

**A COMPARATIVE STUDY OF BEMBA AND MAMBWE AT PHONOLOGICAL,
MORPHOLOGICAL AND LEXICAL LEVELS**

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PHILOSOPHY IN LINGUISTIC SCIENCE.**

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DECLARATION

I, CHIBWE RONALD LUMWANGA, do declare that this thesis is my own work and that it has not been submitted for a degree at this or any other university, and that it does not incorporate any published work or material from another thesis or dissertation without acknowledgement.

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DEDICATION

This Thesis is dedicated to the ALMIGHTY GOD who has made it possible for me to have come this far. I also dedicate this work to my late parents: my father Mr Duncan Lumwanga for having laid the foundation for me – I vividly remember his role as my teacher at home; my mother Mrs. Milika Musonda Lumwanga for having been such a loving and encouraging mother. Her last words a few days before she departed from this world were “Taata wandi filya fine ubombesha efyo ukakonkanyepo” meaning continue working hard, my son! I should not forget to dedicate this work also to my stepfather Mr Esaya Mulenga for his love and sacrifice; he took over from my father who had passed away.

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APPROVAL

This thesis of Chibwe Ronald Lumwanga is approved as fulfilment of the requirements for the award of the degree of Doctor of philosophy in Linguistic Science by The University of Zambia.

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Co-Supervisor _____ Signature _____ date_____.

ABSTRACT

A Comparative Study of Bemba and Mambwe at Phonological, Morphological and Lexical levels

The close proximity of the Bemba and the Mambwe speech communities was the prime motivation of this study. The study sought to compare Bemba and Mambwe at phonological, morphological and lexical levels.

The study used qualitative research design because its focus was on words rather than on numbers. The methods were exploratory and descriptive: seeking to find out the opinions, thoughts and feelings of the respondents. In this study, respondents were freely able to disclose their experiences, thoughts and feelings without constraint. Semi-structured interviews and focus-group discussions were the principal methods of collecting data. There was also some participant observation. Through focus-group discussions, the responses given earlier by the key informant were verified. All the informants are proficient in the languages under study. Collaboration of the participants has made this study a success.

Two theoretical frameworks informed this study: Lexical phonology theoretical framework which was developed by Kiparsky and others in 1980s. It is an approach to phonology that shows the interaction of morphology and phonology in the word building processes. Comparative Bantu morphology and phonology theoretical framework developed by Malcom Guthrie during the period 1967-1971 was also applied. This theory is viewed from the perspective of historical definition and typological characteristics, but the focus was on the latter to contextualise this study. The typological characteristics are viewed in terms of phonology, morphology and syntax. Bantu languages are known to share these typological characteristics.

Anchored on these theories, the study has brought to the fore the differences and similarities between Bemba and Mambwe in phonology, morphology and the lexicon. The findings show that there are more differences than similarities in each of the three levels of linguistic analysis. By implication of the study, something should be indicated with regard to mutual intelligibility between Bemba and Mambwe. Seeing that differences and similarities have emerged, there is some degree of mutual comprehensibility between the languages under study, but this is much lower on the mutual intelligibility continuum than the 63% arrived at in a study done earlier.

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LIST OF ABBREVIATIONS AND SYMBOLS

+ cons	:	plus consonant
-cons	:	minus cons
+cont	:	plus continuant
-cont	:	minus continuant
+distr	:	plus distributed
+lab	:	plus labial
+ voc	:	plus vocalic
-voc	:	minus vocalic
centr	:	central
+cor	:	plus coronal
-cor	:	minus coronal
+ant	:	plus anterior
+lat	:	plus lateral
+nas	:	plus nasal
-nas	:	minus nasal
+strid	:	plus strident
-strid	:	minus strident
+high	:	plus high
-high	:	minus high
+back	:	plus back
+voice	:	plus voice
-voice	:	minus voice
+round	:	plus round

-round	:	minus round
+tense	:	plus tense
-tense	:	minus tense
±Tense	:	plus/ minus tense
Sg	:	singular
Pl	:	plural
BEM	:	Bemba
MAM	:	Mambwe
AUG	:	Augment
DEF. M	:	Definite marker
DEM. M	:	Demonstrative marker
N	:	Noun
NPREF	:	Nominal Prefix
FUT	:	Future
FUT.TD	:	Future tense of today
FV	:	Final Vowel
TM (PRES. HAB)	:	Tense marker (present habitual)
NEG	:	Negative
NEG. M	:	Negative marker
NSTM	:	Nominal Stem
VSTM	:	Verb stem
VSTM (APP)	:	Verb stem (applicative)
V	:	Verb
STM	:	Stem

OM	:	Object Marker
PASS	:	Passive
PREF	:	Prefix
PRES	:	Present
TM (PRES. PROG)	:	Tense marker (Present progressive)
PROG ASP	:	Progressive aspect
ASP (PROG)	:	Aspect (progressive)
TM (PST)	:	Tense marker (past)
TM (RMT.FUT)	:	Tense marker (Remote future)
RP	:	Received Pronunciation
BBC	:	British Broadcasting Corporation
SM	:	Subject marker
TM	:	Tense marker
SUBJ	:	Subjunctive
SUBJ.M (Disc.)	:	Subjunctive Marker Discontinuous)
SUBJ. M	:	Subjunctive marker
SUBJ.TM	:	Subjunctive Tense Marker
NEG. SBJ. M	:	Negative subjunctive marker
NEG. DEF.M	:	Negative definite marker
DEM M	:	Demonstrative markr
DEF M	:	Definite marker
PAST _{td}	:	Past tense of today
PAST _{tm}	:	Past tense marker
PROG/ FUT _{td}	:	Progressive future of today

T/A/MM	:	Tense/Aspect/ Mood Marker
HT	:	High Tone
LT	:	Low Tone
VR	:	Verb radical
S	:	Suffix
PB	:	Proto-Bantu

CHAPTER ONE

INTRODUCTION

1.0 Introduction

The close proximity of the Bemba and the Mambwe speaking communities in the Northern Province of Zambia was the prime motivation of this study. In the light of this, the study sought to compare Bemba and Mambwe phonologically, morphologically and lexically.

1.1 General sociolinguistic survey of Zambia

This study is framed in the broader sociolinguistic landscape of Zambia, which lies in the centre of the Bantu speaking area. Marten and Kula (2008) point out that the present-day Zambian Bantu languages resulted from several linguistic developments that ushered in the languages spoken today via the gradual process of migration, language contact and language shift over the last two millennia. Several European languages were introduced in Zambia through missionary activities, education and the colonial governance by the British. Because of British colonisation of Zambia, English continues to function as the National Official Language (NOL) of Zambia. Zambia is a multilingual state: languages are vitally important in relation to national, political, ethnic identities, communication, education and popular culture, (Marten and Kula, 2008).

In Zambia, the Bantu languages account for 72 dialects, but these are reduced to twenty-six (26) linguistic clusters, which are classified based on mutual intelligibility, (Kashoki & Ohonnessian, 1978; Wakumelo, 2013; Jimaima, 2016).

Marten and Kula (2008) indicate that the main languages of Zambia are Tonga, Lozi, Nyanja and Bemba. However, there are seven Regional Official Languages (Kaonde, Lozi, Tonga, Lunda, Luvale, Nyanja and Bemba) which are languages of the majority in the ten provinces of Zambia. It is also clear that other than these languages, there are many other languages, which are considered as languages of the minority. Marten and Kula note that this is not always the case as can be seen with Tumbuka which is used by more speakers than some official languages such as Lunda, Luvale and Kaonde though the latter languages have become Regional Official Languages

The most important observation made by Marten & Kula (2008) is that Zambia is a linguistically complex and dynamic country, with a range of different languages playing different roles in different contexts. Each language plays an important role in the construction and negotiation of social and national identities.



1.2 The Zoning of Bantu Languages

Guthrie (1948) conventionally divided the Bantu languages into geographical zones. These languages are assigned letters from A to S, for example groups A10 and A20. Individual languages were assigned unit numbers such as A11, A12 while dialects were further subdivided, for instance A11a and A11b. Bemba and Mambwe are M42 and M14, respectively. The geographical zoning of languages is important for showing how languages are related according to regions.

1.3.0 Geographical location and distribution of the Bemba and the Mambwe speaking people

1.3.1 Geographical location and distribution of the Bemba speaking people

The phrase “the Bemba” carries several meanings. It may designate people of Bemba origin, irrespective of where they live: whether in urban areas or the original rural Bemba area. They may encompass a much larger population, which includes other ‘eighteen different ethnic groups who with the Bemba constitute closely related ethno-linguistic clusters known as the Bemba speaking people of Zambia. There are over thirty Bemba clans named after animals or natural organisms such as the royal clan “the people of the crocodile” (Bena Ng’andu) or the Bena Bowa (Mushroom clan)..

According to the Census of Population and Housing (2022), Bemba is the most widely used language of communication spoken by 35 percent of the population in the country, followed by Nyanja and Tonga at 20 percent and 12 percent, respectively.

Spitulnik and Kashoki (2001) point out that the Bemba speech community stretches from the plateau between the escarpment of the Luangwa River to the east and the Luapula River to the west. In Zambia, Chibemba is principally spoken in the Northern, Copperbelt, Luapula and Muchinga Provinces. It is also spoken in the southern Democratic Republic of Congo (DRC) and southern Tanzania.

1.3.2 Geographical location and distribution of the Mambwe speaking people

The Mambwe and Lungu belong to the same language group known as the Mambwe-Lungu. According to the 2010 Census, there are 500 000 Mambwe speaking people in Zambia.

The Mambwe speaking people are found mainly in Mbala District of Zambia. Mambwe is spoken in the north east of Northern Province (mainly Mbala) and south of Lake Tanganyika. It is also spoken in Tanzania, Rukwa Region, Sumbawanga District, the south eastern shore to the south of Lake Tanganyika, (Mambwe at Ethnologue).

The Map showing the research site (Mbala)



Source: www.wikipedia.org

1.4.0 Socio-cultural history of the Bemba and the Mambwe

1.4.1 Socio-cultural history of the Bemba

The history of the Bemba comprises bits and pieces from oral traditions, (Mushindo, 1977; Tanguy, 1948). This fact is similar to the historical writings on other central African Kingdoms, (Africa and Elders & Labreeque, 1949; Gondola, 2002; Reid 2012) and Bemba Focused historiographical endeavours of the past century, (Roberts, 1970, 1973).

Mvemba a-Nzinga (Alfonso Mubemba) rebelled against the Portuguese imperialistic advances that were destroying the Kongo Kingdom. The rebels broke away and became an integral part of the Luba Kingdom in present-day DR Congo, (Tanguy, 1948). A 17th century anti-imperialism

rebellion in the Luba Kingdom led to another eastward movement of a breakaway group that would later be known as AbaBemba. From the Luba Kingdom, the Rebels were led by two of Luba King Mukulumpe's sons, namely: Nkole and Chiti, (Mushindo, 1977; Tanguy, 1948). The mother of Nkole and Chiti was Mumbi Lyulu Mukasa of the Bena-Ng'andu clan. Since then, bena Ng'andu is the monarchical clan of AbaBemba. A crocodile (Injwena) is the totemic object of the clan. At the palace of Chitimukulu in the highly protected royal archives are found four Christian statues obtained six hundred (600) years ago from early Catholic missionaries in the Kongo Kingdom. Mvemba a-Nzinga (also known as Alfonso Mubemba) is believed to have been the ancestor of AbaBemba. The onomastic proximity of –Vemba and Bemba (in AbaBemba) and the Christian statues in the royal archives (babenye) historically link AbaBemba to the Kongo Kingdom.

1.4.2 Socio-cultural history of the Mambwe

British rule incorporated the Mambwe into an economic and a political system, and changed their traditional mode of life. However, the Mambwe were not entirely isolated before the British came; the natural highway between East and Central Africa passed through their territory and this exposed them to external influence, (Mambwe at Ethnologue). They had defended themselves against the Luunda and the Bemba. They fought against the Ngoni and traded with the Arabs. The Mambwe adopted both goods and customs from the strangers who came their way and from the moment the British arrived, they were willing to sell their labour in return for European goods and money. In the past, not all travellers who used these routes brought benefits to the Mambwe. Today, they tend to regard strangers with suspicion, an attitude justified by their experience.

The White Fathers began work in the Mambwe area where they won grudging support. In 1887, the London Missionary Society opened a missionary station among the Mambwe, who have occupied their territory for at least 200 years, (Mambwe at Ethnologue).

1.5.0 Studies done on Bemba phonology and morphology

These include the following:

1.5.1. Basic Phonology

1.5.1.1. Vowels

Table 1: Vowel segments

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

(Sourced from Spitulnik & Kashoki, 1996, 1998)

There is a semantic distinction between short and long vowels. In conventional orthography, the doubling of vowels represents vowel length:

ukú-páma ‘to be brave’, *ukú-pááma*, ‘to hide’

ukú-shíká ‘to be deep’, *ukú-shííká*, ‘to bury’

ukú-sélá ‘to move’, *ukúséélá*, ‘to dangle’

Long vowels may also result from the fusion of two vowels across morpheme boundaries. For instance, *umwéeni* ‘stranger, guest’ is derived from *umu*-+*eni* (class 1 singular prefix + stem) and its plural *abéeni* ‘strangers, guests’ from *aba*-+*eni* (class 2 plural prefix + stem). Below are illustrations of outcomes of the vowel fusion:

followed by	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

1.5.1.2. Consonants

Table 2: Consonantal segments

Stop Voiceless Voiced	Bilabial p (b)	Labiodental	Alveolar t (d)	Alveolar palatal(postalveolar)	Palatal	Velar k (g)
Fricative voiceless voiced	 β	 f	 s	 (ʃ)		
Affricate Voiceless Voiced				 tʃ dʒ		
Nasals	m		n		ɲ	ŋ
Laterals			l			
Approximants (Semivowels)	w				j	

(Adapted from Spitulnik & Kashoki, 1996, 1998)

The Sounds [b], [d] and [ʃ] represented above in parentheses are allophones of the phonemes /β/, /l/ and/s/, respectively. The consonant [b] occurs only when preceded by the homorganic nasal [m] as in *mbwééle* ‘should I return’ (derived from N-1st pers sg) -bwel- verb root), -e (subjunctive) where N-becomes m in homorganic harmony with the following b). The consonant (d) occurs only when preceded by the homorganic nasal [n] as in *ndééya* ‘I shall go’ derived from N-1st pers sg), -lee- (tense/aspect), -ya (verb root). The alveo-palatal (i.e., palato-alveolar fricative) [ʃ] occurs before [i]. In addition, the consonants [dʒ] and [g] never occur word initially or between vowels; they are always preceded by a homorganic nasal represented orthographically as nj and ng (e.g., *njebá* ‘tell me’ and *ngupá* ‘marry me’).

On orthography, the standardisation regarding the velar nasal was arrived at by selecting the three variants: ŋ, ñ and ng’ among the seven languages. In this case, Bemba chose ŋ for words such as *inanda* ‘house’, *inoma*, ‘drum’. The researcher will, therefore, make use of the symbol despite the fact that the Bemba text books written before the approved orthography used the symbol ng’.

1.5.1.3 Tone

Bemba is a tone language with two basic tones, (H) and (L). H is marked with an acute accent while L is left unmarked, (Spitulnik & Kashoki, 1996, 1998). As in most Bantu languages, tone (= a kind of musical note on an individual syllable) in Bemba can be phonemic and is an important functional marker in Bemba, signalling semantic distinction between words such as

ímbá ‘sing’, *imbá* ‘dig!’

ulúpwá, ‘family’, *úlupwá* ‘eggplant’

Tonal contrasts also exist at the grammatical level, for example in signalling different tenses:

bááfíkile ‘they arrived (yesterday)’

bááfikilé ‘they arrived (a long time ago)’

Spitulnik and Kashoki (2001) acknowledge that in actual speech tonal patterns are more complex than the examples suggest because they (the tonal patterns) interact with other morph-syntactic, morph-phonological and prosodic processes. The following expressions can attest to the foregoing statement:

tuléélyá bulééti ‘we are eating bread’

tuléelyá nshí? ‘What shall we eat?’

It is noticed that in the first sentence the tense aspect marker -lee- carries a high tone and in the second sentence, it has a falling tone (H followed by L). In addition, a high tone can become a low tone at the end of a declarative sentence, (Spitulnik & Kashoki, 2001).

1.5.1.4 Syllable Structure

Syllables in Bemba, as it is in many other Bantu languages, are characteristically open and are of four main types, namely: V, CV, NCV and NCGV (where V = Vowel (long or short), C = Consonant, N = nasal, G = glide (w or j)). These types are illustrated by *isa* (i-sa) ‘come!’ *soma* (so-ma) ‘read!’ *yamba* (ya-mba) ‘begin’ and *impwa* (i-mpwa) ‘egg plants’, (Spitulnik & Kashoki, 1996, 1998)

1.5.2 Basic Morphology

Bemba, like other Bantu languages, has a very elaborate noun class system, which involves pluralisation patterns, agreement marking and patterns of pronominal reference. There are 20 different classes in Bemba: 15 basic classes, 2 sub classes and 3 locative classes, (Spitulnik & Kashoki, 2001). Each noun class is indicated by a class prefix (typically VCV-, VC-, or V as in the word *i-sako* ‘a feather’) and the co-occurring agreement markers on adjectives, numerals and verbs:

Table 3: Noun class system and the co-occurring agreement markers on adjectives, numerals and verbs.

<i>umú-ntú</i>	<i>ú-mó</i>	<i>umú-sumá</i>	<i>á-áfiká</i>	one good person has just arrived
person	one	good	he/she has just arrived	

<i>abantu</i>	<i>bá-tátú</i>	<i>abá-sumá</i>	<i>bá-áfiká</i>	three good people have just arrived
people	three	good	they have just arrived	

According to Spitulnik & Kashoki (1996, 1998) a noun in Bemba consists of a class prefix and a stem: *umú-ntú* ‘person’ (class1), *abá-ntú* ‘people’ (class2). Noun classes have some semantic content, and there are regular patterns of singular/plural pairing and non-count classes. Class 1/2 nouns denote human beings; class 3/4 nouns tend to be inanimate, agentive, or plant-like (*úmu-tí*, ‘tree’, *ími-tí* ‘trees’) and class 9/10 nouns represent wild animals [*ín-kalamo* ‘lion’ (class 9 -(sg), *ín-kalamo* ‘lions’ (class 10 (pl.))]. Things that occur in pairs or multiples are denoted by class 5/6 nouns (*í-lúbá*, ‘flower’, *amá-lúbá*, ‘flowers’); nouns for long objects are in class 11/10 (*úlu-séngó*, ‘horn’, *ín-séngó* ‘horns’); and diminutives are in class 12/13 (*aká-ntú* ‘small thing’, *utú-ntú* ‘small things’). Class 7/8 is the general class for inanimate nouns (*icí-ntú* ‘thing’, *ifí-ntú* ‘things’) and also augmentatives; abstract nouns occur in class 14 (*ubú-ntú* ‘humanity’) and verbal infinitives occur in class 15 (*úku-lyá*, ‘eating, to eat’). Some class prefixes have derivational semantic functions; they either replace the basic class prefix or occur as a secondary prefix on the noun

form; an example is -ka- in *a-ka- mu-ntu* ‘a small person’. The locative prefixes function in a similar manner, for instance the locative ku- in *ku-mu-shi* ‘to the village’, (Spitulnik & Kashoki, 1996, 1998). Other examples are shown below:

úmu-tí ‘tree’ (class 3)

áka-tí ‘a bit of medicine’, ‘little tree’ (class 12)

ící-mu-tí, ‘a stick, ‘pole’, ‘big tree’ (class 7)

pá-ci-mu-tí, ‘on the pole’, ‘on the big tree’ (class 16)

íηandá ‘house’ (class 9)

kú-ηandá ‘to/from the house’ (class 17)

mú-ηandá ‘in the house’ (class 18)

The Bemba verb has the following basic structure:

- subject marker
- object marker
- tense/aspect/mood marker
- verb root/ radical
- extension
- final vowel
- suffix

In a linear manner, these can be presented thus: SM+OM+T/A/MM+VR+EXT+FV+S. The only obligatory morphemes are the subject marker (except in imperatives), the root and the final vowel, (Chanda, 2007).

The final vowel (indicated as FV) marks tense and/ or mood and sometimes co-varies with the preceding tense marker. Some past tense forms are represented by -ile or a modified root instead

of a single FV. Bemba distinguishes many different tenses on the verb form including Today Past, Recent Past, Remote Past, Present, Today Future, Later Future, (Spitulnik & Kashoki, 2001). Below are some illustrations:

n-aci-ci-sáng-a1sg-PAST_{td} it (7) 'I found it (today) (it = class 7 e.g. ícípé 'basket').

n-lée-ci-sáng-a1sg-PROG/FUT_{td} 'I am finding/looking for it, 'I will find it (today)' -it (7) find-FV.

n-aalii-cí-sáng-ile1sg-PAST_{tm} -it (7)-find-PAST_{tm} 'I found it (a long time ago)'

1.5.3 Contact with other Languages

In the early 1800s, Portuguese and Arabs were active in the Bemba speaking regions. Consequently, the present-day Bemba has a stock of words that have been borrowed from them through Swahili, (Spitulnik & Kashoki, 1996, 1998). For example, there are Swahili loan words that have come into Bemba in relation to military and commercial fields. In addition to that, some loan words found their way into Bemba through missionary agents while others are associated with colonial administration, (Kashoki, 1978).

The migration of people from rural to urban areas and vice-versa has had diffusional effect on Bemba: there are loan words from European languages, which the migrants from rural areas carried to urban areas and those that the migrants from urban centres carried to rural areas, (Kashoki, 1975).

It has also been noted in Kashoki (1975) that there are loan words related to mining which came into Bemba through Kabanga. Besides, there has been a study on word borrowing by Bemba in comparison with Luunda, both the dialects of Bemba, spoken in Northern and Luapula Provinces, respectively, (Musonda & Kashoki, 1982).

1.6. Studies done on Mambwe

Not much research has been done on Mambwe. Among the works that have been done are the following:

1. Kashoki's (1978) Study on Mambwe lexicon: the study is reflected in the text titled 'A General Sketch of the Bantu Languages of Zambia' (1978). In this study, a selection of two hundred (200) vocabulary items was based on Sarah Gudschinsky word list of 200 items. The primary aim of the study was to establish the degree of similarities of Zambian languages. In this study, twenty-five (25) languages were chosen, and Mambwe and Bemba were among them. On the other hand, this study intends to compare the phonology, morphology and the lexicon of Bemba and Mambwe.

Below are some examples of vocabulary correspondence between Bemba and Mambwe. Kashoki (1978:82-93) used the stems of the vocabulary.

Table 4: Vocabulary correspondence between Bemba and Mambwe.

Bemba	Mambwe	Meaning
- <i>onse</i>	- <i>onsi</i>	all
- <i>nama</i>	- <i>nyama</i>	animal
- <i>ηwena</i>	- <i>gwena</i>	crocodile
- <i>kulu</i>	- <i>kulu</i>	big
- <i>uni</i>	- <i>unyi</i>	bird
- <i>koko</i>	- <i>koko</i>	chicken
- <i>fupa</i>	- <i>fupa</i>	bone
- <i>ana</i>	- <i>ana</i>	child
- <i>kumbi</i>	- <i>kumbi</i>	cloud
- <i>bili</i>	- <i>vili</i>	two
- <i>tatu</i>	- <i>tatu</i>	three
- <i>lila</i>	- <i>lila</i>	cry
- <i>lya</i>	- <i>lya</i>	eat
- <i>cuula</i>	- <i>cula</i>	frog
- <i>pa/peela</i>	- <i>peela</i>	give
- <i>twi</i>	- <i>twi</i>	ear

2. Halembe (1994): this is a bilingual dictionary (Mambwe-English dictionary); 3. Werner & Tucker (2009): this is a list of Mambwe proverbs published in the bulletin of the School of Oriental Studies at the University of London, volume 10. No.2 (1940), pp455-467; 4. Times of Zambia (2013) Mutomolo Cultural Ceremony: this is an annual event observed by the Mambwe-Lungu people to celebrate and give thanks to God for their harvest; 5. Mambwe names (Wikipedia): this is the document showing how the Mambwe distinguish the last names for males and females by applying prefixes 'Si' and 'Na' to be the first letters of the last name, for example **Simpokolwe** (male) and **Nampokolwe** (female); 6. Siame (2019): Towards writing a comprehensive grammar of the Mambwe Language.

1.7 Statement of the Problem

As has been indicated in the introduction, the close proximity of Bemba and Mambwe speaking communities within one geographical space is the prime motivation of this study, which is to compare Bemba and Mambwe at phonological, morphological and lexical levels.

Many studies have been conducted on Bemba, but very few on Mambwe. The studies on Bemba include Kashoki's (1967) inventory of phonemic contrast in Ibibemba, Kashoki's (1975) work on lexical adoption in Bemba, Kashoki's (1977) study on Town Bemba, Kashoki's (1978) work on vocabulary correspondence among the selected Zambian Languages which include Bemba and Mambwe, Kamfuli's (2009) study on a grammar of verbal extensions in Bemba, Kandeke's (1990) work on Ibibemba synonyms, Lumwanga's (2015) work on Some Linguistic Variations of Bemba: A dialectological Study of Standard Bemba, Luunda and Ijumbo, Musonda and Kashoki's (1982) comparative study of word borrowing between Bemba and Luunda spoken in Northern Province and Luapula Province, respectively, Spitulnik and Kashoki's (2001) brief profile of Bemba, reflecting its location, origin and history, orthography, basic phonology, basic morphology and contact with other languages.

Among the few works that have been done on Mambwe are Kashoki's (1978) study on Mambwe lexicon, Halembe's (1994) Mambwe Dictionary, Werner and Tucker's (2009) Mambwe Proverbs and Siame's (2019) Towards writing a Comprehensive grammar of the Mambwe language.

With regard to these and other studies conducted on Bemba and Mambwe, it should be indicated that there has not been a comparative study of Bemba and Mambwe at phonological, morphological and lexical levels. This study's objectives, therefore, are to compare Bemba and Mambwe at these three levels of linguistics. Given this scenario, the statement of the problem in question form is: 'How do Bemba and Mambwe compare at phonological, morphological and lexical levels?'

1.8 The Purpose of the Study

To compare Bemba and Mambwe, which are spoken in the same geographical space of the Northern Province of Zambia.

Kashoki (1978:48) points out that "To establish whether two speech forms are similar or dissimilar, the linguist normally compares their vocabulary and their grammar and also tries to establish the degree of their mutual comprehension".

1.9.0 Specific Objectives and Research Questions

1.9.1 Specific Objectives of the Study

1. To compare the phonology of Bemba with the phonology of Mambwe
2. To compare the morphology of Bemba with the morphology of Mambwe.
3. To compare the lexicon of Bemba with the lexicon of Mambwe.

1.9.2 Research Questions

- 1) How does the phonology of Bemba compare with the phonology of Mambwe?
- 2) How does the morphology of Bemba compare with the morphology of Mambwe?
- 3) How does the lexicon of Bemba compare with the lexicon of Mambwe?

1.10 Significance of the Study

This study will generate new knowledge, which will be part of the literature in this area. The successful outcome of the study will be of value to scholars, researchers, university and college

lecturers and students in the field of Linguistic Science. Furthermore, curriculum developers and Ministry of Education policy makers may find the material in this study beneficial.

1.11.0 Theoretical Frameworks

This research entitled “A comparative Study of Bemba and Mambwe at Phonological, Morphological and Lexical levels” is informed by two theories, which are Lexical phonology theoretical /analytical framework that was developed by P. Kiparsky, K.P. Mohanan and others and the Comparative Bantu morphology and phonology theoretical /analytical framework, which was developed by Guthrie, M.

1.11.1. Lexical phonology theoretical /analytical framework.

Udema (2004) explains that in the theory of Lexical Phonology, the lexicon is given a key role that represents a significant departure from classical models. The theory explains how the output is derived and examines the arrangement of affixes. Lexical phonology is a major contemporary theory of phonology developed in early 1980s. This is a theory in which morphological and phonological rules are brought together within a single framework. It is an approach to phonology that accounts for interaction of morphology and phonology in the word building process and the approach is based on the insight that much of the phonology operates together with the word formation rules in a cyclic fashion to define the class of lexical items in a language. Word formation rules relate to the formation of words. These rules combine morphemes to form new words and are also called morphological rules, (Udema, 2004). Udema explains that the lexicon plays a central productive role in the theory of Lexical phonology and consists of ordered levels, which are the domain for certain phonological processes. In addition, the lexicon is a term whose scope varies enormously from one theory to another. It is that aspect of language or a linguist's account of a language that is centred on individual words or units. The term lexicon simply means ‘dictionary’, but in linguistic sense, the lexicon also represents information about pronunciation, meaning, morphological and syntactic properties so that it could be called a mental lexicon’. In Lexical Phonology, the lexicon is seen as being more than just an appendix to grammar, containing unpredictable, idiosyncratic, phonological, semantic and lexical information about morphemes and lexical items. The inner structure of the lexicon is assumed hierarchical, (Udema, 2004).

This theory is relevant to this study because it has the three levels of linguistics at which the two languages are compared. Each specific research objective reflects one of the three levels of linguistics (phonology, morphology or the lexicon). In fact, the interaction of phonology, morphology and the lexicon agrees very well with the analysis and interpretation of the data on these levels.

1. 11.2 Comparative Bantu morphology and phonology theoretical /analytical framework

Guthrie developed this theory during the period 1967- 1971.

About the key word in this theory ‘Bantu’, Nurse and Philippson (2014) explain that the Bantu speaking communities are those who live in Africa south of the line from Nigeria across the Central African Republic (CAR), Uganda and Kenya, to Southern Somalia in the east. Most language communities between that line and the Cape are Bantu. According to Nurse and Philippson, the communities speaking Bantu languages are indigenous to twenty-seven African countries.

The Comparative Bantu morphology and phonology theory reflected in Nurse and Philippson’s (2014) introductory pages 5, 6, 7 and 8 is viewed from the perspective of historical definition and typological characteristics. More is discussed in relation to this theory in Chapter Three.

This theoretical framework is appropriate to this study, which is concerned with comparing the phonology, morphology and lexicon of the languages under investigation. By comparing the data, the researcher sought to achieve the specific research objectives of this study.

1.12 Delimitation of the Study

This study was focused on a selected area of Mbala District of Northern Province where the participants who are proficient in Bemba and Mambwe are found. Because of its qualitative nature, the study required only a small number of participants who were engaged in the interviews and focus group discussions. However, the data collected from this small number were adequate for the specific research objectives.

1.13 Limitations of the study

There are very few textbooks written on Mambwe language.

One of the areas under data collection is participant observation, which requires more time. One month and three weeks allocated to the fieldwork was not enough for participant observation.

1.14 Operational Definitions

- **Comparative:** This is the term used in linguistics for similarities and differences between units.
- **Assimilation:** This is the process by which the phonetic features of one sound segment are transferred to the neighbouring sound
- **Progressive assimilation:** This is when a sound becomes more like a preceding sound
- **Regressive (=anticipatory) assimilation:** this is when sounds assimilate to the following sound.
- **Palatalisation:** This is the process in which consonants may be modified by extending the body of the tongue into the front position; this produces a y-like modification.
- **Fricativisation/spirantisation:** It is the process in which sounds are made when two organs come so close together that the air moving between them produces audible friction.
- **Compensatory lengthening:** This is the process by which a vowel is lengthened, as another vowel is lost.
- **Bemba:** The language spoken principally in Northern, Luapula, Copperbelt and Muchinga Provinces.
- **Mambwe:** This is the language spoken by Mambwe speech community, principally in Mbala.

