*, which is illustrated in (34b).

(34) a. *íńkóko íyikulu*
i-N-koko i-i-kulu
AUG-9-chicken AUG-PP_9-big
'a big chicken'

b. *umúńtú úmukulu*
u-mu-ntu u-mu-kulu
AUG-1-entity AUG-1-big
'a big person'

Table 5-1-1 shows a list of the same adjective *-kulu* 'big' with head nouns of different noun classes.

Table 5-1-1: Selected forms of the adjective *-kulu* 'big' with head nouns of different noun classes

[cl. 1/2]	*umúńtú úmukulu* u-mu-ntu u-mu-kulu AUG-1-entity AUG-1-big 'a big person'	*abáńtú ábakulu* a-ba-ntu a-ba-kulu AUG-2-entity AUG-PP_2-big 'big people'
[cl. 3/4]	*úmútwe úukulu* u-mu-twe u-u-kulu AUG-3-head AUG-PP_3-big 'a big head'	*ímítwe íshikulu* i-mi-twe i-shi-kulu AUG-4-head AUG-PP_{10}-big 'big heads'

[cl. 5/6]	*ilíbwé ílikulu* i-li-bwe i-li-kulu AUG-5-stone AUG-PP$_5$-big 'a big stone'	*amábwé áyakulu* a-ma-bwe a-ya-kulu AUG-6-stone AUG-PP$_6$-big 'big stones'
[cl. 7/8]	*icóóní ícikulu* i-ci-oni i-ci-kulu AUG-7-bird AUG-PP$_7$-big 'a big bird'	*ifyóóní ífikulu* i-fi-oni i-fi-kulu AUG-8-bird AUG-PP$_8$-big 'big birds'
[cl. 9/10]	*íńkóko íyikulu* i-N-koko i-i-kulu AUG-9-chicken AUG-PP$_9$-big 'a big chicken'	*íńkóko íshikulu* i-N-koko i-shi-kulu AUG-10-chicken AUG-PP$_{10}$-big 'big chickens'
[cl. 11/10]	*ulúpílí úlukulu* u-lu-pili u-lu-kulu AUG-11-mountain AUG-PP$_{11}$-big 'a big mountain'	*impílí íshikulu* i-N-pili i-shi-kulu AUG-10-mountain AUG-PP$_{10}$-big 'big mountains'
[cl. 12/13]	*ákákondo ákakulu* a-ka-kondo a-ka-kulu AUG-12-toe AUG-PP$_{12}$-big 'a big toe'	*útúkondo útukulu* u-tu-kondo u-tu-kulu AUG-13-toe AUG-PP$_{13}$-big 'big toes'
[cl. 14]	*ubwáálí úbukulu* u-bu-ali u-bu-kulu AUG-14-nshima AUG-PP$_{14}$-big 'a big nshima[26]'	
[cl. 15]	*úkúbokó úkukulu* u-ku-boko u-ku-kulu AUG-15-hand AUG-PP$_{15}$-big 'a big hand'	*ámábokó áyakulu* a-ma-boko a-ya-kulu AUG-6-hand AUG-PP$_6$-big 'big hands'
[cl. 16]	*páng'ánda ápakulu* pa-N-anda a-pa-kulu 16-9-house AUG-PP$_{16}$-big 'at a big house'	

The following is a list of selected stems classified as genuine adjectives in the sense that they take a pre-stem agreement marker.

Table 5-1-2: List of selected adjectival stems

stem forms	meanings	relevant items in Guthrie & Mann (1995)[27]	
-kulu	'big'	úmu |kúlú < -kúl-	*(var. pref)* 'adult' 'grow; grow up; grow large'
-noono	'small'	ícin|nóóno	'small'
-tali	'long, high, far'	ící|tálí	'long thing'
-kali	'strong'	ící|kálí < -kálip-	*(var. pref.)* 'fierce person or animal' 'become fierce, angry'

[26] Nshima is a traditional staple food, a thick porridge crafted from maize flour. This type of food is widely distributed across Sub-Saharan Africa and goes by different names in various areas/languages, such as ugali in Swahili, posho in Ganda, etc.

[27] Both *(v.p.)* and *(var.pref.)* are abbreviations that stand for 'variable (adjectival/pronominal) prefix' used in Guthrie & Mann (1995).

-ipi	'short'	-ipí-	{íkiipí *(v.p.)*}'short'
-suma	'good'	icí|sumá	*(var. pref.)* 'good thing'
-bi	'bad, wrong'	ící|bí	*(v.p.)* 'bad thing'
-pya	'new'	ící|pya	*(v.p.)* 'new thing'

5.2 N + ASSC + adjectival noun

Adnominal adjectival expressions can be achieved by using adjectival nouns connected by the associative linker that agrees with a head noun (cf. 2.4.2). Examples in (35) illustrate the template with the cl. 6 noun *amáká* 'power, strength'.

(35) a. *umúńtú uwáa maka*
u-mu-ntu u=u-a ma-ka
AUG-1-entity DEM=PP$_1$-ASSC 6-stength
'a strong person' (Lit: 'a person of strength')
b. *umúńtú uwáa maano*
u-mu-ntu u=u-a ma-ano
AUG-1-entity DEM=PP$_1$-ASSC 6-wisdom
'an intelligent person' (Lit: 'a person of wisdom')

The following table shows more examples with head nouns of different noun classes.

Table 5-2-1: Selected examples of adnominal expression N + ASSC + adjectival noun

cl. 1/2	*umúńtú uwáa maka* u-mu-ntu u=wa ma-ka AUG-1-entity SPEC=ASSC$_1$ 6-strength 'a strong person'	*abáńtú abáa maka* a-ba-ntu aba ma-ka AUG-2-entity SPEC=ASSC$_2$ 6-strength 'strong people'
cl. 5/6	*ílíino ilyáa maka* i-li-ino i=lya ma-ka AUG-5-tooth SPEC=ASSC$_5$ 6-strength 'a strong tooth'	*áméeno ayáa mako* a-ma-ino a=ya ma-ka AUG-6-tooth SPEC=ASSC$_6$ 6-strength 'strong teeth'
cl. 9/10	*inkóńtó iyáa maka* i-N-konto i=ya ma-ka AUG-9-staff SPEC=ASSC$_9$ 6-strength 'a strong staff (stick)'	*inkóńtó isháa maka* i-N-konto i=sha ma-ka AUG-10-staff SPEC=ASSC$_{10}$ 6-strength 'strong staff (sticks)'
cl. 16	*páng'ánda apáa maka* pa-N-anda a=pa ma-ka 16-9-house SPEC=ASSC$_{16}$ 6-strength 'at a strong house'	

5.3 N + ASSC + verbal stem

A third type of adnominal adjectival expression is structurally parallel with the second type. However, the constituent following the associative linker is not a syntactic noun but a verbal stem. The complement of the long associative *uwaa* in (36) is a verb stem as evidenced by its infinitive form *úkúpusana* 'to differ', which can be morphologically decomposed into *-pús-* 'miss' and the reciprocal suffix *-an* (cf. Guthrie & Mann 1995: 77).

(36) *umúńtú uwáa pusana*
u-mu-ntu u=u-a pusana
AUG-1-entity DEM=ASSC$_1$ differ
'a different person'

Table 5-3-1: Selected examples of adnominal expression N + ASSC + verb stem

cl. 1/2	*umúńtú uwáa pusana* u-mu-ntu u=wa pusana AUG-1-entity SPEC=ASSC$_1$ differ 'a different person'	*abáńtú abáa pusana* a-ba-ntu a=ba pusana AUG-2-entity SPEC=ASSC$_2$ differ 'different people'
cl. 5/6	*íllíno ilyáa pusana* i-li-ino i=lya pusana AUG-5-teeth SPEC=ASSC$_5$ differ 'a different tooth'	*áméeno ayáa pusana* a-ma-ino a=ya pusana AUG-6-teeth SPEC=ASSC$_6$ differ 'different teeth'
cl. 9/10	*inkóńtó iyáa pusana* i-N-konto i=ya pusana AUG-9-staff SPEC=ASSC$_9$ differ 'a different staff (stick)'	*inkóńtó isháa pusana* i-N-konto i=sha pusana AUG-10-staff SPEC=ASSC$_{10}$ differ 'different staffs (sticks)'
cl. 16	*páng'ánda apáa pusana* pa-N-anda a=pa pusana 16-9-house SPEC=ASSC$_{16}$ differ 'at a different house'	

The following is a short list of verb stems attested to be used in the syntactic template of N + ASSC + verb stem to form an adnominal adjectival phrase.

Table 5-3-2: List of selected verb stems that can be used as part of adjectival expressions used with an associative linker

stem forms (tone unidentified)	meanings (when used in adnominal expressions)	relevant items in Guthrie & Mann (1995)	
-naka	'soft'	-nak-	'become tired, soft'
-lowa	'sweet'	-lów-	'become sweet to the taste'
-lula	'bitter'	-lul-	'become bitter'
-lungama	'straight'	-lungam-	'become correct'
-fiita	'dark, black'	-fiit-	'become black'
-kashika	'red'	-káshik-	'become red'
-pusana	'different'	-pús-an-	'become different'
-buuta	'white'	-buut-	'become shining white'

6. Simple tense forms

It is widely recognised that Bantu languages tend to have a rich system of tense and aspect marking from a cross-linguistic perspective (cf. Dahl 1985; Nurse & Philippson 2003; Nurse 2008). CB is one of such typical Bantu languages that systematically distinguish multiple degrees of tense categories in both past and future tenses. These intricate tense categories are structurally encoded by various TAM markers slotted in the PREIN, POSTIN, and FV positions of the verbal template formulated in Table 2-6 in Section 2.5, which is reintroduced below.

Table 2-6: Morphological template of Bantu verbs (cf. Meeussen 1967; Nurse 2008; Güldemann 2022)

Pre-stem markers				Stem cluster				
PREIN	IN	POSTIN	PRERAD	RAD	EXT	PREFIN	FIN	POSTFIN
-4	-3	-2	-1	0	1	2	3	4
NEG, TMA, etc.	SM	NEG, TMA, etc.	OM	Root	Derivation	TMA	TMA	Clause type, etc.

Moreover, it will also be demonstrated that the inflectional system interacts with other grammatical categories, notably with those relevant to information structure, as shown in the following sections.

6.1 Present

CB has distinctive inflectional forms based not only on the distinction of lexical aspects, i.e., dynamic vs. stative verbs, but also on the syntactic patterns known as the conjoint vs. disjoint alternation (cf. Van der Wal & Hyman 2017).

6.1.1 Dynamic verbs

One of the possible structures of present tense forms for dynamic verbs is illustrated in (37). In both affirmative and negative forms, no segmental TAM marker appears in the pre-stem slots, while negation is marked by the pre-initial NEG marker *tá-*, except for the form with the first-person singular subject, as in (37a), where the post-initial *shí-* marks negation.

(37) PRS.CJ forms of the dynamic verb *-món-* 'see'

		AFF		NEG	
a.	1SG	*mmóná lyóóńsé*		*nshímóná lyóóńsé*	
		N-Ø-mon-a	li-onse	N-shi-Ø-mon-a	li-onse
		SM_{1SG}-PRS.CJ-see-FV	5-all	SM_{1SG}-NEG-PRS.CJ-see-FV	5-all
		'I always see'		'I do not always see'	
b.	1PL	*tumóná lyóóńsé*		*tatúmóná lyóóńsé*	
		tu-Ø-mon-a	li-onse	ta-tu-Ø-mon-a	li-onse
		SM_{1PL}-PRS.CJ-see-FV	5-all	NEG-SM_{1PL}-PRS.CJ-see-FV	5-all
		'We always see'		'We do not always see'	

c.	2SG	*umóná lyóóńsé*		*taúmóná lyóóńsé*	
		u-Ø-mon-a	li-onse	ta-u-Ø-mon-a	li-onse
		SM_{2SG}-PRS.CJ-see-FV	5-all	NEG-SM_{2SG}-PRS.CJ-see-FV	5-all
		'You (sg.) always see'		'You (sg.) do not always see'	
d.	2PL	*mumóná lyóóńsé*		*tamúmóná lyóóńsé*	
		mu-Ø-mon-a	li-onse	ta-mu-Ø-mon-a	li-onse
		SM_{2PL}-PRS.CJ-see-FV	5-all	NEG-SM_{2PL}-PRS.CJ-see-FV	5-all
		'You (pl.) always see'		'You (pl.) do not always see'	
e.	cl. 1	*amóná lyóóńsé*		*tamóná lyóóńsé*	
		a-Ø-mon-a	li-onse	ta-a-Ø-mon-a	li-onse
		SM_1-PRS.CJ-see-FV	5-all	NEG-SM_1-PRS.CJ-see-FV	5-all
		'S/he always sees'		'S/he does not always see'	
f.	cl. 2	*bamóná lyóóńsé*		*tabámóná lyóóńsé*	
		ba-Ø-mon-a	li-onse	ta-ba-Ø-mon-a	li-onse
		SM_2-PRS.CJ-see-FV	5-all	NEG-SM_2-PRS.CJ-see-FV	5-all
		'They always see'		'They do not always see'	

However, when a post-verbal element, *lyóóńsé* 'always' in the above examples, is omitted in affirmative forms, the pre-stem marker *la-* appears in the POSTIN position of the verbal template. This morphosyntactic process, i.e., the inflectional differentiation between forms with a post-verbal element vs. those without, is known as the conjoint/disjoint (CJ/DJ) alternation, and the marking of DJ with the marker *la-* or its related forms in present tense is quite common in Eastern Bantu languages (cf. Van der Wal 2017). This distinction, however, is not reflected in the negative contexts, where the CJ form is invariably used.

(38) PRS.DJ forms of the dynamic verb *-món-* 'see'

		AFF	NEG
a.	1SG	*ndamó↓ná*	*nshímóná*
		N-la-mon-a	N-shi-Ø-mon-a
		SM_{1SG}-PRS.DJ-see-FV	SM_{1SG}-NEG-PRS.CJ-see-FV
		'I see'	'I do not see'
b.	1PL	*tulamó↓ná*	*tatúmóná*
		tu-la-mon-a	ta-tu-Ø-mon-a
		SM_{1PL}-PRS.DJ-see-FV	NEG-SM_{1PL}-PRS.CJ-see-FV
		'We see'	'We do not see'
c.	2SG	*ulamó↓ná*	*taúmóná*
		u-la-mon-a	ta-u-Ø-mon-a
		SM_{2SG}-PRS.DJ-see-FV	NEG-SM_{2SG}-PRS.CJ-see-FV
		'You (sg.) see'	'You (sg.) do not see'
d.	2PL	*mulamó↓ná*	*tamúmóná*
		mu-la-mon-a	ta-mu-Ø-mon-a
		SM_{2PL}-PRS.DJ-see-FV	NEG-SM_{2PL}-PRS.CJ-see-FV
		'You (pl.) see'	'You (pl.) do not see'
e.	cl. 1	*álámona*	*tamóná*
		a-la-mon-a	ta-a-Ø-mon-a
		SM_1-PRS.DJ-see-FV	NEG-SM_1-PRS.CJ-see-FV
		'S/he sees'	'S/he does not see'

f.	cl. 2	*bálámona*	*tabámóná*
		ba-le-mon-a	ta-ba-Ø-mon-a
		SM_2-PRS.DJ-see-FV	NEG-SM_{1SG}-PRS.CJ-see-FV
		'They see'	'They do not see'

It should be noted that the CJ/DJ distinction is not only marked by the segmental pre-stem marker but is also reflected in the tonal realisation. As shown in the above examples, all the CJ forms follow the same tonal pattern[28], i.e., a low tone is imposed on the initial TBU followed by a high tone, which is most probably associated with the high-toned verb stem *-món-*, which spreads into the final TBU and further on to the post-verbal (toneless) constituent. In contrast, the DJ forms seem to retain the underlying high tones assigned to the verb stem *-món-* and the SM that refers to class nouns, suggesting that CB retains the underlying tonal specification of SM reconstructed in Proto-Bantu, i.e., Ø for speech participants and H for class nouns (Meeussen 1967: 97).

Basically, the same tonal mechanism seems to work in the case of Ø-toned (or 'toneless') stems, e.g., *-end-* 'walk, go'. In the CJ forms with speech participant subjects, no high tone is realised on the verb since no underlying high tone is assumed to be assigned, while in those with noun class subjects, the high tone associated with SM realises on the initial TBU and spreads on to the final TBU. However, tonal realisation of the post-verbal *lyoonse* seems to be determined by the principle of tonal polarity, i.e., when the preceding tone is low, the entire word realises with a high flat tone, while when the preceding tone is high, no high tone is assigned. This may suggest that the tonal behaviour can be different between high tones associated with lexical stems and those assigned to grammatical elements like SM.[29]

(39) PRS.CJ forms of the dynamic verb *-end-* 'walk'

		AFF		NEG	
a.	1SG	*njeenda lyóóńsé*		*nshééńdá lyoonse*	
		N-Ø-end-a	li-onse	N-shi-end-a	li-onse
		SM_{1SG}-PRS.CJ-walk-FV	5-all	SM_{1SG}-NEG-walk-FV	5-all
		'I always walk'		'I do not always walk'	
b.	1PL	*tweenda lyóóńsé*		*tatwééńdá lyoonse*	
		tu-Ø-end-a	li-onse	ta-tu-end-a	li-onse
		SM_{1PL}-PRS.CJ-walk-FV	5-all	NEG-SM_{1PL}-walk-FV	5-all
		'We always walk'		'We do not always walk'	
c.	2SG	*weenda lyóóńsé*		*tawééńdá lyoonse*	
		u-Ø-end-a	li-onse	ta-u-end-a	li-onse
		SM_{2SG}-PRS.CJ-walk-FV	5-all	NEG-SM_{2SG}-walk-FV	5-all
		'You (sg.) always walk'		'You (sg.) do not always walk'	
d.	2PL	*mweenda lyóóńsé*		*tamwééńdá lyoonse*	
		mu-Ø-end-a	li-onse	ta-mu-end-a	li-onse
		SM_{2PL}-PRS.CJ-walk-FV	5-all	NEG-SM_{2PL}-walk-FV	5-all
		'You (pl.) always walk'		'You (pl.) do not always walk'	

[28] I recognise that there is another dialect where the contrast between Ø-toned vs. H-toned SM retains in CJ forms, e.g., *mmóná lyóóńsé* 'I always see' vs. *á˖móná lyóóńsé* 'S/he always see'

[29] For more information on the process of tonal realisation of different verb forms, see Yukawa (1989), Philippson (1999), Bickmore and Kula (2013), and Kula and Bickmore (2015).

e.	cl. 1	*éénḱdá lyoonse*	*téénḱdá lyoonse*
		a-Ø-end-a li-onse	ta-a-end-a li-onse
		SM_1-PRS.CJ-walk-FV 5-all	NEG-SM_1-walk-FV 5-all
		'S/he always walks'	'S/he does not always walk'
f.	cl. 2	*béénḱdá lyoonse*	*tabéénḱdá lyoonse*
		ba-Ø-end-a li-onse	ta-ba-end-a li-onse
		SM_2-PRS.CJ-walk-FV 5-all	NEG-SM_2-walk-FV 5-all
		'They always walk'	'They do not always walk'
g.	cl. 6	*áméenshi yabíla pamulilo*	*áméenshi tayábíla pamulilo*
		a-ma-inshi ya-Ø-bil-a	a-ma-inshi ta-ya-Ø-bil-a
		AUG-6-water SM_6-PRS.CJ-boil-FV	AUG-6-water NEG-SM_6-PRS.DJ-boil-FV
		pa-mu-lilo	pa-mu-lilo
		16-3-fire	16-3-fire
		'Water boils on the fire'	'Water does not boil'

In the affirmative DJ forms, just as in the corresponding CJ forms, no high tone is realised on the forms with speech participant subjects, while in those with noun class subjects, the high tone assigned to SM seems to realise on the initial TBU and spread on to the final TBU of the verb. It should be noted here that in the negative forms, spreading of the high tone is blocked on the nasal part of the final NCV syllable in the clause-final position (see also Section 6.2.3 below).

(40) PRS.DJ forms of the dynamic verb *-end-* 'walk'

		AFF	NEG
a.	1SG	*ndeenda*	*nshéénḱda*
		N-la-end-a	N-shi-Ø-end-a
		SM_{1SG}-PRS.DJ-walk-FV	SM_{1SG}-NEG-PRS.CJ-walk-FV
		'I walk'	'I do not walk'
b.	1PL	*tuleenda*	*tatwéénḱda/ tatúénḱda*
		tu-la-end-a	ta-tu-Ø-end-a
		SM_{1PL}-PRS.DJ-walk-FV	NEG-SM_{1PL}-PRS.CJ-walk-FV
		'We walk'	'We do not walk'
c.	2SG	*uleenda*	*tawéénḱda*
		u-la-end-a	ta-u-Ø-end-a
		SM_{2SG}-PRS.DJ-walk-FV	NEG-SM_{2SG}-PRS.CJ-walk-FV
		'You (sg.) walk'	'You (sg.) do not walk'
d.	2PL	*muleenda*	*tamwéénḱda/ tamúénḱda*
		mu-la-end-a	ta-mu-Ø-end-a
		SM_{2PL}-PRS.DJ-walk-FV	NEG-SM_{2PL}-PRS.CJ-walk-FV
		'You (pl.) walk'	'You (pl.) do not walk'
e.	cl. 1	*áléénḱdá*	*téénḱda*
		a-la-end-a	ta-a-Ø-end-a
		SM_1-PRS.DJ-walk-FV	NEG-SM_1-PRS.CJ-walk-FV
		'S/he walks'	'S/he does not walks'
f.	cl. 2	*báléénḱdá*	*tabéénḱda*
		ba-la-end-a	ta-ba-Ø-end-a
		SM_2-PRS.DJ-walk-FV	NEG-SM2-PRS.CJ-walk-FV
		'They walk'	'They do not walk'

g.	cl. 6	*áméenshi yalabíla*	*áméenshi tayabíla*
		a-ma-inshi ya-la-bil-a	a-ma-inshi ta-ya-Ø-bil-a
		AUG-6-water SM_6-PRS.DJ-boil-FV	AUG-6-water NEG-SM_6-PRS.CJ-boil-FV
		'Water boils'	'Water does not boil'

Finally the forms with a post-verbal object NP or those with OM can be summarised as follows. As shown in (41), in the PRS.CJ forms of Ø-toned verbs, tonal realisation of the post-verbal constituent seems to be controlled by tonal polarity, triggered by the tonal realisation of the preceding verb, e.g., *tuuméng'ómbé* 'We hit a cow' vs. *bóóméng'ombe* 'They hit a cow'. A high tone assigned to OM seems to realise on its own position in a low-tone context, i.e., with an underlyingly toneless SM *tu-*, while in a high tone context, i.e., with an underlyingly high-toned SM *bá-*, it appears to shift to the right and spread to the final vowel.

(41) PRS forms followed by a post-verbal object NP and those with OM: 'S hit O' (*-ùm-* 'hit')

	SM-Ø	SM-H
a. – ObjNP, AFF	*tulooma*	*bálóómá*
	tu-la-um-a	ba-la-um-a
	SM_{1PL}-PRS.DJ-hit-FV	SM_2-PRS.DJ-hit-FV
	'We hit'	'They hit'
b. – ObjNP, NEG	*tatúú↓má*	*tabóó↓má*
	ta-tu-Ø-um-a	ta-ba-Ø-um-a
	NEG-SM_{1PL}-PRS.CJ-hit-FV	NEG-SM_2-PRS.CJ-hit-FV
	'We do not hit'	'They do not hit'
c. + ObjNP, AFF	*tuuméng'ómbé*	*bóóméng'ombe*
	tu-Ø-um-a i-N-gombe	ba-Ø-um-a i-N-gombe
	SM_{1PL}-PRS.CJ-hit-FV AUG-9-cow	SM_{1PL}-PRS.CJ-hit-FV AUG-9-cow
	'We hit a cow'	'They hit a cow'
d. + ObjNP, NEG	*tatúúméng'ombe*	*tabóóméng'ombe*
	ta-tu-Ø-um-a	ta-ba-Ø-um-a
	NEG-SM_{1PL}-PRS.CJ-hit-FV	NEG-SM_{1PL}-PRS.CJ-hit-FV
	i-N-gombe	i-N-gombe
	AUG-9-cow	AUG-9-cow
	'We do not hit a cow'	'They do not hit a cow'
e. + OM-Ø, AFF	*tulamuuma*	*bálámúúmá*
	tu-la-mu-um-a	ba-la-mu-um-a
	SM_{1PL}-PRS.DJ-OM_1-hit-FV	SM_2-PRS.DJ-OM_1-hit-FV
	'We hit her/him'	'They hit her/him'
f. + OM-H, AFF	*tulabóóma*	*bálábóómá*
	tu-la-ba-um-a	ba-la-ba-um-a
	SM_{1PL}-PRS.DJ-OM_2-hit-FV	SM_2-PRS.DJ-OM_2-hit-FV
	'We hit them'	'They hit them'

In contrast, the post-verbal (Ø-toned) noun *ing'ombe* realises with a flat high tone after the H-toned verb *-món-*, although it is downstepped when preceded by another high tone associated with the NEG *tá-* or H-toned OM. The behaviour of the high-toned OM also seems different from the case of the Ø-toned verb in that tonal contrast of OM is apparently obscured, i.e., no tonal contrast is observed between (42e) and (42f).

(42) PRS forms followed by a post-verbal object NP and verb forms with OM: 'S see O' (*-món-* 'see')

	SM-Ø	SM-H
a. – ObjNP, AFF	*tulamóná*	*bálámona*
	tu-la-mon-a	ba-la-mon-a
	SM_{1PL}-PRS.DJ-see-FV	SM_2-PRS.DJ-see-FV
	'We see'	'They see'
b. – ObjNP, NEG	*tatumóná*	*tábámona*
	ta-tu-Ø-mon-a	ta-ba-Ø-mon-a
	NEG-SM_{1PL}-PRS.CJ-see-FV	NEG-SM_2-PRS.CJ-see-FV
	'We do not see'	'They do not see'
c. + ObjNP, AFF	*tumónéng'ómbé*	*bá↓mónéng'ómbé*
	tu-Ø-mon-a	ba-Ø-mon-a
	SM_{1PL}-PRS.CJ-see-FV	SM_{1PL}-PRS.CJ-see-FV
	i-N-gombe	i-N-gombe
	AUG-9-cow	AUG-9-cow
	'We see a cow'	'They see a cow'
d. + ObjNP, NEG	*tatú↓móneng'ómbé*	*tabamó↓néng'ómbé*
	ta-tu-Ø-mon-a	ta-ba-Ø-mon-a
	NEG-SM_{1PL}-PRS.CJ-see-FV	NEG-SM_{1PL}-PRS.CJ-see-FV
	i-N-gombe	i-N-gombe
	AUG-9-cow	AUG-9-cow
	'We do not see a cow'	'They do not see a cow'
e. + OM-Ø, AFF	*tulamú↓móná*	*bálámu↓móná*
	tu-la-mu-mon-a	ba-la-mu-mon-a
	SM_{1PL}-PRS.DJ-OM_1-see-FV	SM_2-PRS.DJ-OM_1-see-FV
	'We see her/him'	'They see her/him'
f. + OM-H, AFF	*tulabá↓móná*	*bálába↓móná*
	tu-la-ba-mon-a	ba-la-ba-mon-a
	SM_{1PL}-PRS.DJ-OM_2-see-FV	SM_2-PRS.DJ-OM_2-see-FV
	'We see them'	'They see them'

It should also be noted that, as a general tendency, the syntactic restriction that DJ should not be followed by any post-verbal constituent seems to be relatively weak in this language, i.e., DJ may not necessarily be clause-final and can be followed by a post-verbal constituent (See example (72) in 7.4 which illustrates this point). [30]

The morphological structures of the present tense forms of the dynamic verb stems can be generalised as follows.

Table 6-1-1: Structural template of PRS tense forms of dynamic verbs

		PREIN	IN	POSIN	STEM	FV
PRS.DJ	AFF		SM-	***la-***	√	***-a***
PRS.CJ	AFF		SM-	***Ø-***	√	***-a***
PRS	NEG	***tá-***	SM-	***Ø-***	√	***-a***

[30] This tendency is addressed in a cross-Bantu typological overview of CJ/DJ distinction in Van der Wal (2017b: 19). Moreover, the DJ restriction can even be 'unlocked' when a DJ form takes an object marker. For further discussion on the CJ/DJ alternation in Bemba, see Kula (2017).

6.1.2 Stative verbs

As in many Bantu languages, CB seems to have a lexico-semantic contrast between 'dynamic' vs. 'stative', which is reflected in the tense paradigm that they follow. The following is an illustration of the present tense form for stative verbs, such as *úkwíishiba* 'to know'.

(43) PRS forms of the stative verb *-íshib-* 'know' in different morphosyntactic contexts

	SM-Ø	SM-H
a. – ObjNP, AFF	*tualíishíba*	*bááliíshíba*
	tu-ali-ishib-a	ba-ali-ishib-a
	SM_{1PL}-PRS.STAT-know-FV	SM_2-PRS.STAT -know-FV
	'We know'	'They know'
b. – ObjNP, NEG	*tatúíshíibe*	*tabéíshíibe*
	ta-tu-ishib-ile	ta-ba-ishib-ile
	NEG-SM_{1PL}-know-ANT	NEG-SM_2-know-ANT
	'We do not know'	'They do not know'
c. + ObjNP, AFF	*tualíishíbé ílyáashi*	*báalíishíbé ílyáashi*
	tu-ali-ishib-a	ba-ali-ishib-a
	SM_{1PL}- PRS.STAT -know-FV	SM_2- PRS.STAT -know-FV
	i-lyaashi	i-lyaashi
	AUG-5.story	AUG-5.story
	'We know the story'	'They know the story'
d. + ObjNP, NEG	*tatúíshíibe ílyáashi*	*tabééshíibe ílyáashi*
	ta-tu-ishib-ile i-lyaashi	ta-ba-ishib-ile i-lyaashi
	NEG-SM_{1PL}-know-ANT AUG-5.story	NEG-SM_2-know-ANT AUG-5.story
	'We do not know the story'	'They do not know the story'

The present affirmative forms share the pre-stem TAM marker *alí-*, while the present stative in the negative context is marked by the suffix *-ile*, which is frequently used in the contexts of past tense or perfect/anterior aspect. Notably, the suffix, which is apparently traced back to the PB form **-ɨde*, triggers the morphophonological process known as 'imbrication', which is further described in Section 6.2.3.2. As mentioned in 3.2.1, the TAM prefix *alí-*, which is used in the present tense form of the possession verb *-kwáat-*, is (at least segmentally) identical to the PST4 marker for dynamic verbs.

The structural template of the present tense forms of the stative verbs is summarised as follows.

Table 6-1-2: Structural template of PRS forms of stative verbs

	PREIN	IN	POSTIN	STEM	FV
PRS.ST AFF		SM-	***alí-***	√	***-a***
NEG	***tá-***	SM-		√	***-ile***

6.1.3 Additional notes on tonal patterns

Finally, some basic observations on the tonal patterns for each of present tense categories can be summarised as follows.

(44) Notes on the tonal patterns in the present tense paradigm

a. In Ø-verb stems, an underlying high tone assigned to SM spreads on to the final TBU of the verb in both CJ and DJ forms.
b. Tonal realisation of (a specific type of) post-verbal nouns in CJ forms can be determined by the mechanism of tonal polarity, i.e., a tone opposite to that of the preceding TBU is automatically assigned. Thus the post-verbal constituent in (39) *lyoonse* 'always' is pronounced with a high flat tone when preceded by an all-low form like (39a) *njeenda lyóóńsé*, while it is pronounced with a low flat tone after an all-high form like (39e) *ééńdá lyoonse.*
c. In H-verb stems, a lexical high tone spreads on to the final TBU in CJ forms, while in DJ forms, a lexical H drops when preceded by a high-toned SM. This can be explained as a domain-sensitive OCP restriction where a high tone in the stem domain cannot be realised when another high tone is assigned in a pre-stem domain.
d. In negative forms, the high tone assigned to NEG *tá-* realises on the following syllable and spreads unboundedly on to the final TBU of the verb (even to the following noun across a word boundary in the case of *-món-* 'to see').
e. In PRS.ST, H on *alí-* spreads on to the last TBU of the verb in the case of a Ø-toned verb, while it is deleted in the presence of H assigned to SM.

Table 6-1-3: A summary of the PST tense forms with relevant tonal processes [TS: Tone spreading, TP: tonal polarity]

		-end-	-món-
PRS.DJ	AFF	SM-***la***-√-***a*** (TS)	SM-***la***-√-***a*** (OCP)
PRS.CJ	AFF	SM-Ø-√-***a*** (TS, TP)	SM-Ø-√-***a*** (TS)
PRS	NEG	***tá-***SM-√-***a*** (TS)	***tá-***SM-√-***a*** (TS)
PRS.ST	AFF		SM-***alí***-√-***a*** (OCP)
	NEG		***tá-***SM-√-***ile***

These observations clearly suggest that not only the tonal property of each morpheme, but also tonal processes including tone spreading and tonal polarity as well as other tonotactic restrictions like an OCP effect on sequential high tones, are essential for describing the whole paradigm of the tense and aspect marking system.

6.2 Past

According to the matrix table of the tense and aspect categories by Nurse (2019), there are four distinct categories of the past tense that are structurally distinguished in Bemba. In our data set, all four past tense categories are identified to be structurally distinguishable, at least in more or less traditional/conservative speech forms.

6.2.1 Dynamic verbs

As shown in (45), CB structurally distinguishes four past tense categories, which are labelled as PST1–4 following Nurse's (2019) classification, where the numbers reflect the degree of temporal distance from the reference point of time, i.e., PST1 is the nearest past while PST4 is the farthest. However, this may not necessarily be the case in contemporary CB. As shown in

the examples in (45) and (46), while PST1 and PST2 can be interpreted as hodienal and hesternal past, respectively, the distinction between PST3 and PST4 seems to be more associated with aspectual concepts as briefly mentioned below.