1.15 Literature Review highlights

This is a review of some of the available works that have direct relevance to this investigation titled ‘A Comparative Study of Bemba and Mambwe at Phonological, Morphological and Lexical

levels. This literature review aimed at positioning the present study within the context of similar research in order to provide justification for it. The review revolved around three themes:

- (i) Some Studies on Dialectal Variations/Linguistic Differences and Similarities in Zambia.
- (ii) Some Studies on Dialectal Variations/Linguistic Differences and Similarities in other Parts of Africa:
- (iii) Some Studies on Dialectal Variatons /Linguistic Differences and Similarities in other Parts of the World

1.16 The Structure of the Thesis

The organisation of the thesis is as follows: just after the front matter, the first chapter presents an overview of the study, consisting of the background to the study. The second chapter reviews some works, which help to contextualise this study. Chapter Three is the presentation of the theoretical / analytical frameworks that inform this study, Chapter Four presents the methodology used in this study while Chapters Five, Six and Seven are presentations of analysis and interpretation of phonological, morphological and lexical data that compare Bemba and Mambwe. Chapter Eight presents the conclusion of the thesis.

1.17 Chapter summary

Chapter One has presented background information to the study such as the motivation of the study, the general sociolinguistic landscape of Zambia thereby situating this study. The other components that have been covered in this chapter are statement of the problem, purpose of the study, specific research objectives and questions, significance of the study, the theoretical frameworks informing this study, delimitation of the study, limitations of the study, operational definitions, highlights of the literature review and the structure of the thesis.

The next chapter reviews some of the literature, which is relevant to this study.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

The previous chapter presented a general survey of the sociolinguistic landscape of Zambia in order to contextualise this study. This chapter presents a review of some of the available works that have direct relevance to the current investigation. This literature review aims at positioning the present study within the context of similar research in order to provide justification for it. The review comprises three themes which are: ‘Some Studies on Dialectal Variations / Linguistic Differences and Similarities in Zambia’, ‘Some Studies on Dialectal Variations /Linguistic Differences and Similarities in other Parts of Africa’ and ‘Some Studies on Dialectal Variations / Linguistic Differences and Similarities in other Parts of the World’. It should also be indicated that most comparative works have been done on dialectology, but comparatively few between or among languages: this is a big gap. Whether it is the comparison between dialects or languages, the common denominator is linguistic material, which is involved in these studies. This is why works on dialectology are relevant to this study.

2.1 Some Studies on Dialectal Variations/ Linguistic Differences and Similarities in Zambia

Mambwe’s (2008) study was an investigation on some linguistic variations among Kaonde dialects spoken in North Western and Central Provinces of Zambia. The dialects under that study were Standard Kaonde, Mumbwa Kaonde and Lubango Kaonde, coded letters A, B and C, respectively. He points out that the Mumbwa Kaonde variety exhibits more variations than the other two dialects, and indicates that the reason for that linguistic divergence is that Mumbwa Kaonde (the B variety) is geographically farther from the other two dialects in North Western Province. He adds that the other reason for Mumbwa Kaonde, in Central Province, standing out in terms of variations is its interaction with other languages. Unlike Mambwe’s (2008) study, which investigated variations among Kaonde dialects, this study investigated linguistic comparisons between two languages, namely: Bemba and Mambwe, which are Regional Official Language and non-Regional Official Language, respectively. Nevertheless, looking at Mambwe’s (2008) study, we see that Kaonde is one of the three languages allocated for wider and official communication

in North Western Province. As has already been indicated, Kaonde is also spoken in Mumbwa in Central Province. This runs contrary to the concept of regionalisation of Zambian languages. Jimaima (2016:7) points out “regionalisation or zoning of the seven languages in Zambia was based on the assumption that the seven languages were static and bounded in particular homogenous communities and regions”. The idea of Kaonde being spoken in another province, that is Central province and in Mumbwa, to be specific, is proof that languages are fluid and mobile through their speakers’ mobility.

The relevance of Mambwe’s study to the current study is that both are comparative studies in the field of linguistics though the former is on dialectology and the latter is between languages.

Lynn (2008) studied the sounds in Silozi and Sesotho and established that Silozi still maintains the Sotho sound patterns. Her study indicates that Silozi is a version of Sesotho and explains that because of the geographical distance and the influence of the Luyana language and other Zambian languages, it differs slightly from the original Sesotho. This situation reflects the concept of linguistic divergence between the two languages. The current study compares two languages Bemba and Mambwe spoken in the same geographical area. Lynn has examined both segmental phonology and suprasegmental phonology to compare Silozi with Sesotho. The current study has also examined the two aspects of phonology to address objective one of the study.

Lumwanga (2015) investigated some linguistic variations among three of Bemba dialects, which are Standard Bemba, Luunda and ɪjumbo. The focus of that study was to establish phonological, morphological, syntactic and lexical variations among the dialects. Since Luunda and ɪjumbo are geographically close to each other, there is linguistic convergence between them. With regard to Bemba, there is some degree of linguistic divergence between it and the other two dialects. The reason is that there is more geographical distance between it, on the one hand, and Luunda and ɪjumbo, on the other, than there is between Luunda and ɪjumbo. Unlike Lumwanga’s (2015) study, this study investigated two languages: Bemba and Mambwe. As indicated earlier, Bemba is a Regional Official Language whereas Mambwe is a non-Regional Official Language; the two are not dialects of the same language; the sister dialect of Mambwe is Lungu, both belonging to Mambwe-Lungu Group. Bemba and Mambwe happen to be in close proximity in the Northern Province of Zambia. The objectives of this study were to compare them: (1) phonologically (2)

morphologically and (3) lexically. In line with the foregoing, Kashoki (1978) points out that when linguists talk of the ways in which languages or dialects are similar or dissimilar, they are generally referring to the proportion of the vocabulary the dialects or languages have in common or the structural relationships that they share such as phonemes, morphemes or sentence arrangement. He continues to indicate that in order to establish the similarities or dissimilarities between two speech forms, the linguist normally compares their vocabulary and their grammar and tries to establish the degree of mutual intelligibility. The current study is also comparative.

Sibajene's (2013) was a dialectological study of Tonga language spoken in Zambia. These dialects are Valley Tonga and Plateau Tonga spoken in Southern Province and some parts of Central Province. Here, once again, we observe language mobility and fluidity defying the idea of regionalisation of the indigenous Zambian languages. In support of the foregoing statement, Pennycook and Otsuji (2015:47) state that "a sociolinguistics which is being witnessed in post-modern societies is one which regards languages and semiotic resources as being more fluid, more mobile, much harder to pin down." Despite Tonga spoken in Central Province, Sibajene's study was conducted in Southern Province; the study revealed some linguistic variations between the dialects 'Valley Tonga' and 'Plateau Tonga'. Unlike Sibajene's study, this study compares two languages at three linguistic levels.

Nkolola's (1997) study was principally on analysis of the applied, causative and passive extensions, but she also touched on some variations between Plateau Tonga and Valley Tonga in connection with the high front vowel /i/ converting to the voiced palatal approximant /j/. She points out that the second way of accounting for [ɸ] and [h], respectively, is:

- (a) Z —————> [ɸ] y
- (b) S —————> [h] y

She states that in Plateau Tonga, the sequences /zj/ and /sj/ are not attested and that wherever [zj] and [sj] occur in Valley Tonga, we have [ɸ] and [h], respectively.

Nkolola observes that both derived and non-derived [z] and [s] in the sequence [zj] and [sj] in Valley Tonga correspond to [h] in Plateau Tonga:

Valley Tonga

Plateau Tonga

[ʏufuzya]

[ʏufuhja] to cause to happen

[ʏupezya]

[ʏupehja] to cause to suffer

While there is appreciation of Nkolola's study, it should be pointed out that the current study focused on the similarities and differences between the two languages, Bemba and Mambwe.

Chitebeta's (2007) study was a contrastive investigation of the noun phrase in Tonga and Lenje. These languages belong to a group of languages called Bantu Botatwe, meaning 'three people'. Her study specifically focused on syntax and the morpho-syntax of the noun phrase. The syntactic analysis was conducted using the government binding (GB) theory. During her study, a number of phrase-structure (PS) rules were identified; these describe the major types of nouns phrases (NPs) in both Tonga and Lenje. The phrases have similar structures. Chitebeta (2007) further indicates that Tonga and Lenje belong to the same language group. However, she indicates that the main difference between Tonga and Lenje is in Phonology though this level of linguistic analysis was not the principal focus of her study. Her study shows that in both Tonga and Lenje, noun phrases have various functions; these include subject, object and time adjunct. She explains that the morpho-syntax and morphological structures presented show that Tonga and Lenje noun phrases have similar structures and that their class systems are interrelated.

A parallel is drawn between Chitebeta's Study and the current study in that each study engaged a Regional Official Language and a non-Regional Official Language. However, unlike Chitebeta's study that used the Government binding theory, this study was informed by two theories: Lexical Phonology and Comparative Bantu morphology and phonology. While Chitebeta's was a Contrastive Study of the Noun Phrase in Tonga and Lenje, the current study is a "Comparative Study of Bemba and Mambwe at Phonological, Morphological and Lexical levels".

Miti's (1988) study was on varieties of Chinyanja and these are Chicewa, Chinsenga and Zambian Chingoni. He addressed internal classification in order to establish how close or different these

varieties are. The difference between Miti's study and the current study is that Miti's investigation on Chicewa, Chinsenga and Zambian Chingoni was informed by auto-segmental phonology while this study is based on phonology, morphology and the lexicon to identify similarities and differences between the languages under study.

Kashoki's (1977) study was on Town Bemba, which is distinguishable from the form of Bemba, which is also known as Rural Bemba. Kashoki indicates that the coming up of urban centres in Zambia has given rise to new and interesting developments in language growth. He points out that in those centres, members of one language group migrating to town met members of other language groups. Because of that contact, the language of one gradually began to be influenced by the language of others and, in the process, a new way of speaking emerged. This was merely a modification of the original or Rural Bemba spoken in the rural areas, mainly of the Kasama, Chinsali, Mporokoso, Mpika Districts and part of Luwingu District. Town Bemba or Chikopabeeluti 'language of the Copperbelt' has become the lingua franca of the Copperbelt.

From this scenario, it is noted that there are language users that subscribe to linguistic conservatism and those who have an inclination to embrace linguistic changes resulting from the changing world. Nevertheless, the point is that each of these categories of language users attaches significance to the variant (Town Bemba or Rural Bemba) they use providing that they can communicate efficiently and effectively. There is no room for taking a prescriptivist approach in linguistics as reflected by Crystal (2008:284) indicating that "linguists have been generally critical of the prescriptivist approach, emphasising instead the importance of descriptively accurate studies of usage and of the need to take into account sociolinguistic variation in explaining the attitudes to language." The difference between Kashoki's (1977) study (on Town Bemba) and the current study is that the former is intra-lingual (dialectal) while the latter is inter-lingual.

Musumali (2015) investigated the degree of inter-relatedness between Lunda and Luvale based on phonological and lexical evidence. His studies focused on the two varieties of Lunda and Luvale commonly known as Zambezi Lunda and Zambezi Luvale, respectively. The study was motivated by the contact of the two languages, which share the same geographical space in close proximity. Musumali (2015: iv) indicates that there has been a claim "in oral history that the present-day Luvale and Lunda speaking peoples were originally one people who later split through migration

and ended up as Luvale speaking and Lunda speaking peoples.” This is another motivation of Musumali’s study. He sought to evaluate this claim with a view to determining the extent and degree of mutual intelligibility between the speakers of the two languages. His finding is that there is a high degree of inter-relatedness of the two languages and the consequent high degree of mutual intelligibility between the speakers of the two languages. Musumali’s conclusion, therefore, is that Lunda and Luvale need to be re-classified within one zone instead of two separate zones ‘L’ and ‘K’, respectively, to which they were earlier assigned.

The current study has something in common with Musumali’s study in that both are concerned with investigating two languages, which are spoken in close proximity in the same geographical area. However, Musumali’s study obtained the results through phonology and lexical cognates while the current study sought to obtain the results by comparing the languages under study phonologically, morphologically and lexically.

Chilambe Bwipwa undertook a study to establish the divergence of Unga dialect from Bemba at phonological, morphological, semantic and lexical levels. He examined the phonology of Unga in relation to Bemba, identified the morphological features in relation to Bemba, compared and contrasted the semantics of Bemba and Unga lexemes and described the salient features of Unga in relation Bemba. It is an acknowledged fact that in the analysis and interpretation of this topic, both the similarities and differences came to the fore. As can be noticed, his study is different from the current study, which compared Bemba and Mambwe phonologically, morphologically and lexically.

Siame conducted a study to identify, describe and analyse the grammar of Mambwe language. In his study, the following were investigated: the nominal and verbal morphology, word order, among others. While Siame’s study was to write a comprehensive grammar of the Mambwe language, the current one is a comparative study of Bemba and Mambwe at phonological, morphological and lexical levels.

2.2 Some Studies on Dialectal Variations / Linguistic Differences and Similarities in other Parts of Africa

Werner (1919) points out that the principal features of Bantu languages are distinctly marked with regard to the grammar and that the grammatical elements are agglutinative. He cites examples of similarities and differences in nominal class 14, which includes abstract nouns and names of materials. Some of these are illustrated below:

1 (a) **ubu-ntu** → *ubuntu* ‘the state of being a human being’ (Zulu)

(b) **u-tu** → *utu* ‘the state of being a human being’ (Swahili)

2 (a) **ubu-si** → *ubusi* ‘honey’ (Zulu)

(b) **u-chi** → *uchi* ‘honey’ (Nyanja).

What is shown above is similar, in some respect, to what this study has investigated.

Guthrie (1970) presents the classification of Bantu languages as well as comparative material. In his study, Guthrie identifies numerous similarities and differences based on radicals in Proto-Bantu. Proto-Bantu is a hypothetical parent language of all the Bantu languages. It provides a reference point for the lexical comparisons. Proto-Bantu in Guthrie’s (1948) work is used to find out the origin of the Bantu language family.

Proto-Bantu radicals are relevant to this study because they have been used to identify the lexical differences between the languages under investigation.

Polomé and Hill (1980) show some differences between two of the dialects of Swahili, namely: Mrima and Mgao. For example, in Mgao there is insertion of *l* or *r* in the sequence of two vowels as in the word *Kugwira* ‘to seize’ while in Mrima where there is no insertion of */r/*, it is *Kugwia*. Contrary to Polomé and Hill’s study, which is on dialectology, the current study is anchored on finding out the differences and similarities between two languages.

“In every language, we have constraints on the way phonemes (sound segments) may co-occur”, Malande (2010: 47). He further indicates that “these phoneme constraints are language specific, thus existing in some languages and not in others.” For example, Nguni language has sequences */bw/*, */paws /*, or */pj /* whereas in Sotho these sequences are not permissible.

In the current study, constraints on the way phonemes may co-occur is expected: what may be permissible in one of the languages under study may not be permitted in the other, and that is a mark of differentiation that is relevant to this comparative study.

Maho (1998) did a comparative study of the typology of Bantu noun class system. His main objective was to describe typological variation with regard to Bantu nominal class system and relate that variation to diachronic issues. The methodological approaches pursued were structural linguistics, dialectology and linguistic reconstruction. Data were drawn from 330 languages covering the entire Bantu speaking area. Although his study and the current study are comparative, they are different in some other respects.

Bastin, Coupeze and Mann (1999) presented data on continuity and divergence in Bantu languages from the perspective of lexicostatistics. The lists show the language from which the word comes, its meaning and its source as follows: Tumbuka, Zambia (language): ndopa/zindopa (word), blood (meaning), Kambanizithe/Twilingiyimana (source); Tumbuka, Malawi (language): somba (word), fish (meaning), Kambanizithe/Twilingiyimana (source), and so on. As the lists continue, one sees the similarities and the differences. The material shown here is relevant to the current study.

Blanchon and Creissels (1999) presented a review of durational and pitch-related tonal aspects relating to the intonation in South African Bantu languages. The aim of the review was to (i) make the results of Africanist and linguistic studies accessible to research in speech processing, laying the foundation on which work in the speech processing branch of human language technologies can be based (ii) by pointing out the gaps in our knowledge, it wanted to draw attention to the fact that more quantitative research is needed in order to advance our knowledge in the theoretical linguistic field. This piece of information is important as it shares something relevant to the current study.

Brian (1959) dealt with groups of Bantu languages, listing examples of their nominal prefixes, verb conjugation and personal prefixes. Other features were also illustrated from whichever language was suitable. In connection to Brian's work,

Guthrie's (1953) work on Bantu languages of western Equatorial Africa. One language was used as the type for each group for listing examples of the nominal prefixes, verb conjugation and personal prefixes. Other features were illustrated from whichever language was suitable.

The material on nominal prefixes and verbs in Bantu languages is relevant to this study as Bantu languages share typological characteristics.

De Blois (1970) discussed the augment and the languages where it occurs. These languages include Ganda, Mbundu and Herero. It is noted that in the language such as Ganda, the absence of augment is noticed in vocatives and after negatives whereas in Xhosa the augment is also dropped after demonstratives, and so on.

One of the languages under study uses augments while the other does not.

Guthrie's (1948) worked on classification of Bantu languages. These were assigned letters A to S and divided decades: A10, A20, and so on, (Ref. Chapter One).

In relation to the foregoing, Cope's (1971) was to consolidate the classification of the lists of Bantu languages which were earlier constructed by Doke and Guthrie. Shifting and recombination of the smaller zones of Guthrie as well as the larger zones of Doke have resulted in a consolidated classification of the Bantu languages in eight areas, each of them divided into zones and groups, notes and maps. This coding system has become the standard for identifying the languages. This information is relevant as the languages under study are within these groupings (Ref. Chapter One).

2.3 Some Studies on Dialectal Variations / Linguistic Differences and Similarities in other Parts of the world

Cheshire (1981:366) notes that:

It is not unusual for the paradigms in nonstandard English dialects to contain fewer forms than the corresponding Standard English paradigm. The present tense verb system in Standard English consists of two forms: a suffixed form used with third person singular subjects, (for example, he goes) and a suffix-less form, used throughout the rest

of the paradigm (for example, I go, you go, we go and they go). Non-standard dialects in Britain and United States typically have a simpler present tense system.

For instance, in the English spoken in southwestern Britain, the suffixed form is used throughout the paradigm (Hughes & Trudgill, 1979). In Appalachian English, the suffixed form is used with third person plural subject as well as with third person singular subjects, (Wolfram & Fasold, 1974). Cheshire explains that “Other dialects, notably the Black English vernacular and the English spoken in East Anglia, Britain, use the suffix-less form throughout the paradigm”, (p366).

The current study also investigated the morphology of verbs in some tenses. However, this is related to only standard forms of the languages under study

On language varieties and situations, Trudgill (1984:246) discusses Standard English in England. He gives a definition of Standard English as “that set of grammatical and lexical form which is typically used in speech and writing by educated native speakers;” the term excludes phonetics or phonology. The Standard English is spoken in Britain with accent ranging from RP (Received Pronunciation) to “milder” regional versions. Trudgill explains that the lexicon of Standard English in England is enshrined in the great dictionaries such as the Oxford English Dictionary and is uniform. The Grammar of Standard English in England is uniform, described competently and in detail, (Quirk, Greenbaum, Leech & Svartvik, 1972). The English of most people is neither Received Pronunciation Standard English nor a rural dialect. Trudgill notes that the vast masses of urban working-class and lower-middle speakers use a pronunciation nearer to Received Pronunciation than the archaic dialects recorded by the dialectologists. Yet their speech diverges in many ways from what is described as standard.

These dialectal variations are appreciated. In fact, the common ground between dialectological studies and the current study (of two languages) is the variation that is discerned in the linguistic material.

Wells’ (1982) research focuses on the various types of English accents found in England as well as correlating them to social variables.

While there is appreciation for his study, the current study does not employ the correlation between the linguistic variables and social variables.

Wakelin (1984) provides examples of traditional vernacular: the sort of English characterised by old regional features and spoken mainly by older people in rural area. Trudgill (1984) observes that Wakelin's data derives mainly from the material collected by the Leeds survey of English dialects; the maps show mainly phonological, grammatical and lexical distributions. In his work, Wakelin describes the major phonological boundary between northern and southern dialects, including subclasses.

Wakelin's work on traditional vernacular, the sort of English characterised by old regional features and spoken mainly by older people in rural areas, has something in common with this study in that the rural and basic varieties of the languages under study were used.

Aitken (1984) gives a comprehensive account of Scottish accents and dialects, stating that the main point in that account is that two polarised and very different English language models are current in Scotland and these are (1) varieties of vernacular scots, and (2) Scottish version of Standard English. Aitken points out that the first type has developed its own vowel systems over the centuries whereas the second uses a selection of the same vowels to render Standard English, which thus acquires a special Scottish flavour. He provides a further feature that affects all types of scots, namely: the Scottish vowel-length rule, which calls for the lengthening in definable environment of all the vowels, except two. Otherwise, all vowels are short.

The study on two Scottish polarised and very different English models and the current study are comparative in nature. Besides that, the rule of vowel lengthening mentioned above is also applicable to the current study.

Spolsky (1998) puts into focus the aspect of Netherland where only Frisian is recognised as a distinct language, but all other regional varieties are labelled dialects. In this case, he concludes that a language is a dialect with a flag, or with an army. He adds that "The kind of differences in patterns of variation that are produced by geographical or spatial isolation are regularly transformed into powerful mechanisms for asserting and recognising social differences," (P.30). Spolsky indicates that language changes take place over time. New words are added to them and

that contact with other languages brings about modification in the phonology of languages concerned.

The effect of language contact in relation to the languages under study have been reported accordingly. The current study was motivated by the close proximity of the Bemba and the Mambwe speaking communities.

‘English Pronunciation in the Global World’ reveals the facts concerning variations that occur among the international speakers of the English Language. For Example, Van De Doel (2006:155) in Rupp (2018) points out that “languages such as Swedish, German, Dutch, Portuguese, Russian, Farsi and languages Spoken in India, Singapore and Malaysia do not have TRAP-vowel /æ/.” Therefore, speakers of English whose native languages are those mentioned replace the TRAP-vowel with /e/. Van De Doel further indicates that “Danish and Dutch speakers substitute /ɒ/ for the TRUP-vowel /ʌ/ while Swedes and Norwegians realise it as /œ/.”

Deterding (2013:65) in Rupp (2018) points out that “the quality of NURSE–vowel /ɜ:/ occasionally causes pronunciation problems for some international speakers of English. For instance, Spanish, Greek and Farsi speakers substitute /e/ for the NURSE–vowel /ɜ:/.”

Rupp (2018) provides observations in relation to the variations that occur among international speakers of English with regard to FACE-diphthong /eɪ /, GOAT-diphthong /əʊ /, GOOSE-vowel /u:/, THOUGHT-vowel /ɔ:/, MOUTH-diphthong /aʊ / and SCHWA-vowel /ə /. For example, for the FACE-diphthong /eɪ /, speakers of Dutch, German, French, Italian and Languages in India and western Africa substitute /e/ while Turkish speakers may use the FACE-vowel with friction, for example /deɪç/ for the word *day*.

English pronunciation by speakers whose languages are not English makes the contrast very rich in that we are comparing pronunciation of English vowels with pronunciation of the vowels in other languages. In other words, the speakers of those other languages exhibit mother-tongue interference in pronouncing English words thereby creating the variants of the Standard British English vowel segments.

Since the discussion on the ‘English Pronunciation in the Global world’ is of variation, it is relevant to the current study, which is also comparative.

It is worth noting that there are various accents even in Britain itself. For instance, there is Received Pronunciation (RP), cockney accent and Birmingham accent, to mention but three examples. Referring to RP, Crystal (2008) points out that it is the name given to the regionally neutral accent in British English, which is historically deriving from the prestigious speech of the courts and public schools. Crystal explains that the prestige of this accent is the result of social factors rather than linguistic ones. He continues to explain that RP is in no sense linguistically superior or inferior to other accents. However, it must be appreciated that RP is a set of accents, which tends to be associated with the better-educated part of the society and the one most often cited as a norm for the description of British English or in teaching that dialect to foreigners. Crystal notes that British Broadcasting Corporation (BBC) originally adopted RP for its announcers because it was the form of pronunciation most likely to be nationally comprehensible and to attract least criticism, hence the association of RP with the phrase BBC English. He observes that these days the BBC accent, as indeed the educated speech at large, displays considerable regional variation and many modified forms of RP exist (i.e modified RP). RP no longer has prestigious social position it once occupied. In the eyes of many, especially the young generations, regionally marked forms of accent are more desirable or appealing, (Crystal, 1980).

Everyone wants to maintain their identity by continuing to use their dialects (their regional accents). Moreover, in cosmopolitan cities accents are varied. In some locations of Britain, Americanisation of British English is evident.

However, what is of paramount importance is for one to speak comprehensibly so that one can command credibility from one’s interlocutors. To recapitulate the point, one should speak with clarity, good volume and at a conducive pace.

The study on variations in English pronunciation presented above is relevant because it is in line with the current study in which the first objective sought to find out the phonological similarities and differences between the languages under investigation; both studies are of comparative nature.

Portuguese and Spanish are closely related romance languages, which differ in many aspects of their phonology, grammar and lexicon. The most obvious differences are in pronunciation. Mutual intelligibility, therefore, is greater between the written languages than between spoken forms. Portuguese and Spanish share a great number of words that are spelt identically or almost identically though the pronunciation almost always differs.

While the majority of lexical differences between Spanish and Portuguese come from the influence of Arabic language over Spanish vocabulary, most of the similarities and cognate words in the two languages have origin in Latin, but several of cognates differ to a greater or lesser extent. Although the vocabularies of Spanish and Portuguese are similar, the two languages differ phonologically.

The foregoing text on Portuguese and Spanish is comparative and, therefore, contributes to situating this study.

Finland Swedish is a general term for the variety of Standard Swedish and closely related groups of Swedish dialects spoken in Finland by the Swedish-speaking population as their first language. One of the phonological differences between Swedish spoken in Sweden and the Finland Swedish is that of tonal word accent distinguishing some minimal pairs in most dialects of Sweden and Norwegian; this is not present in Finland Swedish (except in Parish of Snappertuna, west of Helsinki).

Finland Swedish lacks the aspirated stops, which are present in Central Standard Swedish, making the contrast between fortis and lenis stops one of voicing only. In addition, the retroflexion that occurs in many dialects when / r / precedes a coronal consonant does not occur in certain parts of Finland Swedish, (Wikipedia).

In terms of lexis, Finland Swedish has mostly the same vocabulary as Swedish in Sweden in order to maintain cohesion between the two varieties. Nevertheless, there are differences which, generally, fall into two categories: words, which are now considered archaic in Sweden and loan words and calques from Finnish or other languages, mostly English. There are also some terms differing because of differing legislation, (Wikipedia).

The contrast between Finland Swedish and Central Standard Swedish (in Sweden) with regard to phonology and lexis is relevant because it contextualises this study.

2.4 Chapter summary

This chapter has presented a review of some of the available relevant literature with a view to placing this study within the context of similar research to provide justification for it.

The next chapter presents the theoretical frameworks that inform this study.

CHAPTER THREE

THE THEORETICAL / ANALYTICAL FRAMEWORKS INFORMING THE STUDY

3.0 Introduction

The present chapter explains two theoretical frameworks informing this study. In addition, the chapter discusses and illustrates some of the linguistic concepts directly related to the study.

3.1 Lexical Phonology theoretical / analytical framework

This is one of the Theoretical Frameworks that informed this study. It is one part of the study of linguistics, which has passed through several conceptions since the 1950s. Udemá (2004) indicates that Lexical phonology was developed in the early 1980s by Kiparsky (1982, 1985), Halle and Mohanan (1985), Mohanan (1985), Kaisse and Shaw (1985). Udemá explains that before this theory was developed, another theory was current; it was called Generative Phonology. Chomsky and Halle's *Sound Patterns of English* (1968), abbreviated as 'SPE', established the basis for a phonological theory that included the syntactic model. Goldsmith (1976), Siegel (1974) and Pulleyblank (1983) worked on autosegmental phonology, topics in morphology and tone, respectively. These were added to Generative Phonology thereby reconstructing this old-fashioned theory. Nevertheless, the early stages of Generative Linguistics had no provision for morphology. This is the central distinction between Generative Phonology and Lexical Phonology Theory which embodies morphology and the lexicon, (Udemá, 2004). He points out that in the theory of Lexical Phonology, the lexicon is given a key role that represents a significant departure from classical models. American linguistic studies indicate the interaction between Lexical Phonology and Morphology accounting for the mechanisms of output. The theory examines the arrangement of affixes and discusses different word formation processes, (Udemá, 2004). Udemá indicates that, with emphasis on morphology, this is a theory in which morphological and phonological rules are brought together within a single framework. It is an approach to phonology that shows the interaction of morphology and phonology in the word building processes. The approach is based on the insight that much of the phonology operates together with the word formation rules to define the class of lexical items in a language. Word formation rules relate to the formation of words. These morphological rules are used to combine morphemes to form new words, (Udemá, 2004).

Udema indicates that the lexicon plays a central productive role in the theory of Lexical phonology. It consists of ordered levels, which are the domain for certain phonological processes. This means that the inner structure of the lexicon or the morphological component of grammar is assumed hierarchical, (cf. Allen, 1978; Siegel, 1974; Pesetsky, 1979; Kiparsky, 1982a, 1982b, 1983, 1985; Mohanan, 1982/86; Mohanan and Mohanan, 1984; Halle and Mohanan, 1985; Strauss, 1982a; Pulleyblank, 1986). In this Lexical Phonology and Morphology module, rules are cyclic, meaning that phonological rules are coupled with morphological rules found at the same stratum in the lexicon. First, the morphological rules put together the morphs required to form particular words. Then, the words are cycled or submitted to the rules of phonological module at that stratum, which are triggered by those particular morphological rules. In this way, the phonological rules indicate how the words created by the morphological rules are to be pronounced, (Katamba, 1993). He points out that each journey through all the morphological rules and all the phonological rules paired with them at a given stratum constitutes a layer of derivation. The rule stipulates that one inserts an element in the environment $[y - z] x$ and the output is w ; where x , y and z are variables and w a mnemonic standing for the word, (Katamba, 1993).

The lexicon is a term whose scope varies enormously from one theory to another. It is that aspect of language or a linguist's account of a language that is centred on individual words or units. The term simply means dictionary. In linguistics, the lexicon also represents information about pronunciation, meaning, morphological and syntactic properties so that it could be called a mental lexicon. In Lexical Phonology, the lexicon is seen as being more than just an appendix to grammar, containing unpredictable, idiosyncratic, phonological, semantic and lexical information about morphemes and lexical items; it is grammatical substance or material itself.

This theory is instrumental in the current study: it has been applicable to achieving the specific research objectives.

3.1.1 The role of phonetics and phonology in this study

In distinguishing the two terminologies, phonetics and phonology, Crystal (2008:363) defines phonetics as “the science which studies the characteristics of human sound-making, especially those sounds used in speech, and provides methods for their classification and description.” On

the other hand, he explains that phonology is a branch of linguistics, which studies the sound systems of languages. He further points out that, of the very wide range of sounds the human vocal apparatus can produce and which are studied by phonetics, only a relatively small number are used distinctively in any one language. He adds that sounds are organised into a system of contrasts, which are analysed in terms of phonemes, distinctive features, or other such phonological units according to the theory used. The aim of phonology is to demonstrate the patterns of distinctive sounds found in a language, and to make general statements about the nature of sound systems in the languages of the world. Nevertheless, it is not the intention of this study to make such general statements about the languages of the world. This study being informed by Lexical Phonology has used phonemes as well as supra-segmental elements to determine phonological similarities and differences between the languages under study.