It should also be noted that the (segmental) distinction between CJ and DJ is only attested in PST3 and PST4, and the distinction between PST3.CJ and PST4.CJ, which are only tonally differentiated in Nurse's (2008) description, seems to have been neutralised into PST4.CJ in our data set. Moreover, the structural distinction between PST3.NEG and PST4.NEG also seems to be obscured in a way such that the PST3.NEG forms are tending toward being replaced by the corresponding PST4 forms.

(45) PST forms of the dynamic verb *-end-* 'walk'

		SM-Ø	SM-H	structure
PST1 AFF	a. _#	*tuaéńdá*	*bááéńdá*	SM-á-√-a (TS)
		tu-a-end-a	ba-a-end-a	
		SM_{1PL}-PST-walk-FV	SM_2-PST-walk-FV	
		'We walked'	'They walked'	
	b. _X	*tuaéńdá nómba*	*bááéńdá nómba*	
		tu-a-end-a nomba	ba-a-end-a nomba	
		SM_{1PL}-PST-walk-FV now	SM_2-PST-walk-FV now	
		'We walked right now'	'They walked right now'	
PST1 NEG	c.	*tatuéńdéle*	*tabáéndéle*	tá-SM-√-ile
		ta-tu-end-ile	ta-ba-end-ile	
		NEG-SM_{1PL}-walk-ANT	NEG-SM_2-walk-ANT	
		'We did not walk'	'They did not walk'	
PST2 AFF	d. _#	*twaacééńda*	*báácééńda*	SM-ací-√-á
		tu-aci-end-a	ba-aci-end-a	
		SM_{1PL}-PST2-walk-FV	SM_2-PST2-walk-FV	
		'We walked'	'They walked'	
	e. _X	*twaacééńdá leelo*	*báácééńdá leelo*	
		tu-aci-end-a leelo	ba-aci-end-a leelo	
		SM_{1PL}-PST2-walk-FV today	SM_2-PST2-walk-FV today	
		'We walked today'	'They walked today'	
PST2 NEG	f.	*tatuácééńdá leelo*	*tabáácééńdá leelo*	tá-SM-ací-√-á
		ta-tu-aci-end-a	ta-ba-aci-end-a	
		NEG-SM_{1PL}-PST2-walk-FV	NEG-SM_2-PST2-walk-FV	
		'We did not walk today'	'They did not walk today'	
PST3 DJ	g. _#	*twaalíienda*	*báálíiéńdá*	SM-alíi-√-a (TS)
		tu-alii-end-a	ba-alii-end-a	
		SM_{1PL}-PST3.DJ-walk-FV	SM_2-PST3.DJ-walk-FV	
		'We walked'	'They walked'	
PST3=4 CJ	h. _X	*twaaéńdélé lyoonse*	*báendele lyoonse*	SM-a-√-ile (TP)
		tu-a-end-ile	ba-a-end-ile	
		SM_{1PL}-PST-walk-ANT	SM_2-PST-walk-ANT	
		li-onse	li-onse	
		5-all	5-all	
		'We did always walk'	'They did always walk'	
PST3 NEG	i.	*tatuaéndele*	*tabaaéndele*	tá-SM-a-√-ile
		ta-tu-a-end-ile	ta-ba-a-end-ile	
		NEG-SM_{1PL}-PST-walk-ANT	NEG-SM_2-PST-walk-ANT	
		'We did not walk'	'They did not walk'	

PST4 DJ	j.	_#	*twaalíéńdélé* tu-ali-end-ile SM$_{1PL}$-PST4.DJ-walk-ANT 'We walked'	*báaliendele* ba-ali-end-ile SM$_{2}$-PST4.DJ-walk-ANT 'They walked'	SM-alí-√-ile (TP)
PST4 NEG	l.		*tatuaéndele* ta-tu-a-end-ile NEG-SM$_{1PL}$-PST-walk-ANT 'We did not walk'	*tabaaéndele* ta-ba-a-end-ile NEG-SM$_{2}$-PST-walk-ANT 'They did not walk'	tá-SM-a-√-ile

The following are the possible past tense forms of the high-toned verb stem *-món-* 'see' with the Ø-toned 1PL SM *tu-* and the high-toned class 2 SM *ba-*.

(46) PST forms of the dynamic verb *-món-* 'see'

			SM-Ø	SM-H	structure
PST1 AFF	a.	_#	*twaamó↓ná* tu-a-mon-a SM$_{1PL}$-PST-see-FV 'We saw'	*báámó↓ná* ba-a-mon-a SM$_{2}$-PST-see-FV 'They saw'	SM-a-√-a (TS)
	b.	_X	*twaamóná mwáape* tu-a-mon-a mwaape SM$_{1PL}$-PST-see-FV Mwape 'We saw Mwape'	*báámóná mwáape* ba-a-mon-a mwaape SM$_{2}$-PST-see-FV Mwape 'They saw Mwape'	
PST1 NEG	c.		*tatúmwéene* ta-tu-mon-ile NEG-SM$_{1PL}$-see-ANT 'We did not see'	*tabámwéene* ta-ba-mon-ile NEG-SM$_{2}$-see-ANT 'They did not see'	ta-SM-√-ile
PST2 AFF	d.	_#	*twaacímóná* tu-ací-mon-a SM$_{1PL}$-PST2-see-FV 'We saw'	*báácímóná* ba-ací-mon-a SM$_{2}$-PST2-see-FV 'They saw'	SM-ací-√-a (TS)
	e.	_X	*twaacímóná léelo* tu-ací-mon-a SM$_{1PL}$-PST2-see-FV 'We saw today'	*báácímóná léelo* ba-ací-mon-a SM$_{2}$-PST2-see-FV 'They saw today'	
PST2 NEG	f.		*tatwáácímóná* ta-tu-ací-mon-a NEG-SM$_{1PL}$-PST2-see-FV 'We did not see'	*tabáácímóná* ta-ba-ací-mon-a NEG-SM$_{2}$-PST2-see-FV 'They did not see'	ta-SM-ací-√-a (TS)
PST3 DJ	g.	_#	*twaalíimona* tu-alíi-mon-a SM$_{1PL}$-PST3-see-FV 'We saw'	*báálíimona* ba-alíi-mon-a SM$_{2}$-PST3-see-FV 'They saw'	SM-alíi-√-a
PST3=4 CJ	h.	_X	*twaamwéné máíló* tu-a-mon-ile SM$_{1PL}$-PST-see-ANT mailo the day before/after today 'We saw yesterday'	*báamwene mailo* ba-a-mon-ile SM$_{2}$-PST-see-ANT mailo the day before/after today 'They saw yesterday'	SM-a-√-ile (TP)

PST3 NEG	i.	*tatwáamwene* ta-tu-a-mon-ile NEG-SM1PL-PST-see-ANT 'We did not see'	*tabáamwene* ta-ba-a-mon-ile NEG-SM2-PST-see-ANT 'They did not see'	ta-SM-a-√-ile
PST4 DJ	j. _#	*twaalímwéné* tu-alí-mon-ile SM1PL-PST4.DJ-see-ANT 'We saw'	*báalimwene* ba-alí-mon-ile SM2-PST4.DJ-see-ANT 'They saw'	SM-alí-√-ile (TP)
PST4 NEG	l.	*tatwáamwene* ta-tu-a-mon-ile NEG-SM1PL-PST-see-ANT 'We did not see'	*tabáamwene* ta-ba-a-mon-ile NEG-SM2-PST-SEE-ANT 'They did not see'	ta-SM-a-√-ile

As mentioned above, the structural contrast between PST3 and PST4 seems to be in the process of becoming weaker than that in the system described by Nurse (2019). However, the categorical difference – or semantic contrast – between them is more or less clearly recognised by speakers in that the former tends to reflect imperfective connotations, while the latter is more associated with expectations or achievement, i.e., the event took place as previously planned or as expected, etc. The following examples illustrate the point.

(47) a. *áálíibelengela ábáana íbuúku* = (97)
a-alii-beleng-il-a a-ba-ana i-buuku
SM1-PST3-read-APPL-FV AUG-2-child 5-book
'He read a book for (his) children'
b. *áalibelengela ábáana íbuúku*
a-ali-beleng-il-a a-ba-ana i-buuku
SM1-PST4-read-APPL-FV AUG-2-child 5-book
'He read a book for (his) children (as expected/as previously planned)'

(48) a. *twaalíéńdá cíla bushíku*
tu-alii-end-a cila bu-shiku
SM1PL-PST3-walk-FV every 14-day
'We used to walk every day'
b. *twaalíéńdélé cíla bushíku*
tu-ali-end-ile cila bu-shiku
SM1PL-PST4-walk-ANT every 14-day
'We walked every day (as we had planned)'

The structural template of the past tense verb forms is summarised in Table 6-2-1, which also shows the corresponding forms in Nurse (2019). Additional notes on past marking morphemes and phonological processes relevant to the past tense marking templates will be provided in 6.2.3.

Table 6-2-1: Structural template of PST forms of dynamic verbs

		PREIN	IN	POSIN	STEM	FV	cf. Nurse (2019)		PREIN	IN	POSIN	STEM	FV
PST1	AFF		SM-	***á-***	√	***-a***	PST1	AFF		SM-	*á-*	√	*-a*
	NEG	***tá-***	SM-		√	***-ile***		NEG	*tá-*	SM-		√	*-ile*

PST2	AFF		SM-	***ací-***	√	***-a***
	NEG	***tá-***	SM-	***(á-)ací-***	√	***-a***
PST3	AFF.CJ		SM-	***a-***	√	***-ile***
	AFF.DJ		SM-	***alíi-***	√	***-a***
	NEG	***tá-***	SM-	***á-***	√	***-ile***
PST4	AFF.CJ		SM-	***a-***	√	***-ile***
	AFF.DJ		SM-	***alí-***	√	***-ile***
	NEG	***tá-***	SM-	***á-***	√	***-ile***

PST2	AFF		SM-	*ácí-*	√	*-a*
	NEG	*tá-*	SM-	*ácí-*	√	*-a*
PST3	AFF.CJ		SM-	*á-*	√	*-ile*
	AFF.DJ		SM-	*á-líí-*	√	*-a*
	NEG	*tá-*	SM-	*á-*	√	*-a*
PST4	AFF.CJ		SM-	*a-*	√	*-ílé*
	AFF.DJ		SM-	*alí-*	√	*-ílé*
	NEG	*tá-*	SM-	*á-*	√	*-ile*

Whereas the past marking system based on the present observation largely overlaps with that summarised in Nurse (2019), there are three features that are contrastive and which thus may be worth pointing out. First, there is a slight tonal contrast of the PST2 marker, i.e., *ací-* in the description here vs. *ácí-* in Nurse's table. Second, the structural contrast between PST3.CJ and PST4.CJ, which is tonally marked in Nurse's description, seems to be neutralised in the present data set. This neutralisation seems to be triggered by a more general process by which the high tone of *-ílé* in PST4.AFF forms has been lost in the speech forms observed.

6.2.2 Stative verbs

Unlike the present tense forms, the past tense paradigm summarised in Table 6-2-1 generally seems to be applied to the stative verbs, e.g., the stative verb stem *-íshib-* 'know' can be used in the distinctive past forms as illustrated in (49).

(49) PST (CJ) forms of a stative verb *-íshib-* 'know'

	AFF	NEG
PST1	*búpe aíshiba ilyáashi* bupe a-a-ishib-a i-li-ashi Bupe SM_1-PST_1-know-FV AUG-5-story 'Bupe has (just) known the story'	*búpe teéshíibe ilyáashi* bupe ta-a-ishib-ile i-li-ashi Bupe NEG-SM_1-know-ANT AUG-5-story 'Bupe has not known the story'
PST2	*búpe áácííshíba ilyáashi* bupe a-aci-ishib-a i-li-ashi Bupe SM_1-PST_2-know-FV AUG-5-story 'Bupe knew the story'	*bupe táácííshíba ilyáashi* bupe ta-a-aci-ishib-a i-li-ashi Bupe NEG-SM_1-PST_2-know-FV AUG-5-story 'Bupe did not know the story'
PST3	*búpe áálíishiba ílyáashi* bupe a-alii-ishib-a Bupe SM_1-PST_3-know-FV i-li-ashi AUG-5-story 'Bupe knew the story (and he still knows it)'	*búpe tááishííbé ílyáashi* bupe ta-a-a-ishib-ile Bupe NEG-SM_1-PST-know-ANT i-li-ashi AUG-5-story 'Bupe did not know the story'
PST4	*búpe áaliishííbé ílyáashi* bupe a-ali-ishib-ile Bupe SM_1-PST4-know-ANT i-li-ashi AUG-5-story 'Bupe knew the story (he may have forgotten)'	

As pointed out in Section 6.2.1, the PST3 form seems to be associated with an aspectual connotation of imperfectivity as reflected in the translation. In contrast, the PST4 form seems to denote perfective past.

6.2.3 Additional notes on tonal patterns

Based on the examples shown in 6.2.1, the tonal patterns of the past tense forms are tentatively summarised as follows.

(50) Notes on the tonal patterns in the past tense paradigm:

a. H of PST1 *á-* seems to spread in an unbounded fashion (when not followed by another lexical high tone), e.g., (45b) *tuaéndá nómba.*
b. H on the second syllable of PST2 *ací-* spreads unboundedly to the following noun. However, the spreading can be blocked when the pre-pausal, i.e., utterance-final, syllable contains an NC sequence: e.g., (45d) *twaacéńda* vs. (46d) *twaacímóná*. But see also (45e) *twaacéńdá leelo* vs. (46e) *twaacímóná léelo.*
c. PST2.NEG may be analysed as SM-*á-ací-*√*-a*, i.e., with an additional NEG prefix *á-* preceding *ací-* based on the realisation of (46f) [PST2-NEG (L)] *tatw**áa**címóná léelo.*
d. H of PST3 *alíi-* spreads on to the final TBU, but the spreading is blocked when followed by a H-verb stem.
e. PST3=4.CJ forms show tonal polarity, i.e., in a high-toned context where the verb takes a high-toned SM, the remaining part is pronounced with a flat low tone, while in the low-toned context where the verb takes a toneless SM, the remaining part is pronounced in a high flat tone, irrespective of the tonal properties of the verb stem.
f. In PST4.DJ, the high tone of PST4 *alí-* realises its own position and spreads on to the last TBU of the verb. However, the underlying high tone drops when preceded by a high-toned SM due to the domain-sensitive OCP effect.

The morphological templates of the past tense forms, with tonal annotation, can be summarised as in Table 6-2-2.

Table 6-2-2: A summary of the PST tense forms with relevant tonal processes

		Ø-verb	H-verb
PST1	AFF	SM-***á-***√-***a*** (TS)	SM-***á-***√-***a*** (TS)
	NEG	***tá-***SM-√***-ile***	***tá-***SM-√***-ile***
PST2	AFF	SM-***ací-***√-á	SM- ***ací-***√-a (TS)
	NEG	***tá-***SM-(***á-***)***ací-***√-á	***tá-***SM-(***á-***)***ací-***√-a (TS)
PST3	AFF.DJ	SM-***alíi-***√-***a*** (TS)	SM-***alíi-***√-***a***
	AFF.CJ	SM-***a-***√***-ile*** (TP)	SM-***a-***√***-ile*** (TP)
	NEG	***tá-***SM-***á-***√***-ile***	***tá-***SM-***á-***√***-ile***
PST4	AFF.DJ	SM-***alí-***√***-ile*** (OCP)	SM-***alí-***√***-ile*** (OCP)
	AFF.CJ	SM-***a-***√***-ile*** (TP)	SM-***a-***√***-ile*** (TP)
	NEG	***tá-***SM-***á-***√***-ile***	***tá-***SM-***á-***√***-ile***

6.2.4 Additional notes on past marking morphemes and relevant phonological processes

The following sections provide some additional information on past marking morphemes, namely the affirmative pre-stem markers *ací-*, *alí-*, and *alíi-* in 6.2.4.1, and the suffixal marker *-ile* in 6.2.4.2, focusing on accompanying morphophonological processes pertaining to these morphemes.

6.2.4.1 The pre-stem markers *ací-, alí-, alíi-*

The four-way distinction within the past tense is segmentally marked by the pre-stem markers, PST1 *á-*, PST2 *ací-*, PST3 *alíi-*, and PST4 *alí-*. The tonal property of each morpheme is tentatively assumed[31] based on the realisation in the least tonally specified environment where no underlying high tone is specified within the form.

(51) a. *tuaéńdá* [=(45a)]
tu-á-end-a
SM$_{1PL}$-PST-walk-FV
'We walked'

b. *twaacéńda* [=(45d)]
tu-ací-end-a
SM$_{1PL}$-PST2-walk-FV
'We walked'

c. *twaalíéńdá* [=(45g)]
tu-alíi-end-a
SM$_{1PL}$-PST3.DJ-walk-FV
'We walked'

d. *twaalíéńdélé* [=(45j)]
tu-alí-end-ile
SM$_{1PL}$-PST4.DJ-walk-ANT
'We walked (~We used to walk)'

In all cases, a surface high tone is realised even though no underlying high tone is assigned to all the other morphemes except for the TAM markers themselves, i.e., SM$_{1SG}$ *tu-*, the verb root *-end-*, and the FV *-a* are all tonally unmarked. In (51a), a high tone assumed to be assigned to *á-* realises on the following TBU and spreads on to the word-final TBU. (51b) has a high tone assumed to be assigned to the second syllable of PST2 *ací-*, which realises in its original position but the (unbounded) spreading seems to be blocked. In (51c) and (51d), an assumed underlying high tone is realised on the second syllable of *alíi-* and *alí-*, respectively, and spreads on to the final syllable of the verb.

As shown in (51c–d), the contrast of vowel length between *alíi-* and *alí-* can be obscured when followed by onsetless stems. However, the morphophonemic contrast between the two seems to be at least partly compensatorily expressed through different tonal processes, i.e., high tone spreading (TS) in PST3 vs. tonal polarity (TP) in PST4, both of which are illustrated in examples with a high-toned SM.

[31] I recognise the fact that some of the TAM markers described in this sketch are differently identified in previous studies, especially in terms of their tonal shapes, e.g., PST3 *alíi-* is identified as *álii-* in Kula (2017). I thus stress here that identification of the tonal property of such forms needs further examination with extensive data on the possible realisation forms.

(52) a. *báálíéńdá*
bá-alíi-end-a
SM$_2$-PST3.DJ-walk-FV
'They walked'
b. báaliendele
bá-alí-end-ile
SM$_2$-PST4.DJ-walk-ANT
'They walked'

In (52a), the entire verb is realised with a flat high tone, where the high tone on *alíi-* spreads throughout onto the final position of the verb, as in the low-toned context in (51c) (and additionally the initial high tone on SM$_2$ *bá-* spreads to the following TBU). Contrastively, in (52b), the underlying high tone of *-alí*, which is realised in a low tone context with unbounded spreading, is all swept out in the presence of the preceding high tone assigned to SM$_2$ *bá-*.

6.2.4.2 The suffixal marker *-ile* and imbrication

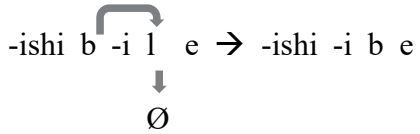
The suffix *-ile* is frequently used not only in several past tense forms but also in other tense and aspect categories including present stative (PRS.ST; cf. 6.1.2) and, notably, anterior aspect (ANT). As illustrated in (43b–d) and (46h–i), the suffix triggers a unique morphophonemic process of assimilatory contraction, known as 'imbrication' in the literature of Bantu languages (cf. Bastin 1983).

In the imbrication process, the consonant immediately preceding the trigger morpheme, which is *-ile* in this case, replaces the phoneme /l/ that is contained in the trigger. According to Bastin (1983), the process can be schematised as follows.

(53) A generalised process of imbrication triggered by *-ile* < *-*ị́de* (Bastin 1983: 2)
-VC-ị́de → -VịCde → -VịCe

This process is illustrated by the negative form, e.g., (43b) *tatúíshíibe*, whose morphemic configuration is //tá-tu-íshib-ile//. In this case, the stem final /b/ replaces the /l/ of *-ile*.

(54) Schematised representation of the imbrication process



The imbrication process is frequently observed in all tense and aspect forms pertaining to *-ile* suffixation and it produces various outputs of contracted forms depending on the different combinations of the replacing consonants and vowels to be fused. However, it should be pointed out that in Bemba the process is not applied to monosyllabic verb bases, as Hyman (1995: 17) states that "imbrication will occur only if the input verb base meets the minimality condition", by which "the base must be (at least) two syllables long" to be a target of the process. In that sense, the application to *-món-*, as a monosyllabic -CVC- root, is a clear exception to the restriction and so is described with the following illustration.

(55) Illustration of the imbrication process of the -CVC- stem *-món-* 'see'; based on Hyman (1995: 37)

a.	*món-*		‘see’	
b.	*mwéen-*	//mon-il-//	‘see for/at’	*món-en-
	món-en-	//mon-il-//	‘see at’ (locative only)	
c.	*mwénsh*	//mon-ish-//	‘show’ (make see)	
	món-esh-	//mon-ish-//	‘see a lot’	
	<mwen-esh->	//mon-il-ish-//	‘see a lot’	

For more information on theoretical treatments of the imbrication process in Bemba, see Hyman (1995) and Kula (2001, 2002).

6.3 Future

The three-way distinction described in the TA matrix table by Nurse (2019) is also identified in the present data set.

6.3.1 Dynamic verbs

There are three morphemes that distinguish different categories of future referents, namely FUT1 *aláa-*, FUT2 *lée-*, and FUT3 *ka-*. These morphologically distinct categories, however, may not be described as a conceptually fully genuine tense distinction, such as in the case of the past tense distinction. In (56) are some examples of the future tense forms of a Ø-toned verb root, *-end-* ‘walk’, and in (57) are those of a high-toned verb root, *-món-* ‘see’.

(56) FUT forms of the dynamic verb *-end-* ‘walk’

			SM-Ø	SM-H	structure
FUT1 AFF	a.	_#	*twaalááéńdá*	*bállááéńdá*	SM-aláa-√-a (TS)
			tu-alaa-end-a	ba-alaa-end-a	
			SM_{1PL}-FUT1-walk-FV	SM_{2}-FUT1-walk-FV	
			‘We will walk’	‘They will walk’	
	b.	_X	*twaalááéńdá léelo*	*bállááéńdá léelo*	
			tu-alaa-end-a	ba-alaa-end-a	
			SM_{1PL}-FUT1-walk-FV	SM_{2}-FUT1-walk-FV	
			‘We will walk today’	‘They will walk today’	
FUT1 NEG	c.		*tatwaaendé*	*tabaaendé*	tá-SM-a-√-é
			ta-tu-a-end-e	ta-ba-a-end-e	
			NEG-SM_{1PL}-NEG-walk-NEG	NEG-SM_{2}-NEG-walk-NEG	
			‘We will not walk’	‘They will not walk’	
FUT2 AFF	d.	_#	*tulééńdá*	*balééńdá*	SM-lée-√-a (TS)
			tu-lee-end-a	ba-lee-end-a	
			SM_{1PL}-FUT2-walk-FV	SM_{2}-FUT2-walk-FV	
			‘We will walk’	‘They will walk’	
	e.	_X	*tulééńdá léelo*	*balééńdá léelo*	
			tu-lee-end-a	ba-lee-end-a	
			SM_{1PL}-FUT2-walk-FV	SM_{2}-FUT2-walk-FV	
			‘We will walk today’	‘They will walk today’	

FUT2 NEG	f.	*tatuleéńda* ta-tu-lee-end-a NEG-SM$_{1PL}$-FUT2-walk-FV 'We will not walk today'	*tabaleéńda* ta-ba-lee-end-a NEG-SM$_{2}$-FUT2-walk-FV 'They will not walk today'	tá-SM-lée-√-a (TSh)
FUT3 AFF	g. _#	*tukeendá* tu-ka-end-a SM$_{1PL}$-FUT3-walk-FV 'We will walk'	*bákééńdá* ba-ka-end-a SM$_{2}$-FUT3-walk-FV 'They will walk'	SM-ka-√-á (TS)
	h. _X	*tukeenda límó* tu-ka-end-a SM$_{1PL}$-FUT3-walk-FV 'We will walk someday'	*bákééńdá límó* ba-ka-end-a SM$_{2}$-FUT3-walk-FV 'They will walk someday'	
FUT3 NEG	i.	*tatwaakeendé* ta-tu-a-ka-end-e NEG-SM$_{1PL}$-NEG-FUT3-walk-NEG 'We will not walk'	*tabaakeendé* ta-ba-a-ka-end-e NEG-SM$_{2}$-NEG-FUT3-walk-NEG 'They will not walk'	tá-SM-a-ka-√-é

(57) FUT forms of the dynamic verb *-món-* 'see'

			SM-Ø	SM-H	structure
FUT1 AFF	a.	_#	*twaaláamona* tu-alaa-mon-a SM$_{1PL}$-FUT1-see-FV 'We will see'	*báláamona* ba-alaa-mon-a SM$_{2}$-FUT1-see-FV 'They will see'	SM-aláa-√-a
	b.	_X	*twaaláamona léelo* tu-alaa-mon-a SM$_{1PL}$-FUT1-see-FV 'We will see today'	*báláamona léelo* ba-alaa-mon-a SM$_{2}$-FUT1-see-FV 'They will see today'	
FUT1 NEG	c.		*tatwaamó$^{\downarrow}$né* ta-tu-a-mon-e NEG-SM$_{1PL}$-NEG-see-NEG 'We will not see'	*tabaamó$^{\downarrow}$né* ta-ba-a-mon-e NEG-SM$_{2}$-NEG-see-NEG 'They will not see'	tá-SM-a-√-é
FUT2 AFF	d.	_#	*tuléemona* tu-lee-mon-a SM$_{1PL}$-FUT2-see-FV 'We will see'	*baléemona* ba-lee-mon-a SM$_{2}$-FUT2-see-FV 'They will see'	SM-lée-√-a
	e.	_X	*tuléemoná léelo* tu-lee-mon-a SM$_{1PL}$-FUT2-see-FV 'We will see today'	*baléemona léelo* ba-lee-mon-a SM$_{2}$-FUT2-see-FV 'They will see today'	
FUT2 NEG	f.		*tatuleemóna* ta-tu-lee-mon-a NEG-SM$_{1PL}$-FUT2-see-FV 'We will not see today'	*tabaleemóna* ta-ba-lee-mon-a NEG-SM$_{2}$-FUT2-see-FV 'They will not see today'	tá-SM-lée-√-a
FUT3 AFF	g.	_#	*tukamó$^{\downarrow}$ná* tu-ka-mon-a SM$_{1PL}$-FUT3-see-FV 'We will see'	*bákámona* ba-ka-mon-a SM$_{2}$-FUT3-see-FV 'They will see'	SM-ka-√-a (TP)

	h. _X	*tukamóná máíló*	*bákámona mailo*	
		tu-ka-mon-a	tu-ka-mon-a	
		SM_{1PL}-FUT3-see-FV	SM_{1PL}-FUT3-see-FV	
		'We will see tomorrow'	'They will see tomorrow'	
FUT3 NEG	i.	*tatwaakámó⁺né*	*tabaakámó⁺né*	tá-SM-a-ka-√-é
		ta-tu-a-ka-mon-e	ta-ba-a-ka-mon-e	
		NEG-SM_{1PL}-NEG-FUT3-see-NEG	NEG-SM_{2}-NEG-FUT3-see-NEG	
		'We will not see'	'They will not see'	

Semantically, FUT1 denotes a connotation of 'immediately' while FUT2 suggests that the event will take place 'sometime after'. The semantic difference between FUT2 and FUT3, in turn, seems to be described as a distinction reflecting modal connotations rather than a pure tense distinction, i.e., FUT2 *lée-* is more associated with the speaker's recognition of 'certainty'[32] about the occurrence of the event expressed by the verb, while FUT3 *ka-* tends to be used to denote less certainty. This modal contrast can be understood along with the fact that the FUT2 *lée-* can also be used as a progressive aspect marker (see 7.1).

Table 6-3-1: Structural template of FUT forms of dynamic verbs

		PREIN	IN	POSIN	STEM	FV	cf. Nurse (2019)		PREIN	IN	POSIN	STEM	FV
FUT1	AFF		SM-	***aláa-***	√	***-a***	PST1	AFF		SM-	*aláa-*	√	*-a*
	NEG	***tá-***	SM-	***a-***	√	***-é***		NEG	*tá-*	SM-	*a*	√	*-é*
FUT2	AFF		SM-	***lée-***	√	***-a***	PST2	AFF		SM-	*lée-*	√	*-a*
	NEG	***tá-***	SM-	***lée-***	√	***-a***		NEG					
FUT3	AFF.CJ		SM-	***ka-***	√	***-á***	PST3.CJ	AFF		SM-	*ka-*	√	*-á*
	NEG	***tá-***	SM-	***a-ka-***	√	***-é***		NEG	*tá-*	SM-	*a-ka-*	√	*-é*

6.3.2 Stative verbs

As in the case of the past tense, the paradigm of the future tense can be applied to the stative verbs, which follow a different inflectional pattern in present tense. Examples are provided in (58).

(58) FUT forms of the stative verb *-ishib-* 'know'

	AFF	NEG
FUT1	*búpe aaláaishiba ílyáashi*	*búpe taaishíbé ílyáashi*
	bupe a-alaa-ishib-a i-li-ashi	bupe ta-a-a-ishib-e i-li-ashi
	Bupe SM_{1}-FUT1-know-FV AUG-5-story	Bupe NEG-SM_{1}-NEG-know-FV AUG-5-story
	'Bupe will know the story'	'Bupe will not know the story'

[32] One of the consultants explains that this form can also be used to express a speaker's feeling of an 'obligation' or 'promise', which can apparently be interpreted as a pragmatic extension of the prototypical notion of 'certainty'.

FUT2	*búpe aléeishiba ílyáashi*	*búpe taaleeíshíba ílyáashi*
	bupe a-lee-ishib-a i-li-ashi	bupe ta-a-lee-ishib-a i-li-ashi
	Bupe SM1-FUT2-know-FV AUG-5-story	Bupe NEG-SM1-FUT2-know-FV AUG-5-story
	'Bupe will know the story'	'Bupe will not know the story'
FUT3	*búpe akáíshíbá ílyáashi*	*búpe taakaíshíbá ílyáashi*
	bupe a-ka-ishib-a i-li-ashi	bupe ta-a-ka-ishib-a i-li-ashi
	Bupe SM1-FUT3-know-FV AUG-5-story	Bupe NEG-FUT3-know-FV AUG-5-story
	'Bupe will know the story'	'Bupe will not know the story'

6.3.3 Additional notes on tonal patterns

Some tonal features pertaining to the future tense forms can be summarised as follows.

(59) Notes on the tonal patterns in the future tense paradigm:

a. In the affirmative forms of FUT1 and FUT2, a high tone lexically assigned to the verb root apparently drops, at least in the forms in isolation.
b. The high tone of *lée-* realises in its original position in affirmative forms, while it seems to shift to the following TBU in the negative forms, where, in turn, it drops when it is adjacent to another high tone, as in (57f).
c. The high tone assigned to NEG *tá-* seems to be deleted, or at least does not realise on its own position, throughout all three future forms.
d. High-toned verbs in FUT3.AFF seem to show word-internal tonal polarity between the pre-stem cluster SM-*ka-*, whose tonal shape is determined by the tonal property of SM, and the following verb root, i.e., when SM is low, the entire verbal stem realises with a flat high tone, while when SM is high, the high-toned root realises as L.

The morphological templates of the future verb forms, with tonal annotation, can be summarised as in Table 6-3-2.

Table 6-3-2: A summary of FUT forms with relevant tonal processes

		Ø-verb	H-verb
FUT1	AFF	SM-***aláa***-√-***a*** (TS)	SM-***aláa***-√-***a***
	NEG	***tá***-SM-***a***-√-***é***	***tá***-SM-***a***-√-***é***
FUT2	AFF	SM-***lée***-√-***a*** (TS)	SM-***lée***-√-***a****1
	NEG	***tá***-SM-***lée***-√-***a*** (TSh)	***tá***-SM-***lée***-√-***a****2
FUT3	AFF	SM-***ka***-√-***á*** (TS)	SM-***ka***-√-***a*** (TP)
	NEG	***tá***-SM-***a-ka***-√-***é***	***tá***-SM-***a-ka***-√-***é***

6.4 Summary of the tense paradigm

Table 6-4 is a list of simple tense forms identified in the data set. The tonal processes that seem to be relevant to each tense form are also shown in the table (TS: Tone spreading; TP: Tonal polarity; OCP: Tone deletion that can be explained by the effect of the Obligatory Contour Principle).