This study has used Lexical Phonology framework in which morphological and phonological rules are brought together within a single framework. The applications of some of these rules have been useful in this study. For example, there is the rule of devoicing in English, which changes /v/ to /f/ in the environment before a voiceless sound as in twelfth and fifth (cf. twelve and five). This can be formalised as follows:

$$\begin{array}{ccc} \left[\begin{array}{c} +str \\ -cor \end{array} \right] & \rightarrow & [-vd] / \text{---} [-vd] \\ (v, f) & & (f) \quad (\Theta) \end{array}$$

In the input the rule applies to /v/ because it is voiced and it has to convert to the voiceless sound segment in the rule, (Sloat, Taylor & Hoard, 1978: 41)

Another phonological rule has to do with assimilation (i.e. assimilatory rule). A phonological rule describes an assimilation if its output and its environment share one or more features, which are not part of the input. There are two types of assimilatory processes: progressive and regressive / anticipatory assimilation. These are illustrated by the two-palatalisation rules, which are formalised as follows:

$$\text{i. } [+ \text{ cons}] \longrightarrow \begin{bmatrix} -bk \\ +hi \end{bmatrix} / \begin{bmatrix} -cons \\ -bk \\ +hi \end{bmatrix} \text{ —} \\ (i, y)$$

In this rule, the output [+ cons] undergoes palatalisation in the environment after (i or y). This is progressive assimilation

$$\text{ii. } [+ \text{ cons}] \longrightarrow \begin{bmatrix} -bk \\ +hi \end{bmatrix} / \text{ — } \begin{bmatrix} -cons \\ -bk \\ +hi \end{bmatrix} \\ (i, y)$$

In this rule the output [+cons] undergoes change in the environment before (i or y). This is regressive / anticipatory assimilation.

(Ref. Sloat, Taylor and Hoard (1978:145))

The study has used these rules to elicit phonological similarities and differences between the languages under study.

Mann's (1999) work provides both the consonant segments and the vowel segments used in Chibemba. He points out that the vowels in Chibemba are pronounced in much the same way as in other Zambian languages, which include Mambwe, one of the two languages under study. Many of the consonant sounds used in Chibemba are also used in Mambwe. Besides, Mann discusses vowel fusion (or coalescence) which is also relevant to this study.

The previous section has presented the material under segmental phonology. This section looks briefly at Suprasegmental Phonology. The key elements in this study are tone and length. Redden (1963:73) in Sloat, Taylor and Hoard (1978) explains, "There are languages in which pitch (or tone) plays a semantic role: the same sequence of segments may have different meanings if uttered at different relative pitches. This study has employed tone and length to elicit some phonological similarities and differences. The languages under investigation are tonal languages, (Ref. Mann, 1999, also).

3.1.2 Morphological perspective of this study based on ‘Lexical phonology’ theoretical Framework.

Morphology is another aspect in this study; it is relevant to one of the research objectives outlined in Chapter One. Udema (2004) has earlier observed that the Lexical Phonology theory brings together morphological and phonological rules. It is an approach that accounts for interface between morphology and phonology in the word-building process. Against this background, this section presents some morphological concepts, which are relevant to this study. For example, there are nominal prefixes in the seven Zambian Regional Official Languages. Chanda (2007) and Mann (1999) present some of the nominal prefixes in Bemba and these are:

- Nominal prefix class 1: **-mu-**; example noun: **umuntu** ‘person’
- Nominal prefix class 1a: **Ø-**; example noun: **kolwe** ‘monkey’
- Nominal prefix class 2: **-βa-**; noun: **abantu** ‘people’
- Nominal prefix class 2a: **βaa-**; example noun: **baakaminamisa** ‘drunkards’
- Nominal prefix class 3: **-mu-**; example noun: **umushi** ‘village’
- Nominal prefix class 4: **-mi-**; example noun: **imishi** ‘villages’
- Nominal prefix class 5: **-li-** / **-i-**; example nouns: **iilini** ‘egg’ / **iisabi** ‘fish’
- Nominal prefix class 5a: **lii-**; example noun: **lii Phiri** ‘funny Phiri’
- Nominal prefix class 6: **-ma-**; example noun: **amasako** ‘feathers’
- Nominal prefix class 7: **-ci-**; example noun: **icisote** ‘hat’
- Nominal prefix class 7a: **cii-**; example noun: **ciikolwe** ‘huge monkey’
- Nominal prefix class 8: **-fi-**; example noun: **ifisote** ‘hats’
- Nominal prefix class 8a: **fii-**; example noun: **fiikolwe** ‘huge/ funny/ ugly monkeys’
- Nominal prefix class 9: **n-**; example noun: **inkoko** ‘chicken’, and so on,

These and other nominal prefixes in Bemba are relevant to the current study since they have been used in establishing the similarities and differences between Bemba and Mambwe in nominal morphology.

The other concepts in verbal morphology that are relevant to this study are ‘tense’, ‘aspect’ and ‘mood’. Quirk and Greenbaum (1973) explain that, to a great extent, the three categories (i.e., tense, aspect and mood) impinge on each other: “in particular, the expression of time present and past cannot be considered separately from aspect and the expression of the future is closely bound up with mood,” (p.40). In relation to tense and aspect, Awoniyi (1982:870) notes, “many African languages show unique characteristics that are not familiar in English. For example, some of the languages only have two distinctions of past and non-past.” With regard to tense, there is a terminology ‘hodiernal’ that is derived “from the Latin word ‘hodie’, meaning today”, (Crystal 2008:230). In connection with this, there are the terms pre-hodiernal, which means before today and post-hodiernal, meaning after today. This information is relevant to this study because it has been employed under the section of verbal morphology. Equally relevant and useful to this study are verbal extensions such as passive, causative, intensive, reciprocal, frequentative, applied/applicative, neutre/stative, reversive active and completive, (See Kamfuli,2009; Nkolola, 1997). In addition, negation and definitisation verb phrases are the other concepts, which have been used to find out the similarities and differences between the languages being compared.

3.1.3 The contribution of the lexicon to the study

The lexicon is yet another area, which has played a significant role in this study; it is reflected in one of the three research objectives outlined in Chapter One. This is the domain of analysis towards establishing the degree of lexical similarities and differences between the languages under study.

In relation to the fore going, Langacker (1973) and Akmajian et.al (2001) present some material on the lexicon borrowings, coinages and others, but a section from Bauer (1983) explaining how some words came into existence is relevant to this study. She points out that some modern English words are of Proto-indo European roots. In a similar manner, some lexical items of Bantu Languages were derived from Proto-Bantu radicals. This is why the current study has used Proto-Bantu radicals as the criterion to identify the lexical similarities and differences between the languages under study.

3.2 Comparative Bantu Morphology and Phonology theoretical / analytical frame work

Malcom Guthrie developed this theory during the period 1967- 1971.

About the key word in this theory ‘Bantu’, Nurse and Philippson (2014) explain that the Bantu speaking communities are those who live in Africa south of the line from Nigeria across the Central African Republic (CAR), Uganda and Kenya, to Southern Somalia in the east. Most language communities between that line and the Cape are Bantu. According to Nurse and Philippson, the communities speaking Bantu languages are indigenous to twenty-seven African countries. They indicate that the Bantu family is recognised as forming part of the Niger-Congo phylum: around 400 million people speak Niger-Congo languages of whom some 240 million are Bantu speakers.

The Comparative Bantu morphology and phonology theory reflected in Nurse and Philippson’s (2014) introductory pages 5, 6, 7 and 8 is viewed from the perspective of historical definition and typological characteristics. Focus is on the latter to contextualise the study. The typological characteristics are viewed in terms of the following:

1. Phonology: Vowels: most Bantu languages have seven or five vowels (Ref. Nurse and Philippson, 2014: introductory page 7); consonants (Ref. Nurse and Philippson on the discussion of this); syllables: open in many Bantu languages; tone: most Bantu languages are tonal.
2. Morphology: Bantu languages are agglutinating. Verbs have an elaborate set of affixes. Most Bantu languages have non-derived and derived nouns, the latter having an inflectional prefix and derivational suffix, and so on; all nouns are assigned to a class. Over twenty such classes are reconstructed for Proto-Bantu (PB) although most of today’s languages have between twelve and twenty while a few languages have reduced or eliminated classes. A class is characterised by a distinct prefix: a specific singular / plural pairing, (a gender) and agreement with other constituents; Bantu languages have been described as verby. This means that the verb is pivotal in the sentence; it incorporates much information and may stand alone as a sentence; nearly all Bantu languages are prodrop. In many languages, verbs have six possible pre-stem position positions. Because most of these may be occupied by one morpheme, it is possible to get a string of a dozen or more morphemes in a verbal word, and so on.

3. Syntax: The default order of sentence constituents across Bantu is S (Aux) VO (Adjunct).

Very few languages, as their only or dominant order, have OV, and so on, (Ref. Nurse & Philippson, 2014: introductory pages 9 and 10).

Most of the material mentioned under phonology and morphology feature significantly in this study.

Another study pertinent to the theory is by Mtenje (2016). Mtenje describes and compares the grammar of Cisukwa, Cindali and Cilambwa (SuNdaLa) which are the three related varieties spoken in northern region of Malawi. Mtenje's study focused on the phonological and morpho-syntactic systems of the SuNdaLa varieties. He examined variations among these varieties. Suggestions have made whether the SuNdaLa dialects should be considered as being three dialects of one language or as constituting three distinct languages. His study places the SuNdaLa cluster into a wider context of the Bantu languages spoken in the region and more generally. The study used data involving words lists (lexis) data on morpho-syntax and phonology. Mtenje's study is relevant to the Comparative Bantu Morphology and Phonology as well as to this study.

The evidence arising from comparative study of Bantu languages has to be collated with evidence from other sources, especially from archeology and extra-linguistic factors. It has been indicated that Bantu speaking communities did not expand because of the fact that they spoke Bantu, (Guthrie, 1967-71). Based on this assumption, Greenburge worked towards the classification for all African languages and arrived at the controversial conclusion with regard to relationship between Bantu and the so-called "semi-Bantu" languages of Nigeria. If this was correct, it meant that Proto-Bantu must have been spoken somewhere near the Nigeria-Cameroun border. In this regard, Guthrie investigated the relationships within the Bantu group and was to embark on the construction of Bantu prehistory, (Guthrie, 1967-71).

This information is relevant to the theory and this study, which is comparative.

In the Chapter: Introduction to Comparative Bantu linguistics, Miti (2006) explains the distinction between the 'history of linguistics' and historical linguistics. The former means "the survey of the development of linguistics as a science whereas the latter is the systematic comparison of

genetically related languages. This is undertaken to establish how these languages are inter-related and how they have evolved from the common ancestor (or parent) language”, (p. 58). Historical linguistics is also known as historical comparative linguistics. Miti looks at comparative Bantu phonology vi-z-avi the Proto-Bantu vowel system (by Guthrie), the ur-Bantu vowel system (by Meinhof) and the modern Bantu vowel system. He has shown how vowel sequences in modern Bantu languages are related to vowel in Proto- Bantu radicals. Examples are noted in Zambian languages such as Cinsenga, Citonga, KiKaonde and Ibibemba. These languages share similarities of PB radicals.

This information also contextualises the theory and this study: Bemba and Mambwe have terms, which are of Proto-Bantu origin as this study has shown.

Kaashoki (1978) points out that in linguistic classification, languages are grouped according to certain properties such as phonology (sound system), morphology (word structure) and the degree of vocabulary. This is how we note that dialects such as Aushi, Chishinga, Kabende, Bisa, Luunda (Luapula), Twa (Bangweulu), Shila, Lala, Bemba, Bwile, Unga, Lamba, Tabwa and many others fall under group A. Group L comprises Tumbuka, Fungwe, Senga, Ngoni (Magodi) and more. This means that these languages share certain characteristics in the language systems indicated above. In support of this, Kashoki notes “generally speaking, differences between languages are larger than differences between dialects”, (p.47). In line with this, Kashoki undertook the study to find out vocabulary similarity among Zambian languages. Looking at the lists, which he has presented from pages 82 to 100, one notices several similarities or correspondences of the stems. For example, in languages / dialects such as Lambya, Tambo and Nyiha the stems meaning hear are – vwa, -ivwa and –ivwa, respectively. This kind of relatedness is also noted among other Bantu languages.

In view of what is presented in the foregoing text, Kashoki’s study is relevant to this study and appropriately situates the theory.

Polomé and Hill’s (1980) study is about the degree of similarity between the Bantu languages of East Africa. They compared a set of vocabulary with a view to putting the languages into immediate groups and where possible into ever larger groups. The survey involved comparing 400

vocabulary items from 76 languages /dialects. The vocabulary items were chosen for their unambiguity and reliability. These sets of vocabulary comprised parts of the body, names of common animals, household implements (pots, hoe axe, and so on), natural phenomena (wind, sun, river, and so on), verbs referring to clear functions, and a few adjectives. Polomé and Hill point out that “the original list was intended basically for comparing with Proto-Bantu, as set out by Guthrie (1971: vol.2, 118-45). Their wish was to base the degree of lexical similarity on words inherited from the vocabulary assumed for PB. They relied on cognition: two or more cognates deriving from the same single item in hypothetical common ancestor language by direct oral transmission, (Polomé and Hill, 1980). They worked out sound correspondences between PB and each of the languages concerned and, in this way, between languages themselves. “Two items were considered cognates if each segment in an item in one language corresponded regularly to the equivalent segment of the same item in the other language”, (p. 26).

This information on Polomé and Hill’s study contextualises the theory and is pertinent to this study.

A number of works contextualising the comparative nature of the current study have been dealt with in literature review in Chapter Two and in this Chapter. The other comparative works include ‘Language Variety’, ‘Standard Language’ and ‘Non-Standard Language’.

Language variety is an area where similarities and differences manifest. Atkinson, Kilby, and Roca (1983:39) explain that, linguistically, the world is a mosaic. They note, “It is difficult to specify the criteria for distinguishing between language and dialect”. However, they indicate that the two commonly cited criteria are mutual intelligibility for dialects and the presence of literature for language. They further indicate that only mutually unintelligible varieties can be accorded the status of independent languages. In fact, there are varieties of English that are not mutually intelligible though intelligibility is a relative notion: varieties can be more or less mutually intelligible. They also observe that many languages, two of them being Portuguese and Spanish, differ from one another far less than some dialects as in the case of those of Chinese and Arabic. Whenever some languages are compared, one expects varying degrees of intelligibility (i.e. from low to high).

Atkinson, Kilby and Roca (1983) explain that with regard to the requirement that a body of literature be associated with a language, leaving aside the ontogenetic and phylogenetic priority of the spoken language, literature is a socio-cultural product not to be confused with language and no linguist would argue that there are varieties of speech which are so structurally primitive that they cannot serve as the instrument for literary creation. Actually, there is literature in the languages under study, showing that both languages are equally important.

Continuing the discussion about the comparison between language and dialect, Atkinson, Kilby and Roca (1983) observe that the opposition between language and dialect bears on prestige and is usually associated with political or ethnic affirmation. Consequently, new independent states typically promote their speech variety to the category of language. They give an example of Norway where the official Danish was displaced after independence by several local varieties, some of them not so different from the language of Denmark. It is noted from their discussion that as the local language is elevated to official language, it must undergo standardisation, i.e., it must be made into an instrument functionally apt for utilisation at levels of community life such as law-making, education, the administration of justice, and so on. Atkinson, Kilby and Roca (1983) go further to explain that “standardisation mainly involves the selection of one dialect or the combination of several, and the codification of this variety through the regularisation of the orthography, the lexicon, the morphology, the pronunciation and the syntax, after which loyalty to the language is expected. Social status of the languages under study is not the concern of this study.

In this section, concept of ‘standard and Non-standard language’ is presented. Akmajian et. al. (2001) point out that ‘Standard and non-Standard language’ is a concept which cuts across all societies in the contemporary world. They further explain that one dialect of a language is regarded as the standard, ‘correct’ or ‘pure’ form of the language. They observe that, contrary to this, in linguistic terms, no one dialect of a language is any more correct, any better, or any more logical than any other dialect of the language: “all dialects are equally effective forms of language in that any idea or desire that can be expressed in one dialect can be expressed just as easily in any other dialect”, (P.283).

The researcher is cognisant of the fact that Zambia is no exception with regard to *socio-political compartmentalisation* of her languages and dialects. Even between the languages under

investigation, such kind of labelling is discernible. However, there is cognisance of the fact that the socio-political designation of languages does not correlate with linguistic judgment. It is, therefore, justifiable to emphasise that this study is purely based on linguistic judgment as noted in the analysis Chapters Five, Six and Seven.

3.3 Chapter Summary

This chapter has presented the theories: ‘Lexical Phonology’ and ‘Comparative Bantu morphology and phonology’ informing this study. These are the theories that helped the researcher to analyse and interpret the data to arrive at the differences and similarities that hold between the languages that were investigated.

The next chapter discusses some aspects of methodology for this study.

CHAPTER FOUR

METHODOLOGY

4.0 Introduction

This chapter presents research design, research sites, study population, study sample, sampling procedure, research instruments, sources of data, data collection procedure, data analysis, ethical considerations, and chapter summary.

4.1. Research Design

A qualitative research design was used because it focuses on words rather than on numbers. The research design was exploratory and descriptive: seeking to get the opinions, thoughts and feelings of the respondents. In this study, respondents were able to disclose freely their experiences, thoughts and feelings without constraint. This research design enabled the researcher to have an in-depth involvement by way of semi-structured interviews, focus-group discussions and a bit of first-hand observation. The researcher had an opportunity to follow up, through focus-group discussions, on the responses given earlier by the key informant who is very proficient in Mambwe. All the informants are proficient in the two languages under study. It is this in-depth involvement by the researcher with the informants and his analysis and interpretation of the data that have shaped the outcome of this study, (Ref. Strauss & Corbin, 1990; Anderson, 1987; Green & Thorogood, 2004).

4.2. Research Sites

This study was conducted in Mbala District in the Northern Province. Mbala is one of the eleven districts in the province and shares the border with Tanzania to the north and the east, Mpulungu District to the west and Senga Hill District to the South. This place was chosen as a research site because of the close proximity of the Bemba and the Mambwe speaking communities: these are the people whose languages are spoken in the area; Bemba happens to be the Regional Official Language widely used in the area.

4.3. Study Population

The study population consisted of more proficient speakers of the two languages. This is because in a qualitative study it is important to select knowledgeable participants on the issue under investigation, (Ref. Kombo & Tromp, 2006).

4.4 Study Sample

The sample was made up of five informants (including the key informant). Arkava and Lane (1983:27) define sample as “the element of the population considered for actual inclusion in the study or it can be a subject of measurement drawn from a population in which we are interested”. They point out that we study sample in an effort to understand the population from which it was drawn.” Powers, et al., (1985) explain that the researchers are interested in describing the sample not primarily as an end in itself, but rather as a means for helping them to explain some facets of the population.

With this study sample, the researcher was able to obtain the facts on phonological, morphological and lexical similarities and differences between the languages under study.

4.5. Sampling Procedure,

Five informants were selected from the study population using purposive sampling method. This sampling was big enough to minimise the gap between the values obtained from the sample and those prevalent in the larger population, (See Rabson, 1993; Rudestam & Newton, 1992).

4.6. Research Instruments

The researcher employed the interview schedule and focus group discussion.

4.7. Sources of data

The researcher used academic books, scholarly journals and research reports

4.8. Data Collection Procedure

The data was elicited during each interview session and verified at every focus group discussion session, (See Sidhu, 2013). This was with a view to achieving the research objectives, which the researcher has done. The research design was qualitative. The period of the research was one month and three weeks. The researcher has analysed and interpreted the data, provided the general overview and made recommendation.

The qualitative research design used in this study comprised the following stages, namely: (a) Semi-structured interview (b) Analysis of written data (c) focus group discussions and (d) Participant observation. The activities in each of these were as follows:

- a) Semi-structured interviews: the researcher employed in-depth, face-to-face interviews. These interviews sought to obtain the participants' ideas and opinions on a given phenomenon. At every interview session, the key informant answered pre-determined questions and there was room for probing and clarification of answers by conducting focus group discussions later. The method was useful and helpful in obtaining ideas and perspectives of the participants on the research objectives. This was of significance as it gave the participants an opportunity to say what they believe they knew. This method, therefore, placed the speakers (or users) of the languages under investigations at the centre. Thus, the methods enabled the investigator to collect data from purposively selected participants, (Ref. Denzin and Lincoln, 1994).

Semi-structured interviews were conducted in the following linguistic levels

Phonology

The key informant was interviewed with regard to the allophonic rule operating on the voiced alveolar lateral /l/: he was requested to provide the equivalents of the given English expressions in Bemba and Mambwe in order for the researcher to establish whether allophonic rule applies to both or one of the languages under study with a view to finding out differences and similarities between them.

- I eat

- I am eating
- I see them everyday
- I go
- I laugh, etc.

The key informant was interviewed with regard to the use of tone in recent and remote past tenses. He was requested to provide the equivalents of the given English clauses in Bemba and Mamabwe for the researcher to find out whether there were similarities and differences in the use of tone to show recent past and remote past tenses in the languages under study:

- we learnt (recent past)
- we learnt (remote past)
- they saw (recent past)
- they saw (remote past), etc.

The key informant was interviewed with regard to the rule of vowel harmony in the languages under study: he was requested to provide the equivalents of the given English expressions in Bemba and Mambwe in order for the researcher to establish whether there were similarities and differences between the languages in the process of vowel harmony.

- to throw on behalf of someone
- to harvest on behalf of someone
- to fold on behalf of someone
- to write on behalf of someone
- to cut trees on behalf of someone
- to guard on behalf of someone, etc.

In addition to these, the key informant was requested to say the causative verbal forms in the two languages by using the given English expressions so that the researcher could identify phonological similarities and differences. For example, the researcher would ask ‘What is the single word in Bemba and Mambwe for the given English expression?’ By comparing the responses, it would be noted whether the targeted phonemes were different or not:

- causing to talk

- causing to pass
- causing to hunt
- causing to eat, etc.

Morphology

Nominal morphology

The key informant was requested to provide the equivalents of the English words or expressions denoting the derived nouns (linked to noun class system) in Bemba and Mambwe; this was with a view to establishing similarities and differences between the languages under study.

- work
- workers
- writer
- writers
- tool
- tools
- journey, etc

Verbal morphology

The key informant was requested to provide in Bemba and Mambwe the equivalents of the English sentences in the given tenses for the researcher to establish similarities and differences in relation to the verbal elements in the given tenses.

- Prehodiernal progressive Aspect
 - (a) I was sowing the millet the whole of last week
 - (b) we were fishing in that river for two years
 - (c) She was cooking for her teacher last month
 - (d) they were cultivating potatoes in the 80s
 - (f) she was studying in America last year

(g) I was teaching English for two weeks, etc.

- Future tense of today

(a) I am meeting them today

(b) they are going back today

(c) she is cleaning the house this afternoon

(d) you are talking to her this evening, etc

The Lexicon

Analysis and interpretation of the data was based on Proto-Bantu radicals. This was to establish whether there were lexical similarities and differences between the languages under study in the given semantic fields and miscellaneous terms.

The key informant was requested to provide in Bemba and Mambwe the equivalents of the given English lexical terms for the researcher to establish similarities and differences

(i) household terms

(a) knife

(b) calabash

(c) ladle / stirring stick

(ii) domesticated animals and birds' terms

(a) chicken

(b) cat

(c) sheep

(iii) human body parts terms

(a) belly /stomach

(b) breast

(c) neck

(iv) kinship terms

(a) husband

(b) wife

(c) father

(v) agricultural terms

(a) millet

(b) sorghum

(c) castor bean

(vi) fishing terms

(a) fishing hook

(b) crocodile

(c) canoe

(vii) Miscellaneous terms

(a) all of them

(b) ashes

(c) five, etc.

The qualitative Research method (I) was employed to address all the research questions for the researcher to achieve the research objectives of the study.

b) Qualitative Method II: Analysis of written data.

This method was used to analyse and interpret the material on the six given semantic fields and the miscellaneous terms. The key informant made use of the provided English words and expressions to say the equivalents of these in the languages under study. This activity helped the investigator to elicit lexical similarities and differences between Bemba and Mambwe and interpret the data in reference to Proto-Bantu radicals.

Qualitative Method III: focus group discussion.

The stimulus material was provided. This encouraged participants' interaction with one another, (Ref. Kitzinger & Barbour, 1999). Attention was also paid to the composition of the group to ensure that the discussions were appropriate, (See Barbour, 2007). For this study, the focus group was composed of both genders, four male participants and one female participant. As observed by Barbour (2007), it was ensured that the group enjoyed natural talk. This method (FGD) was deemed important for data collection in this study, which sought naturally occurring talk. The idea was to get people together and provide a topic for discussion and, in this manner, the required data was generated in the fulfilment of the research objectives. A conducive atmosphere was provided for spontaneous discussions. This method worked very well in addressing the research question on phonology, morphology and the lexicon. FGD sessions were instrumental in data verification after every interview with the key informant.

c) Qualitative Method IV: Participant Observation.

At times, the researcher was immersed in other activities of the participants, became part of the people being observed, listened to their conversations without the speakers noticing and later wrote a few notes on the particular information pertinent to the study.

It was not possible, however, for the researcher to observe everything. In fact, the researcher did not conduct a detailed observation because of temporal constraint, (Ref. Chapter One under limitation)

4.9. Data Analysis

It is important to note that data analysis, especially in the case of interviews usually begins during the research process itself, (Patton, 1990; Silverman, 1993). Silverman explains that it is advisable to analyse research data in the light of research questions. This study aimed at finding out the differences between Bemba and Mambwe at phonological, morphological and lexical levels. Lexical phonology theory and Comparative Bantu morphology and phonology theory informed this study. The responses from the participants were sorted out according to the research questions. In fact, verification of data by the participants was a prerequisite for such an exercise. Crabtree and Miller (1992) indicate that application of triangulation, flexibility and independent audit are

important in research: the principal investigator and the other participants collaborated in implementing the project. This was very important as it enabled the researcher to interpret the data accurately.

4.10. Ethical Considerations

Wimmer and Dominick (1994) feel that the principle of autonomy or self-determination is the most important ethical issue that requires consent on the part of the participants. Observing this principle, the researcher obtained free consent of the participants for them to be part of the study.

4.11 Chapter Summary

This chapter has presented the methodology, which the researcher employed to address the research questions and the specific research objectives.

The next chapter is the presentation of the analysis and interpretation of data on phonological similarities and differences between Bemba and Mambwe.

CHAPTER FIVE

PHONOLOGICAL DIFFERENCES AND SIMILARITIES

5.0 Introduction

The present chapter addresses the first objective, which is “To compare the phonology of BEM with the phonology of MAM”. The data have enabled the researcher to establish and appreciate some phonological differences and similarities between the languages under investigation. There were a number of elements and processes that were used in bringing out phonological differences and similarities in this study. These in segmental phonology are feature changing rules, allophonic rules operating on consonants [l] and [ɭ], palatalisation and postalveolarisation in causative and intensive verbal extensions, morphophonological rule of vowel harmony in applicative verbal extension, semivocalisation (gliding), Coalescence (vowel fusion) and nasal assimilation.

In suprasegmental phonology, the study sought to find out the differences and similarities between the languages under study in relation to: shift in tone in the same words, application of tone in recent and remote past tenses, vowel length in minimal pairs and vowel length in nominal stabilisation.

In this and other chapters that follow, capitalisation of the first letter of the chunk or the piece of language under scrutiny has not been used unless that piece is a proper noun or the first-person singular pronoun ‘I’ as part of the gloss. Similarly, the use of punctuation marks on the chunk, with the exception of quotation marks on the gloss, was not necessary. The reason was that the focus was on the aspect under examination; the idea is not to examine the completeness of expression, but to focus on units such as phones, phonemes, allophones, morphs, morphemes, allomorphs and lexis that were the key elements in the objectives. However, the language was used normally in other instances. With regard to tone, the words in this study were not marked for tone except in the areas where tone marking was necessary and these included phonetic transcriptions. The reason for not marking tone everywhere is that it hinders the smooth reading of the text and consequently affects comprehension adversely. Except in quotations, the current study has not used the orthographic symbol “ng”; instead, it has made use of **ŋ**, which is a recommended symbol in Bemba in the ‘new’ orthography for Zambian languages, (MOE, 1977). For example, in place

of ‘ng’ in the word ing’anda ‘house’, the current study has used **ŋ** as in **inŋanda**. This study has normally used the British English variety; other varieties of English were used where there was need.

5.1 Segmental phonology: its contribution to the study

5.1.1 Feature changing rules

The feature changing rules have been used to find out the differences between the languages under study.

5.1.1.1 Consonant Segments: Feature Changing rule, **f** → **v** (Voicing rule)

The key informant was interviewed with regard to the feature changing rule of voicing which is shown above. He was requested to provide the equivalents of the English terms in BEM and MAM for the researcher to find out whether there were similarities and differences in relation to the rule. After this exercise, the informants, including the key informant, verified the findings. Below are the analysis and interpretation of the findings.

In the BEM and MAM cognates presented in the table below, the feature-changing rule is applied.