Table 6-4: A summary of tense paradigm of dynamic verbs with relevant tonal processes

		-end-	-món-
PRS	AFF.DJ	SM-***la***-√-***a*** (TS)	SM-***la***-√-***a*** (OCP)
	AFF.CJ	SM-Ø-√-***a*** (TS)	SM-Ø-√-***a*** (TS)
	NEG	***tá***-SM-√-***a*** (TS)	***tá***-SM-√-***a*** (TS)
PST1	AFF	SM-***á***-√-***a*** (TS)	SM-***á***-√-***a*** (TS)
	NEG	***tá***-SM-√-***ile***	***tá***-SM-√-***ile***
PST2	AFF	SM-***ací***-√-á	SM- ***ací***-√-a (TS)
	NEG	***tá***-SM-(***á***-)***ací***-√-á	***tá***-SM-(***á***-)***ací***-√-a (TS)
PST3	AFF.DJ	SM-***alíi***-√-***a*** (TS)	SM-***alíi***-√-***a***
	AFF.CJ	SM-***a***-√-***ile*** (TP)	SM-***a***-√-***ile*** (TP)
	NEG	***tá***-SM-***á***-√-***ile***	***tá***-SM-***á***-√-***ile***
PST4	AFF.DJ	SM-***alí***-√-***ile*** (OCP)	SM-***alí***-√-***ile*** (OCP)
	AFF.CJ	SM-***a***-√-***ile*** (TP)	SM-***a***-√-***ile*** (TP)
	NEG	***tá***-SM-***á***-√-***ile***	***tá***-SM-***á***-√-***ile***
FUT1	AFF	SM-***aláa***-√-***a*** (TS)	SM-***aláa***-√-***a***
	NEG	***tá***-SM-***a***-√-***é***	***tá***-SM-***a***-√-***é***
FUT2	AFF	SM-***lée***-√-***a*** (TS)	SM-***lée***-√-***a***
	NEG	***tá***-SM-***lée***-√-***a*** (TSh)	***tá***-SM-***lée***-√-***a***
FUT3	AFF	SM-***ka***-√-***á*** (TS)	SM-***ka***-√-***a*** (TP)
	NEG	***tá***-SM-***a-ka***-√-***é***	***tá***-SM-***a-ka***-√-***é***

7. Aspect

According to Nurse (2019), Bemba is identified as having four marked aspectual categories, namely i) Imperfective (IPFV) , ii) Progressive (PROG), iii) Persistive (PERS) , and iv) Anterior (ANT) , besides Perfective as an aspectually unmarked category. In my observations of CB, PROG is encoded by the morphological means described by Nurse (ibid.) as Imperfective, and the structure described as PROG does not appear to be very productive. Thus, the following sections focus on the three main aspectual categories, i.e., PROG (i.e., Nurse's IPFV; 7.1), ANT (7.2), and PERS (7.3), followed by Habitual (HAB; 7.4) , which can be expressed as part of the semantics of specific simple tense forms or of the expanded use of other aspectual forms.

7.1 Progressive

Progressive aspect is morphologically expressed by the TAM *lée-*[33], which is described as an Imperfective marker in Nurse (2019). As illustrated in the following examples, the morpheme can co-occur not only with dynamic verb stems but also with stative verb stems including those de-transitivised by NEUT *-ik*, as in (61).

(60) *ulyá úmúńtú aléelyoobwalyuubo*
ulya u-muntu a-lee-li-a u-bu-ali ubo
DEM.D$_1$ AUG-1.person SM$_1$-PROG-eat-FV AUG-14-nshima DEM.HP$_{14}$
'That person is eating that nshima'

(61) *ifíibí filéélsálíká*
i-fi-ibi fi-lee-isal-ik-a
AUG-8-door SM$_8$-PROG-close-NEUT-FV
'The doors are closing'

The present progressive thus morphologically contrasts with the present perfective, i.e., aspectually unmarked present tense, which is either marked by *Ø-* in CJ or *la-* in DJ forms in the pre-stem TAM slot. However, it should be noted that the prefix *lée-* (at least segmentally) is identical to FUT2, as has already been pointed out by Nurse (ibid.). Given that they can be identified as the same morpheme, Nurse (ibid.) suggests that the FUT2 could be excluded from the tripartite future tense categories. This interpretation can be further supported by the fact that FUT2 "does not co-occur with any of the aspects" (ibid.). In contrast, the TAM *lée-* does co-occur with the (imperfective) PST marker *á-* to form a past progressive form, which is illustrated in (62).

(62) *mailo ááléelálá fye*
mailo a-a-lee-lal-a fye
the_day_before/after SM$_1$-PST-PROG-sleep-FV just
'She was just sleeping all day yesterday.'

[33] This morpheme has an (apparent) allomorph, *laa-*, which appears in combination with PST2 *ácí-* and FUT3 *ka-* in Nurse's (2019) data table. Also it was frequently observed that *laa-* tends to occur after FUT3 *ka-* in the present data set. However, the exact conditions for this allomorphy, if they are, are still unclear.

7.2 Perfect/Anterior

Perfect as an aspectual concept that refers to an event having taken place in the past with its current relevance (cf. Comrie 1976; Dahl 1985; Bybee et al. 1994) is expressed by the pre-initial proclitic *náa=* as shown in (63a). The adverbial *kale* can be used to explicitly indicate the completion of the action in the past. The same construction can be used with different types of verbs, including non-volitional verbs as in (63b).

(63) a. *ulyá úmúntú nááísa (kále)*
u-lya u-muntu naa=a-is-a kale
PP$_1$-DEM.D AUG-1.person PRF=SM$_1$-come-FV already
'That person has already come'
b. *búpe náabuuka (kále)*
bupe naa=a-buuk-a kale
Bupe PRF=SM$_1$-wake_up-FV already
'Bupe has already woken up'

Negation of the *náa=* form is achieved by the pre-initial clitic *ta=* as in most of the finite main verb forms in combination with the low-toned TAM *laa*.

(64) a. *búpe talaaísa*
bupe ta=a-laa-is-a
Bupe NEG=SM$_1$-NEG-NEG.IPFV-come-FV
'Bupe has not come yet'
b. *búpe talaabúúka*
bupe ta=a-laa-buuk-a
Bupe NEG=SM$_1$- NEG-NEG.IPFV-wake_up-FV
'Bupe has not woken up yet'

Another form that can be identified as a TA marker denoting aspectual notions centring around anteriority and stativity is the suffix *-ile*, which has been traced back to the PB reconstructed form **-ịde*. Nurse (2019) identifies the template *Ø-√-ile* as the CJ counterpart of the *náa=* form.

(65) CJ-DJ distinction in PRS.ANT (Nurse 2019)
CJ: *bá-Ø-bomb-élé* vs. DJ: *náa-bá-Ø-bomb-á*
'they have worked'

This suffix is also attested in predicate forms with high aspectual stativity such as stative verbs, possessive predicates, and relative verb forms, as illustrated in (66a–c).

(66) a. *tabeéshiibe ílyáashi*
ta-ba-ishib-ile i-lyaashi
NEG-SM$_2$-know-ANT AUG-5.story
'They do not know the story'
b. *níńshí ukweete?*
ni=i-N-shi u-kwaat-ile
PRED=AUG-9-what SM$_{2SG}$-have-ANT
'What do you have?'
c. *úmwáanakashi úwáaponene*

u-mwaanakashi u=u-a-pon-ile
AUG-1.woman SPEC$_1$=PP$_1$-PST-fall-ANT
'The woman who fell'

Though it is not explicitly mentioned in Nurse (2019), there is another TAM prefix that denotes perfectivity, which is the prefix *N-* in (67a). The aspectual concepts denoted by this prefix seem to focus on the completion of events rather than temporal anteriority, which is expressed by the clitic *náa=*. However, the contrast between *N-* and *náa=*, both of which clearly seem to be associated with aspectual perfect, is structurally neutralised in the context of negation, which is marked by *laa-* as shown in (67b).

(67) a. *níndya kále ubo ubwali*
N-N-li-a kale ubo u-bu-ali
SM$_{1SG}$-ANT-eat-FV already DEM.HP$_{14}$ AUG-14-nshima
'I have already eaten that nshima'
b. *nshilaalyá ubo ubwali*
Nshi-laa-li-a ubo u-bu-ali
SM$_{1SG}$ .NEG-IPFV.NEG-eat-FV DEM.HP$_{14}$ AUG-14-nshima
'I have not yet eaten that nshima'

As shown in 6.1.1, the present tense of stative verbs is marked by the prefixal form *alí-*, which is further exemplified in (68).

(68) a. *waalípálá báamaayo boobe*
u-ali-pal-a baa-maayo ba-obe
SM$_{2SG}$-PRS.STAT-look_like-FV 2a-my_mother 2-POSS.2SG
'You look like your mother'
b. *áalyuupwa*
a-ali-up-w-a
SM$_1$-PRS.STAT-marry-PASS-FV
'She is married'

At least from a diachronic point of view, this form can be further decomposed into *a-* and *li-*, the latter of which seems to have been apparently grammaticalised from the homophonous copula. Along with the prefix *a-*, which is synchronically identified as a general imperfective past marker (cf. 6.2.2), *li-* also appears to be a TA marking element which is relevant to a certain aspectual category. This is supported by the fact that experience as a marked aspectual category is expressed by the template consisting of *ali-* and the locative clitic *=po* as illustrated in (69 a–b).

(69) a. *naalíyápo kulusaka*
N-ali-i-a=po ku-lusaka
SM$_{1SG}$-PRS.STAT-go_towards-FV=ENCL$_{16}$ 17-Lusaka
'I have been to Lusaka before'
b. *naalímónápo*
N-ali-mona=po
SM$_{1SG}$-PRS.STAT-see=ENCL$_{16}$
'I have seen before'

Along with the class 17 enclitic *=ko*, these locative clitics show a wide range of functionality,

which is further discussed with different examples in Section 9.3.

7.3 Persistive

The persistive aspect is used to depict a situation where an event 'is still ongoing' or a state 'still remains unchanged'. This aspectual notion is expressed through the auxiliary *-cili*, which can be etymologically decomposed into *ci-*, tracing back to the persistive formative reconstructed as **-kí* in PB, followed by the homophonous copula *-li*.

(70) a. *ncílí ndeeyá kusukúlu*
N-cili N-lee-y-a ku-sukulu
SM1SG-PERS SM1SG-PROG-go_toward-FV 17-school
'I am still going to school'
b. *ncílí nshíleeyá kúsukúlu*
N-cili N-shi-lee-y-a ku-sukulu
SM1SG-PERS SM1SG-NEG-PROG-go_toward-FV 17-school
'I'm still not going to school (i.e., I have not returned to school yet)'

It should be noted that, as shown in (70b), the persistive *-cili* can also be used in negative contexts. On the other hand, there seems to be a morphosyntactic restriction such that the finite verb forms following the persistive auxiliary must contain a pre-stem aspectual marker, which may be the progressive prefix *lée-* or the perfect proclitic *náa=*.

(71) a. *icílí íléeloká*
i-cili i-lee-lok-a
SM9-PERS SM9-PROG-rain-FV
'It's still raining'
b. **icili iloka*
i-cili i-la-lok-a
SM9-PERS SM9-PRS.DJ-rain-FV
Intd: 'It still rains'
c. *icííbí cicílí náaciisúka*
i-ci-ibi ci-cili naa=ci-isuk-a
AUG-7-door SM7-PERS PRF=SM7-be_open-FV
'The door is still open'

7.4 Habitual

As already pointed out in 6.1.1, habituality can be expressed by the PRS.DJ marker *la-*, i.e., present habitual seems to be part of the semantic field that can be encoded by the TA marker *la-* as part of the morphosyntactic template of DJ in this language. Note, however, that DJ in Bemba does not always follow the general restriction that it should not be followed by any post-verbal constituent, as illustrated in the following examples (for further information on the structural restrictions and functional features of DJ, see Kula 2017).

(72) a. *ndabéléńgá icitabo lyóónsé úluceélo*
N-la-beleng-a i-ci-tabo li-onse u-lu-ceelo
SM1SG-DJ.PRS-read-FV AUG-7-book 5-all AUG-11-morning

‘I read a book every morning’

b. *ndatápá áméenshi lyóónsé úluceélo*
N-la-tap-a a-ma-inshi li-onse u-lu-ceelo
SM1SG-DJ.PRS-fetch-FV AUG-6-water 5-all AUG-11-morning
‘I fetch water every morning’

In contrast, habituality in the past tense is part of the semantic features expressed by the PST3 form, which differs from the PST4 form that can be used to describe an event ‘as expected’ or ‘as previously planned’. The past habitual can also be expressed through the morphological template for past progressive, which is marked by the (imperfective) PST *a-* followed by PROG *lée-*, as illustrated in (73).

(73) *nalééya kusukúlu cíla bushiku*
N-a-lee-i-a ku-sukulu cila bu-shiku
SM1SG-PST-PROG-go_towards-FV 17-school every 14-day
‘I used to go to school every day.’

8. Verbal derivation

As in most of the Eastern Bantu languages, CB has a rich system of verbal morphology, in terms of cross-referential grammatical agreement with nominal arguments (cf. Section 2.5), inflectional marking of tense and aspect (cf. Chapters 6 and 7), and valency changing verbal derivation. This chapter deals with five derivational categories, namely passive (PASS; 8.1), causative (CAUS; 8.2), reciprocal (RECIP; 8.3), neuter (NEUT; 8.4), and applicative (APPL; 8.5), all of which are widely observed throughout Eastern Bantu languages as a major valency control process expressed through verbal morphology. Suffixes that mark such derivational processes are widely shared across present-day Bantu languages and can be traced back to the reconstructed proto forms. This historical common ground enables us to further investigate cross-linguistic variation, which may shed light on diachronic processes of development as well as the typological interrelations across different semantic categories.

8.1 Passive

Passive as a valency-decreasing process – by demoting an agentive subject to an oblique argument – is widely expressed through verbal morphology using suffixes that can be traced back to Proto-Bantu *-*ʊ* and *-*ibʊ*, the former of which appears after a consonant and the latter after a coda-less stem. In present-day CB, the descendant form *-w* is used as a morphological passive marker.

(74) a. *abáńtú báálíimonwa múmpánga*
a-ba-ntu ba-alii-mon-w-a mu-N-panga
AUG-2-entity SM_2-PST3-see-PASS-FV 18-9-forest
'People were seen in the forest'
b. *ímbwá shílóomwa kúbalími*
i-N-bwa shi-la-um-w-a ku-ba-limi
AUG-10-dog SM_{10}-PRS.DJ-hit-PASS-FV 17-2-farmer
'Dogs are hit by the farmers'

Agent nouns are marked by the cl. 17 prefix *ku-* as in (74b). Where agents are human, they can be introduced by the grammaticalised preposition *kuli*, which is etymologically analysed as SM17-COP.

(75) a. *búpe aacúúmwá kulí mwaape*
bupe a-aci-um-w-a kuli mwaape
Bupe SM_1-PST2-beat-PASS-FV by Mwape
'Bupe was beaten by Mwape'
b. *búpe aacísúmwá kúmbwa*
bupe a-aci-sum-w-a ku-N-bwa
Bupe SM_1-PST2-bite-PASS-FV 17-9-dog
'Bupe was bitten by a dog.'
*Bupe acisumwa kuli mbwa

One of the salient features in the Bemba passive is that it is not only expressed through the passive marker but also through an impersonal construction by making use of the cl. 2 SM as a

marker of an underspecified subject, which is often referred to as '*ba*-passive' in the literature on Bantu grammar (Schadeberg & Bostoen 2019: 187). In (76a–b), which are semantic equivalents of (74a–b), not only is SM_2 *ba-* used instead of the morphological passive marker *w-*, but pre-verbal passivised subjects are object-marked by *ba-* in (76a) and *shi-* in (76)b, respectively.

(76) a. *abáńtú báálíibamona múḿpánga*
a-ba-ntu ba-alii-ba-mon-a mu-N-panga
AUG-2-entity SM_2-PST3-OM_2-see-FV 18-9-forest
'People are seen in the forest'
b. *íḿbwa bálashuúmwa kubalimi*
i-N-bwa ba-la-shi-um-w-a ku-ba-limi
AUG-10-dog SM_2-PRS.DJ-OM_{10}-hit-FV 17-2-farmer
'Dogs are hit by the farmers'

According to Kula & Marten (2010), the *ba*-passive is generally used in a wider range of contexts than the morphological *-w* passive, which tends to be preferably used in contexts where the agent is not overtly expressed, or the valency of the verb stem is reduced.[34] In that sense, with passivisation of the sentence with salient transitivity, like in (77), the *ba*-passive may be more natural to use than the *w*-passive.

(77) *bááliilya inama kubeéni*
ba-alii-ly-a i-N-nama ku-ba-eni
SM_2-PST_3-eat-FV AUG-9-meat 17-2-guest
'The meat was eaten by the guests'

In contrast, *-w* is frequently used as part of the sequence of suffixes *-ik-w*. This suffixal sequence, which is also referred to as a suffixal 'phraseme' in the literature (cf. Bostoen & Gueriois 2022), seems to be morphophonemically conditioned to appear after the verbal base which Kula (2002: 154) calls 'frozen passive', which contains the fossilised *-w* as a base-final consonant, e.g., *-temw-* 'love' and *-umfw-* 'hear'.

(78) a. *mwaalíítémwíkwá kubáana besu*
mu-alii-temw-ik-w-a ku-ba-ana ba-esu
SM_{2PL}-PST_3-love-NEUT-PASS-FV 17-2-child PP_2-POSS.1PL
'You (pl.) were loved by our children'
b. *ingómá sháálíiumfwikwa múńgánda*
i-N-goma shi-alii-umfw-ik-w-a mu-N-ganda
AUG-10-drum SM_{10}-PST3-hear-NEUT-PASS-FV 17-9-house
'The sound of drums was heard from the house'

The fact that verbal forms with the *-ik-w* phraseme can be replaced with the *ba*-passive forms as illustrated in (79a–b) suggests that the phraseme as a whole serves as a passive marker rather than as a combination of independent suffixes.