Table 5: Feature Changing, **f → **v****

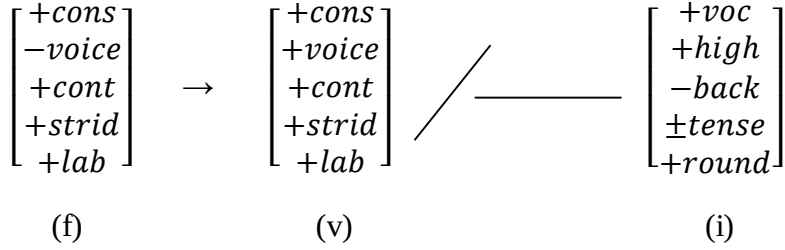
Gloss	BEM	MAM
ancestors	<i>ifikolwe/i-fi-kolwe/</i> [ɪfíkólwé]	<i>vikolwe/vi-kolwe /</i> [víkólwé]
Rain	<i>imfula/i-m-fula/</i> [ɪmfúlá]	<i>mvula/m-vula/</i> [ɱvúlá]
Two	<i>fibili / fi-bili /</i> [fɪβíli]	<i>vili / vi-li /</i> [vɪlí]
Three	<i>fitatu /fi-tatu /</i> [fítátú]	<i>vitatu / vi-tatu /</i> [vítátú]
Four	<i>fine / fi-ne /</i> [fíné]	<i>vini / vi-ni /</i> [víní]
Five	<i>fisano / fi-sano /</i> [físánó]	<i>visano /vi-sano /</i> [vísánó]
elephant	<i>Insofu / i-n-sofu /</i> [ɪnsófú]	<i>nzovu / n-zovu /</i> [nzóvú]
to hear	<i>ukumfwa/u-ku-mfu-a/</i> [ukú:ɱfwá]	<i>kumvwa/ku-mfu-a/</i> [kú:ɱvwá]
Hands	<i>ifisansa / i-fi-sansa /</i> [ɪfísá:nsá]	<i>vizanza / vi-zanza /</i> [vízá:nzá]
Chin	<i>akalefulefu/a-ka-lefulefu/</i> [akálefúléfú]	<i>cilevu / ci-levu /</i> [tʃílévú]
Cousin	<i>umufyala/u-mu-fyal-a/</i> [umúfjálá]	<i>muvyala/mu-vyal-a/</i> [múvjálá]

Birds	<i>ifyuuni</i> /i-fi-uni / [ɪfjú:ní]	<i>vyunyi</i> / vi-unyi / [vjúní]
darkness	<i>imfinshi</i> /i-m-finshi/ [ɪmfí:ní]	<i>mvinzi</i> /m-vinzi / [mví:nzí]
Toes	<i>ifikondo</i> /i-fi-kondo/ [ɪfíkó:ndó]	<i>vikando</i> /vi-kando/ [víká:ndó]
Ribs	<i>imbafu</i> /i-m-bafu/ [ɪmbáfú]	<i>mbavu</i> /m-bavu / [mbávú]
Parent	<i>umufyashi</i> /u-mu-fyashi/ [umúfjáí]	<i>muvyazi</i> /mu-vyazi/ [múvjází]
great grandchildren	<i>ifishikulula</i> /i-fi-shikulula/ [ɪfííkulúlá]	<i>vizikululwa</i> /vi-zikululwa/ [vízíkulúlá]
sugarcane	<i>ifisali</i> / i-fi-sali / [ɪfísálí]	<i>vizali</i> / vi-zali / [vízálí]
pumkins	<i>ifipushi</i> /i-fi-pushi/ [ɪfípúí]	<i>vipuzi</i> / vi-puzi / [vípúzí]
cocoa yam	<i>ifilungwa</i> /i-fi-lungwa/ [ɪfílú:ŋgwáná]	<i>vilungwa</i> /vi-lungwa/ [vílú:ŋgwá]
cucumbers	<i>ifibimbi</i> /i-fi-bimbi/ [ɪfíβi:mbí]	<i>vimbi</i> / vi-mbi / [ví:mbí]
big things	<i>ifikalamba</i> /i-fi-kalamba/ [ɪfíkálá:mbá]	<i>vikalamba</i> /vi-kalamba/ [víkálá:mbá]
many(things)	<i>ifingi</i> /i-fi-ingi / [ɪfí:ŋgí]	<i>vingi</i> /vi-ingi / [ví:ŋgí]
new (things)	<i>ifipya</i> /i-fi-pya / [ɪfípjá]	<i>vipya</i> / vi-pya / [vípjá]
Trees	<i>ifimuti</i> /i-fi-muti / [ɪfímútí]	<i>vimiti</i> / vi-miti/ [vímítí]
shadows	<i>ifinshingwa</i> /i-fi-nshingwa/ [ɪfínf:íŋgwá]	<i>vinzingwa</i> /vi-nzingwa/ [vínzí:ŋgwá]
traditions	<i>ifishilano</i> /i-fi-shilano/ [ɪfíílánó]	<i>vizilano</i> /vi-zilano/ [vízílánó]
hospitals	<i>ifipatala</i> /i-fi-patala/ [ɪfípátálá]	<i>vipatala</i> /vi-patala/ [vípátálá]

The voiceless labio-dental fricative / **f** / heard in the BEM words is changed into the voiced labio-dental fricative / **v** / in the environment before the high front vowel / **i** / in the MAM words. Example are:

- 1 (i) *ifikolwe* [ɪfíkólwé] ‘ancestors’ (BEM)
- (ii) *vikolwe* [víkólwé] ‘ancestors’ (MAM)
- 2 (i) *fitatu* [fítátú] ‘three’ (BEM)
- (ii) *vitatu* [vítátú] ‘three’ (MAM)
- 3 (i) *ifishilano* [ɪfíílánó] ‘traditions’ (BEM)
- (ii) *vizilano* [vízílánó] ‘traditions’ (MAM)

Formalisation of the change is shown below:



The voiceless labio-dental fricative / **f** / heard in the BEM words is changed into the voiced labio-dental fricative / **v** / in the environment before the voiced palatal approximant / **j** / in the MAM words. Examples are:

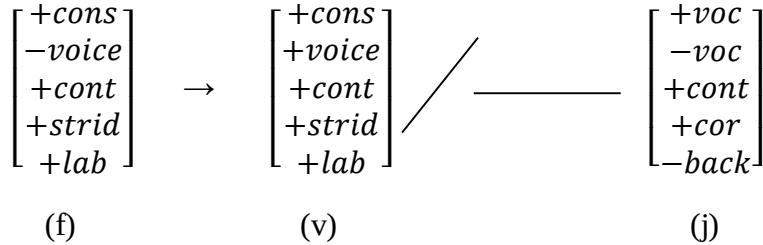
4 (i) *umfya* [umúfjálá] ‘cousin’ (BEM)

(ii) *mu***v***ya* [múvjálá] ‘cousin’ (MAM)

5 (i) *ifyuuni* [ɪfjú:ní] ‘birds’ (BEM)

(ii) *vyun***y***i* [vjújíní] ‘birds’ (MAM)

Formalisation of the change is shown below:



The voiceless labio-dental fricative / **f** / heard in the BEM words is changed into the voiced labio-dental fricative / **v** / in the environment before the high back vowel / **u** / in the MAM words. Examples are:

6(i) *imf***u***la* [ɪmfúlá] ‘rain’ (BEM)

(ii) *mv***u***la* [ɪmvúlá] ‘rain’ (MAM)

7(i) *insof***u** [ɪnsófú] ‘elephant’ (BEM)

(ii) *nzov***u** [ɪnzófú] ‘elephant’ (MAM)

Formalisation of the change is shown below:

$$\begin{array}{ccc}
 \begin{bmatrix} +cons \\ -voice \\ +cont \\ +strid \\ +lab \end{bmatrix} & \rightarrow & \begin{bmatrix} +cons \\ +voice \\ +cont \\ +strid \\ +lab \end{bmatrix} \quad \diagup \quad \text{---} \quad \begin{bmatrix} +high \\ +back \\ -tense \\ +round \end{bmatrix} \\
 (f) & & (v) \qquad \qquad \qquad (u)
 \end{array}$$

The voiceless labio-dental fricative / f / heard in the BEM words is changed into the voiced labio-dental fricative / v / in the environment before the voiced labio-velar approximant / w / in the MAM words. The example is:

8(i) *ukumfwa* [ukú: ɱfwá] ‘to hear’ (BEM)

(ii) *kumvwa* [kú:ɱvwá] ‘to hear’ (MAM)

Formalisation of the change is shown below:

$$\begin{array}{ccc}
 \begin{bmatrix} +cons \\ -voice \\ +cont \\ +strid \\ +lab \end{bmatrix} & \rightarrow & \begin{bmatrix} +cons \\ +voice \\ +cont \\ +strid \\ +lab \end{bmatrix} \quad \diagup \quad \text{---} \quad \begin{bmatrix} +voc \\ -voc \\ +cont \\ +lab \\ +back \end{bmatrix} \\
 (f) & & (v) \qquad \qquad \qquad (w)
 \end{array}$$

The rule is that the voiceless labio-dental fricative / f / in the BEM words is converted to the voiced labio-dental fricative / v / in the MAM words in the environment before the high front vowel /i /, the voiced palatal approximant /j /, the high back vowel /u / and the voiced labio-velar approximant /w / ; this is a difference.

The main similarity is that all the words in the table are cognates.

5.1.1.2 Consonant Segments: Feature Changing rule, ɸ → ʋ

In the BEM and MAM cognates presented in the table below, the feature-changing rule is applied.

The key informant was interviewed with regard to the feature changing rule that is shown above. He was requested to provide the equivalents of the English terms in BEM and MAM for the researcher to find out whether there were similarities and differences in relation to the rule. After

this exercise, the informants, including the key informant, verified the findings. Below are the analysis and interpretation of the findings.

Table 6: Feature Changing, ʃ → z

Gloss	BEM	MAM
Pineapple	<i>icinanashi</i> /i-ci-nanashi/ [ɪʃínánáʃí]	<i>cinanazi</i> /ci-nanazi/ [ʃínánází]
month / moon	<i>umweshi</i> /u-mu-eshi/ [umwéʃí]	<i>mwezi</i> /mu-ezi/ [mwézí]
Name	<i>iiishina</i> /i-i-shina/ [i:ʃíná]	<i>izina</i> /i-zina/ [ízíná]
Parent	<i>umufyashi</i> /u-mu-fyashi/ [umúfjájí]	<i>muvyazi</i> /mu-vyazi/ [múvjází]
Sister	<i>inkashi</i> /i-n-kashi/ [ɪ́kʌʃí]	<i>nkazi</i> /n-kazi/ [ɪ́kʌzí]
Pumpkin	<i>icipushi</i> /i-ci-pushi/ [ɪʃípúʃí]	<i>cipuzi</i> /ci-puzi/ [ʃípúzí]
Bed	<i>ubusanshi</i> /u-bu-sanshi/ [uβúsá:nʃí]	<i>musanzi</i> /mu-sanzi/ [músá:nzí]
milk from animals	<i>iiishiba</i> /i-i-shiba/ [i:ʃíβá]	<i>iziya</i> /i-ziya/ [ízíjá]
Fireplace	<i>iiishiko</i> /i-i-shiko/ [i:ʃíkó]	<i>iziko</i> /i-ziko/ [ízíkó]
Water	<i>ameenshi</i> /a-ma-inshi/ [amé:nʃí]	<i>manzi</i> /manzi/ [má:nzí]
Housefly	<i>lunshi</i> /ø-lunshi/ [lú:nʃí]	<i>lunzi</i> /ø-lunzi/ [lú:nzí]
night	<i>ubushiku</i> /u-bu-shiku/ [úβuʃíkú]	<i>uziku</i> /u-ziku/ [úzikú]
Darkness	<i>imfinshi</i> /i-m-finshi/ [ɪmfí:nʃí]	<i>mvinzi</i> /m-vinzi/ [ɪmví:nzí]
Shadows	<i>ifinshingwa</i> /i-fi-nshingwa/ [ɪfí:nʃi:ɪŋgwá]	<i>vinzingwa</i> /vi-zingwa/ [ví:nzi:ɪŋgwá]
Bend	<i>icinshoko</i> /i-ci-nshoko/ [ɪʃí:nʃókó]	<i>cinzyoko</i> /ci-nzyoko/ [ʃí:nzjókó]

The voiceless postalveolar fricative / ʃ / heard in the BEM words is changed into the voiced alveolar fricative / z / in the environment before the high front vowel / i / in the MAM words. Examples are:

9 (i) *inkashi* [ɪ́kʌʃí] ‘sister’ (BEM)

(ii) *nkazi* [ɪ́kʌzí] ‘sister’ (MAM)

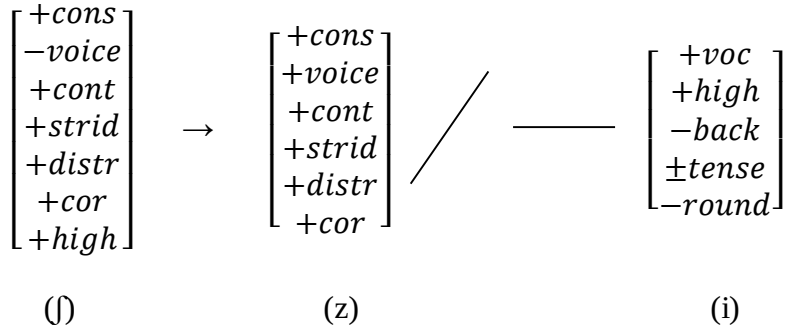
10 (i) *ameenshi* [amé:nʃí] ‘water’ (BEM)

(ii) *manzi* [má:nzí] ‘water’ (MAM)

11(i) *ifinshingwa* [ɪfí:nʃi:ɪŋgwá] ‘shadows’ (BEM)

(ii) *vinzingwa* [vɪ:nzi:ŋgwá] ‘shadows’ (MAM)

Formalisation of the change is shown below:



The generalisation is that the voiceless postalveolar fricative / ʃ / heard in the BEM words is changed into the voiced alveolar fricative / z / in the environment before the high front vowel / i /; this is a difference.

The similarity is that all the words in the table are cognates.

5.1.2 Allophonic rules in relation to this study

Allophonic rules have to do with the relationship of allophones to phonemes: the phonemes of a language are abstractions and the particular phonetic shapes (i.e allophones) they take are dependent upon many factors, especially their position in relation to other sounds in an utterance, (Crystal, 2008). In other words, a phoneme, which is a cover symbol, has a range of different sounds (or phones) that occur in actual speech, (Akmajian, Demers, Farmer & Harnish, 2001).

This section of the chapter presents the data in the languages under study with regard to allophonic rules operating on the consonant segments /l/ and /ɹ/.

5.1.2.1 The allophonic rule operating on consonant /l/ in BEM and MAM

In BEM, there are two allophones of the voiced alveolar lateral /l/, and these are the voiced alveolar plosive /d/ and the voiced alveolar lateral /l/. This allophonic rule states that the allophone /d/ is applicable if the voiced alveolar nasal /n/ immediately precedes it whereas the allophone /l/ occurs elsewhere.

The key informant was requested to provide the equivalents of the given English expressions in BEM and MAM with regard to the rule which is explained above. After this exercise, the informants, including the key informant, verified the findings. Below are the analysis and interpretation of the findings.

Table 7: Allophonic rule operating on consonant /l /

Gloss	BEM Pronunciation	MAM pronunciation
I eat	/n-la-li-a/ → <i>ndalya</i> [ndáljá]	/n-ka-li-a/ → <i>nkalya</i> [ńkaljá]
I'm eating	/n-lee-li-a/ → <i>ndeelya</i> [ndé:ljá]	/n-ku-li-a / → <i>nkulya</i> [ńkuljá]
I see them	/n-la-ba-mon-a/ → <i>ndabamona</i> [ndábámóná]	/n-ka-ya-lol-a/ → <i>nkayalola</i> [ńkajálólá]
I go	/n-la-i-a/ → <i>ndaya</i> [ndájá]	/n-ka-i-a/ → <i>nkaya</i> [ńkajá]
I laugh	/n-la-sek-a/ → <i>ndaseká</i> [ndáséká]	/n-ka-sek-a/ → <i>nkaseka</i> [ńkaséká]
I dance	/n-la-cind-a/ → <i>ndacinda</i> [ndátĩ:ndá]	/n-ka-cin-a/ → <i>nkacina</i> [ńkatĩná]

The allophonic rule operating on /l/ in these verbs is applicable to BEM when the voiced alveolar lateral /l/ in the present simple tense marker **-la-** and that in the present progressive tense marker **-lee-** is realised as allophone /d/ in the environment after the voiced alveolar nasal /n/. In contrast to this, the voiceless velar plosive /k/ which is the initial consonant sound for the present simple tense marker **-ka-** and the present progressive tense marker **-ku-** in the MAM verbs in the table is not part of the allophonic rule stated above despite the fact that both BEM and MAM verbs in the table convey the same meanings.

It is evident that the distinction in the use of phonemes does not affect structural interpretation, (See also Arbor, 1957).

Examples from the table:

12 (i) *ndalya* [ndáljá] 'I eat' (BEM)

(ii) *nkalya* [ńkaljá] 'I eat' (MAM)

13 (i) *ndaseka* [ndáséká] 'I laugh' (BEM)

(ii) *nkaseka* [ńkaséká] 'I laugh' (MAM)

14(i) *ndacinda* [ndátĩ:ndá] 'I dance' (BEM)

(ii) *nkacina* [ŋkatʃíná] ‘I dance’ (MAM)

15 (i) *ndeelya* [ndé:ljá] ‘I’m eating’ (BEM)

(ii) *nkulya* [ŋkuljá] ‘I’m eating’ (MAM)

It is noted that the first person subject marker *n-* phonetically changes to the voiced velar nasal [ŋ], making it homorganic with the voiceless velar plosive /k/ which begins the present tense marker *-ka-* and the present progressive tense marker *-ku-* in the MAM verbs in the table above.

The conclusion is that there are differences between BEM and MAM in the application of the allophonic rule operating on /l/ with regard to the present simple tense and the present progressive tense markers. *Ndabamona* ‘I see them’ (BEM); *nkayalola* ‘I see them’ (MAM) and *ndacinda* ‘I dance’ (BEM) and *nkacina* ‘I dance’ (MAM) are also differences, morphophonologically.

With the exception of the verbs mentioned above, the BEM and MAM verbs in the table are cognates: this is a similarity.

5.1.2.2 The allophonic rule operating on consonant /ɓ/

The consonant /ɓ/ has two allophones, namely: the voiced bilabial plosive /b/, which must be preceded by the voiced bilabial nasal /m/ in the nasal complex /mb/ while the other allophone, which is the voiced bilabial fricative/ɓ/, is used elsewhere.

The key informant was requested to provide the equivalents of the given English expressions in BEM and MAM with regard to the rule which is explained above. After this exercise, the informants, including the key informant, verified the findings. Below are the analysis and interpretation of the findings.

Table 8: Allophonic rule operating on consonant /ɓ/

Gloss	BEM pronunciation	MAM pronunciation
work (verb)	<i>bomba</i> /-bomb-a/ [ɓó:mbá]	<i>omba</i> /-omb-a [ó:mbá]
mould (verb)	<i>bumba</i> /-bumb-a/ [ɓú:mbá]	<i>mata</i> /-mat-a/ [mátá]
people	<i>abantu</i> /a-ba-ntu/ [aɓá:ntú]	<i>antu</i> /a-ntu/ [á:ntú]
beer	<i>ubwalwa</i> /u-bu-alwa/ [uɓwá:lwá]	<i>wengwa</i> /u-engwa/ [wé:ŋgwá]
wedding	<i>ubwinga</i> /u-bu-inga/ [uɓwí:ŋgá]	<i>winga</i> /u-inga/ [wí:ŋgá]
come back	<i>bwela</i> /-bwel-a/ [ɓwé:lá]	<i>wela</i> /-wel-a/ [wé:lá]
to carve out	<i>ukubaasa</i> /u-ku-baas-a/ [ukúɓá:sá]	<i>kuwaza</i> /ku-waz-a/ [kúwá:zá]

to read	<i>ukubelenga</i> /u-ku-beleng-a/ [ukú□élé:ŋgá]	<i>kuwelenga</i> /ku-weleng-a/ [kúwélé:ŋgá] <i>kuwazya</i> /ku-wazi-a/ [kúwá:zjá]
mat made from reeds	<i>ubutanda</i> /u-bu-tanda/ [u□útá:ndá]	<i>utanda</i> /u-tanda/ [utá:ndá]
Preparation	<i>ubwanshiko</i> /u-bu-anshiko/ [u□wá:ŋfíkó]	<i>wanziko</i> /u-anziko/ [wá:nzíkó]
Fiancée	<i>nkobekela</i> /n-kobekel-a/ [ŋkóβékélá]	<i>nkowekela</i> /n-kowekel-a/ [ŋkowékélá]
a leap/ jump	<i>iibaka</i> /i-i-baka/ [í:βaká]	<i>iwaka</i> /i-waka/ [íwaká]
Flower	<i>iiluba</i> /i-i-luba / [í:luβá]	<i>iluwa</i> /i-luwa/ [íluwá]
Shell	<i>umuseba</i> /u-mu-seba/[úmuséβá]	<i>musyewa</i> /mu-syewa/ [músjéwá]

As shown in the table above, the voiced bilabial fricative /□/ is not realised in the MAM words: *omba* [ó:mbá] ‘work’ in the environment before the mid back vowel /o/, *antu* [á:ntú] ‘people’ in the environment before the low central vowel /a/, *wela* [wé:lá] ‘come back’ in the environment before the voiced labio-velar approximant /w/, *utanda* [utá:ndá] ‘mat made from reeds’ in the environment before the high back vowel /u/, *wanziko* [wánzíkó] ‘preparation’ in the environment before the voiced labio-velar approximant /w/ and *winga* [wíŋgá] ‘wedding’ in the environment before the voiced labio-velar approximant /w/. In the other MAM words *kuwaza* [kúwázá] ‘to carve out’ and *kuwelenga* [kúwéléŋgá] ‘to read’, the voiced bilabial fricative /□/ has been substituted by the voiced labio-velar approximant /w/ in the environment before the low central vowel /a/ and the mid front vowel /e/, respectively. The contrast with regard to this allophonic rule is noted also in the examples below:

16 (i) *nkobekela* [ŋkóβékélá] ‘fiancée’ (BEM)

(ii) *nkowekela* [ŋkowékélá] ‘fiancée’ (MAM)

17 (i) *iibaka* [í:βaká] ‘a leap/jump’ (BEM)

(ii) *iwaka* [íwaká] ‘a leap/jump’ (MAM)

This study has concluded that the allophonic rule of the voiced bilabial fricative /□/ applies to BEM, but not to MAM. In fact, the two allophonic rules are applicable to BEM.

The similarity is that the voiced bilabial plosive /b/ manifests in the nasal complex /-mb-/ in both MAM and BEM as the case is in the words *omba* [ó:mbá] ‘work’ and *bomba* /-bomb-a/ [□ó:mbá] ‘work’, respectively.

Another similarity is that all the words in the table are cognates, with these exceptions: *bumba* /-bumb-a/ [□ú:mbá] (BEM) ‘mould’ and *mata* /-mat-a/ [mátá] (MAM) ‘mould’; *ubwalwa/u-bu-alwa/* [u□wá:lwá] ‘beer’(BEM) and *wengwa/u-engwa/* [wé:ŋgwá] (MAM) ‘beer’; *ukubelenga/u-ku-beleng-a/* [ukú□élé:ŋgá] ‘read’(BEM) and *kuwazyu/ku-wazi-a/* [kúwá:zjá] ‘read’(MAM)

The non-application of the allophonic rule concerning the voiced bilabial fricative /β/ in MAM is attributable to the sequence of sounds in the words indicated above. Arbor (1957) attaches significance to the sequence or distribution of phonemes in words because it is the source of pronunciation differences between languages.

5.1.3 Palatalisation and postalveolarisation in causative and intensive verb forms

This section of the thesis discusses palatalisation and postalveolarisation in causative and intensive verb forms with a view to identifying the differences and similarities between the languages under investigation.

5.1.3.1 Palatalisation and postalveolarisation in causative verbal forms

The key informant was requested to provide the equivalents of the given English expressions in BEM and MAM with regard to palatalisation and postalveolarisation in causative verb forms for the researcher to identify the differences and similarities between the languages under investigation. After this exercise, the informants, including the key informant, verified the findings. Below are the analysis and interpretation of the findings.

Table 9: Palatalisation and postalveolarisation in causative verbal forms

Gloss	BEM pronunciation	MAM pronunciation
to cause something to burst	<i>ukupoosha/u-ku-poosi-a/</i> [ukúpó:fǎ]	<i>kupusya/ku-pusi-a/</i> [kúpúsjá]
to cause (a dog) to hunt	<i>ukulunsha/u-ku-lunsi-a/</i> [ukúlú:nǎ]	<i>kulusya/ku-lusi-a/</i> [kúlúsjá]
to cause somebody to drink	<i>ukunweshu/u-ku-nwesi-a/</i> [ukú:nwé:fǎ]	<i>kumwezya/ku-mwesi-a/</i> [kú:mwé:sjá]
to cause somebody to pass	<i>ukupisha/u-ku-pisi-a/</i> [ukúpí:fǎ]	<i>kupisya/ku-pisi-a/</i> [kúpísjá]
to cause somebody to talk	<i>ukulunsha/u-ku-lansi-a/</i> [ukúlá:nǎ]	<i>kulanzya/ku-lanzi-a/</i> [kúlá:nzjá]
to cause somebody to stop doing something	<i>ukulesha/u-ku-lesi-a/</i> [ukúlélǎ]	<i>kulesya/ku-lesi-a/</i> [kúlésjá]
to cause somebody to act; urge on to an action, especially a bad thing	<i>ukusokeshu/u-ku-sokesi-a/</i> [ukúsókélǎ]	<i>kuswemezya/ku-swemezi-a/</i> [kúswé:mé:zjá]

The process of palatalisation refers to any articulation involving a movement of the tongue towards the hard palate, (Crystal, 2008). Palatalisation usually occurs in the environment of the high front sound such as /i/ or /j/, (Akmajian et.al, 2001). In some languages, including the languages under investigation, the /s/ and /z/ preceding the [i] or [j] undergo palatalisation. For example, the /s/ in the BEM and MAM words *ukupoosya* /ukupoosja/ and *kupusya*/kupusja/, respectively, is palatalised to [sj]. However, there is deletion of the voiced palatal approximant /j/ in the BEM word *ukupoosja*. Therefore, the voiceless alveolar fricative /s/ undergoes postalveolarisation. Hence, the BEM word *ukupoosha* ‘to cause something to burst’ is phonetically realised as [ukúpó:fǎ]. On the other hand, the voiceless alveolar fricative /s/ in the MAM word *kupusya* [kúpúsjá] ‘to cause something to burst’ remains palatalised.

The findings are that the infinitives(or verbs) in MAM under causative verbal extension end at palatalisation level whereas those in BEM undergoing the same verbal extension go two steps further by having their voiced palatal approximant /j/ deleted and the voiceless alveolar fricative /s/ postalveolarised. This is a difference.

The conversion of the verb *cimba* [tʃí:mbá] ‘surrender’ to causative verbal form manifests the difference between the languages. To do this in BEM, the voiced bilabial plosive /b/ in the nasal complex /-mb-/ is fricativised to the voiceless labio-dental fricative /f/ which is then palatalised as [fj] in the process of the verb changing to the causative verbal form *cimfya* [tʃí:mǎfjá] ‘cause

somebody to surrender or be defeated’. The same process occurs in MAM, but the difference is that the voiced bilabial plosive /b/ in the verb *cimba* [tʃí:mbá] ‘surrender’ is converted to the voiced labio-dental fricative /v/ which is palatalised as [vj], as the verb changes to the causative verbal form *cimvya* [tʃí: ɱvjá] ‘cause to be defeated’; this is a difference with regard to the process of fricativisation or spirantisation.

If the BEM verb *lulumba* [lúlú:mbá] ‘move everywhere’ is converted to the causative verbal form; its voiced bilabial plosive /b/ is fricativised to the voiceless labio-dental fricative /f/ which is then palatalised as [fj] to derive the causative verbal form *lulumfya* [lúlú:ɱfjá] ‘cause to move everywhere’. In the MAM verb *pitana* [pítáná] ‘move everywhere’, the voiced alveolar nasal /n/ is, in the process of palatalisation, converted to the voiced palatal nasal [ɲ] as the verb changes to the causative verbal form *pitanya* [pítáɲá] ‘cause to move everywhere’.

In the BEM verb *kosa* [kósá] ‘be/become hard’, the voiceless alveolar fricative /s/ is palatalised to [sj], as the verb changes to the causative verbal form /kosja/. However, the voiced palatal approximant /j/ is deleted, causing the voiceless alveolar fricative /s/ to undergo postalveolarisation: it becomes the voiceless postalveolar fricative [ʃ]. The resultant causative verbal form is *kosha* [kófá] ‘cause to become hard’. In the MAM verb *koma* [komá] ‘be/become hard’, the voiced bilabial nasal /m/ undergoes palatalisation [mj] to form the causative verb *komya* [kómjá] ‘cause to be/become hard’. While palatalisation and postalveolarisation have occurred in the derivation of the BEM causative verb *Kosha* [kófá], only palatalisation of the voiced bilabial nasal [mj] has taken place in the MAM verb *koma* [kómá] to derive the causative verbal form *komya* [kómjá] ‘cause to become hard’.

Examples of causative verbal forms:

- 18 (i) *ukulunsha* [ukúlú:ɲfá] ‘cause to hunt’ (BEM)
- (ii) *kulusya* [kúlúsjá] ‘cause to hunt’ (MAM)
- 19 (i) *ukupisha* [ukúpíʃá] ‘cause to pass’ (BEM)
- (ii) *kupisya* [kúpísjá] ‘cause to pass’ (MAM)
- 20 (i) *cimfya* [tʃí:ɱfjá] ‘cause to be defeated’ (BEM)
- (ii) *cimvya* [tʃí:ɱvjá] ‘cause to be defeated’ (MAM)
- 21(i) *ukululumfya* [úkulúlú:ɱfjá] ‘cause to move everywhere’ (BEM)
- (ii) *kupitanya* [kúpítáɲá] ‘cause to move everywhere’ (MAM)

The difference involves postalveolarisation and palatalisation for BEM and MAM, respectively, as shown in 18 and 19. In 20, there is palatalisation in both BEM and MAM, but the difference consists in feature changing. In the last pair, that is 21, there is palatalisation in these different lexical entries with the same meaning

The similarity is noted in the cognates such as

- (i) *ukulunsha* [ukúlú:ɲfǎ] ‘cause to hunt’ (BEM)
- (ii) *kulusya* [kúlúsjǎ] ‘cause to hunt’ (MAM)
- (i) *ukupisha* [ukúpíǎ] ‘cause to pass’ (BEM)
- (ii) *kupisya* [kúpísjǎ] ‘cause to pass’ (MAM), and many others in table above.

5.1.3.2 Palatalisation and postalveolarisation in intensive verbal forms

The key informant was requested to provide the equivalents of the given English expressions in BEM and MAM with regard to palatalisation and postalveolarisation in intensive verb forms for the researcher to identify the differences and similarities between the languages under investigation. After this exercise, the informants, including the key informant, verified the findings. Below are the analysis and interpretation of the findings.

Table 10: Palatalisation and postalveolarisation in intensive verbal forms

Gloss	BEM pronunciation	MAM pronunciation
to cultivate very much / too much	<i>ukulimisiya</i> /u-ku-limisi-a/ [ukúlímíǎ]	<i>kulimisiya</i> /ku-limisi-a/ [kúlímísjǎ]
to run very much / too much	<i>ukubutukisiya</i> /u-ku-butukisi-a/ [úku □ útúkíǎ]	<i>kusimulisiya</i> /ku-simulisi-a/ [kúsímúlísjǎ]
to shout very much / too much	<i>ukupundisiya</i> /u-ku-pundisi-a/ [ukúpú:ndíǎ]	<i>kulaizisiya</i> /ku-laizisi-a/ [kúláízísjǎ]
to eat very much / too much	<i>ukuliisiya</i> /u-ku-liisi-a/ [úkúlí:ǎ]	<i>kulisiya</i> /ku-lisi-a/ [kúlísjǎ]
to shine very much / too much	<i>ukubalikisiya</i> /u-ku-balikisi-a/ [úku □ álíkíǎ]	<i>kuwalisiya</i> /ku-walisi-a/ [kúwá:lísjǎ]
to clap very much / too much	<i>ukutootesya</i> /u-ku-tootesi-a/ [ukútó:téǎ]	<i>kukomelesya</i> /ku-komelesi-a/ [kúkómélésjǎ]
to play very much / too much	<i>ukwangalisiya</i> /u-ku-angalisi-a/ [ukwángálíǎ]	<i>kucimisiya</i> /ku-cimisi-a/ [kútíímísjǎ]
to cook very much / too much	<i>ukwipikisiya</i> /u-ku-ipikisi-a/ [ukwí:píkíǎ]	<i>kwelekesya</i> /ku-elekesi-a/ [kwé:lékésjǎ]

Examples of intensive verb forms are:

- 22 (i) *ukwangalisha* [ukwángálíǎ] ‘to play very much / too much’ (BEM)

(ii) *kucimisya* [kút/ímísjá] ‘to play very much / too much’ (MAM)

23 (i) *ukwipikisha* [ukwí:píkíjǎ] ‘to cook very much / too much’ (BEM)

(ii) *kwelekesya* [kwé:lékésjá] ‘to cook very much / too much’ (MAM)

Palatalisation and postalveolarisation in BEM verbs when they are extended into intensive verbal forms and palatalisation in MAM verbs when they are converted to intensive verbal forms are quite similar to what has been discussed earlier under the causative verbal forms.

It is noted that the MAM verbs undergoing intensive verbal extension process end at palatalisation level whereas the BEM verbs going through the same process go two steps further by having their voiced palatal approximant /j/ deleted and the voiceless alveolar fricative /s/ postalveolarised; this is a difference.

With regard to similarity, it is noted that most of the words in the table are cognates as in example 22 above.

5.1.4 Morphophonological rule of vowel harmony in relation to applicative (or applied) verbal extension

This section presents the application of the morphophonological rule of vowel harmony. In morphophonology, phonological factors affect the shape, or appearance of morphemes (Crystal, 1991; Mathews, 2005).

The rule of vowel harmony stipulates that in applied verbal extension, the preceding mid vowel, either the mid front vowel /e/ or the mid back vowel /o/ in the verb radical causes the high front vowel /i/ in the applied verbal extension morph /-il-/ to be realised as the mid front vowel [e]. The applied verbal extension morph /-il-/ carries the semantic value of doing something for or on behalf of someone. This implies that the high front vowel /i/ in the applied verbal extension morph /-il-/ remains unaltered if the vowel in the verb radical is neither the mid front vowel /e/ **nor** the mid back vowel /o/.

The key informant was requested to provide the equivalents of the given English expressions in BEM and MAM with regard to the application of the morphophonological rule of vowel harmony for the researcher to identify the differences and similarities between the languages under

investigation. After this exercise, the informants, including the key informant, verified the findings. Below are the analysis and interpretation of the findings.

Table 11: Morphophonological rule on vowel harmony

Gloss	BEM	MAM
harvest (the millet) for	/-seep- il -a/→ <i>seepela</i> [sé:pélá]. (The rule applies)	/-sinz- il -a/→ <i>sinzila</i> [sí:nzílá] (The rule should not apply)
throw for or on behalf of	/-poos- il -a/→ <i>poosela</i> [pó:sélá] (The rule applies)	/-sumb- il -a/→ <i>sumbila</i> [sú:mbílá] (The rule should not apply)
guard for or on behalf of	/-lond- il -a/→ <i>londela</i> [ló:ndélá] (The rule applies)	/-lind- il -a/→ <i>lindila</i> [lí:ndílá] (The rule should not apply)
cut (tree) for or on behalf of	/-tem- il -a/→ <i>temena</i> [téméná] (The rule applies)	/-tem- il -a/→ <i>temela</i> [témélá] (The rule applies)
fold for or on behalf	/-pet- il -a/→ <i>petela</i> [pétélá] (The rule applies)	/-vung- il -a/→ <i>vungila</i> [vú:ngílá] (The rule should not apply)
write for or on behalf	/-lomb- il -a/→ <i>lombela</i> [lé:mbélá] (The rule applies)	/-lomb- il -a/→ <i>lombela</i> [lé:bélá] (The rule applies)
beg for or on behalf of	/-lomb- il -a/→ <i>lombela</i> [ló:mbélá] (The rule applies)	/-leng- il -a/→ <i>lengela</i> [lé:ngélá] (The rule applies)
pick up for or on behalf of	/-tool- il -a/→ <i>toolela</i> [tó:lélá] (The rule applies)	/-lengu- il -a/→ <i>lengwila</i> [lé:ngwílá] (The rule should not apply)

The study reveals that the mid front vowel /e/ in the BEM verb radical -seep- [se:p] ‘harvest (the millet)’ changes the high front vowel /i/ in the applied verbal extension morph /-il-/ to the mid front vowel /e/ in order to derive the applied verbal form seep-**el**-a which become *seepela* [sé:pélá] ‘harvest (the millet) on behalf of someone. For the MAM word *sinza* [sí:nzá] ‘harvest (the millet)’, the high front vowel /i/ in the applied verbal extension morph /-il-/ does not change to the mid front vowel /e/ because the vowel in the verb radical –sinz- [sí:nz] ‘harvest’ is neither the mid front vowel /e/ nor the mid back vowel /o/. In fact, the vowel in the verb radical is the high front vowel /i/. Hence, the applied verbal form derived from sinz-a is sinz-**il**-a, which becomes *sinzila* [sí:nzílá] ‘harvest (the millet) on behalf of someone’.

It is also noted that in the BEM verb radical –*poos-* [pɔ:s] ‘throw’ the mid back vowel /**o**/ converts the high front vowel /**i**/ in the applied verbal extension morph /-**il**-/ to the mid front vowel /**e**/. Therefore, the applicative verbal form of the verb *poosa* [pó:sá] is *poos-el*-a which becomes *poosela* [pó:sélá] ‘throw on behalf of someone’. This is not the case with the MAM verb radical -*sumb-* [su:mb] ‘throw’ in which the vowel is not either the mid front vowel /**e**/ or the mid back vowel /**o**/. This is why the high front vowel /**i**/ in the infixed applicative morph /-**il**-/ does not change. Consequently, the applicative verbal form is *sumb-il*-a which is rendered as *sumbila* [sú:mbílá] ‘throw on behalf of someone’. Similarly, the vowel in the other MAM verb radical -*vung-* [vu:ŋg] ‘fold’ is the high back vowel /**u**/. This is incapable of converting the high front vowel /**i**/ in the applied verbal extension morph /-**il**-/ and, therefore, the applied verbal form is *vung-il*-a which becomes *vungila* [vú:ŋgílá] ‘fold for’.

In contrast to the foregoing, the vowel in the corresponding BEM verb radical –*pet-* [pet] ‘fold’ is the mid front vowel /**e**/ which causes the high front vowel /**i**/ in the applicative verbal extension morph /-**il**-/ to change to the mid front vowel /**e**/ and the resultant applicative verbal form is *pet-el*-a which is rendered as *petela* [pétélá] ‘fold on behalf of someone’. In the BEM verb radical -*tool-* [to:l] ‘pick up’, the mid back vowel /**o**/ changes the high front vowel /**i**/ in the applicative verbal extension morph /- **il**-/ to the mid front vowel /**e**/ and, hence, the derived applicative verbal form is *tool-el*-a which becomes *toolela* [tó:lélá] ‘pick up on behalf of someone’. A different situation applies to the corresponding MAM verb radical -*lengu-* [le:ŋgu] ‘pick up’ in which the mid front vowel /**e**/ and the high back vowel /**u**/ do not cause the conversion of the high front vowel /**i**/ in the applicative verbal extension morph /-**il**-/ to the mid front vowel /**e**/. Because of that, the derived applied verbal form is *lengu-il*-a which becomes *lengwila* [lé:ŋgwílá] ‘pick up for’. Semivocalisation has also occurred in this word: the high back vowel /**u**/ has become the voiced labio-velar approximant /**w**/ in the environment before the high front vowel /**i**/. Semivocalisation is covered in section 5.3.7.

A similar difference is noted in the verb radicals - *lond-* [lɔ:nd] ‘guard’ and -*lind-* [li:nd] ‘guard’ for BEM and MAM, respectively. In the BEM verb radical, there is the mid back vowel /**o**/, which causes the conversion of the high front /**i**/ in the applicative verbal extension morph /-**il**-/ to the mid front vowel /**e**/, as shown here: *lond-il*-a becomes *londela* [lóndélá] ‘to guard for’. On the

other hand, the MAM verb radical –**lind-** has the high front vowel /i/ which does not cause the change of the high front vowel /i/ in the applicative verbal extension morph /-**il-**/, as illustrated here: **lind-il-a** becomes *lindila* [lí:ndí^hlá] ‘guard for’

There are instances where verb radicals are shared by both languages. For example, the verb radical –**tem** ‘cut (trees)’- is for both BEM and MAM: **tem-il-a** becomes *temena* for BEM and *temela* for MAM. The difference in this case is that in the BEM word *temena*, another rule applies, and this is progressive nasal assimilation; the voiced alveolar lateral /l/ becomes the voiced alveolar nasal /n/ in the environment after the voiced bilabial nasal /m/ which is in the verb radical –**tem-**. On the other hand, the voiced alveolar lateral /l/ in the corresponding MAM word *temela* does not undergo progressive nasal assimilation. The nasal assimilation rules are presented and discussed in section 5.3.9. The word **lomb-il-a** which changes to *lombela* [lé:mbé^hlá] ‘write for’ is both BEM and MAM. The vowel harmonisation rule also applies to the BEM word **lomb-il-a** which becomes *lombela* [ló:mbé^hlá] ‘beg for’ and to the MAM word **leng-il-a** which is rendered as *lengela* [lé:ngé^hlá] ‘beg for’. Here are a few examples of the differences extracted from the table above:

24 (i) **seep-il-a** → *seepela* [sé:pé^hlá] ‘harvest (the millet) for someone’. (The rule applies) (BEM)

(ii) **sinz-il-a** → *sinzila* [sí:nzílá] ‘harvest (the millet) for someone’. (The rule should not apply) (MAM)

25 (i) **pet-il-a** → *petela* [pété^hlá] ‘fold for someone’ (The rule applies) (BEM)

(ii) **vung-il-a** → *vungila* [vú:ngí^hlá] ‘fold for someone’ (The rule should not apply) (MAM)

26 (i) **lomb-il-a** → *lombela* [ló:mbé^hlá] ‘beg for’ (The rule applies) (BEM)

(ii) **leng-il-a** → *lengela* [lé:ngé^hlá] ‘beg for’ (The rule applies) (MAM)

It is also important to indicate that this rule applies to both languages under study; this is a similarity. However, some minor differences have been noted such as in 24, 25 and 26. For other differences, refer to the table above.

5.1.5 Semivocalisation (Gliding) as a contributory factor in this study.

One of the themes contributing to the first objective of this study is semivocalisation and this is what this section presents. The unit at the centre of this sub-theme is the semi-vowel which is phonetically like a vowel, but whose place in a syllable structure is characteristically that of a consonant, (Matthews, 2005). In fact, semivocalisation or gliding is a morphophonological process by which semivowels or glides are formed. In this process, the high back vowel / **u**/ is represented as the voiced labio-velar approximant / **w**/ in the environment before another vowel with the exception of the high back vowel / **u**/. In a similar manner, the high front vowel / **i**/ is realised as the voiced palatal approximant / **j**/ in the environment before a vowel, except the high front vowel / **i**/. These phonological rules are formally presented below:

- (i) **u** → **w** / ——— [i, o, e, a]
 i → **j** / ——— [e, a, o, u]

The key informant was requested to provide the equivalents of the given English expressions in BEM and MAM with regard to semivocalisation for the researcher to identify the differences and similarities between the languages under investigation. After this exercise, the informants, including the key informant, verified the findings. Below are the analysis and interpretation of the findings.

(ii)

Table 12: The process of semivocalisation

Gloss	BEM	MAM
guest	/u-mu- eni / → <i>umweni</i> [umwéni]	/mu- enyi / → <i>mwenyi</i> [mwéni]
boat/canoe	/u-bu- ato / → <i>ubwato</i> [ubwá:tó]	/u- ato / → <i>wato</i> [wá:tó]
owner	/u-mu- ine / → <i>umwine</i> [umwí:né]	/mu- ine / → <i>mwine</i> [mwí:né]
knives	/i-mi- ele / → <i>imyele</i> [mjé:lé]	/mi- peni / → <i>mipeni</i> [mípeni] (no semivocalisation)
moon	/u-mu- eshi / → <i>umweshi</i> [umwé:ʃi]	/mu- ezi / → <i>mwezi</i> [mwé:zi]
baby/child	/u-mu- ana / → <i>umwana</i> [umwá:ná]	/mu- ana / → <i>mwana</i> [mwá:ná]
wedding	/u-bu- inga / → <i>ubwinga</i> [ubwí:ŋgá]	/u- inga / → <i>winga</i> [wí:ŋgá]
door way	/u-mu- inshi / → <i>umwinshi</i> [umwí:nʃi]	/mu- li-ango / → <i>mulyango</i> [múljá:ŋgó]
to close	/u-ku- isala / → <i>ukwisala</i> [ukwí:sála]	/ku- i-ala / → <i>kuyala</i> [kújá:lá]

to open	/u-ku- is ula/ → ukwisula [ukwí:súlá]	/ku- i -ula /→ kuyula [kújú:lá]
sing	/u-ku- im ba/ → ukwimba [ukwí:mbá]	/ku- im ba/ → kwimba [kwí:mbá]
to walk	/u-ku- enda / → ukwenda [ukwé:ndá]	/ku- pita / → kupita [kúpítá] (no semivocalisation)
heavens	/i- mi -ulu/ → imyuulu [imjú:lú]	/ma- ulu / → mauulu [máúúlú] (no semivocalisation)

For example, in the BEM word u-**mu**-inshi which becomes *umwinshi* [umwí:ɲʃí] ‘door way’, the high back vowel /**u**/ in the prefix -**mu**- glides with the initial high front vowel /**i**/ in the base -inshi [i:ɲʃí] ‘door way’ to produce the voiced labio-velar approximant /**w**/. However, in the corresponding MAM word: mu-li-ango which is rendered as *mulyango* [múljá:ɲgó] ‘door way’, the gliding occurs between the high front vowel / **i** / in the second syllable - **li** -, which is part of the base, and the following low central vowel /**a**/ in the same base. The prefix does not feature in this case.

In the BEM word u-**ku**-isala which becomes *ukwisala* [ukwí:sálá] ‘to close’, the high back vowel / **u** / in the locative -**ku**- [ku] ‘to’ is semivocalised in the environment before the high front vowel / **i** / which is in the base -**isala** [ɪsala] ‘close’, but there is no semivocalisation of the high back vowel / **u** / in the locative -**ku**- [ku] ‘to’ in the corresponding MAM word **ku**-**i**-ala which becomes *ukuyala* [kújá:lá] ‘to close’. However, there is the gliding of the high front vowel /**i**/ in the base -**i**-ala [ja:la] ‘close’ in the environment before the low central vowel /**a**/. There is a similar situation in the BEM and the MAM words u-**ku**-isula which becomes *ukwisula* [ukwí:súlá] ‘to open’ and **ku**-**i**-ula which is rendered as *kuyula* [kújú:lá] ‘to open’, respectively. This shows that in both the former pair and latter pair, the environments of semivocalisation are different.

It is also noted that in the instances where the words are the same or cognate, the environments of semivocalisation are the same, as well. The BEM and MAM words which mean sing are u-ku-imba which become *ukwimba* [ukwí:mbá] ‘to sing’ and ku-imba which is rendered as *kwimba* [kwímbá], respectively. In these words, the high back vowel / **u** / becomes the voiced labio-velar approximant / **w** / in the environment before the high front vowel / **i** /

The other point is that in some situations where the words are different, there is semivocalisation in one and not in the other. One example is the BEM word *i-mi-ele* which becomes *imyeele* [ɪmjé:le] ‘knives’: in this word, the high front vowel /i/ in the prefix **-mi-** [mɪ] ‘for plural’ becomes the voiced palatal approximant /j/ in the environment before the mid front vowel /e/, which is in the base **-ele** [ele] ‘knife’ whereas in the corresponding MAM word **mi-peni** which becomes *mipeni* [mípeni] ‘knives’, the conditions for semivocalisation do not exist there. A similar situation obtains in the words: *u-ku-enda* which becomes *ukwenda* [ukwé:ndá] ‘to walk’ and *ku-pita* which becomes *kupita* [kúpítá] ‘to walk’, *i-mi-ulu* which becomes *imyuulu* [ɪmjú:lu] ‘heavens’ and **ma-ulu** which becomes *maulu* [máúlú] ‘heavens’ for BEM and MAM, respectively. In the MAM word **ma-ulu** (*maulu*), there is no semivocalisation while in the BEM word *i-mi-ulu* (*imyuulu*) there is. Below are examples of words in which gliding occurs in different environments in the languages under study:

27 (i) *u-mu-inshi* → *umwinshi* [umwí:ɲĩ] ‘doorway’ (BEM)

(ii) *mu-li-ango* → *mulyango* [múljá:ŋgó] ‘doorway’ (MAM)

28 (i) *u-ku-isala* → *ukwisala* [ukwí:sálá] ‘to close’ (BEM)

(ii) *ku-i-ala* → *kuyala* [kújá:lá] ‘to close’ (MAM)

Similarities: semivocalisation occurs in both languages and where words are cognates, the environment of semivocalisation is the same: some of the words are cognates.

Differences: where the words are different as in 27 and 28 above, the environment in which semivocalisation occurs in one of the languages is different from that in which it takes place in the other language. In some situations, gliding occurs in one of the languages and not in the other, as reflected in the table above.

5.1.6 Coalescence contributing to the differences in the current study

This section of the study presents the differences concerning coalescence, which is also known as merger or fusion. Coalescence is a morphophonological process by which units that are separate at one level of representation are realised by a form in which there is no corresponding boundary, (Crystal, 2008; Mathews, 2005).

The key informant was requested to provide the equivalents of the given English expressions in BEM and MAM with regard to coalescence for the researcher to identify the differences and similarities between the languages under investigation. After this exercise, the informants, including the key informant, verified the findings. Below are the analysis and interpretation of the findings.

Table 13: The process of coalescence; (The Bemba material in this table is adapted from Mann, 1999)

Gloss	BEM	MAM
these men	<i>abaumeaba/a-ba-ume-a-ba/</i> : <i>e+a → yaa</i> <i>abaumyaaba [abáúmjá:ba]</i> (coalescence occurs)	<i>aonsiaeya/a-onsi-a-eya/→</i> <i>aonsiaeya [aó: nsí áéja]</i> (no coalescence occurs)
this milk	<i>umukakauyu/u-mu-kaka-u-yu/</i> : <i>a+u → oo</i> <i>umukakooyu [umúkákó:ju]</i> (coalescence occurs)	<i>iziyaaili/i-ziya-a-ili/→</i> <i>iziyaaili [izíjálí]</i> (no coalescence occurs: one /a/ is dropped)
this mirror	<i>icilola ici/i-ci-lola-i-ci/</i> : <i>a+i → ee</i> <i>iciloleeci [ɪtʃílólé: tʃi]</i> (coalescence occurs)	<i>cilolani aici/ci-lolani-a-ici/</i> <i>→ cilolaniaici [tʃílólání áítʃi]</i> (no coalescence occurs)
this small radio	<i>akalimbaaka/a-ka-limba-a-ka/</i> : <i>a+a → aa</i> <i>akalimbaaka [akálí:mbá:ka]</i> (coalescence occurs)	<i>kalimba aeka</i> <i>/ka-limba-a-eka/ →</i> <i>kalimbaeka [kálí:mbáéka]</i> (no coalescence occurs: one /a / is lost)
this hen house	<i>icitele ici/i-ci-tele-i-ci/</i> : <i>e+i → ee</i> <i>iciteleeci [ɪtʃítélé:tʃi]</i> (coalescence/compensatory lengthening occurs)	<i>citeleaici/ci-tele-a-ici/→citeleaici [tʃítélé: áítʃi]</i> (no coalescence occurs)
this straw	<i>umutete uyu/u-mu-tete-u-yu/</i> : <i>e+u → yoo</i> <i>umutetyooyu [umútétjó:ju]</i> (coalescence occurs)	<i>pilu aii or auwi/ø-pilu-a-ii or</i> <i>a-uwi/→ piluaili [pílú áí:]</i> ; <i>piluaui [pílú áúw:]</i> (no coalescence occurs)
this gun	<i>icituli ici/i-ci-tuli-i-ci/</i> : <i>i+i → ii</i> <i>icituliici</i> <i>[ɪtʃítúlí:tʃi]</i> (coalescence occurs)	<i>mututula auwi or aii/mu-</i> <i>tutula-a-uwi or a-ii/ →</i> <i>mututilaui [mútútílá:úw:] /</i> <i>[mútútílái]</i> (no coalescence occurs: one / a / is dropped)

this small grasshopper	<i>akapaso aka/a-ka-paso-a-ka/</i> : <i>o+a → wa akapaswaka</i> [akápáswá:ka] (coalescence occur)	<i>kapaso aeka</i> /ka-paso-a-eka/ → <i>kapasoaeaka</i> [kápásó áéka] (no coalescence occurs)
this tin	<i>icikopo ici/i-ci-kopo-i-ci/</i> : <i>o+i</i> → we <i>icikopweci</i> [ɪtʃíkópwé:tʃi] (coalescence occur)	<i>cikopoaici/ci-kopo-a-ici/</i> → <i>cikopoaici</i> [tʃíkópó áítʃi] (no coalescence occurs)
this work	<i>umulimo uyu/u-mu-limo-u-</i> <i>yu/</i> : <i>o+u → oo</i> <i>umulimooyu</i> [umúlímó:ju] (compensatory lengthening / coalescence occurs)	<i>mulimo auu</i> or <i>ncito aii/mu-</i> <i>limo-a-uu</i> or <i>n-cito-a-ii/</i> → <i>mulimoauu</i> [múlímó áúu] / <i>incitoaii</i> [ntʃító áú] (no coalescence occurs)
these Europeans	<i>abasungu aba/a-ba-sungu-a-</i> <i>ba/</i> : <i>u+a → wa</i> <i>abasungwaba</i> [abású:ŋgwá:ba] (coalescence and gliding occur)	<i>azungu aeya</i> /a-zungu-a-eya/ → <i>azunguaeya</i> [azú:ŋgú áéja] (no coalescence occurs)
this catapillar	<i>icishimu ici/i-ci-shimu-i-ci/</i> : <i>u+i → wi</i> <i>icishimwici</i> [ɪtʃíʃímwí:tʃi] (coalescence and giding occur)	<i>ciungu aici/ci-ungu-a-ici/</i> → <i>ciunguaici</i> [tʃíú:ŋgúáítʃi] (no coalescence and no giding occur)
this hill	<i>ulupili ulu/u-lu-pili-u-lu/</i> : <i>i+u</i> → yu <i>ulupilyuulu</i> [ulúpíljú:lu] (semivocalisation and coalecence occur)	<i>mwamba auu</i> /mu-amba-a-uu/ → <i>mwambauu</i> [mwá:mbáúu:] (no coalescence occurs: one /a/ is dropped)
this duck	<i>imbata ii/i-m-bata-ii/</i> : <i>a+ i</i> → ee <i>imbateei</i> [imbá:té:ɪ] (coalescence occurs)	<i>cibata aici/ci-bata-a-ici/</i> → <i>cibataici</i> [tʃí□áíáítʃi]: (no coalescence occurs: one /a/ is dropped)
this rib	<i>ulubafu ulu/u-lu-bafu-u-lu/</i> : <i>u+u → uu</i> <i>ulubafuulu</i> [ulú□áfú:lu] (coalescence occurs)	<i>lumbazoaulu/lu-mbazo-a-ulu/</i> → <i>lumbazoaulu</i> [lú:mbázó áúlu] (no coalescence occurs)
my hat	<i>icisotecaandi</i> /i-ci-sote-ci-andi/ [ɪtʃísótetʃá:ndí] (i.e. <i>i+a→aa</i>) (coalescence occurs)	<i>ngowaninyane/n-gowani-i-</i> <i>ane/</i> [ŋgowánɪjáne] gliding occurs

It is noted that in BEM the low central vowel /a/ in the prefix **ba** [□a] ‘them’ coalesces with the mid back vowel /o/ in the stem **–onse** [o:nse] ‘everyone’ into /-oo-/; therefore, the combination of **ba** – and **–onse** forms the word *boonse* [□ó:nse] ‘all of them’. It is also worth mentioning that in this word compensatory lengthening has occurred: the low central vowel /a/ in the prefix **ba-** is lost and the mid back vowel /o/ in the stem **–onse** is lengthened. In the corresponding MAM word, the high front vowel /i/ and the mid back vowel / o / fuse (i+o) to form the initial syllable **yo-** [jo] in the word *yonsi* [jó:nsí] ‘all of them’. Semivocalisation of the high front vowel /i/ has also occurred.

It is noticeable that in another BEM word there is fusion of the high front vowel /i/ in the prefix **fi-** [fi] ‘standing for things’ and the mid back vowel /o/ in the stem **–onse** [o:nse] ‘everything’ into **yoo-** [jo:]. Consequently, this coalescence forms the word *fyoonse* [fjó:nse] ‘all the things’. It is also noted that in this process, two processes have occurred and these are semivocalisation and palatalisation. In the corresponding MAM word, the high front vowel /i/ in the prefix **vi-** [vi] ‘standing for things’ coalesces with the mid back vowel /o/ in the stem **–onsi** [o:nsí] ‘everything’ to form / -yo / [jo]. This process forms the word *vyonsi* [vjó:nsí] ‘all the things’. Phonologically, there is no doubling of the mid back vowel /o/ in the MAM word *vyonsi* while in the BEM word *fyoonse* there is.

It is also manifest that in BEM there is fusion of the low central vowel /a/ in the prefix **-ba-** [□a] ‘they’ and the mid front vowel /e/ in the stem **-eni** [eni] ‘guest’ into **-ee-** [e:]. This coalescence forms the word *abeeni* [abé:ní] ‘guests’ whereas in the corresponding MAM word *aenyi*(**a-enyi**) [aé:ní] ‘guests’, there is no fusion between the low central vowel / a / [a] ‘they’, which is the prefix, and the mid front vowel / e / in the stem **-enyi** ‘guest’.

In the MAM expression *ingowani i-ane* which is pronounced as *ngowaniyane* [ńgowáníjáné] ‘my hat’, there is no fusion between the high front vowel /i/ which is the prefix of the possessive determiner **i-ane** and the low central vowel /a/ in the possessive-determiner stem **–ane**. The possessive determiner is, therefore, rendered as /**yane**/ [já:ne] ‘my’. What occurs, here, is semivocalisation of the high front vowel / i / in the environment before the low central vowel /a / . In the corresponding BEM expression *icisote ci-andi*, which is pronounced as *icisotecaandi* [itʃísótetʃá:ndí] ‘my hat’, the high front vowel /i/ in the prefix **ci-** [tʃi] of the possessive determiner

(**ci-andi**) and the low central vowel /a/ in the stem –**andi** [á:ndɪ] ‘my’ of the possessive determiner (**ci-andi**), there is vowel fusion in which compensatory lengthening occurs: the high front vowel /i/ in the prefix **ci-** is lost and the low central vowel /a/ in the stem –**andi** is lengthened. The word formed from this coalescence is the possessive determiner **caandi** [tʃá:ndɪ] ‘my’.

In another BEM word, coalescence occurs: the low central vowel /a/ in the prefix –**ma-** [ma] ‘they’ (of things) and the front vowel /i/ in the stem –**ino** [íno] ‘tooth’ are fused into –**ee-** [e:] and, therefore, the word formed is **ameeno** [amé:nó] ‘teeth’ whereas in the corresponding MAM word, the high front vowel /i/ in the prefix –**mi-** [mɪ] ‘they’ (of things) and the high front vowel /i/ in the stem –**ino** [ino] ‘tooth’ do not coalesce with each other. In fact, one high front vowel /i/ is dropped; hence, the word **amino** [amínó] ‘teeth’ is formed.

It is also noted that in the MAM word, the low central vowel /a/ in the prefix /-**ma-**/ [ma] ‘they’ (of things) and the high back vowel /u/ in the stem –**ulu** [ulu] ‘leg’ do not fuse with each other. Instead, there is just a linear arrangement of the phonemes resulting in the word **maulu** [máulú] ‘legs’. In contrast to this, the low central vowel /a/ in the BEM prefix –**ma-** [ma] ‘they’ (of things) and the high back vowel /u/ in the BEM stem /-**ulu**/ [ulu] ‘leg’ fuse into –**oo-** [o:] and, therefore, the word that is formed is **amoolu** [amó:lú] ‘legs’. Some of the differences extracted from the text are presented below:

29 (i) **a-ba-eni**→**abeeni** [abé:ní] ‘guests’ (BEM) (coalescence)

(ii) **a-enyi**→**aenyi** [aéɲí] ‘guests’ (MAM) (**no** coalescence)

30 (i) **a-ma-ulu**→**amoolu** [amó:lú] ‘legs’ (BEM) (coalescence)

(ii) **ma-ulu**→**maulu** [máulú] ‘legs’ (MAM) (**no** coalescence)

31 (i) **a-ma-ino**→**ameeno** [amé:nó] ‘teeth’ (BEM) (coalescence)

(ii) **a-ma-ino**→**amino** [amínó] ‘teeth’ (MAM) (**no** coalescence)

The differences are that some words in BEM are different from those in MAM. As noted in the table above, coalescence has not occurred in the MAM expressions.

Similarity: There are a few cognates in the table; 31 above is one of them.

5.1.7 Phonological differences involving nasal assimilation

Nasal assimilation is another sub-theme in this chapter. What is involved in assimilation is “the influence exercised by one sound segment upon the articulation of another so that the sounds become more alike or identical”, (Crystal, 2008:39). Mathews (2005:28) also indicates that this is “sound change or process by which features of one element change to match those of another that precedes or follows.” Classification of assimilation is given in terms of the direction in which it works, (Crystal 2008; Sloat, Taylor & Hoard, 1978).

The key informant was requested to provide the equivalents of the given English expressions in BEM and MAM in relation to nasal assimilation for the researcher to identify the differences and similarities between the languages under investigation. After this exercise, the informants, including the key informant, verified the findings. Below are the analysis and interpretation of the findings.

Table 14: Nasal assimilation

Gloss	BEM	MAM
to use me	/u-ku-n-bomfi-a/→ <i>ukumomfya</i> [úkumó:ɲfjá]	/ku-n-bomvi-a/→ <i>kumbomvya</i> [kú:mbó:ɲvjá]
to make me wet	/u-ku-n-bomfia/→ <i>ukumomfya</i> [úkumó:ɲfjá]	/ku-n-bomvi-a/→ <i>kumbomvya</i> [kú:mbó:ɲvjá]
to see me	/u-ku-n-mon-a/→ <i>ukumona</i> [úkumóna]	/ku-n-lol-a/→ <i>kundola</i> [kú:ndóla]
to work for me	/u-ku-n-bomb-il-a/→ <i>ukumombela</i> [úkumó:mbéla]	/ku-n-bomb-il-a/ → <i>kumbobela</i> [kú:mbó:mbéla]
to cut trees for me	/u-ku-n-tem-il-a/→ <i>ukuntemena</i> [úkuntéména]	/ku-n-tem-il-a/→ <i>kuntemela</i> [kú:ntéméla]
to swallow for me	/u-ku-n-min-il-a/→ <i>ukuminina</i> [úkumínína]	/ku-n-min-il-a/→ <i>kuminila</i> [kú:míníla]

Some differences have been noted between BEM and MAM words concerning nasal assimilation. In the BEM infinitive u-ku-**n**-bomfi-a, which becomes *ukunbomfya*; the **-n-**, is the first-person singular pronoun meaning ‘I’ or ‘me’. In this nasal assimilation process, the voiced alveolar nasal /**n**/ in the word *ukunbomfya* ‘to use me’ becomes the voiced bilabial nasal /**m**/ in the environment before the voiced bilabial plosive /**b**/, and the outcome is /uk**um**bomfya/. The foregoing process

involves regressive (or anticipatory) nasal assimilation. Application of this rule is formalised below:

$$\begin{array}{ccc} \begin{bmatrix} +cons \\ -cont \\ +nas \\ +cor \end{bmatrix} & \rightarrow & \begin{bmatrix} +cons \\ -cont \\ +nas \\ +lab \end{bmatrix} \quad / \quad \text{---} \quad \begin{bmatrix} +cons \\ -cont \\ +voice \\ +lab \end{bmatrix} \\ (n) & & (m) \qquad \qquad \qquad (b) \end{array}$$

In the same word, *ukumbomfya*, the voiced bilabial plosive /b/ becomes the voiced bilabial nasal /m/ in the environment after the voiced bilabial nasal /m/. The process which has just been described involves progressive nasal assimilation, and the outcome of this is *ukumomfya* which is finally reduced to *ukumomfya* [úkumó:ɱfjá] ‘to use me’. Application of the rule is formalised below:

$$\begin{array}{ccc} \begin{bmatrix} +cons \\ -cont \\ +voice \\ +lab \end{bmatrix} & \rightarrow & \begin{bmatrix} +cons \\ -cont \\ +nas \\ +lab \end{bmatrix} \quad / \quad \text{---} \quad \begin{bmatrix} +cons \\ -cont \\ +nas \\ lab \end{bmatrix} \\ (b) & & (m) \qquad \qquad \qquad (m) \end{array}$$

It is noted that in this BEM word, two nasal assimilation processes have occurred. In the corresponding MAM infinitive ku-n-bomvi-a which is rendered as *kumbomvya* ‘to use me’, the voiced alveolar nasal /n/, which is the first-person singular pronoun meaning ‘I’ or ‘me’, becomes the voiced bilabial nasal /m/ in the environment before the voiced bilabial plosive /b/. This process involves regressive nasal assimilation, and the outcome of this is *kumbomvya* [kú:mbó:ɱvja] ‘to use me’. In this MAM word only one nasal assimilation process occurs. Application of the rule is formalised below:

$$\begin{array}{ccc} \begin{bmatrix} +cons \\ -cont \\ +nas \\ +cor \end{bmatrix} & \rightarrow & \begin{bmatrix} +cons \\ -cont \\ +nas \\ +lab \end{bmatrix} \quad / \quad \text{---} \quad \begin{bmatrix} +cons \\ -cont \\ +voice \\ lab \end{bmatrix} \\ (n) & & (m) \qquad \qquad \qquad (b) \end{array}$$

Hence, the BEM infinitive *ukumomfya* [úkumó:ɱfjá] is different from the MAM infinitive *kumbomvya* [kú:mbó:ɱvjá].