(79) a. *báálimitemwa kubáana beesu*

[34] "*-w-* passives are typically found in two contexts, with transitive verbs on the one hand, in which case the *-w-* passive prefers that the agent is not expressed, and in combination with the neutro-passive extension on the other hand, in which case *-w-* licenses the introduction of an agent oblique phrase" (Kula & Marten 2010: 129).

ba-alii-mi-temw-a ku-baana ba-esu
SM$_2$-PST$_3$-OM$_{2PL}$-love-FV 17-2-child PP$_2$-POSS.1PL
'You (pl.) were loved by our children'

b. *ingómá báálíishumfwa múńgánda*
i-N-goma ba-alii-shi-umfw-a mu-N-ganda
AUG-10-drum SM$_2$-PST3-OM$_{10}$-hear-FV 17-9-house
'The sound of drums was heard from the house'

Passivisation can also be applied to derived verbal stems, e.g., as in (80) applicative verbs (see 8.5) can be passivised through suffixation of *-w* as well as through *ba*-passivisation, as in (80a) and (80b), respectively. However, it should be noted that in applicative forms it is always applied objects that can be raised to a subject position, i.e., the passivisation of base objects seems to be structurally unacceptable. This fact, in turn, may be interpreted as partially reflecting an object asymmetric nature of this language (For more information on the definition, theoretical treatments, and typological variation of object a/symmetry in Bantu, see Bresnan & Moshi 1990, Jerro 2015, and Van der Wal 2017a).

(80) a. *ábáana báléépikilwa ífyaakúlya kúmwéeni*
a-ba-ana ba-la-ipik-il-w-a i-fi-akulya ku-mu-eni
AUG-2-child SM2-PRS.DJ-cook-APPL-PASS-FV AUG-8-food 17-1-guest
'Food is cooked for (our) children by the guest'

b. *ábáana bálábeépíkíla ífyaakúlya kúmwéeni*
ba-la-ba-ipik-il-a i-fi-akulya ku-mu-eni
SM$_2$-PRS.DJ-cook-APPL-FV AUG-8-food 17-1-guest
'Food is cooked for (our) children by the guest'

c. *ifyaakulya filabeepikilwa abaana

Passivisation of intransitive verbs seems apparently restricted, as suggested in (81), i.e., typical intransitive verbs like 'to rain' (cf. *-tón-* in Guthrie & Mann [1995: 106]) are usually not allowed to be passivised.

(81) a. *náátucílíkwá kúmfúla*
naa=tu-cilik-w-a ku-N-fula
ANT=SM$_{1PL}$-stop_up-PASS-FV 17-9-rain
'We are caught in the rain/ blocked by the rain'

b. *náabatucílíká kúmfula*
naa=ba-tu-cilik-a ku-N-fula
ANT=SM$_2$-OM$_{1PL}$-stop_up-FV 17-9-rain
'We are caught in the rain/ blocked by the rain'

However, according to Kula & Marten (2010), the *-ik-w* sequence can also be used as a sequence of independent extensions with distinct functions, where *-ik* serves as a valency-reducing 'neutro-passive' marker, which structurally does not co-occur with an oblique agent, while *-w* plays the role of introducing it in the syntactic frame of the sentence.

(82) a. *mulenga á-alí-cén-ék-a mu-lúbúlí* (**kulí cisanga*)
1.Mulenga SM$_1$-PST4-hurt-NEUT-FV 18-fight by 1.Chisanga
'Mulenga was hurt in the fight'[35]

[35] The translation of the sentence is slightly modified by the present author.

b. *mulenga á-alí-cén-ék-w-a mu-lúbúlí na cisanga*
1.Mulenga SM_1-PST-hurt-NEUT-PASS-FV 18-fight by 1.Chisanga
'Mulenga was hurt in the fight (by Chisanga).'

For more information on the functional distinction between the two types of passive forms, see Kula & Marten (2010).

8.2 Causative

Like the passive, two suffixal forms of the causative are reconstructed for PB, namely **-ị* and **-ịci*, which are allomorphs whose occurrence is conditioned by the preceding environment; specifically, the former appears after C and the latter after V. One of the striking features of the causative in CB is the fact that the two descendent forms have developed into independent morphemes. (83a–b) illustrate the short causative forms, while (84 a–b) are examples of the long causative forms.

(83) a. *twaalíiponya ámakíi*
tu-alii-pon-i-a a-ma-kii
SM_{1PL}-PST_3-fall-CAUS1-FV AUG-6-key
'We dropped the keys'
b. *áálíísésha íteébulo kúkoóna*
a-alii-sel-i-a i-tebulo ku-kona
SM_1-PST_3-move-CAUS1-FV 5-table 17-corner
'He moved a table to the corner'

(84) a. *báálímúumisha ing'ombe*
ba-ali-mu-um-ish-a i-N-ombe
SM_2-PST4-OM_1-hit-CAUS2-FV AUG-9-cow
'They made him hit a cow'
b. *ábáana báálíiliisha utunama*
a-ba-ana ba-alii-li-ish-a u-tu-nama
AUG-2-child SM_2-PST_3-eat-CAUS2-FV AUG-13-animal
'The children fed the small animals'

Both the short form *-i* in (83) and the long form *-ish* in (84) serve a similar function of causation, i.e., to introduce a causer subject to the argument structure of the verbal base that it attaches to. According to Kula (2022: 109ff), there seems to be a tendency for the short causative to suffix to intransitive verb stems, while the long causative attaches to transitive stems, which seems to be confirmed in the present sample data as well. This relation can be summarised as in (85) with an illustration of the verb stem *-pón-*, which is a labile stem denoting 'drop (itr./tr.)'

(85) illustration of the short vs. long causatives with the labile verb stem *-pón-* 'drop (itr./tr.)'

a.	√-FV	*úkúpona*	u-ku-pon-a	'to drop (itr./tr.)'
b.	√-CAUS1-FV	*úkúponya*	u-ku-pon-i-a	'to make fall/drop (tr.)'
c.	√-CAUS2-FV	*úkúponesha*	u-ku-pon-ish-a	i) 'to make s.o. drop (tr.)' ii) 'to drop (tr.) hard'
d.	√-CAUS2-APPL-FV	*úkúponyesha*	u-ku-pon-ish-il-a	'to make s.o. drop (tr.) for'

In terms of the differences between the two forms, at least two aspects can be pointed out. First, the short causative triggers spirantisation of the preceding stop consonant, as in *sesha* //sel-i-a// in (83b). In contrast, the effect of fricativisation triggered by the long causative seems to be limited[36], e.g., the coda consonant of the stem *-ishib* 'know' undergoes no spirantisation when followed by *-ish* in (86), which is contrastive with, e.g., *lufya* //lub-i-a// 'cause to be lost' where the verb stem with the same coda consonant *-lub* 'lose' undergoes spirantisation triggered by the short causative (Kula 2002: 110).

The second difference is that unlike the short causative, whose functionality remains as a typical valency-increasing function of causation, the long form can also be used to intensify the lexical meaning of a verb stem, e.g., the infinitive form *úkúishibisha* in (86) meaning 'to learn' is morphologically analysed as the stem *-ishib-* followed by the long causative *-ish* and semantically decomposed into 'know' + 'very well/intensively'. It should also be noted that this use of *-ish* does not affect the argument structure of the base verb, i.e., it has nothing to do with valency control.

(86) *tubélénga úkúishibisha icíbémba*
tu-Ø-beleng-a u-ku-ishib-ish-a i-ci-bemba
SM$_{1PL}$-PRS.CJ-study-FV AUG-15-know-CAUS2-FV AUG-7-Bemba
'We study (very hard) to learn Bemba'

Based on these observations, it can be recognised that the short and long causative forms, which have been reconstructed as allomorphs at the Proto-Bantu stage, have been morphologised, i.e., developed into independent morphemes, in the derivational system of present-day Bemba. If this interpretation is correct, verb stems can doubly be derived by the short and long causative extensions with different functions. Based on the semantic interpretation given, (87c) may be interpreted as such a 'double causative' form.

(87) Co-occurrence of the short and long causatives in a single verbal base

a.	√-FV	*ukúlílá*	u-ku-lil-a	'to cry'
b.	√-CAUS1-FV	*ukúlíshá*	u-ku-lil-i-a	'to make cry'
c.	√-CAUS1-CAUS2-FV	*ukúlíshíshá*	u-ku-lil-i-ish-a	'to make cry hard'
d.	√-CAUS2-APPL-FV	*ukúlíshíshá*	u-ku-lil-ish-il-a	'to make cry for'

However, it should be noted that exactly the same form can be yielded from a different morphemic configuration through a different derivational process, i.e., as shown in (87d), the underlying CAUS-APPL sequence attached to the stem can be realised as the same form through spirantisation of the coda consonant *l* to *sh*, triggered by the long causative, followed by imbrication that alters *-ish-il* into *-i(i)sh* (cf. Kula 2002: 110). The applicativised causative form is also illustrated in (88), where the long causative is used to derive the transitive verb 'drive', which is applicativised by the suffix *-il*, which in turn is imbricated by *sh* of the preceding long causative. This process of applicative morphology, as the English translation suggests, seems to re-identify the noun *mótoka* as an instrumental applied object.

(88) *aléénshésha mótoka kúmúshi*
a-le-end-ish-il-a motoka ku-mu-shi
SM$_1$-PRS.DJ-go-CAUS2-APPL-FV 3.car 17-3-village
'She uses a car to drive to the village'

[36] Kula (2002: 110) points out that coda consonants that undergo spirantisation triggered by the short causative "are also able to appear adjacent to the long causative with no spirantisation."

Note also that, as in many Eastern Bantu languages, the vowel *i* of both CAUS and APPL suffixes regularly realises as *e* due to the vowel height harmony triggered by the immediately preceding [+mid] vowel, as shown in (88). The same process applies to NEUT *-ik* and APPL *-il* in the same environment.

8.3 Reciprocal

The reciprocal, as a derivational concept that depicts a situation where "more than one [...] agents are at the same time mutual patients of their action" (Schadeberg & Bostoen 2019: 183), is morphologically marked by the suffix *-an*, which is a direct reflex of the reconstructed form **-an*.

(89) *tumónáná mukumo cíla mulungu*
tu-Ø-mon-an-a mu-ku-mo cila mulungu
SM_{1PL}-PRS.CJ-see-RECIP-FV 18-17-one each 3.week
'We see each other once a week'

(90) *bóómána neecíímúti*
ba-Ø-um-an-a na i-ci-Vmuti
SM_2-PRS.CJ-hit-RECP-FV with AUG-7-stick
'They hit each other with a stick'

(91) *bááléélánshana paka bwááíla*
ba-a-lee-land-i-an-a paka bu-a-il-a
SM_2-PST-PROG-talk-CAUS1-RECP-FV until SM_{14}-PST-night_fall-FV
'They were talking to each other till late'

According to Guthrie & Mann (1995), the verbal base *-lansh* is morphologically decomposed into the root *-land* followed by the short causative *-i*, making the meaning of the form as a whole 'chat with'. This may suggest that causativisation with the short causative introduces the counterpart agency, i.e., one whom the subject talks with. As suggested by the ungrammaticality of **-land-an-a*, this is an essential condition for *-land* to be involved in the process of derivation with the reciprocal *-an*.

8.4 Neuter

The suffix *-ik*, which is a direct reflex of the reconstructed suffix **-ik* (*-ɪk*) in the Proto-Bantu system, is also productively used in this language. As in many Eastern Bantu languages, this suffix pertains to a valency-reducing process, which is specifically characterised as the deletion of the agent–subject and promotion of the direct object of the base verb to the subject, which is expressed as being "potentially or factually affected by the action expressed by the verb" (Schadeberg 2003: 75).

(92) *icíkuulúa cílámonéka úkúfuma pamúshi*
i-cikuulua ci-la-mon-ik-a ukufuma pa-mu-shi
AUG-7.building SM_7-PRS.DJ-see-NEUT-FV from 16-3-village
'The building is seen from the village'

(93) *umúshílá wáa ciimúti úlaliika*
u-mu-shila u-a ci-Vmuti u-la-li-ik-a
AUG-3-root PP$_3$-ASSC 7-tree SM$_3$-PRS.DJ-eat-NEUT-FV
'The root of the tree is edible'

(94) *ifiíbí filééísálíká*
i-fi-ibi fi-lee-isal-ik-a
AUG-8-door SM$_8$-PROG-close-NEUT-FV
'The doors are closing'

As already shown in Section 8.1, *-ik* often forms a suffixal sequence, *-ik-w*, which may either be used as a single 'phraseme', which is analysed as a functional equivalent of PASS, or a sequence of independent suffixes, where *-ik* serves as a valency-reducing neutro-passive suffix. In such cases, the passive suffix *-w* plays the role of eliminating the agent–subject argument from the argument structure of the base verb stem, as illustrated in (95).

(95) *icípiíkica náacikóbekwa pacíbuḿba*
i-ci-pi(i)kica na=ci-kob-ik-w-a pa-ci-bumba
AUG-7-picture PRF=SM$_7$-hang-NEUT-PASS-FV 16-7-wall
'The picture is hanging on the wall'

The suffix *-ik* co-occurs with other types of suffixes as well. (96b) shows that it can be followed by the long causative *-ish*, which, in this case, plays a role of 'intensifier', i.e., the argument structure of (96b) is basically the same as that of (96a), which does not contain the long causative suffix.

(96) a. *íng'óma shilómfwika*
i-N-goma shi-la-umfw-ik-a
AUG-10-drum SM$_{10}$-PRS.DJ-hear-NEUT-FV
'The sound of drums can be heard'
b. *ámáshiwi yakwé yáálíumfwikisha*
a-ma-shiwi ya-akwe ya-alii-umfw-ik-ish-a
AUG-6-voice PP$_6$-POSS.1 SM$_6$-PST$_3$-listen-NEUT-CAUS2-FV
'Her speech was clearly understood'

8.5 Applicative

The suffix *-il*, a regular reflex of Proto-Bantu **-id* (*-ɪd*), is attested to be productively used to introduce nominals with a wide range of thematic roles as an applied object into the argument structure of the verb stem derived by the suffix, i.e., the applicative verb. As shown in the following examples, most of the typical thematic roles that are frequently expressed in Bantu applicative constructions can be introduced as an applied object, including beneficiary, as in (97) and (98), which can sometimes be interpreted as maleficiary depending on the discourse context, goal or recipient as in (99), locative as in (100), and instrumental as in (101).

(97) *áálíibelengela ábáana íbuúku* =(47a)
a-alii-beleng-il-a a-ba-ana i-buuku
SM$_1$-PST$_3$-read-APPL-FV AUG-2-child 5-book

'He read a book for (his) children'

(98) *ábákashi baandi báálíindiila ífyaakúlya*
a-ba-kashi ba-andi ba-alii-N-li-il-a i-fi-akulya
AUG-2-wife$_{PP2}$-POSS.1SG SM$_2$-PST$_3$-OM$_{1SG}$-eat-APPL-FV AUG-8-food
'My wife ate a meal (which was cooked) for me'

(99) *ndéelembela baataata íńkálata*
N-lee-lemb-il-a baa-taata i-N-kalata
SM$_{1SG}$-PROG-write-APPL-FV 2a-my_father AUG-9-letter
'I'm writing a letter to my father'
cf. **ndeelembela inkalata baataata*

(100) *yáálíilokela mumpili*
i-alii-lok-il-a mu-N-pili
SM$_9$-PST$_3$-rain-APPL-FV 18-10-mountain
'It rained in the mountains'

(101) *baanamaáyo baléángwila náífu*
ba-anamayo ba-lee-angul-il-a naifu
2-group_of_mothers SM$_2$-PROG-peel-APPL-FV 9.knife
'Mothers are peeling with a knife'

As has already mentioned in Section 8.1, the two objects in (derivational) ditransitive constructions tend to behave contrastively, i.e., CB shows rather clear object asymmetric tendencies in terms of its morphosyntactic nature. This tendency is also observed with the applicative constructions. For example, scrambling the order of the two post-verbal objects in (99) – which are semantically quite contrastive and thus swapping their order would not be ill-formed in typical object symmetric languages – is confirmed to be grammatically unacceptable.

The object asymmetric nature may also be reflected in the syntactic restrictions, which seem to be selectively applied for instrumental applicatives. As in (101), the applicative form *baleángwila*, which has undergone the imbrication process, can take an applicative object immediately after the verb position, but this is not possible with the base object, i.e., a sentence like **baanamaayo baleangwila indiimu* is not grammatically accepted, suggesting that the base object, *índiímu* in this case, loses its morphosyntactic status as an object in the syntactic framework of the applied verb. In order to include both arguments in a single clause, the base form should be used and the instrumental argument should be introduced as an oblique prepositional phrase, as illustrated in (102).

(102) *baanamaáyo balééangula índiímu na náífu*
ba-anamayo ba-lee-angul-a indiimu na naifu
2-group_of_mothers SM$_2$-PROG-peel-FV 10.lemon with 9.knife
'Mothers are peeling lemons with a knife'

As expected, due to their status as asymmetrical primary objects, applied objects can be promoted to a subject position in the *ba*-passive construction, and again, the base object is not licensed as an object in the syntactic frame of the applied verb, as shown in (103b). However, interestingly the same morphosyntactic configuration can be grammatically accepted if the post-verbal enclitic *=ko* is attached to the verb as illustrated in (103a). The enclitic, which is identified as a shortened form of the locative cl. 17 DEM.HP in its morphological shape, has a

wide functionality including locative pronominal marking, relative clause marking, and honorific marking. Additional information on the clitic will be provided in Section 9.3.