The same processes apply to the BEM word *ukumomfya* [úkumó:ɱfjá] ‘to make me wet’ and its corresponding MAM word *kumbomvya* [kú:mbó:ɱvjá] ‘to make me wet’.

In the BEM word u-ku-**n**-mon-a which is rendered as *ukunmona* ‘to see me’, the voiced alveolar nasal /**n**/, which is the first-person singular pronoun meaning ‘I’ or ‘me’, becomes the voiced bilabial nasal /**m**/ in the environment before the voiced bilabial nasal /**m**/. The process, which has just been described, involves regressive (or anticipatory) nasal assimilation. The output is *ukummona*, which is reduced to *ukumona* [úkumóna] ‘to see me’. Application of the rule is formalised below:

$$\begin{array}{ccc} \begin{bmatrix} +cons \\ -cont \\ +nas \\ +cor \end{bmatrix} & \rightarrow & \begin{bmatrix} +cons \\ -cont \\ +nas \\ +lab \end{bmatrix} \quad \diagup \quad \text{---} \quad \begin{bmatrix} +cons \\ -cont \\ +nas \\ +lab \end{bmatrix} \\ (n) & & (m) \quad \quad \quad (m) \end{array}$$

There is no progressive nasal assimilation in this BEM infinitive. In contrast to the process in the BEM infinitive, the voiced alveolar lateral /**l**/ in the corresponding MAM word ku-**n**-lol-a, which is rendered as *kunlola*, becomes the voiced alveolar plosive /**d**/ in the environment after the voiced alveolar nasal /**n**/, (this is the allophonic rule on /**l**/, which is covered in section 5.3.4.1). In this progressive nasal assimilation, nasalisation of the voiced alveolar lateral /**l**/ has occurred and, hence, the outcome is the MAM word *kundola* [kú:ndóla] ‘to see me’. Application of the rule is formalised below:

$$\begin{array}{ccc} \begin{bmatrix} +cons \\ +cont \\ +lat \\ +ant \\ +cor \end{bmatrix} & \rightarrow & \begin{bmatrix} +cons \\ -cont \\ +voice \\ +cor \end{bmatrix} \quad \diagup \quad \begin{bmatrix} +cons \\ -cont \\ +nas \\ +cor \end{bmatrix} \quad \text{---} \\ (l) & & (d) \quad \quad \quad (n) \end{array}$$

This nasal assimilation process is different from that which occurs in the corresponding BEM word *ukumona*.

In the BEM word u-ku-**n**-bomb-il-a which is rendered as *ukun**mb**ila*, the voiced alveolar nasal /**n**/, which is the first-person singular pronoun meaning ‘I’ or ‘me’, becomes the voiced bilabial nasal /**m**/ in the environment before the voiced bilabial plosive /**b**/; this is regressive (or anticipatory) nasal assimilation and the output is *ukum**mb**ila*. Application of the rule is formalised below:

$$\begin{array}{ccc} \begin{bmatrix} +cons \\ -cont \\ +nas \\ +cor \end{bmatrix} & \rightarrow & \begin{bmatrix} +cons \\ -cont \\ +nas \\ +lab \end{bmatrix} \quad \text{---} \quad \begin{bmatrix} +cons \\ -cont \\ +voice \\ lab \end{bmatrix} \\ (n) & (m) & (b) \end{array}$$

The process continues in the same word *ukum**mb**ila* in which case the voiced bilabial plosive /**b**/ becomes the voiced bilabial nasal /**m**/ in the environment after the voiced bilabial nasal /**m**/ and the resultant form is *ukum**mm**ombila*, which is reduced to *ukum**mb**ombila*. This type of nasal assimilation is progressive. Application of this rule is formalised below:

$$\begin{array}{ccc} \begin{bmatrix} +cons \\ -cont \\ +voice \\ +lab \end{bmatrix} & \rightarrow & \begin{bmatrix} +cons \\ -cont \\ +nas \\ +lab \end{bmatrix} \quad \text{---} \quad \begin{bmatrix} +cons \\ -cont \\ +nas \\ +lab \end{bmatrix} \\ (b) & (m) & (m) \end{array}$$

There is yet another process in relation to applied verbal extension morph /-**il**-/ in the word *ukumombila*: the high front vowel /**i**/ in the applied verbal extension morph /-**il**-/ becomes the mid front vowel /**e**/ under the influence of the mid back vowel /**o**/ in the verb radical –**bomb**- [β**o**:mb] ‘work’, (Section 5.3.6, vowel harmonisation). The output from these processes is the infinitive *ukumombela* [úkumó:mbéla] ‘to work for me’. In the corresponding MAM word ku-**n**-bomb-il-a, which is rendered as *kun**mb**ila*, the voiced alveolar nasal /**n**/, meaning ‘I’ or ‘me’, becomes the voiced bilabial nasal /**m**/ in the environment before the voiced bilabial plosive /**b**/ and the output in this regressive nasal assimilation process is *ukum**mb**ombila*. Hence, the voiced bilabial plosive

/b/ is nasalised by the preceding voiced bilabial nasal /m/. Application of the rule is formalised below:

$$\begin{array}{ccc}
 \begin{bmatrix} +cons \\ -cont \\ +nas \\ +cor \end{bmatrix} & \rightarrow & \begin{bmatrix} +cons \\ -cont \\ +nas \\ +lab \end{bmatrix} \quad / \quad \begin{bmatrix} +cons \\ -cont \\ +voice \\ +lab \end{bmatrix} \\
 (n) & (m) & (b)
 \end{array}$$

The applied verbal extension morph /-il-/ in the infinitive kumbomb**ila** has its high front vowel /i/ converted to the mid front vowel /e/ under the influence of the mid back vowel /o/ in the verb radical -b**omb**- [βo:mb] ‘work’ and, therefore, the word becomes *kumb**omb**ela* [kú:mbó:mbéla] ‘to work for me’.

The difference between the BEM word *ukum**omb**ela* [úkumó:mbéla] ‘to work for me’ and the MAM word *kumb**ob**ela* [kú:mbó:mbéla] ‘to work for me’ consists in the former undergoing both regressive and progressive nasal assimilation processes while the latter undergoes only anticipatory (or regressive) nasal assimilation process.

It is also clear in this study that in the BEM word u-ku-**n**-tem-**il**-a, which is rendered as *ukun**tem**ila*, the voiced alveolar lateral /l/ in the applicative verbal extension morph /-il-/ becomes the voiced alveolar nasal /n/ in the environment after the voiced bilabial nasal /m/ in the verb radical -tem- ‘cut’. This is progressive nasal assimilation. Application of the rule is formalised below:

$$\begin{array}{ccc}
 \begin{bmatrix} +cons \\ +cont \\ +lat \\ +ant \\ +cor \end{bmatrix} & \rightarrow & \begin{bmatrix} +cons \\ -cont \\ +nas \\ +cor \end{bmatrix} \quad / \quad \begin{bmatrix} +cons \\ -cont \\ +nas \\ +lab \end{bmatrix} \\
 (l) & (n) & (m)
 \end{array}$$

In the same word, the high front vowel /i/ in the applied verbal extension morph /-il-/ is converted to the mid front vowel /e/ under the influence of the mid front vowel /e/ in the verb radical -tem- [tem] ‘cut’. The output in these processes is the word *ukun**tem**ena* [úku:ntéména] ‘to cut (trees) for me’. In the corresponding MAM word u-ku-**n**-tem-il-a, which is written as *kun**tem**ila*, neither

regressive nor progressive nasal assimilation occurs. What occurs is vowel harmony in which the high front vowel /i/ in the applied verbal extension morph /-il-/ is transformed into the mid front vowel /e/, (See vowel harmoniatison: section 5.3.6). The output is the word *kuntemela* [kú:ntéméla] ‘to cut (trees) for me’. Hence, the BEM word *ukuntemena* [úkuntéména] is different from the MAM word *kuntemela* [kú:ntéméla].

It is also noted that in the BEM word u-ku-**n**-min-il-a which is rendered as *ukunminila*, the voiced alveolar nasal /n/, which is the equivalent for the English pronoun ‘I’ or ‘me’, becomes the voiced bilabial nasal /m/ in the environment before the voiced bilabial nasal /m/; the resultant form is *ukumminila*, which is reduced to *ukuminila* ‘to swallow for me’. This is regressive nasal assimilation. Application of the rule is formalised below:

$$\begin{array}{ccc} \begin{bmatrix} +cons \\ -cont \\ +nas \\ +cor \end{bmatrix} & \rightarrow & \begin{bmatrix} +cons \\ -cont \\ +nas \\ +lab \end{bmatrix} \quad \text{---} \quad \begin{bmatrix} +cons \\ -cont \\ +nas \\ +lab \end{bmatrix} \\ (n) & (m) & (m) \end{array}$$

In the same word, the voiced alveolar lateral /l/ in the applicative verbal extension morph /-il-/ becomes the voiced alveolar nasal /n/ in the environment after the voiced alveolar nasal /n/ in the verb radical -min- [mɪn] ‘swallow’. This is progressive nasal assimilation. Application of the progressive nasal assimilation rule is formalised below:

$$\begin{array}{ccc} \begin{bmatrix} +cons \\ +cont \\ +lat \\ +ant \\ +cor \end{bmatrix} & \rightarrow & \begin{bmatrix} +cons \\ -cont \\ +nas \\ +cor \end{bmatrix} \quad \text{---} \quad \begin{bmatrix} +cons \\ -cont \\ +nas \\ +cor \end{bmatrix} \\ (l) & (n) & (n) \end{array}$$

The outcome of the two nasal assimilation processes is the word *ukuminina* [úkumínína] ‘to swallow for me’. In the corresponding MAM word ku-**n**-min-il-a which is rendered as *kunminila*, the voiced alveolar nasal /n/, which is the equivalent for the English pronoun ‘I’ or ‘me’, becomes the voiced bilabial nasal /m/ in the environment before the voiced bilabial nasal /m/. The resultant

form is *kumminila*, which is reduced to *kuminila* [kúmíníla] ‘to swallow for me’. This is anticipatory (or regressive) nasal assimilation. Application of the rule is formalised below:

$$\begin{array}{ccc}
 \begin{bmatrix} +cons \\ -cont \\ +nas \\ +cor \end{bmatrix} & \rightarrow & \begin{bmatrix} +cons \\ -cont \\ +nas \\ +lab \end{bmatrix} \quad / \quad \text{---} \quad \begin{bmatrix} +cons \\ -cont \\ +nas \\ lab \end{bmatrix} \\
 (n) & & (m) \qquad \qquad (m)
 \end{array}$$

The difference between the BEM word *ukuminina* [úkumínína] and its corresponding MAM word *kuminila* [kúmíníla] is that in the former both regressive and progressive nasal assimilation processes occur while in the latter only regressive nasal assimilation takes place.

The following are examples from the table above showing the differences.

32 (i) *u-ku-n-tem-il-a* → *ukuntemena* [úku:ntéména] ‘to cut trees for me’ (BEM)

(ii) *ku-n-tem-il-a* → *kuntemela* [kú:ntéméla] ‘to cut trees for me’ (MAM)

33 (i) *u-ku-n-min-il-a* → *ukuminina* [úkumínína] ‘to swallow for me’ (BEM)

(ii) *ku-n-min-il-a* → *kuminila* [kúmíníla] ‘to swallow for me’ (MAM)

This study shows that there are many differences in the application of nasal assimilation rule between BEM and MAM.

This section shows the similarities also: nasal assimilation rule is applicable to both BEM and MAM, and most of the words used are cognates.

5.2 Suprasegmental phonology: its contributory role to this study

The sections under this theme present the findings in relation to the shift in tone in the same words to express semantic differences, the use of tone to distinguish recent past from remote past, vowel length in minimal pairs and the use of vowel length in nominal stabilisation.

5.2.1 The shift in tone in the same words

This section shows different tonal patterns in the same word so that different meanings of the word can be expressed. Each syllable in a word carries a tone, and this distribution of tone in the word contributes to the meanings of the word, (Mathews, 2005).

The key informant was requested to provide the equivalents of the given English expressions in BEM and MAM in relation to the shift in tone in the same words for the researcher to identify the differences and similarities between the languages under investigation. After this exercise, the informants, including the key informant, verified the findings. Below are the analysis and interpretation of the findings.

Table 15: Shift in tone in the same words

Gloss	BEM	MAM
we're digging	<i>tulééimbá/tu-lee-imb-a/ [tulé:imbá]</i>	<i>tukwímbá/tu-ku-imb-a/ [tukwí:mbá]</i>
we're singing	<i>túleeimba/tu-lee-imb-a [túle:imba]</i>	<i>túkwimbá/tu-ku-imb-a/ [túkwí:mbá]</i>
we're beating	<i>tulééumá/tu-lee-um-a/ [tulé:umá]</i>	<i>túkumá/tu-ku-uma-a/ [túkumá]</i>
we're drying	<i>túleeúma/tu-lee-um-a/ [túle:úma]</i>	<i>tukúma/tu-ku-um-a/ [tukúma]</i>
vomit	<i>ukulúká/u-ku-luk-a [ukulúká]</i>	<i>kúlúká/ku-luk-a/ [kúlúká]</i>
to plait hair	<i>ukulúká/u-ku-luk-a/ [ukulúká]</i>	<i>Kúluká/ku-luk-a/[kúluká]; also kúpómbá/ku-pomb-a/ ínyelé [kúpómbá ínelé]</i>
maize	<i>itábá/i-taba/ [itá□á]</i>	<i>císamá/ø-cisama/ [tʃísamá]</i>
a call	<i>itabá/itab-a/ [ítabá]</i>	<i>asuká/asuk-a/ [ásuká]</i>
price	<i>umúténgo/u-mu-tengo/ [umúté:ngo]</i>	<i>mútengó/mu-tengo/ [múte:ngó] (waku mupunga)</i>
forest patch	<i>umutengo/u-mu-tengo/ [úmuténgo]</i>	<i>mutengo/mu-tengo/ [mútengó] (wa vimiti)</i>

The BEM expression for the two English expressions ‘we’re digging and ‘we’re singing’ is *tuleeimba*, but the semantic distinction is discerned when different tonal patterns are used in the expression. For the expression ‘we’re digging, the BEM expression has this tonal pattern:

tulééimbá [tulé:imbá]. The tonal distribution (or pattern) for this meaning is that the second syllable and the fourth syllable receive **HT**. For the expression ‘we’re singing’, the BEM expression has this tonal pattern *túleeímba* [túle:imba]: the first syllable and the third receive **HT**.

For the same English expressions, the MAM expression is *tukwimba* and the semantic distinction is seen in these tonal patterns: *tukwímbá* [tukwí:mbá] ‘we’re digging’: the second syllable and the third have **HT**. In *túkwimbá* [túkwi:mbá] ‘we’re singing’: the first syllable and the third receive **HT**.

For the BEM expression *tulééimbá* [tulé:imbá] ‘we’re digging’, **HT** is on the second and the fourth syllables while for the corresponding MAM expression *tukwímbá* [tukwí:mbá] ‘we’re digging’, **HT** is on the second and the third syllables. The **HT** for the BEM expression *túleeímba* [túleeimba] ‘we’re singing’ and for the MAM expression *túkwimbá* [túkwi:mbá] ‘we’re singing’ is on the first and the third syllables. It is, therefore, noted that the BEM and MAM expressions which mean ‘we’re digging’ have different tonal patterns while those which mean ‘we’re singing’ have the same tonal patterns though the number of syllables in the BEM expression is different from that of the MAM expression: the phonemic composition is not the same in both languages

The BEM expression, which means either ‘we’re beating or we’re drying’, is *tuleeuma*. The semantic differences are expressed by the following tonal patterns:

- *tulééumá* [tulé:umá] ‘we’re beating’: in this expression, the second syllable and the fourth carry **HT**.
- *túleeúma* [túle:úma] ‘we’re drying: in this expression, the first syllable and the third have **HT**.

The MAM expression which means either ‘we’re beating’ or ‘we’re drying’ is *tukuma*. Its semantic value is made clear by the following tonal patterns:

- *túkumá* [túkumá] ‘we’re beating’: in this expression, the first syllable and the third receive **HT**.
- *tukúma* [tukúma] ‘we’re drying’: in this expression, the second syllable and the third have **HT**.

It is evident that the tonal patterns for the BEM and the MAM expressions meaning ‘we’re beating’ and ‘we’re drying’ are different: the phonemic composition in the BEM expressions differs from that of the MAM expressions

We also notice that the BEM expression *úkulúká* [úkúlúká] ‘to vomit’, the first, the third and the fourth syllables receive **HT** while in the MAM expression *kúlúká* [kúlúká] ‘to vomit’, the first, second and third syllables carry **HT**. In the BEM expression *ukúlúká* [ukúlúká] ‘to plait hair’, the syllables carrying **HT** are the second, the third and the fourth whereas in the MAM expression *kúluká* ‘to plait hair’, the syllables carrying **HT** are the first and the third. There is *úkupómba ínyelé* [úkupómba ínyelé] ‘to plait hair’ for MAM, also.

The BEM and MAM expressions meaning a cob of maize are *itábá* [ítá□á] and *císamá* [tʃísamá], respectively. In these expressions, the tonal patterns are different: in the BEM expression, the second and the third syllables carry **HT** whereas the first and the third syllables receive **HT** in the MAM one.

The BEM and MAM expressions, which mean to answer a call, are *ítabá* [ítabá] and *ásuká* [ásuká], respectively. In both cases, the first syllable and the third carry **HT**. However, their phonemic compositions differ.

It is also manifest that in the BEM word *umúténgó* [umúté:ngó] ‘price’, the second and the third and fourth syllables have **HT** while in the MAM word *múténgó* [múte:ngó] (waku mupunga) ‘price’ the syllables carrying **HT** are the first and the second. Again, it should be noted that their phonemic compositions are different. The BEM and MAM words which mean ‘forest patch’ are *umutengo* [úmuténgó] and *mutengo* [múténgó] (wa vimiti), respectively. For BEM, the first and the third syllables carry **HT** and for MAM the first and second carry **HT**; the BEM word has four syllables while the MAM word has three syllables: their different phonemic compositions create a rhythmic difference between them. It is also noted that the tonal pattern of the word *múténgó* [múténgó] in MAM is the same for both contexts. What differentiates the meanings is the accompanying words as in *múténgó waku mupunga* ‘the price of rice’ or *múténgó wa vimiti* ‘forest patch’. Below are some expressions illustrating the differences:

34 (i) *tulééumá* [tulé:umá] ‘we’re beating’ (BEM)

(ii) *túkumá* [túkumá] ‘we’re beating’ (MAM)

35 (i) *túleeúma* [túle:úma] ‘we’re drying’ (BEM)

(ii) *tukúma* [tukúma] ‘we’re drying’ (BEM)

The study shows that tonal patterns in the BEM words are different from those in the MAM words because these words have different phonemic compositions.

Similarity: there are cognates such as the BEM word *umúténgó* [umúté:ngó] ‘price’ and the MAM word *múténgo* [múté:ngo] (waku mupunga) ‘price’ which, though different in tonal distribution, can be comprehended contextually by both BEM and MAM speakers.

5.2.2 The use of tone in recent past and remote past tenses in order to manifest differences and similarities between the languages under study.

This section shows the use of tone in recent past and remote past tenses in the languages under investigation.

The concept of tense relates to a category in grammatical description of verbs along with aspect and mood. It is the way the grammar marks the time at which the action denoted by the verb took place, (Crystal, 2008). However, the significance of this section lies in using the interface between the syntax (syntactic unit – tense) and phonology (phonological unit – tone) to identify similarities and differences.

The key informant was requested to provide the equivalents of the given English expressions in BEM and MAM in relation to tone in recent past and remote past tenses for the researcher to identify the differences and similarities between the languages under study. After this exercise, the informants, including the key informant, verified the findings. Below are the analysis and interpretation of the findings.

Table 16: The use of tone in recent past and remote past tenses

Gloss	BEM	MAM
we learnt (recent past)	<i>twásámbilile</i> [twá:sá:mbilile]	<i>twásambílízilé</i> [twá:sa:mbílízilé]
we learnt (remote past)	<i>twásambílílélé</i> [twá:sa:mbílílélé]	<i>twásámbílízilé</i> [twá:sá:mbílízilé]
they saw (recent past)	<i>báámwéne</i> [□á:mwé:ne]	<i>yáwení</i> [já:we:ní]
they saw (remote past)	<i>báámwené</i> [□á:mwe:né]	<i>yáwéní</i> [já:wé:ní]
he/she ate (recent past)	<i>áálíle</i> [á:líle]	<i>wálílélé</i> [wá:lílélé]
he/she ate (remote past)	<i>áálílélé</i> [á:lílélé]	<i>wálílélé</i> [wá:lílélé]
he/she carried (recent past)	<i>áásénde</i> [á:sé:nde]	<i>wásenzílélé</i> [wá:se:nzílélé]
she carried (remote past)	<i>ááséndélélé</i> [á:se:ndélélé]	<i>wáséndá</i> [wá:sé:ndá]
you laughed (recent past)	<i>wásékele</i> [wá:sé:kele]	<i>wáseká</i> [wáseká] [a] short for 2 nd person
you laughed (remote past)	<i>wásekélélé</i> [wá:sekélélé]	<i>wáseká</i> [wáseká] [a] short for 2 nd person

In the BEM expression, *twásámbilile* [twásá:mbilile] ‘we learnt’, the first syllable and the second carry **HT** for recent past while for remote past it is *twásambílílélé* [twása:mbílílélé] ‘we learnt’ and in this case the first and the last three syllables have **HT**.

On the other hand, in the MAM expression *twásambílízilé* [twá:sa:mbílízilé] ‘we learnt’, the first and the last four syllables carry **HT** for recent past whereas for remote past *twásámbílízilé* [twá:sá:mbílízilé] ‘we learnt’ all the syllables carry **HT**.

For recent past, the BEM expression *báámwéne* [□á:mwé:ne] ‘they saw’, the first and second syllables receive **HT** while for remote past *báámwené* [□á:mwené] ‘they saw’, the first and the final syllables carry **HT**. In contrast to this, the MAM expression *yáwení* [já:we:ní] ‘they saw’, the first and final syllables have **HT** for recent past whereas for remote past *yáwéní* [já:wé:ní] ‘they saw’, all the syllables carry **HT**.

It is also noted that the BEM recent past expression *áálíle* [á:líle] ‘she/he ate’ has **HT** on the first and second syllables and its remote past expression *áálilé* [á:lilé] ‘she/he ate’ has **HT** on the first and third (final) syllables while the MAM recent past expression *wálilé* [wá:lílé] ‘she/he ate’, has **HT** on the first and third (final) syllables and its remote past expression *wálilé* [wá:lílé] ‘she/he ate’ has **HT** on all the syllables.

It is manifest that the tonal pattern for recent past in MAM is similar to that of remote past for BEM: one of the examples is: *yáwení* [já:we:ní] ‘they saw’ (MAM, recent past) and *báámwené* [βá:mwe:né] ‘they saw’ (BEM, remote past); in both cases, the first syllable and the final syllable carry **HT**. However, the tonal pattern for recent past for BEM is different from the tonal pattern for recent past for MAM, for example: *báámwéne* [□á:mwé:ne] ‘they saw’ and *yáwení* [já:we:ní] ‘they saw’, respectively. Moreover, differences are noted in tonal patterns for remote past. For example, the tonal pattern for the BEM expression *áásendélé* [á:se:ndélé] ‘she carried’ is different from that of the MAM expression *wáséndá* [wá:sé:ndá] ‘she carried’. Another example to show this difference is *wásekélé* [wá:sekélé] ‘you laughed’ and *wáséká* [wáséká] ‘you laughed’ for BEM and MAM, respectively.

It has also been noted that the low central vowel / a / used in the second person *wa* ‘you’ in MAM is short after the voiced labio-velar approximant / w /; this is why it is [wáséká], instead of [wá:séká].

These tonal patterns from the table above illustrate the differences:

36 (i) *wásekélé* [wá:sekélé] ‘you laughed’ (remote past) (BEM)

(ii) *wáséká* [wáséká] ‘you laughed’ (remote past) (MAM)

37 (i) *báámwéne* [□á:mwé:ne] ‘they saw’ (recent past) (BEM)

(ii) *yáwení* [já:we:ní] ‘they saw’ (recent past) (MAM)

Because the phonemic composition of BEM is different from that of MAM, the tonal patterns expressing the differences between recent and remote past tenses in BEM are different from the tonal patterns differentiating recent and remote past tenses in MAM.

5.2.3 Vowel length in minimal pairs: how it relates to this study

Making a point on vowel length, Mann, Kashoki and Wright (1977) explain that length is important in Rural Bemba for indicating differences in meaning between the two words that would otherwise be identical. They indicate that vowel length is an important linguistic marker in Bamba since it can change the meaning of a word depending on whether the relative duration on the syllable is long or short.

The key informant was requested to provide the equivalents of the given English expressions in BEM and MAM in relation to vowel length in minimal pairs for the researcher to identify the differences and similarities between the languages under investigation. After this exercise, the informants, including the key informant, verified the findings. Below are the analysis and interpretation of the findings.

Table 17: Vowel lngth in minimal pairs

Gloss	STDBEM	RULMAM
something bad	<i>icibi</i> [ítʃi□í]	<i>icipe</i> [ɪtʃípé]
door	<i>iciibi</i> [ɪtʃi:□í]	<i>cisasa</i> [tʃísásá]
to laugh	<i>ukuseka</i> [úkuseká]	<i>kuseka</i> [kúseká]
to be plentiful	<i>ukuseeka</i> [úkuse:ka]	<i>kuvula</i> [kúvulá]
to choose	<i>ukusala</i> [úkusalá]	<i>kusola</i> [kúsolá]
to surrender/ capitulate	<i>ukusaala</i> [úkusalá:la]	<i>kuzala</i> [kúzalá]
to compensate	<i>ukufuta</i> [úkufúta]	<i>kulipila</i> [kúlipíla]
to erase	<i>ukufuuta</i> [úkufú:ta]	<i>kufuta</i> [kúfutá]

It is noted that while the BEM minimal pair *icibi* [ítʃi□í] ‘something bad’ and *iciibi* [ɪtʃi:□í] ‘door’ shows the semantic distinction between them on account of vowel length, their MAM counterparts *icipe* [ɪtʃípé] ‘something bad’ and *cisasa* [tʃísásá] ‘door’ are not minimal pairs; therefore, their semantic distinction is not as a result of their difference in vowel length. A similar situation is noted in these MAM words *kuseka* [kúseká] ‘to laugh’ and *kuvula* [kúvulá] ‘to be plentiful and found everywhere’. These are not minimal pairs while their corresponding BEM terms *ukuseka* [úkuseká] ‘to laugh’ and *ukuseeka* [úkuse:ka] ‘to be plentiful and found everywhere’ are minimal pairs whose semantic distinction is attributable to the difference in vowel length. The other MAM words *kusola* [kúsolá] ‘to choose’ and *kuzala* [kúzalá] ‘to surrender or capitulate’ are not minimal

pairs whereas their BEM counterparts *ukusala* [úkúsála] ‘to choose’ and *ukusaala* [úkúsá:la] ‘to surrender or capitulate’ are minimal pairs which show a semantic difference because of their difference in vowel length. The other words which are not minimal pairs in MAM are *kulipila* [kúlípíla] ‘to compensate’ and *kufuta* [kúfutá] ‘to erase’ while their BEM counterparts *ukufuta* [úkufúta] ‘to compensate’ and *ukufuuta* [úkufú:ta] ‘to erase’ are a minimal pair because of their difference in vowel length. The following show which words are minimal pairs and which ones are not:

38 (i) *ukusala* [úkúsála] ‘to choose’ (BEM)

(ii) *ukusaala* [úkúsá:la] ‘to surrender/ capitulate’ (BEM)

39 (i) *kusola* [kúsolá] ‘to choose’ (MAM)

(ii) *kuzala* [kúzalá] ‘to surrender/ capitulate’ (MAM)

The study shows that there are minimal pairs in relation to vowel length in BEM while in MAM there is none at all.

5.2.4 Vowel Length in nominal stabilisation: its relevance to the study

The stabilisation process in nominals has to do with making them do the work of verbs. This is to say that a noun has to be made predicative or copulative. The forms used when the nominal is doing the work of a verb are called stabilised forms, (Mann, 1999). Mann indicates that from some nominals, the ordinary stable form begins with *ni-*, which is often written as a separate word. However, the main focus, here, is on the stabilisation process relating to vowel length.

The key informant was requested to provide the equivalents of the given English expressions in BEM and MAM in relation to vowel length in nominal stabilisation for the researcher to identify the differences and similarities between the languages under study. After this exercise, the informants, including the key informant, verified the findings. Below are the analysis and interpretation of the findings.

Table 18: Vowel length in nominal stabilisation

Gloss	BEM	MAM
<i>it's a pumpkin</i>	<i>ciipushi</i> /cii-push/ [tʃi:puʃi]	<i>cipuzi</i> /ci-puzi/ [tʃipúzi]
<i>it's a slave</i>	<i>muusha</i> /muu-sha/ [mú:ʃá]	<i>muzya</i> /mu-zya/ [múzjá]
<i>it's a hat</i>	<i>ciisote</i> /cii-sote/ [tʃi:soté]	<i>ningowani</i> /ni-n-gowani/ [ní:ŋgowá:ní] or <i>ninkofela</i> /ni –n-kofela/ [níŋkófélá]
<i>it's a hoe</i>	<i>luukasu</i> /luu-kasu/ [lú:kasú]	<i>nimukolo</i> /ni-mukolo/ [nímukóló]
<i>it's forgetfulness</i>	<i>ciilafi</i> /cii-lafi/ [tʃi:láfí]	<i>ciya</i> /ci-ya/ [tʃíjá]
<i>it's water</i>	<i>meenshi</i> /ma-inshi/ [mé:nʃí]	<i>manzi</i> /ma-nzi [mánzí]

In the BEM expression *ciipushi* [tʃi:puʃi] ‘it’s a pumpkin’, the high front vowel /i/ is lengthened whereas in the corresponding MAM expression *cipuzi* [tʃipúzi] ‘it’s a pumpkin’ the high front vowel /i/ is not. This shows that there is no stabilisation of the nominal. It is also noted that there is no stabilisation of the MAM expression *muzya* [múzjá] ‘it’s a slave’ whereas the BEM expression *muusha* [mú:ʃá] ‘it’s a slave’ is a stabilised form: there is the lengthening of the high back vowel /u/ in the BEM nominal.

In the MAM expressions *ningowani* [ní:ŋgowá:ní]/ *ninkofela* [níŋkófélá] ‘it’s a hat’, stabilisation is achieved with the proclitic **ni-** while in the corresponding BEM expression *ciisote* [tʃi:soté] ‘it’s a hat’ the high front vowel /i/ is lengthened as a way of stabilising the nominal.

In the MAM expression *nimukolo* [nímukóló] ‘it’s a hoe’, there is no stabilisation of the nominal by lengthening the vowel. Instead, the proclitic **ni-** is employed for stabilising the nominal. In the corresponding BEM expression *luukasu* [lú:kasú] ‘it’s a hoe’, the high back vowel /u/ is lengthened to stabilise the nominal. It is also noted that the BEM expression *ciilafi* [tʃi:láfí] ‘it’s forgetfulness’ is stabilised by lengthening the high front vowel /i/ whereas in the MAM expression *ciya* [tʃíjá] ‘it’s forgetfulness’, there is no lengthening of the high front vowel /i/ to stabilise the nominal. It is a similar situation for the MAM nominal *manzi* [mánzí] ‘it’s water’: there is no

stabilisation of the nominal by lengthening the low central vowel /a/ while in the BEM expression *meenshi* [mé:nʃi] ‘it’s water’ vowel-lengthening occurs to achieve stabilisation of the nominal. In *meenshi*, vowel lengthening is done by coalescence. Among the examples from the table are:

40 (i) *muusha* [mú:ʃá] ‘it’s a slave’ (BEM)

(ii) *muzya* [múzjá] ‘it’s a slave’ (MAM)

41 (i) *ciilafi* [tʃi:láfí] ‘it’s forgetfulness’ (BEM)

(ii) *ciya* [tʃjá] ‘it’s forgetfulness’ (MAM)

42 (i) *ciisote* [tʃi:soté] ‘it’s a hat’ (BEM)

(ii) *ninkofela* [nínkófélá] / *ningowani* [ní:ngowá:ní] ‘it’s a hat’ (MAM)

It is noted that in BEM nominal stabilisation is achieved by vowel lengthening, besides using the proclitic *ni-* in other instances, whereas in MAM nominal stabilisation is not achieved by vowel lengthening, as the examples above illustrate.

5.3 Chapter Summary

The purpose of this chapter has been to address the first research objective, which is “To compare the phonology of BEM with the phonology of MAM. The chapter has presented and discussed the elements of segmental phonology and suprasegmental phonology.

In segmental phonology, the areas covered were feature-changing rules with some consonants, the allophonic rules, palatalisation and postalveolarisation in causative and intensive verbal extensions, morphophonological rule of vowel harmony in applicative verbal extension, semivocalisation, coalescence and nasal assimilation. The chapter has brought to the fore some differences and similarities in segmental phonology. First, the similarities: with the feature changing rules (*f*→*v* and *ʃ*→*z*), all the words were cognates; the rule of nasal assimilation is applicable to both languages and some words that were involved are cognates; allophonic rule on the voiced bilabial fricative /β/ is applicable to BEM only, but most of the words involved with this rule are cognates; some words undergoing palatalisation in MAM and postalveolarisation in BEM in causative and intensive verbal extension processes were cognates; semivocalisation occurred where

words in both languages are similar or the same. The differences were: the vowel harmony rule is applicable to both languages, but there were some minor differences in its application; the allophonic rule on the voiced alveolar lateral / l / with regard to the present simple and present continuous tenses in BEM and MAM is applicable only to BEM; with regard to semivocalisation, where the BEM word is different from the MAM word, this process occurs in one word, but not in the other or the environments of semivocalisation in both words are different.

In suprasegmental phonology, the study sought to find out the differences and similarities between the languages under study in relation to: shift in tone in the same words, application of tone in recent and remote past tenses, vowel length in minimal pairs and vowel length in nominal stabilisation.

A similarity was noted under the shift in tone in the same word; in the light of this, cognates with different tonal patterns can be understood by both BEM and MAM speakers, given the context; the differences were: where the phonemic composition of words in BEM differs from that of words in MAM, the use of tone to distinguish recent past from remote past is different; vowel length in minimal pairs and in nominal stabilisation is applicable only to BEM.

In these areas of analysis and interpretation, it has been concluded that there are more differences than similarities between BEM and MAM.

The next chapter presents the findings on the comparison between the morphology of BEM with the morphology of MAM.

CHAPTER SIX

MORPHOLOGICAL DIFFERENCES AND SIMILARITIES

6.0 Introduction

The previous chapter presented and discussed phonological differences and similarities. This chapter presents and discusses the findings in relation to the second research objective: to compare the morphology of BEM with the morphology of MAM. There are two dimensions of analysis and interpretation, namely: nominal morphology and verbal morphology. In nominal morphology, differences and similarities between BEM and MAM manifest in terms of the use of nominal prefixes and nominal stems. The differences and similarities emerge in nouns with different nominal prefixes, but which have the same nominal stems; the nouns with the same nominal prefixes, but which have different nominal stems; the nouns with different nominal prefixes and different nominal stems. Another differentiating feature is that BEM has augments while MAM does not.

With regard to verbal morphology, differences and similarities have emerged in the tenses which are prehodiernal progressive, posthodiernal progressive, present progressive(continuous), future tense of today (hodiernal future), posthodiernal (i.e., remote) future and present simple.

Concerning verbal extensions, differences and similarities are noted in passive, causative, intensive, frequentative, applied or applicative, neuter or stative, reciprocal, reversive active and completive morphs. The other areas where differences and similarities are noticeable are mood, negative verbs and definitisation verb phrases.

6.1 Nominal Morphology

Differences and similarities in the nouns manifest in accordance with the three themes that follow.

6.1.1 Differences and similarities between BEM and MAM nouns having different nominal prefixes, but with the same nominal stems:

The key informant was interviewed with regard to BEM and MAM nominal prefix class 2: nouns having different nominal prefixes, but with the same nominal stems: He was requested to provide the equivalents of the English terms in BEM and MAM for the researcher to find out whether there were similarities and differences in relation to those nouns. After this exercise, the informants, including the key informant, verified the responses from the key informant on the findings. Below are the analysis and interpretation of the findings.

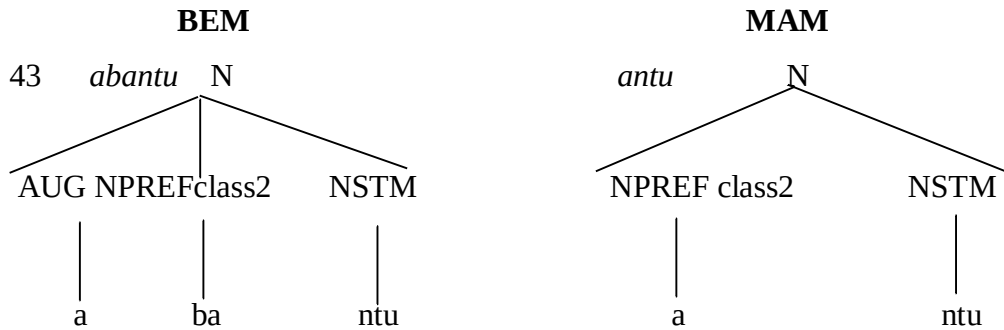
As it has already been indicated in the introduction, BEM is an augmented language with forms like **u**-mu-, **a**-ba-, **i**-mi- whereas MAM is a non-augmented language, as we shall note in the presentation.

This study reveals that BEM uses **-ba-**, nominal prefix class 2 for plural in the word **a-ba-ntu** which is written as *abantu* ‘people’, but MAM realises nominal prefix class 2 as **a-** in the word **a-ntu** which is written as *antu* ‘people’. The table below shows some differences between BEM and MAM in connection with the nominal prefix class 2.

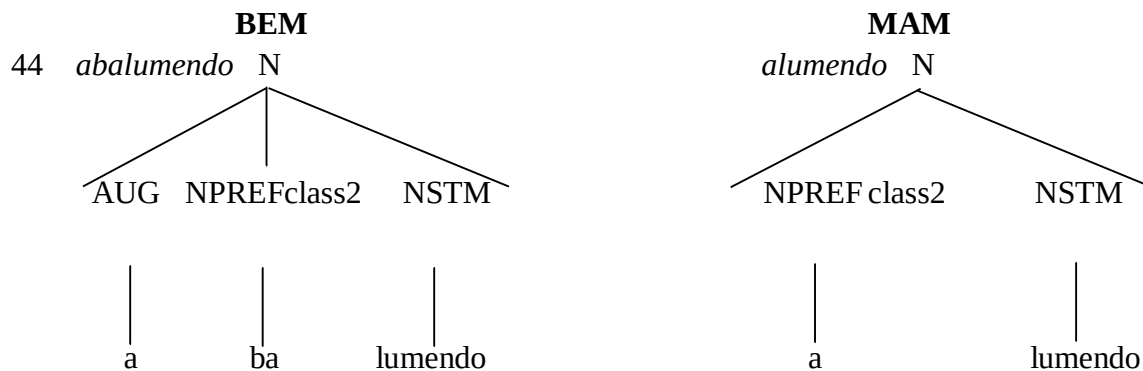
Table 19: Differences and similarities in relation to the nouns with nominal prefix class 2

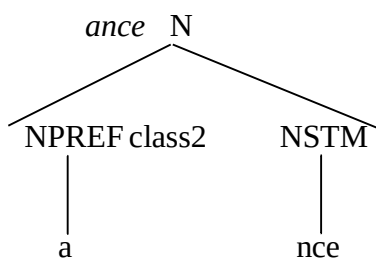
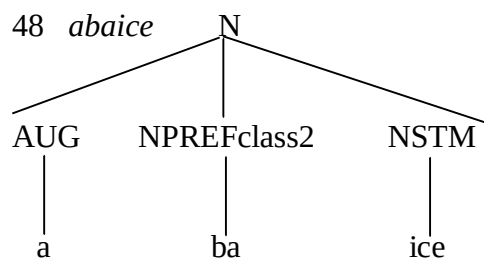
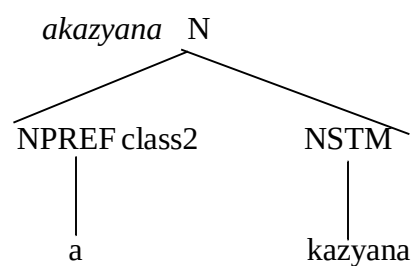
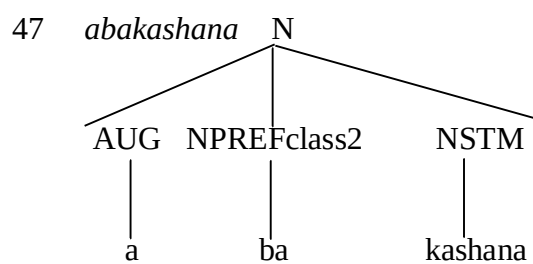
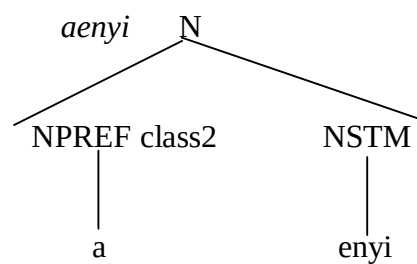
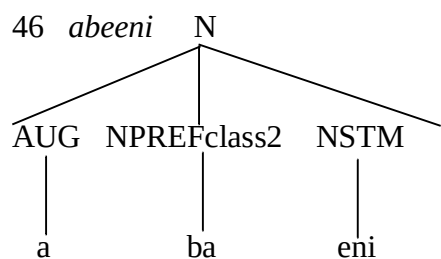
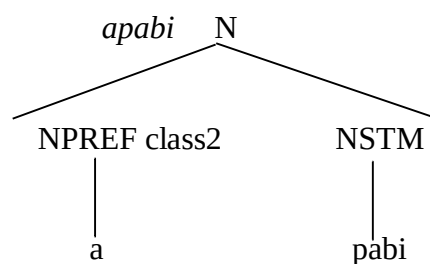
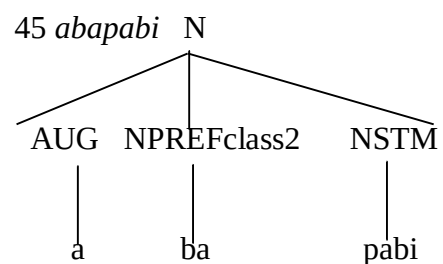
Gloss	BEM	MAM
people	<i>abantu /a-ba-ntu</i>	<i>antu /a-ntu/</i>
boys	<i>abalumendo /a-ba-lumendo/</i>	<i>alumendo /a-lumendo/</i>
people without royal blood	<i>abapabi /a-ba-pabi/</i>	<i>apabi /a-pabi/</i>
guests	<i>abeeni /a-ba-ini/</i>	<i>aenyi /a-enyi/</i>
girls	<i>abakashana /a-ba-kashana/</i>	<i>akazyana /a-kazyana/</i>
children	<i>abaice / a-ba-ice/</i>	<i>ance /a-nce/</i>

Illustrations of the differences are given in the tree diagrams below:



Similarly, **-ba-** is the nominal prefix in the BEM words: a-**ba**-lumendo written as *abalumendo* ‘boys’ and a-**ba**-pabi which is rendered as *abapabi* ‘persons without royal blood or ordinary people’. Other words include a-**ba**-eni (*abeeni*) ‘guests’, a-**ba**-kashana (*abakashana*) ‘girls’, a-**ba**-ice (*abaice*) ‘children’ whereas **a-** is the nominal prefix representing class 2 in the corresponding MAM words: **a**-lumendo (*alumendo*) ‘boys’ and **a**-pabi written as *apabi* ‘persons without royal blood or ordinary people’. In this category, the cognate words include **a**-enyi (*aenyi*) ‘guests’, **a**-kazyana (*akazyana*) ‘girls’, **a**-nce (*ance*) ‘children’. Illustrations of the differences and the similarities are shown below in the tree diagrams:





In the section above, it is noted that BEM is different from MAM in the use nominal prefix class 2. The BEM nominal prefix class 2 is -ba-, which is preceded by the augment a- whereas the

corresponding MAM nominal prefix class 2 is a- which has no augment. However, it is shown that the languages share the nominal stems. This category also includes cognate nouns.

The key informant was interviewed with regard to BEM and MAM nouns having nominal prefix class 2a. He was requested to provide the equivalents of the English terms in BEM and MAM for the researcher to find out whether there were similarities and differences in relation to those nouns. After this exercise, the informants, including the key informant, verified the responses from the key informant on the findings. Below are the analysis and interpretation of the findings.

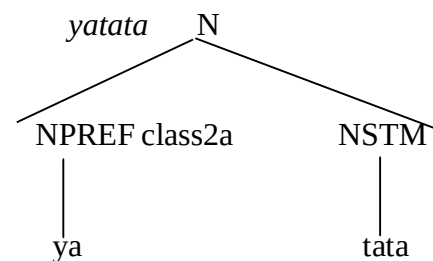
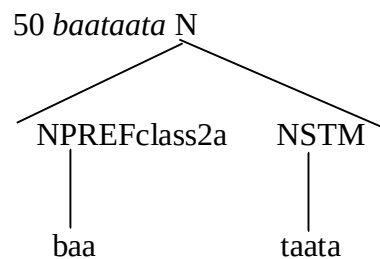
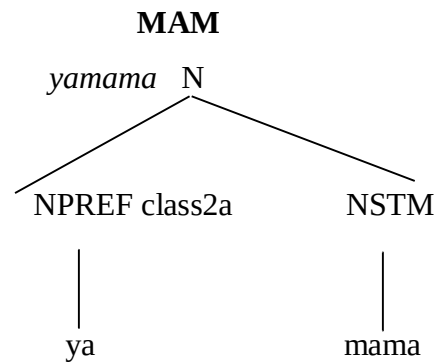
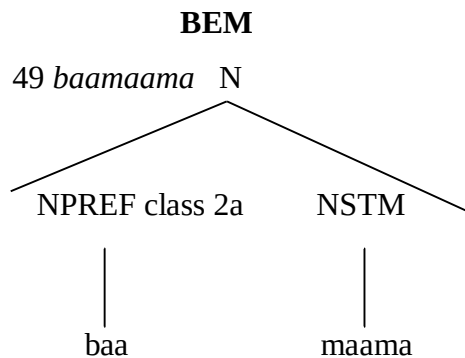
Table 20: Differences and similarities concerning the nouns with nominal prefix class 2a

Gloss	BEM	MAM
my grandmother(s)	<i>baamaama /baa-maama/</i>	<i>yamama /ya-mama/</i>
my father(s)	<i>baataata /baa-taata/</i>	<i>yatata /ya-tata/</i>
my paternal uncle(s)	<i>baayaama /baa-yaama/</i>	<i>yayama /ya-yama/</i>
my mother(s)	<i>baamaayo /baa-maayo/</i>	<i>yamayo /ya- mayo/</i>
my paternal aunt(s)	<i>baamaayosenge /baa-maayosenge/</i>	<i>yamangusenge /ya-mangusenge/</i>

In the BEM words meaning my grandmother(s) and my father(s), the nominal prefix is class 2a, **baa-** that is written before the nominal stems. **Baa** – maama becomes **baamaama** and **baa** – taata is written as **baataata**. Other words in this category include **baa-yaama** (**baayaama**) ‘my maternal uncle(s)’, **baa-maayo** (**baamaayo**) ‘my mother(s)’, **baa-maayosenge** (**baamaayosenge**) ‘my paternal aunt(s)’. In contrast to these, the corresponding MAM words take **ya-** as the nominal prefix representing class 2a before the nominal stems: -mama, -tata, -yama, -mayo and -mangusenge which become **yamama** ‘my grandmother (s)’, **yatata** ‘my father (s)’, **yayama** ‘my maternal uncle(s)’, **yamayo** ‘my mother(s)’ and **yamangusenge** ‘my paternal aunt(s)’, respectively. It is important to note that in these languages the brothers of one’s father are regarded as one’s fathers and the sisters of one’s mother as one’s mothers, as well. In addition to signalling plurality, nominal prefix class 2a, baa- and ya- in BEM and MAM, respectively, are used for showing respect to somebody. It has also been noted that in the following BEM stems: -maama -taata, maayo and

yaama, the low central vowel /a/ in the first syllable is long whereas in the corresponding MAM stems -*mama*, *tata*, *mayo* and *yama* it is short.

Illustrations of the differences are given in the tree diagrams below:



In the section above, the difference is in the use of nominal prefix class 2a. BEM uses *baa-* while MAM uses *ya-*. There is cognation in relation to nominal stems

Differences and similarities also noted with regard to nominal prefix class 8.

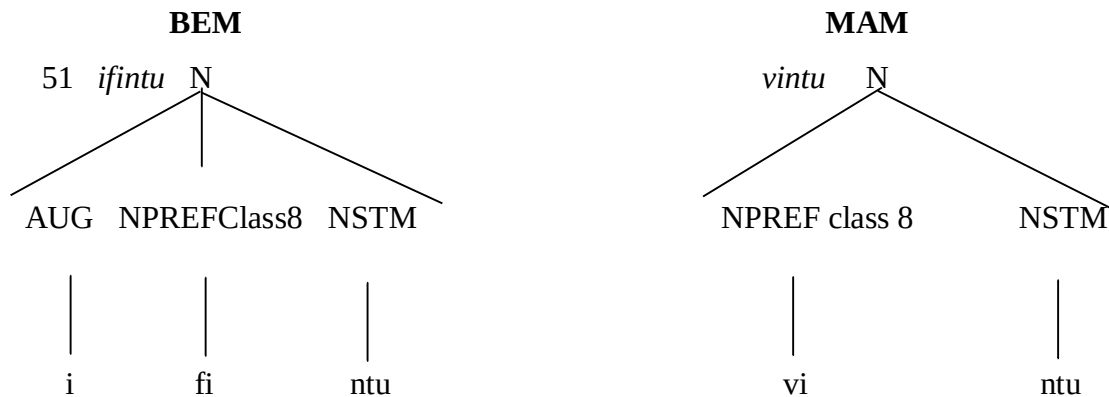
The key informant was interviewed with regard to BEM and MAM nouns having nominal prefix class 8. He was requested to provide the equivalents of the English terms in BEM and MAM for the researcher to find out whether there were similarities and differences in relation to those nouns. After this exercise, the informants, including the key informant, verified the responses from the key informant on the findings. Below are the analysis and interpretation of the findings.

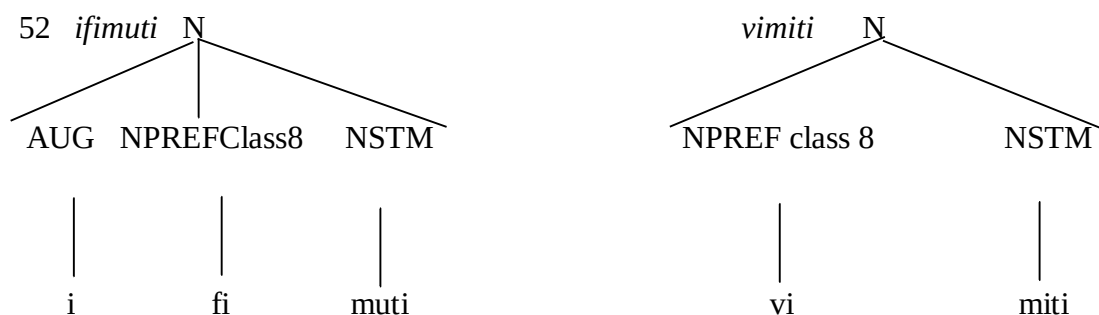
Table 21: Differences and similarities with regard to the nouns having nominal prefix class 8

Gloss	BEM	MAM
things	<i>ifintu</i> /i-fi-ntu/	<i>vintu</i> /vi-ntu/
trees	<i>ifimuti</i> /i-fi-muti/	<i>vimiti</i> /vi-miti/
ancestors	<i>ifikolwe</i> /i-fi-kolwe/	<i>vikolwe</i> /vi-kolwe/
cucumbers	<i>ifibimbi</i> /i-fi-bimbi/	<i>vimbi</i> vi-mbi/

The BEM and MAM words meaning ‘things’ are i-**fi**-ntu written as *ifintu* and **vi**-ntu which is rendered as *vintu*, respectively. In the BEM word **-fi-** is the nominal prefix class 8 and preceded by the augment i-. It is followed, in this context, by the nominal stem –ntu while the MAM nominal prefix class 8 is **vi-**. It is also followed by the nominal stem –ntu. Other words in this category in BEM include i-**fi**-muti (*ifimuti*) ‘trees’, i-**fi**-kolwe (*ifikolwe*) ‘ancestors’ and i-**fi**-bimbi (*ifibimbi*) ‘cucumbers’. Their corresponding words in MAM are **vi**-miti(*vimiti*) ‘trees’, **vi**-kolwe(*vikolwe*) ‘ancestors’ and **vi**-mbi(*vimbi*) cucumbers.

Below are two illustrations of these nouns in the tree diagrams:





The difference is in the use of the nominal prefix class 8. The nominal prefix class 8 used in BEM is -fi-, which follows the augment i-; the corresponding MAM nominal prefix class 8 is vi-, which is augmentless. This category also includes cognate nouns. It is important to indicate that feature changing occurs here: /f/ in BEM words changes to /v/ in MAM words.

The key informant was interviewed with regard to BEM and MAM nouns having nominal prefix class 10. He was requested to provide the equivalents of the English terms in BEM and MAM for the researcher to find out whether there were similarities and differences in relation to those nouns. After this exercise, the informants, including the key informant, verified the responses from the key informant on the findings. Below are the analysis and interpretation of the findings.

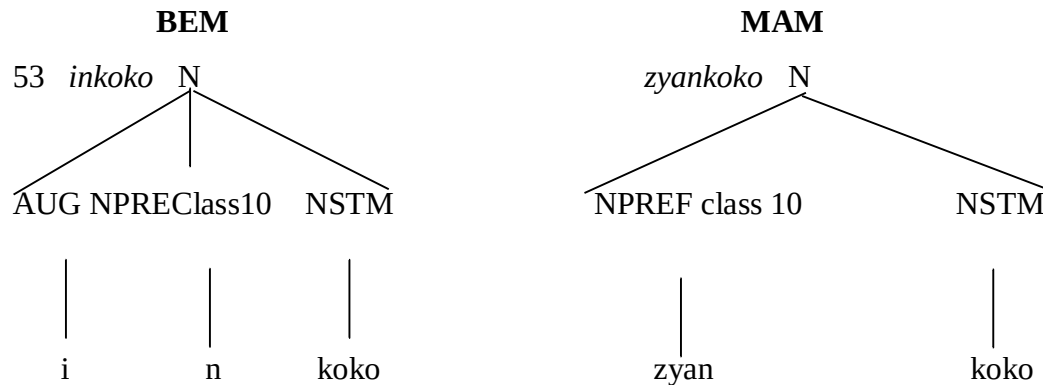
Table 22: Differences and similarities in reference to the nouns with nominal prefix class 10

Gloss	BEM	MAM
chicken	<i>inkoko</i> /i-n-koko/	<i>zyankoko</i> /zya-n-koko/
goats	<i>imbushi</i> /i-m-bushi/	<i>zyambuzi</i> /zya-m-buzi/
lions	<i>inkalamo</i> /i-n-kalamo/	<i>zyankalamo</i> /zya-n-kalamo/

It is evident from the findings that the **n-** is the nominal prefix class 10 which is followed by many nominal stems and one of them is -koko for the BEM word i-**n**-koko which is written as *inkoko* ‘chickens’, but for the corresponding MAM word, the nominal prefix class 9, -**n**- is preceded by another prefix (a pre-prefix) zya, and the combination of these prefixes becomes the counterpart for the BEM nominal prefix class 10, -**n/m**-. The MAM word is, therefore, **zya-n**-koko, which is

written as *zyankoko* ‘chickens. Other words in this category include **zya-m-buzi** (*zyambuzi*) ‘goats’ and **zya-n-kalamo** (*zyankalamo*) ‘lions’.

An illustration is shown in the tree diagram below:



The difference in the above section is in the use of nominal prefix class 10. While BEM uses n- or m- preceded by the augment i-, the corresponding MAM nominal prefix class 10 is zyan- or zyam-, which is preceded by no augment. This category includes cognates.

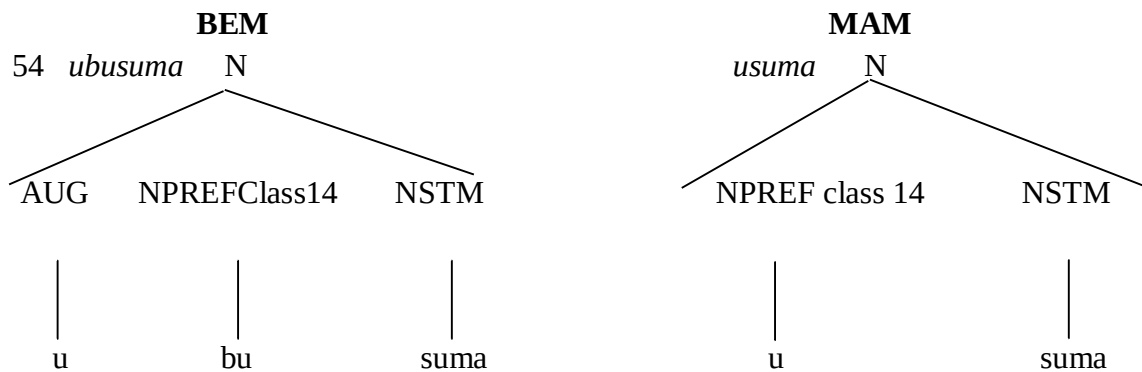
The key informant was interviewed with regard to BEM and MAM nouns having nominal prefix class 14. He was requested to provide the equivalents of the English terms in BEM and MAM for the researcher to find out whether there were similarities and differences in relation to those nouns. After this exercise, the informants, including the key informant, verified the responses from the key informant on the findings. Below are the analysis and interpretation of the findings.

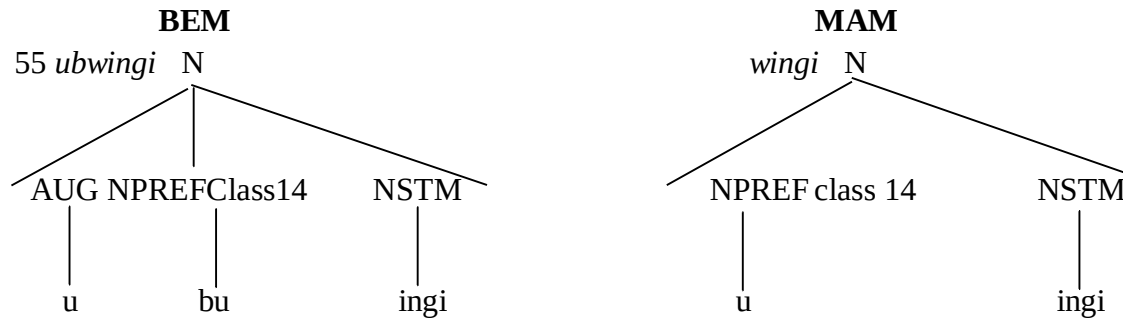
Table 23: Differences and similarities in relation to the nouns with nominal prefix class 14

Gloss	BEM	MAM
goodness	<i>ubusuma</i> /u-bu-suma/	<i>usuma</i> /u-suma/
the state of being plentiful	<i>ubwinga</i> /u-bu-ingi/	<i>wingi</i> /u-ingi/
canoe	<i>ubwato</i> /u-bu-ato/	<i>wato</i> /u-ato/
Mat made from reeds	<i>ubutanda</i> /u-bu-tanda/	<i>utanda</i> /u-tanda/
wedding	<i>ubwinga</i> /u-bu-inga/	<i>winga</i> /u-nga/

The words in BEM and MAM which mean ‘goodness or beauty’ are *ubusuma* and *usuma*, respectively. In the BEM word u-**bu**-suma, the nominal prefix class 14 is **-bu-**, which is preceded by the augment u- and followed by the nominal stem –suma whereas in MAM the nominal prefix class 14 is realised by **u-**, which is followed by the nominal stem –suma; no augment is used in the MAM nouns. Similarly, the BEM and MAM words meaning ‘the state of being plentiful’ are u-**bu**-ingi, which is written as *ubwingi*, and **u**-ingi that is rendered as *wingi*, respectively. In the BEM word, the nominal prefix class 14 is **-bu-** followed by the nominal stems –ingi. On the other hand, the nominal prefix class 14 in the MAM word is represented by **u-** and the nominal stem –ingi follows this. Other words in this category in BEM include u-**bu**-ato (*ubwato*) ‘canoe’, u-**bu**-tanda (*ubutanda*) ‘mat made from reeds’ and u-**bu**-inga (*ubwinga*) ‘wedding’. The corresponding words in MAM are u-ato (*wato*) ‘canoe’, **u**-tanda (*utanda*) ‘mat made from reeds’ and **u**-inga (*winga*) ‘wedding’. In the BEM and MAM words: *ubwingi* and *wingi*, *ubwato* and *wato*, *ubwinga* and *winga*, respectively, the process of semivocalisation occurs.