(103) a. *náifu balééangwilako índiímu*
naifu ba-lee-angul-il-a=ko indiimu
9.knife SM_2-PROG-peel-APPL-FV=$ENCL_{17}$ 10.lemon
'A knife is being used for peeling lemons'
b. **naifu baleangwila indiimu*
naifu ba-lee-angul-il-a indiimu
9.knife SM_2-PROG-peel-APPL-FV 10.lemon

On the other hand, it should also be mentioned that, while object asymmetry is an overall characteristic in CB, a defining feature of the symmetric type may also be observed. According to Marten et al. (2007: 265), two object markers can be slotted in a single verb, which is by definition only possible within the object symmetric frame. However, as expected from CB's general tendency as an object asymmetric language, the multiple object marking is only possible in a very restricted context where either both of the OMs index animate referents or one of OMs refers to the speaker, i.e., the first-person singular object.

(104) a. **n-álì-mù-yà-péél-à*
SM_{1SG}-PST-OM_1-OM_6-give-FV
Intd: 'I gave him it (e.g. water)'
b. **n-álì-yà-mù-péél-à*
SM_{1SG}-PST-OM_6-OM_1-give-FV
Intd: 'I gave him it (e.g. water)'
c. *à-chí-m-péél-é*
SM_1-OM_7-OM_{1SG}-give-SBJV
'S/he should give it to me'

For further information on the typological variation of object marking from a cross-Bantu perspective, see Marten and Kula (2012). See also Bresnan & Moshi (1990), Jerro (2015), and Van der Wal (2020) for a more detailed investigation of the possible variation of object symmetry types in Bantu.

9. Relative clauses

In the literature on Bantu grammar, relative verb forms have been classified into two types: direct and indirect relatives (cf. Meeussen 1967: 113–114). The former has its initial slot filled by a PP that shows agreement with the relativised head noun, as illustrated in (105a–b), while the latter has a PP as an agreement marker with the head noun in addition to the SM filled in the initial slot of the relative verb, as in (105c).

(105) PB reconstructed relative forms (Van de Velde 2022: 466; based on Meeussen 1967: 113–4)
a. *mu-ntu ju-dim-a ị-pía*
1-person PP_1-cultivate-FV 5-garden
'a person who cultivates the garden'
b. *ị-pía dí-dim-á mu-ntu*
5-garden PP_5-cultivate-FV 1-person
'the garden that the person cultivates'
c. *mu-ntu ju-tú-dim-id-á ị-pía*
1-person PP_1-SM_{1PL}-cultivate-APPL-FV 5-garden
'the person for whom we cultivate the garden'

In a recent study on a cross-Bantu typology of relative constructions, Van de Velde (2021: 982) classifies the following three types based on the distinction of control relation of agreement marked on the relative verb, i.e., agreement either with the subject (SBJ), or with the relativised head noun phrase (NP_{rel}), or with both.

(106) Three types of relative verbs in Bantu (Van de Velde 2021: 982)
i) Type SBJ: agreement with the subject only
ii) Type NP_{rel}-SBJ: agreement with the relativised NP and the subject
iii) Type NP_{rel}: agreement with the relativised NP only

Type iii) NP_{rel}, where only agreement with the relativised NP is indexed on the relative verb, corresponds to the direct relative in (105a) and (105b), while Type NP_{rel}-SBJ, where agreement with both the relativised NP and the subject occurs, is exemplified by (105c). Type SBJ, which is at least not explicitly reconstructed in Proto-Bantu by Meeussen (1967), shows grammatical agreement with the subject only. This type is illustrated in (107b), where SM_9 *y-* is a sole agreement marker in the relative verb *y-á-lyà*.

(107) Type SBJ from Haya (Van de Velde 2021: 983; excerpted from Duranti 1977: 121)
a. *è-m-bwá y-à-ly' é-bì-tòòkè*
AUG_9-9-dog SM_9-PST-eat AUG_8-8-banana
'The dog has eaten the bananas.'
b. *è-bì-tòòk' [éby' é-m-bwá y-á-lyà]*
AUG_8-8-banana DEM_8 AUG_9-9-dog SM_9-PST-eat
'the bananas that the dog has eaten'

In the following, a basic overview of the relative construction in CB is provided with brief notes from the viewpoint of cross-Bantu typology summarised above.

9.1 Subject relative

The subject-relative construction, i.e., one where the relativised head noun is the logical subject of the relative verb, is illustrated in the following example.

(108) *búpe uwáabelengele*
bupe u=a-a-beleng-ile
Bupe SPEC$_1$=SM$_1$-PST-read-ANT
'Bupe who read (e.g., a book)'

In (108), SPEC procliticised to SM in the PREIN position indexes NC-based agreement with the preceding head noun *Bupe*, which is a proper noun that triggers class 1 agreement. Following the SPEC is SM$_1$, which also shows agreement with the head noun but which indexes the subject relation between the relative verb and the relativised head noun. However, as shown in the following examples, SM can be replaced with PP when the subject of the relative clause is in class 1. Interestingly, when the logical subject refers to a speech participant, the agreement marker in the initial slot must be PP.

(109) a. *úmúkashi úwáaponene*
u-mukashi u=u-a-pon-ile
AUG-1.woman SPEC$_1$=PP$_1$-PST-fall-ANT
'The woman who fell'
b. *ine néwáaponene*
ine ne=u-a-pon-ile
PRON.1SG SPEC$_{1SG}$=PP$_1$-PST-fall-ANT
'I who fell'
c. *ifwe fwébáaponene*
ifwe fwe=ba-a-pon-ile
PRON.1PL SPEC$_{1PL}$=PP$_2$-PST-fall-ANT
'We who fell'

It should also be noted that, as shown in (109b–c), the morphological shape of the SPEC that agrees with the speech participant subject is identical with the second syllable of the PRON, i.e., *ne=* from *ine*, and *fwe=* from *ifwe*, respectively. The morphological structure of the subject-relative verb forms thus can be generalised as follows.

(110) Morphosyntactic template of the subject-relative verb forms
HEAD$_i$ + $_{rel}$[SPEC$_i$=SM$_i$/PP$_i$-TAM-(OM-)√-FV]
N.B. If the head is in cl. 1, SM can be replaced with PP while PP should be used if the subject refers to a speech participant.

The following is a list of subject-relative forms meaning 'X that fell', where X stands for relativised nouns in different noun classes and person+number combinations for speech participants.

Table 10-1: List of subject-relative forms: ‘X that fell’

	AFF	NEG
1SG	*ine néwáaponene* ine ne=u-a-pon-ile PRON.1SG SPEC$_{1SG}$=PP$_1$-PST-fall-ANT ‘I who fell’ also *ine úwáaponene* ine u=u-a-pon-ile PRON.1SG SPEC$_1$=PP$_1$-PST-fall-ANT ‘I who fell’	*ine néú↓shááponene* ine ne=u-shi-a-pon-ile PRON.1SG SPEC$_{1SG}$=PP$_1$-NEG-PST-fall-ANT ‘I who did not fall’
1PL	*ifwe fwébáaponene* ifwe fwe=ba-a-pon-ile PRON.1PL SPEC$_{1PL}$=PP$_2$-PST-fall-ANT ‘We who fell’	*ifwe fwébá↓shááponene* ifwe fwe=ba-shi-a-pon-ile PRON.1PL SPEC$_{1PL}$=PP$_2$-NEG-PST-fall-ANT ‘We who did not fall’
2SG	*iwe wéwáaponene* iwe we=u-a-pon-ile PRON.2SG SPEC2$_{SG}$=PP$_1$-PST-fall-ANT ‘You (sg.) who fell’	*iwe wéú↓shááponene* iwe we=u-shi-a-pon-ile PRON.2SG SPEC2$_{SG}$=PP$_1$-NEG-PST-fall-ANT ‘You (sg.) who did not fall’
2PL	*imwe mwébáaponene* ine fwe=ba-a-pon-ile PRON.1SG SPEC$_{1PL}$=PP$_2$-PST-fall-ANT ‘You (pl.) who fell’	*imwe mwébá↓shááponene* ine fwe=ba-shi-a-pon-ile PRON.1SG SPEC$_{1PL}$=PP$_2$-NEG-PST-fall-ANT ‘You (pl.) who did not fall’
cl. 1	*úmúkashi úwáaponene* u-mukashi u=u-a-pon-ile AUG-1.woman SPEC$_1$=PP$_1$-PST-fall-ANT ‘The woman who fell’	*úmúkashi úúsháaponene* u-mukashi u=u-shi-a-pon-ile AUG-1.woman SPEC$_1$=PP$_1$-NEG-PST-fall-ANT ‘The woman who did not fall’
cl. 2	*ábákashi ábáaponene* a-bakashi a=ba-a-pon-ile AUG-2.woman SPEC$_2$=SM$_2$-PST-fall-ANT ‘The women who fell’	*ábákashi ábásháaponene* a-bakashi a=ba-shi-a-pon-ile AUG-2.woman SPEC$_2$=SM$_2$-NEG-PST-fall-ANT ‘The women who did not fall’
cl. 3	*úmúcila úwáaponene* u-mucila u=u-a-pon-ile AUG-3.tail SPEC$_3$=SM$_3$-PST-fall-ANT ‘The tail that fell’	*úmúcila úúsháaponene* u-mucila u=u-shi-a-pon-ile AUG-3.tail SPEC$_3$=SM$_3$-NEG-PST-fall-ANT ‘The tail that did not fall’
cl. 4	*ímícila ísháaponene* i-micila i=shi-a-pon-ile AUG-4.tail SPEC$_{10}$=SM$_{10}$-PST-fall-ANT ‘The tails that fell’	*ímícila íshísháaponene* i-micila i=shi-shi-a-pon-ile AUG-4.tail SPEC$_{10}$=SM$_{10}$-NEG-PST-fall-ANT ‘The tails that did not fall’
cl. 5	*ílíni ílyáaponene* i-lini i=li-a-pon-ile AUG-5.egg SPEC$_5$=SM$_5$-PST-fall-ANT ‘The egg that fell’	*ílíni ílísháaponene* i-lini i=li-shi-a-pon-ile AUG-5.egg SPEC$_5$=SM$_5$-NEG-PST-fall-ANT ‘The egg that did not fall’
cl. 6	*ámáni áyáaponene* a-mani a=ya-a-pon-ile AUG-6.egg SPEC$_6$=SM$_6$-PST-fall-ANT ‘The eggs that fell’	*ámáni áyásháaponene* a-mani a=ya-shi-a-pon-ile AUG-6.egg SPEC$_6$=SM$_6$-NEG-PST-fall-ANT ‘The eggs that did not fall’

cl. 7	*icísóté ícáaponene*	*icísóté ícísháaponene*
	i-cisote i=ci-a-pon-ile	i-cisote i=ci-shi-a-pon-ile
	AUG-7.hat $SPEC_7$=SM_7-PST-fall-ANT	AUG-7.hat $SPEC_7$=SM_7-NEG-PST-fall-ANT
	'The hat that fell'	'The hat that did not fall'
cl. 8	*ifísóté ífyáaponene*	*ifísóté ífísháaponene*
	i-fisote i=fi-a-pon-ile	i-fisote i=fi-shi-a-pon-ile
	AUG-8.hat $SPEC_8$=SM_8-PST-fall-ANT	AUG-8.hat $SPEC_8$=SM_8-NEG-PST-fall-ANT
	'The hats that fell'	'The hats that did not fall'
cl. 9	*íńkóko íyáaponene*	*íńkóko íyísháaponene*
	i-Nkoko i=i-a-pon-ile	i-Nkoko i=i-shi-a-pon-ile
	AUG-9.chicken $SPEC_9$=SM_9-PST-fall-ANT	AUG-9.chicken $SPEC_9$=SM_9-NEG-PST-fall-ANT
	'The chicken that fell'	'The chicken that did not fall'
cl. 10	*íńkóko ísháaponene*	*íńkóko íshísháaponene*
	i-Nkoko	i-Nkoko
	AUG-10.chicken	AUG-10.chicken
	i=shi-a-pon-ile	i=shi-shi-a-pon-ile
	$SPEC_{10}$=SM_{10}-PST-fall-ANT	$SPEC_{10}$=SM_{10}-NEG-PST-fall-ANT
	'The chickens that fell'	'The chickens that did not fall'
cl. 11	*ulúkásá úlwáaponene*	*ulúkásá úlúsháaponene*
	u-lukasa u=lu-a-pon-ile	u-lukasa u=lu-shi-a-pon-ile
	AUG-11.foot $SPEC_{11}$=SM_{11}-PST-fall-ANT	AUG-11.foot $SPEC_{11}$=SM_{11}-NEG-PST-fall-ANT
	'The foot that fell'	'The foot that did not fall'
cl. 12	*ákákondo ákáaponene*	*ákákondo ákásháaponene*
	a-kakondo a=ka-a-pon-ile	a-kakondo a=ka-shi-a-pon-ile
	AUG-12.toe $SPEC_{12}$=SM_{12}-PST-fall-ANT	AUG-12.toe $SPEC_{12}$=SM_{12}-NEG-PST-fall-ANT
	'The toe that fell'	'The toe that did not fall'
cl. 13	*útúkondo útwáaponene*	*útúkondo útúsháaponene*
	u-tukondo u=tu-a-pon-ile	u-tukondo u=tu-shi-a-pon-ile
	AUG-13.toe $SPEC_{13}$=SM_{13}-PST-fall-ANT	AUG-13.toe $SPEC_{13}$=SM_{13}-NEG-PST-fall-ANT
	'The toes that fell'	'The toes that did not fall'
cl. 14	*ubóówá úbwáaponene*	*ubóówá úbúsháaponene*
	u-boowa	u-boowa
	AUG-14.mushroom	AUG-14.mushroom
	u=bu-a-pon-ile	u=bu-shi-a-pon-ile
	$SPEC_{14}$=SM_{14}-PST-fall-ANT	$SPEC_{14}$=SM_{14}-NEG-PST-fall-ANT
	'The mushrooms that fell'	'The mushrooms that did not fall'
cl. 15	*úkúbokó úkwáaponene*	*úkúbokó úkúsháaponene*
	u-kuboko u=ku-a-pon-ile	u-kuboko u=ku-shi-a-pon-ile
	AUG-15.arm $SPEC_{15}$=SM_{15}-PST-fall-ANT	AUG-15.arm $SPEC_{15}$=SM_{15}-NEG-PST-fall-ANT
	'The arm that fell'	'The arm that did not fall'

At least in the past tense form, negation is marked by the NEG *shi-* slotted in the POSTIN slot as in regular main clause verbs. The ANT suffix *-ile* in these examples is a target of a nasal consonant harmony process, which is triggered by the root-final /m/ and /n/, and affects all *l*-containing suffixes (cf. Kula: 147). Note, however, that imbrication is not applicable to these cases, as pointed out by Hyman (1995) that it is only applied to the stem forms that fulfils the minimality condition, i.e., those with more than two syllables, or in other words, to those consisting of a root followed by at least one segmental derivational suffix (Kula 2002: 153), except for the stem *-món-* 'see' (cf. 6.2.4.2).

9.2 Object relative

The object-relative construction, where a logical object is relativised and thus becomes the head of the relative clause, is illustrated by (111a–b).

(111) a. *ífyaákulya ífyonaípíkila ábáana*
i-fi-akulua i=fyo=N-a-ipik-ile a-ba-ana
AUG-7-food SPEC$_8$=REL.O$_8$=SM$_{1SG}$-PST-cook-ANT AUG-2-child
'The food I cooked for children'

b. *úmúlumendo úonámweene mumúshi*
u-mu-lumendo u=o=N-a-mon-ile mu-mu-shi
AUG-1-young_man SPEC$_1$=REL.O$_1$=SM$_{1SG}$-PST-see-ANT 18-3-village
'The boy I saw in the village'

As in the subject relative, agreement with the head noun is marked by the procliticised element, which is almost identical to the 'hearer-proximate' demonstrative (DEM.HP). However, as shown in (111b), the form in class 1 is clearly different from its corresponding DEM.HP, which is *uyo*. Based on this fact, it can be tentatively assumed that in the object relative, noun class-based agreement with the relativised head noun is marked by SPEC, just as in the case of subject relative, which in turn is followed by the object-relative marker (REL.O). As shown in (111a), REL.O is a shortened form of the DEM.HP, which is basically identical to the shape of its second syllable except in the case of cl. 1 and 3, which is *u=o=*. Agreement with the logical subject of the relative verb is indexed by SM, which is preceded by the two proclitics.

(112) Morphosyntactic template of the object-relative verb forms
HEAD$_i$ + $_{rel}$[SPEC$_i$=REL.O=SM$_i$-TAM-(OM-)√-FV]

It has now been demonstrated that the morphosyntactic structure of the relative clause in CB, both subject relative and object relative, can be classified as Type NP$_{rel}$-SBJ in Van de Velde's (2021) cross-Bantu typological classification of relative clauses shown in (106), i.e., agreement both with the head noun and with the logical subject is indexed in a single relative verb form. Moreover, it has been identified that in the scheme of the developmental cycle proposed by Van de Velde (2021), which focuses on the control relation of agreement, i.e., whether relative verbs morphologically index agreement with the head noun (AGR$_i$), with the subject (AGR$_j$), or with both, relative verbs in CB can be classified as Stage 2, where both relations are structurally marked.

(113) Developmental stages of relative clauses in Bantu languages (cf. Van de Velde 2021: 985)

Stages	Structures
pre-Stage 1 situation	HEAD$_i$ [AGR$_j$-V SUBJECT$_j$ (…)]
Stage 1	HEAD$_i$ REL$_i$ [AGR$_j$-V SUBJECT$_j$ (…)]
Stage 2	HEAD$_i$ [AGR$_i$-AGR$_j$-V SUBJECT$_j$ (…)]
Stage 3	HEAD$_i$ [AGR$_i$-V SUBJECT$_j$ (…)]

Note also that the structure of the relative verbs that relativise speech participant subjects can be described as a subtype of Stage 2 that deviates from the prototype (towards Stage 3) in that

it contains PP which indexes the noun class-based agreement with the head noun rather than the subject relation which is systematically encoded by SM.

The following is a list of object-relative forms meaning ‘X that we saw’, where X stands for relativised object nouns in different noun classes and person+number combinations for speech participants.

Table 10-2: List of object-relative forms: ‘X that we saw’

	AFF	NEG
1SG	*ninéebo úó↓báamweene*	*ninéebo úótabáamweene*
	ni=ine=bo	ni=ine=bo
	PRED=PRON1SG=ENCL$_2$	PRED=PRON1SG=ENCL$_2$
	u=o=ba-a-mon-ile	u=o=ta-ba-a-mon-ile
	SPEC$_1$=REL.O$_1$=SM$_2$-PST-see-ANT	SPEC$_1$=REL.O$_1$=NEG-SM$_2$-PST-see-ANT
	‘It’s me that they saw’	‘It’s me that they did not see’
1PL	*nifwéebo ábó↓báamweene*	*nifwéebo ábótabáamweene*
	ni=ifwe=bo	ni=ifwe=bo
	PRED=PRON1PL=ENCL$_2$	PRED=PRON1PL=ENCL$_2$
	a=bo=ba-a-mon-ile	a=bo=ta-ba-a-mon-ile
	SPEC$_2$=REL.O$_2$=SM$_2$-PST-see-ANT	SPEC$_2$=REL.O$_2$=NEG-SM$_2$-PST-see-ANT
	‘It’s us that they saw’	‘It’s us that they did not see’
2SG	*niwéebo úó↓báamweene*	*niwéebo úótabáamweene*
	ni=iwe=bo	ni=iwe=bo
	PRED=PRON2SG=ENCL$_2$	PRED=PRON2SG=ENCL$_2$
	u=o=ba-a-mon-ile	u=o=ta-ba-a-mon-ile
	SPEC$_1$=REL.O$_1$=SM$_2$-PST-see-ANT	SPEC$_1$=REL.O$_1$=NEG-SM$_2$-PST-see-ANT
	‘It’s you (sg.) that they saw’	‘It’s you (sg.) that they did not see’
2PL	*nimwéebo ábó↓báamweene*	*nimwéebo ábótabáamweene*
	ni=imwe=bo	ni=imwe=bo
	PRED=PRON2PL=ENCL$_2$	PRED=PRON2PL=ENCL$_2$
	a=bo=ba-a-mon-ile	a=bo=ta-ba-a-mon-ile
	SPEC$_2$=REL.O$_2$=SM$_2$-PST-see-ANT	SPEC$_2$=REL.O$_2$=NEG-SM$_2$-PST-see-ANT
	‘It’s you (pl.) that they saw’	‘It’s you (pl.) that they did not see’
cl. 1	*úmúkashi úó↓twáámweene*	*úmúkashi úótatwáámweene*
	u-mukashi	u-mukashi
	AUG-1.woman	AUG-1.woman
	u=o=tu-a-mon-ile	u=o=ta-tu-a-mon-ile
	SPEC$_1$=REL.O$_1$=SM$_{1PL}$-PST-see-ANT	SPEC$_1$=REL.O$_1$=NEG-SM$_{1PL}$-PST-see-ANT
	‘The woman we saw’	‘The woman we did not see’
cl. 2	*ábákashi ábó↓twáámweene*	*ábákashi ábótatwáámweene*
	a-bakashi	a-bakashi
	AUG-2.woman	AUG-2.woman
	a=bo=tu-a-mon-ile	a=bo=ta-tu-a-mon-ile
	SPEC$_2$=REL.O$_2$=SM$_{1PL}$-PST-see-ANT	SPEC$_2$=REL.O$_2$=NEG-SM$_{1PL}$-PST-see-ANT
	‘The women we saw’	‘The women we did not see’
cl. 3	*úmúcila úó↓twáámweene*	*úmúcila úótatwáámweene*
	u-mucila	u-mucila
	AUG-3.tail	AUG-3.tail
	u=o=tu-a-mon-ile	u=o=ta-tu-a-mon-ile
	SPEC$_3$=REL.O$_3$=SM$_{1PL}$-PST-see-ANT	SPEC$_3$=REL.O$_3$=NEG-SM$_{1PL}$-PST-see-ANT
	‘The tail we saw’	‘The tail we did not see’

cl. 4	*ímícila íshó↓twáámweene*	*ímícila íshótatwáámweene*
	i-micila	i-micila
	AUG-4.tail	AUG-4.tail
	i=sho=tu-a-mon-ile	i=sho=ta-tu-a-mon-ile
	$SPEC_{10}$=REL.O_{10}=SM_{1PL}-PST-see-ANT	$SPEC_{10}$=REL.O_{10}=NEG-SM_{1PL}-PST-see-ANT
	'The tails we saw'	'The tails we did not see'
cl. 5	*ílíni ílyó↓twáámweene*	*ílíni ílyótatwáámweene*
	i-lini	i-lini
	AUG-5.egg	AUG-5.egg
	i=lyo=tu-a-mon-ile	i=lyo=ta-tu-a-mon-ile
	$SPEC_5$=REL.O_5=SM_{1PL}-PST-see-ANT	$SPEC_5$=REL.O_5=NEG-SM_{1PL}-PST-see-ANT
	'The egg we saw'	'The egg we did not see'
cl. 6	*ámáni áyó↓twáámweene*	*ámáni áyótatwáámweene*
	a-mani	a-mani
	AUG-6.egg	AUG-6.egg
	a=yo=tu-a-mon-ile	a=yo=ta-tu-a-mon-ile
	$SPEC_6$=REL.O_6=SM_{1PL}-PST-see-ANT	$SPEC_6$=REL.O_6=NEG-SM_{1PL}-PST-see-ANT
	'The eggs we saw'	'The eggs we did not see'
cl. 7	*icísóté ícó↓twáámweene*	*icísóté ícótatwáámweene*
	i-cisote	i-cisote
	AUG-7.hat	AUG-7.hat
	i=co=tu-a-mon-ile	i=co=ta-tu-a-mon-ile
	$SPEC_7$=REL.O_7=SM_{1PL}-PST-see-ANT	$SPEC_7$=REL.O_7=NEG-SM_{1PL}-PST-see-ANT
	'The hat we saw'	'The hat we did not see'
cl. 8	*ifísóté ífyó↓twáámweene*	*ifísóté ífyótatwáámweene*
	i-fisote	i-fisote
	AUG-8.hat	AUG-8.hat
	i=fyo=tu-a-mon-ile	i=fyo=ta-tu-a-mon-ile
	$SPEC_8$=REL.O_8=SM_{1PL}-PST-see-ANT	$SPEC_8$=REL.O_8=NEG-SM_{1PL}-PST-see-ANT
	'The hats we saw'	'The hats we did not see'
cl. 9	*íńkóko íyó↓twáámweene*	*íńkóko íyótatwáámweene*
	i-Nkoko	i-Nkoko
	AUG-9.chicken	AUG-9.chicken
	i=yo=tu-a-mon-ile	i=yo=ta-tu-a-mon-ile
	$SPEC_9$=REL.O_9=SM_{1PL}-PST-see-ANT	$SPEC_9$=REL.O_9=NEG-SM_{1PL}-PST-see-ANT
	'The chicken we saw'	'The chicken we did not see'
cl. 10	*íńkóko íshó↓twáámweene*	*íńkóko íshótatwáámweene*
	i-Nkoko	i-Nkoko
	AUG-10.chicken	AUG-10.chicken
	i=sho=tu-a-mon-ile	i=sho=ta-tu-a-mon-ile
	$SPEC_{10}$=REL.O_{10}=SM_{1PL}-PST-see-ANT	$SPEC_{10}$=REL.O_{10}=NEG-SM_{1PL}-PST-see-ANT
	'The chickens we saw'	'The chicken we did not see'
cl. 11	*ulúkásá úló↓twáámweene*	*ulúkásá úlótatwáámweene*
	u-lukasa	u-lukasa
	AUG-11.hat	AUG-11.hat
	u=lwo=tu-a-mon-ile	u=lwo=ta-tu-a-mon-ile
	$SPEC_{11}$=REL.O_{11}=SM_{1PL}-PST-see-ANT	$SPEC_{11}$=REL.O_{11}=NEG-SM_{1PL}-PST-see-ANT
	'The foot we saw'	'The foot we did not see'

cl. 12 *ákákondo ákó$^{\downarrow}$twáámweene*	*ákákondo ákótatwáámweene*
a-kakondo	a-kakondo
AUG-12.toe	AUG-12.toe
a=ko=tu-a-mon-ile	a=ko=ta-tu-a-mon-ile
$SPEC_{12}$=REL.O_{12}=SM_{1PL}-PST-see-ANT	$SPEC_{12}$=REL.O_{12}=NEG-SM_{1PL}-PST-see-ANT
'The toe we saw'	'The toe we did not see'
cl. 13 *útúkondo útó$^{\downarrow}$twáámweene*	*útúkondo útótatwáámweene*
u-tukondo	u-tukondo
AUG-13.toe	AUG-13.toe
u=to=tu-a-mon-ile	u=to=ta-tu-a-mon-ile
$SPEC_{13}$=REL.O_{13}=SM_{1PL}-PST-see-ANT	$SPEC_{13}$=REL.O_{13}=NEG-SM_{1PL}-PST-see-ANT
'The toes we saw'	'The toes we did not see'
cl. 14 *ubóówá úbó$^{\downarrow}$twáámweene*	*ubóówá úbótatwáámweene*
u-boowa	u-boowa
AUG-14.mushroom	AUG-14.mushroom
u=bo=tu-a-mon-ile	u=bo=ta-tu-a-mon-ile
$SPEC_{14}$=REL.O_{14}=SM_{1PL}-PST-see-ANT	$SPEC_{14}$=REL.O_{14}=NEG-SM_{1PL}-PST-see-ANT
'The mushrooms we saw'	'The mushrooms we did not see'
cl. 15 *úkúbokó úkó$^{\downarrow}$twáámweene*	
u-kuboko	
AUG-15.arm	
u=ko=tu-a-mon-ile	
$SPEC_{15}$=REL.O_{15}=SM_{1PL}-PST-see-ANT	
'The arm we saw'	

9.3 Temporal and locative use of relative clauses

In many Eastern Bantu languages, temporal and locative subordinate clauses are frequently expressed through the structural template of the relative verb forms. CB also utilises a construction of the same type, which is headed by the class 16 distal demonstrative (DEM.D) *pályá*, as illustrated in (114) and (115).

(114) *pályá wáasángílecóóní pán'gánda páábáfyaashí baabo*
pa-lya u-a-sang-ile i-ci-oni pa-N-ganda pa-ba-fyaashi ba-abo
16-DEM.D SM_{2SG}-PST-find-ANT AUG-7-bird 16-9-house 16-2-parent PP_2-POSS.2
'Where you found the bird was their relative's place'

(115) *pályá twáakúmweené kumálikéeti, báali kúng'ánda kwa báfyaashí baandi*
pa-lya tu-a-ku-mon-ile ku-malikeeti
PP_{17}-DEM.D SM_{1PL}-PST-REF-see-ANT 17-market
ba-a-li ku-N-ganda ku-a ba-fyashi ba-andi
SM_2-COP 17-9-house PP_{17}-ASSC 2-parent PP_2-POSS.1SG
'When we met at the market, they were at my parents' place'

It is widely observed in Bantu languages that the locative classes, i.e., cl. 16–18, are semantically expanded to cover temporal concepts. For example, the Swahili relative verb *tu-li-po-on-a* {SM_{1PL}-PST-REL_{16}-see-FV}, which contains the cl. 16 relative marker *po-*, can not only be used as a locative subordinate clause meaning 'where we saw', but also as an extended temporal clause meaning 'when we saw'. The same process seems to apply to the usage of

pályá in both locative and temporal contexts, as in (114) and (115), respectively. As for the TA marking, these forms are inflected by the combination of TAM *a-* followed by ANT *-ile*, i.e., they follow the same inflection patterns for the past tense form of the subject and object relatives illustrated in Tables 10-1 and 10-2.

Interestingly, the locative demonstrative *pályá*, which seems to serve as a head of the relative construction in (114) and (115), drops when the verb is encliticised by *=po*, which is apparently identical to the locative class 16 object relative marker (REL.O_{16}).

(116) *waasángilepo icooní páń'gánda pabáfyaashí baabo*
u-a-sang-ile=po i-ci-oni pa-N-ganda pa-ba-fyaashi ba-abo
SM_{2SG}-PST-find-ANT=$ENCL_{16}$ AUG-7-bird 16-9-house 16-2-parent PP_2-POSS.2
'Where you found the bird was their relative's place'

This enclitic thus can be identified as a (locative as well as temporal) relative marker in this context. However, the enclitics of this type, i.e., those identical in shape to REL.O such as *=bo* in cl.2 and *=ko* in cl. 17, can also be used to express a variety of different functions.

(117) *naalíéshá úkulyaakó ico*
N-alii-esh-a u-ku-li-a=ko ico
SM_{1SG}-PST3-try-FV AUG-INF-eat-FV=$ENCL_{17}$ DEM.HP_7
'I tried to eat that (a little)'

In (117) the locative cl. 17 enclitic *=ko* seems to function like an adverbial particle meaning 'a little'. The same morpheme can also be used as part of an honorific form to express 'humbleness' as illustrated in (118a).

(118) a. *njeleeléniko*
N-eleel-eni=ko
OM_{1SG}-forgive-PLADD=$ENCL_{17}$
'please forgive me' [humblest]
b. *njeleeléni*
N-eleel-eni
OM_{1SG}-forgive-PLADD
'(please) forgive me' [humble to a singular addressee; neutral to plural addressees]
c. *njeleelá*
N-eleel-a
OM_{1SG}-forgive-FV
'forgive me' [neutral to a singular addressee]

In different contexts, it can also be used in a way of expressing pluractionality as illustrated in (119a).

(119) a. *ulyá úmúntú áálíipeláko ifí kúlí boonse*
ulya u-muntu a-alii-pel-a=ko ifi
DEM.D_1 AUG-1.person SM_1-PST.R-give=$ENCL_{17}$ DEM.CD_8
kuli ba-onse
by PP_2-all
'Did that person share these with everyone?'
b. *ulyá úmúntú áálíiakanya ifí ná bóonse*
ulya u-muntu a-alii-akany-a ifi na ba-onse

DEM.D$_1$ AUG-1.person SM$_1$-PST3-share-FV DEM.CD$_8$ with PP$_2$-all
'Did that person share these with everyone?'

The clitic, in this context, refers to a manner of distributing something one by one to many people, as evidenced by the fact that the sentence can be paraphrased by using the verb *-akanya* 'share', as in (119b). As illustrated in the above examples, these forms when used as a verbal enclitic cover a wide range of functionality (see also Marten & Kula 2014, 2021). An extensive investigation of their functions and morphosyntactic features would be an interesting topic of further research.

Abbreviations

1, 2, 3...	noun classes (when referred to as an agreement properties, they are subscripted, e.g. SM_1, OM_2 etc...)
1PL	first person singular
1SG	first person plural
2PL	second person singular
2SG	second person plural
AG	agent
ANT	anterior
APPL	applicative
ASSC	associative
AUG	augment
CAUS1	causative 1 (short causative)
CAUS2	causative 2 (long causative)
CD	counter-distal
CJ	conjoint
COMP	complementiser
COP	copula
CP	noun class prefix
D	distal
DEM	demonstrative
DJ	disjoint
ENCL	enclitic
FOC	focus
FUT1	future 1
FUT2	future 2
FUT3	future 3
FV	final vowel (default inflectional suffix)
HP	hearer-proximate
IPFV	imperfective
LOC	locative
NEG	negation
NEUT	neuter
NMLZ	nominaliser
O	object
OM	object marker
PASS	passive
PERS	persistive
PLADD	plural addressees
POSS	possessive
PP	pronominal prefix
PRED	predicator
PROG	progressive
PRON	pronoun
PRS	present
PST	past
PST1	past 1
PST2	past 2
PST3	past 3
PST4	past 4
RECIP	reciprocal
REL	relative
SM	subject marker
SP	speaker-proximate
SPEC	specifier (pseudo-augment)
STAT	stative
√	(extended) stem
-	affix boundary
=	clitic boundary

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