Using the two nominal prefixes, the nouns formed are shown in the tree diagrams below:





In the foregoing section, the BEM nominal prefix class 14 is -bu- preceded by the augment u- whereas the corresponding MAM nominal prefix class14 is u-. It is noted that in the MAM nouns, there is no the voiced bilabial fricative /β/, which is present in their BEM counterparts.

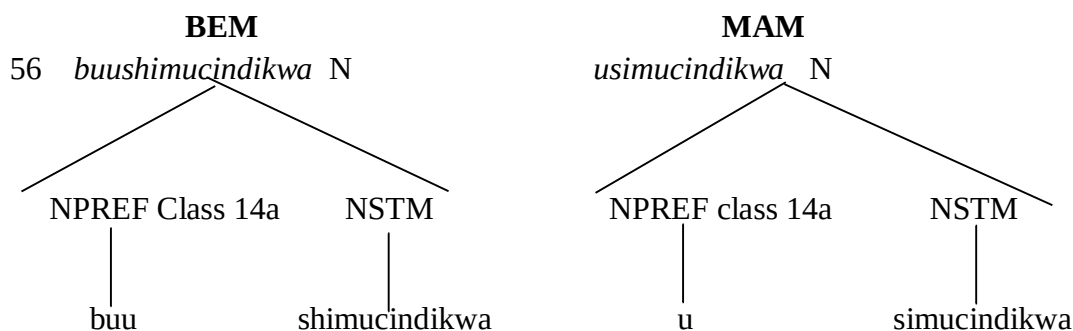
The key informant was interviewed with regard to BEM and MAM nouns having nominal prefix class 14a. He was requested to provide the equivalents of the English terms in BEM and MAM for the researcher to find out whether there were similarities and differences in relation to those nouns. After this exercise, the informants, including the key informant, verified the responses from the key informant on the findings. Below are the analysis and interpretation of the findings.

Table 24: Differences and similarities concerning the nouns with nominal prefix class 14a

Gloss	BEM	MAM
the state of being respected	<i>buushimucindikwa</i> /buu-shimucindikwa/	<i>usimucindikwa</i> /u-simucindikwa/

The nominal prefix class 14a in BEM is **buu-** and it is followed by nominal stems. One of such stems in BEM is -shimucindikwa, which is used to form the noun **buushimicindikwa** ‘the state of being a respected person’. In the corresponding MAM noun, the nominal prefix class 14a is realised by **u-**, which is followed by the nominal stem -simucindikwa, and this becomes **usimucindikwa** ‘the state of being a respected person’. There is a phonological difference concerning the initial syllable of the nominal stems. The initial phoneme in the BEM nominal stem -**shimucindikwa** is the voiceless postalveolar fricative [ʃ] and this is followed by the high front vowel [i] while the initial phoneme of the MAM nominal stem -**simucindikwa**- is the voiceless

alveolar fricative [s]; it is also followed by the high front vowel [i]. The morphological difference is illustrated in the tree diagram below:



It is noted that the nominal prefix class 14a is buu- in BEM whereas in the corresponding MAM nouns, it is u-. The other difference noted is a phonological one concerning the initial syllables of the nominal stems: the phoneme in the BEM nominal stem is the voiceless posalveolar fricative [ʃ] while the initial phoneme of the MAM nominal stem is the voiceless alveolar fricative[s]. Cognation also features in this category.

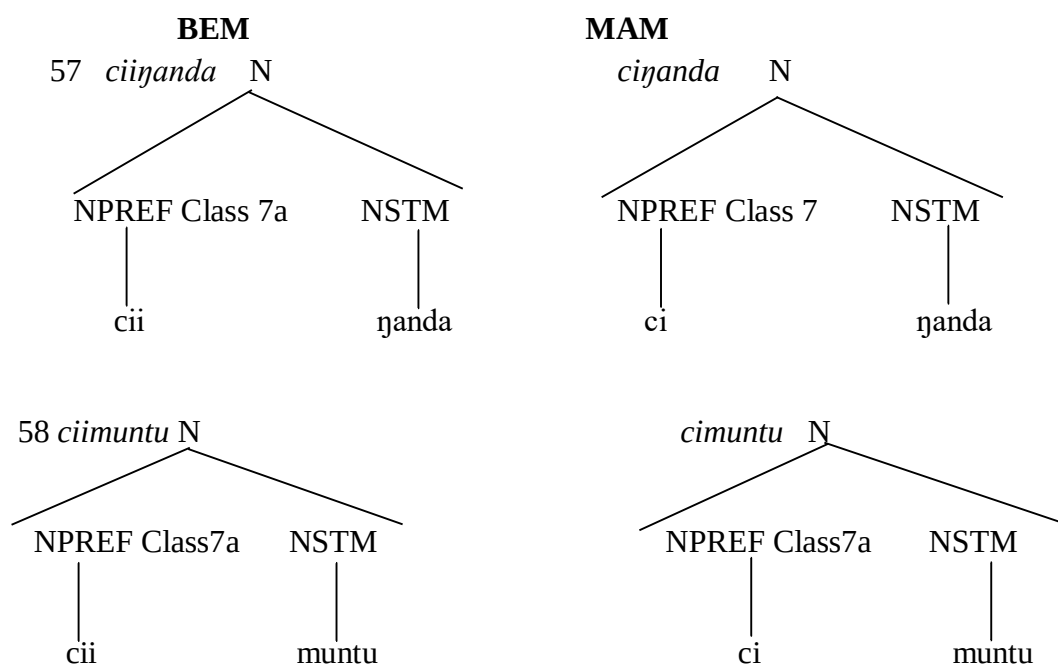
It is also noticeable in the process of denominalisation that some nouns are derived in relation to augmentativisation in both BEM and MAM.

The key informant was interviewed with regard to BEM and MAM nouns having nominal prefix classes 7 and 7a. He was requested to provide the equivalents of the English terms in BEM and MAM for the researcher to find out whether there were similarities and differences in relation to those nouns. After this exercise, the informants, including the key informant, verified the responses from the key informant on the findings. Below are the analysis and interpretation of the findings.

Table 25: Differences and similarities with regard to the nouns with nominal prefix classes 7 and 7a

Gloss	BEM	MAM
a huge (and ugly) house	<i>ciiṇanda</i> /cii-ṇanda/	<i>ciṇanda</i> /ci-ṇanda/
a huge (and ugly) person	<i>ciimuntu</i> /cii-muntu/	<i>cimuntu</i> /ci-muntu/
a huge (and ugly) cock	<i>ciimukolwe</i> /cii-mukolwe/	<i>cimukolwe</i> /ci-mukolwe/

In the BEM word, the nominal prefix class 7a is **cii-**, which is followed by the nominal stems, and one of them is – ɲanda, which is used to derive the word **ciijanda** ‘a huge (and ugly) house’. In the corresponding MAM word, the nominal prefix class 7, **ci-** is used and it is followed by the nominal stem, – ɲanda. The MAM noun, which is formed, is **ciɲanda** ‘a huge (and ugly) house.’ Similarly, the process applies to the BEM and MAM words **cii-muntu** (**ciimuntu**) ‘a huge (and ugly) person’ and **ci-muntu** (**cimuntu**) ‘a huge (and ugly) person’, **cii-mukolwe** (**ciimukolwe**) and **ci-kapandala** / **ci-mukolwe** (**cikapandala** / **cikapandala**) ‘a huge (and ugly) cock’, respectively. Illustrations of two of the morphological differences are shown in the tree diagrams below:



In the section above, the difference is in the use of nominal prefix classes 7 and 7a for MAM and BEM, respectively.

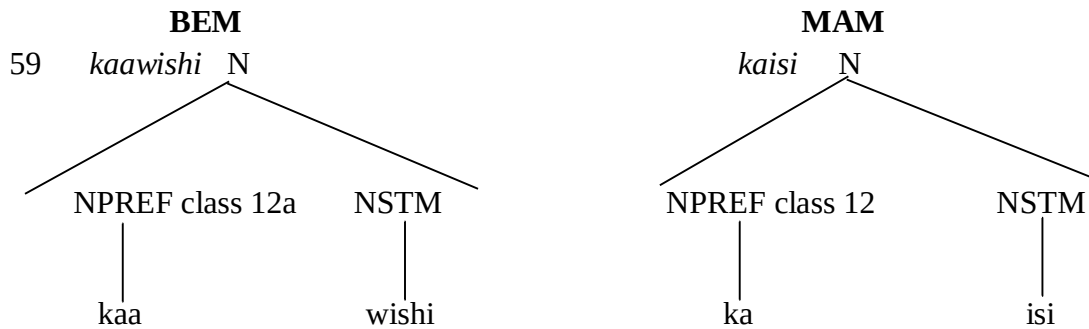
The key informant was interviewed with regard to BEM and MAM nouns having nominal prefix classes 12 and 12a. He was requested to provide the equivalents of the English terms in BEM and MAM for the researcher to find out whether there were similarities and differences in relation to those nouns. After this exercise, the informants, including the key informant, verified the responses from the key informant on the findings. Below are the analysis and interpretation of the findings.

It is also evident from this study that there are differences and similarities in relation to diminutive nouns. In BEM, diminutivisation of nouns requires the use of the nominal prefix classes 12, 12a, 13 and 13a. The table below shows the differences and similarities between BEM and MAM with regard to the nominal prefix classes 12a and 12, respectively.

Table 26: Differences and similarities with regard to nominal prefix classes 12 and 12a.

Gloss	BEM	MAM
little grandmother	<i>kaamaama</i> / <i>kaa-maama</i> /	<i>kamama</i> / <i>ka-mama</i> /
small canoe	<i>kaabwato</i> / <i>kaa-bwato</i> /	<i>kawato</i> / <i>ka-wato</i> /
small crocodile	<i>kaanywena</i> / <i>kaa-nywena</i> /	<i>kangwena</i> / <i>ka-ngwena</i> /
small cow	<i>kaanyombe</i> / <i>kaa-nyombe</i> /	<i>kanombe</i> / <i>ka-nyombe</i> /
small/little father	<i>kaawishi</i> / <i>kaa-wishi</i> /	<i>kaisi</i> / <i>ka-isi</i> /

The nominal prefix class 12a, **kaa-** followed by the nominal stem –maama forms the noun **kaamaama** ‘little grandmother’ in BEM whereas in MAM the nominal prefix class 12, **ka-** followed by the same nominal stem derives the noun **kamama** ‘little grandmother’. Other words in BEM and MAM in this category include **kaabwato** and **kawato** ‘small canoe’, **kaanyombe** and **kanombe** ‘small cow’, **kaanywena** and **kangwena** ‘small crocodile’, **kaawishi** and **kaisi** ‘small/little father’, respectively. One of the morphological differences and similarities is illustrated in the tree diagram below:



The difference in this category is in the use of the nominal prefix classes 12 and 12a for MAM and BEM, respectively.

Based on the data, it is also clear that there are differences and similarities between BEM and MAM in the process of deadjectivisation in which nouns are derived. The table below shows the differences.

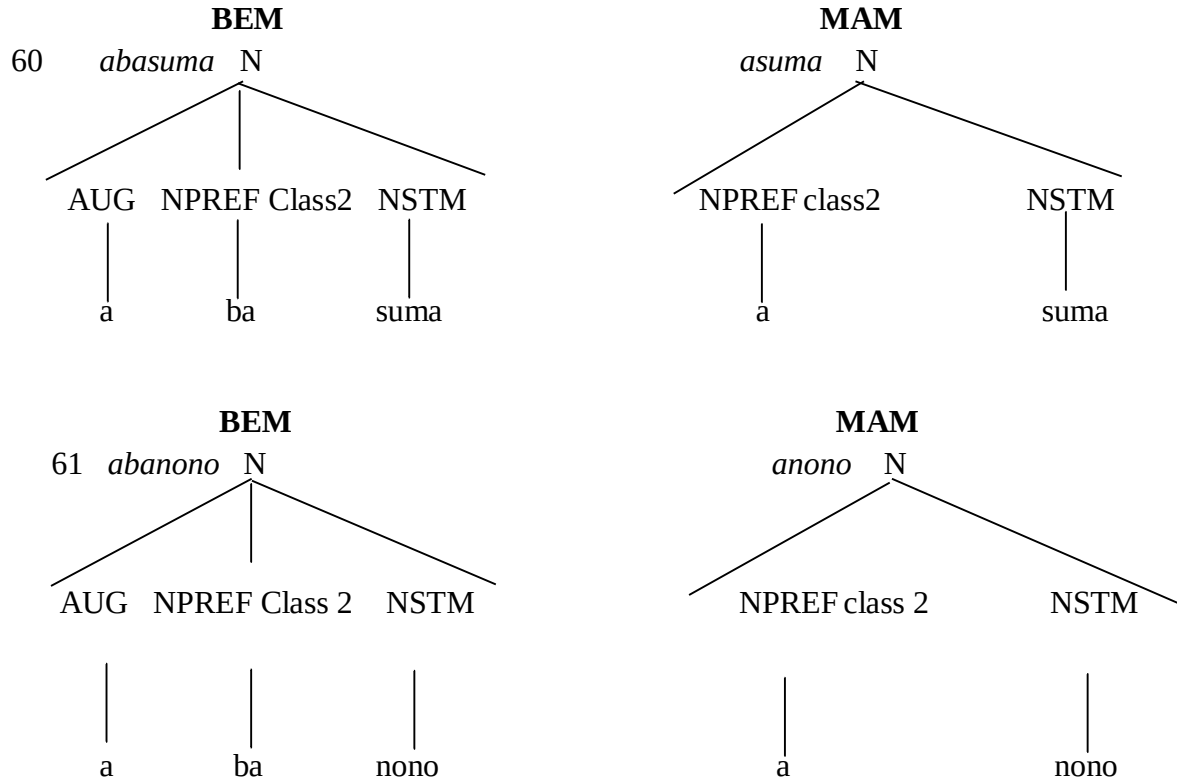
The key informant was interviewed with regard to the process of deadjectivisation in which nouns are derived from nominal prefix class 2 in BEM and MAM. He was requested to provide the equivalents of the English terms in BEM and MAM for the researcher to find out whether there were similarities and differences in relation to those nouns. After this exercise, the informants, including the key informant, verified the responses from the key informant on the findings. Below are the analysis and interpretation of the findings.

Table 27: Differences and similarities in relation to deadjectivisation in which nouns are derived using class 2.

Gloss	BEM	MAM
good people	<i>abasuma</i> /a-ba-suma/	<i>asuma</i> /a-suma/
young people	<i>abanono</i> /a-ba-nono/	<i>anono</i> /a-nono/

In BEM the nominal prefix class 2, **-ba-** is followed by the nominal stem *-suma*, which is an adjective meaning ‘good’, to form the noun **abasuma** ‘good people’. In the corresponding MAM word, the nominal prefix **a-**, realising the nominal prefix class 2, is also followed by the nominal stem *-suma* meaning ‘good’ to derive the noun **asuma** ‘good people’. In a similar manner, the BEM nominal prefix class 2, **-ba-** is followed by the nominal stem *-nono* which is an adjective meaning ‘young’ to derive the noun **abanono** ‘young people’ whereas the MAM nominal prefix **a-** representing the nominal prefix class 2 is followed by the nominal stem *-nono* which means ‘young’ to form the noun **anono** ‘young people’. The BEM nominal prefix is preceded by the augment *a-* while the MAM prefix has no augment.

The differences are illustrated in the tree diagrams below:



In the section above, it is noted that the nominal prefix class 2 for BEM is -ba- , which is preceded by the augment a- whereas the corresponding MAM nominal prefix class 2 is a-, which has no augment. Based on the data, it is also clear that there are differences between BEM and MAM in the process of deadjectivisation in which nouns are derived. Similarities are also noted in terms of nominal stems.

The key informant was interviewed with regard to nouns with nominal prefix classes 14 and 8. He was requested to provide the equivalents of the English terms in BEM and MAM for the researcher to find out whether there were similarities and differences in relation to those nouns. After this exercise, the informants, including the key informant, verified the responses from the key informant on the findings. Below are the analysis and interpretation of the findings.

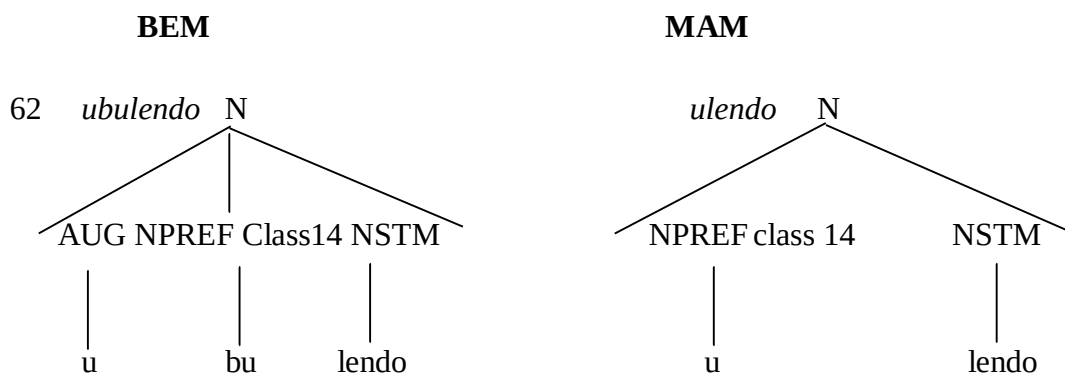
In BEM and MAM, a few differences are noted in the process of deverbalisation in which nouns are formed from verbs such as *enda* ‘move/walk’ and *bomba/omba* ‘work’, and so on, using nominal prefix classes 14, -bu-/u- and 8-fi-/v-. The table below shows these differences.

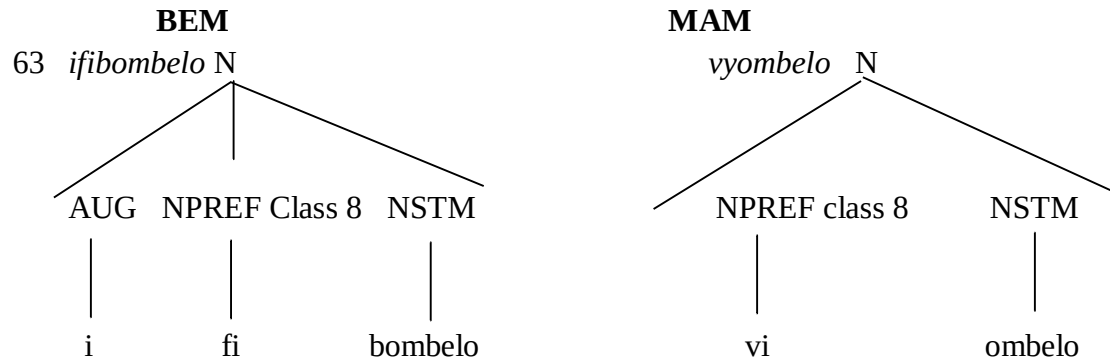
Table 28: Differences and similarities concerning the nouns with nominal prefix classes 14 and 8

Gloss	BEM	MAM
journey	<i>ubulendo</i> /u-bu-lendo/	<i>ulendo</i> /u-lendo/
tools	<i>ifibombelo</i> /i-fi-bombelo/	<i>vyombelo</i> /vi-ombelo/

The BEM nominal prefix class 14, **-bu-** is followed by many nominal stems and one of them is –lendo which is used to form the noun *ubulendo* ‘journey’. In MAM, the nominal prefix **u-** realising the nominal prefix class 14 is followed by the nominal stem –lendo to form the noun *ulendo* ‘journey’. In like manner, the BEM nominal prefix class 8 **-fi-** is followed by the nominal stem –bombelo to derive the noun *ifibombelo* ‘tools. The MAM nominal prefix **-vi-** representing the nominal prefix class 8, is followed by the nominal stem –ombelo to form the noun *vyombelo* ‘tools. There is a slight difference in the nominal stems: the initial phoneme in the BEM nominal stem is the voiced bilabial fricative /β/ while that of MAM is the mid back vowel /o/. The other phonological difference is semivocalisation that occurs in the MAM word *vi-ombelo*: the high front vowel /i/ in the prefix **-vi-** becomes the voiced palatal approximant /j/ in the environment before the mid back vowel /o/ that begins the stem.

The morphological differences and similarities are illustrated in the tree diagrams below:





In the section above, the difference is that the BEM nominal prefix class 14 is realised by -bu- which has the augment a- while in MAM this nominal prefix is represented by u- which is augmentless. With regard to nominal prefix class 8, BEM is represented by -fi- of which the augment is i- while in MAM the nominal prefix class 8 is realised by vi-, which does not have an augment. There is also feature changing in relation to nominal prefix class 8: in BEM, the nominal prefix begins with the voiceless labio-dental fricative /f/ whereas in MAM it begins with the voiced labio-dental fricative /v/.

The key informant was interviewed with regard to nouns with nominal prefix classes 1 and 3. He was requested to provide the equivalents of the English terms in BEM and MAM for the researcher to find out whether there were similarities and differences in relation to those nouns. After this exercise, the informants, including the key informant, verified the responses from the key informant on the findings. Below are the analysis and interpretation of the findings.

6.1.2 Differences and similarities emerging from nouns having the same nominal prefixes but with different nominal stems.

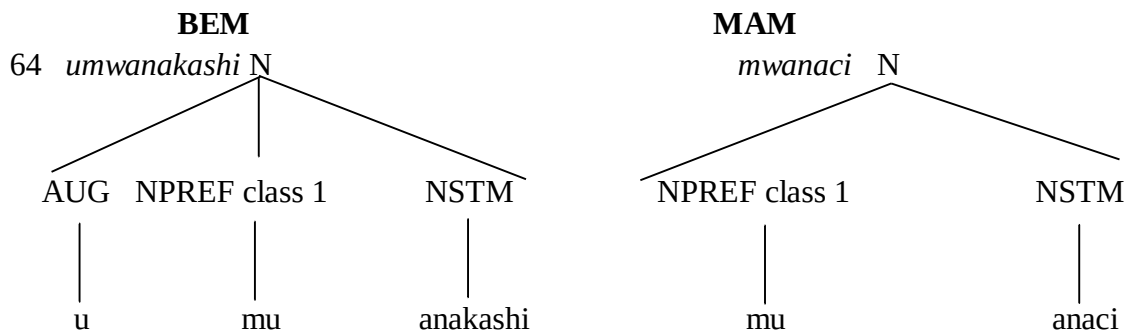
It is noted in this study that some nouns in BEM and MAM share the nominal prefixes class 1 -**mu-** (denoting people) and class 3 -**mu-** (denoting things), but have different nominal stems. The table below shows some differences in this category.

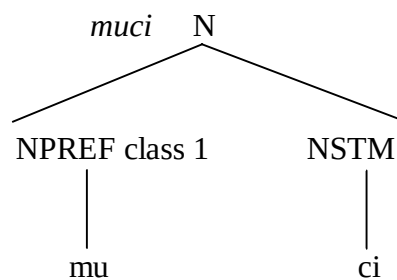
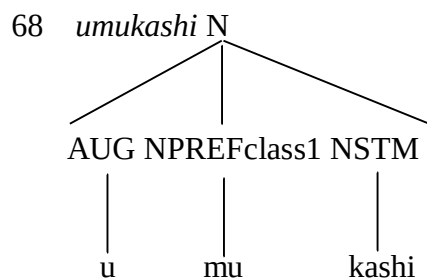
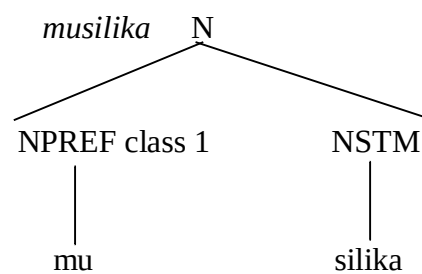
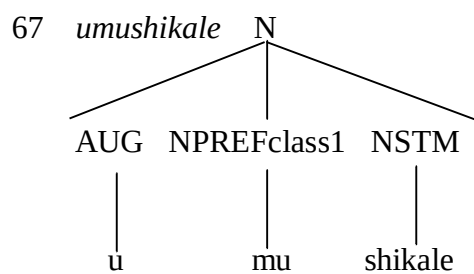
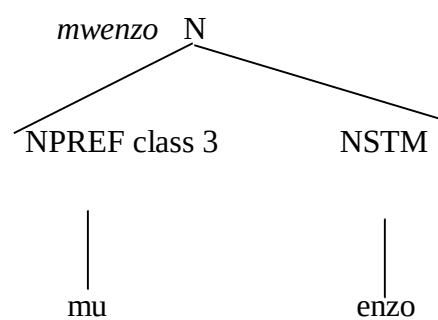
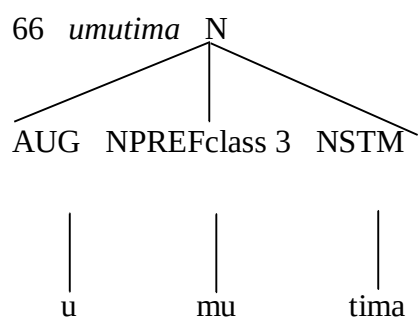
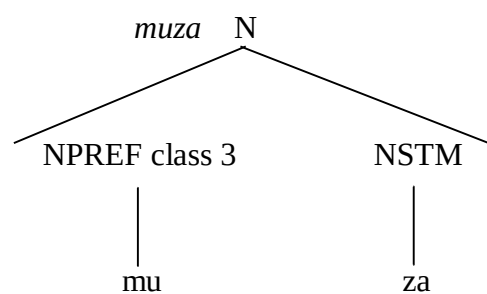
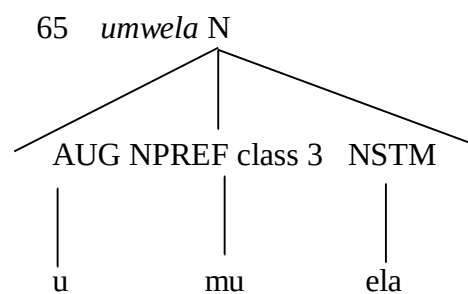
Table 29: Differences and similarities in relation to the nouns with the same nominal prefix classes 1 and 3 and different nominal stems

Gloss	BEM	MAM
woman	<i>umwanakashi/u-mu-anakashi/</i>	<i>mwanaci /mu-anaci/</i>
Wind	<i>umwela /u-mu-ela/</i>	<i>muza /mu-za/</i>
heart	<i>umutima /u-mu-tima/</i>	<i>mwenzo /mu-enzo/</i>
soldier	<i>umushikale /u-mu-shikale/</i>	<i>musilika /mu-silika/</i>
wife	<i>umukashi /u-mu-kashi/</i>	<i>muci /mu-ci/</i>
village	<i>umushi /u-mu-shi/</i>	<i>muzi /mu-zi/</i>
root	<i>umushila /u-mu-shila/</i>	<i>musisi /mu-sisi/</i>

In BEM, these stems include –anakashi, –ela, –tima, –shikale and –kashi, –shi, –shila. They follow the prefixes to form the nouns u-**mu**-anakashi (*umwanakashi*) ‘woman’, u-**mu**-ela (*umwela*) (*uleepuupa*) ‘wind’, u-**mu**-tima (*umutima*) ‘heart’, u-**mu**-shikale (*umushikale*) ‘soldier’ u-**mu**-kashi (*umukashi*) ‘wife’, u-**mu**-shi (*umushi*) ‘village’, u-**mu**-shila (*umushila*) ‘root’. The same nominal prefixes are followed by the corresponding MAM stems: –anaci, –za, –enzo, –silika, –ci, –zi, –sisi to form the nouns **mu**-anaci (*mwanaci*) ‘woman’, **mu**-za (*muza*) ‘wind’, **mu**-enzo (*mwenzo*) ‘heart’, **mu**-silika (*musilika*) ‘soldier’, **mu**-ci(*muci*) ‘wife’, **mu**-zi (*muzi*) ‘village’ and **mu**-sisi (*musisi*) ‘root’, respectively.

Semivocalisation occurs in the words in 64 for both BEM and MAM, in 65 for BEM and in 66 for MAM in the illustrations of the differences in the tree diagrams below; where semivocalisation does not occur, it is simply because the conditions for this process to take place are not met.





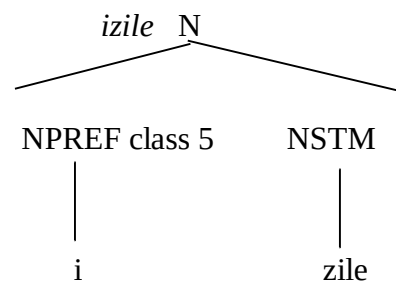
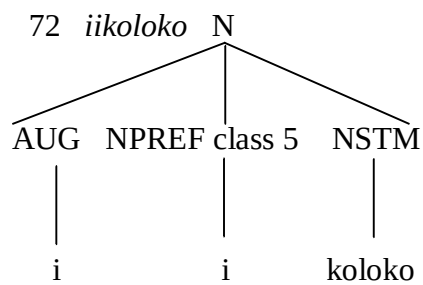
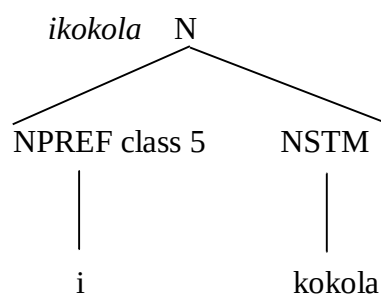
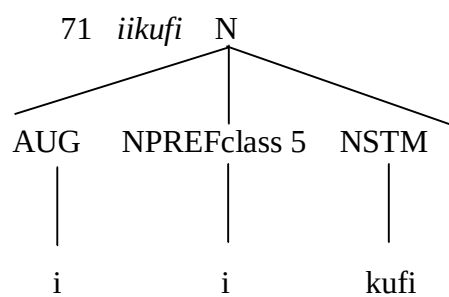
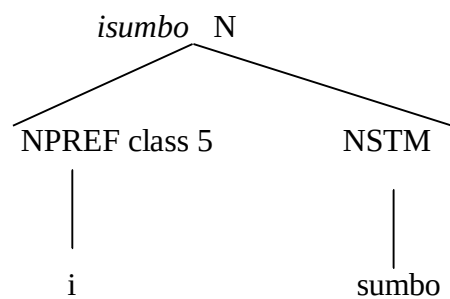
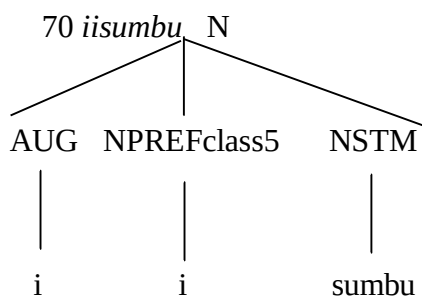
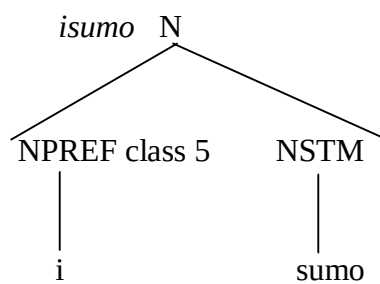
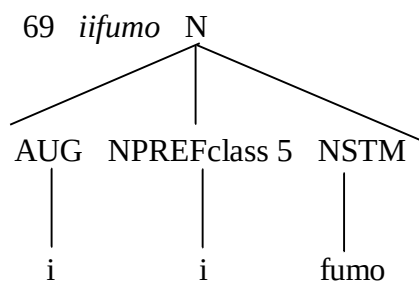
The findings show that some BEM and MAM nouns share nominal prefixes, but they have different nominal stems. This is also noted in nouns with nominal prefix classes 5, 6, 11, 12 and 15.

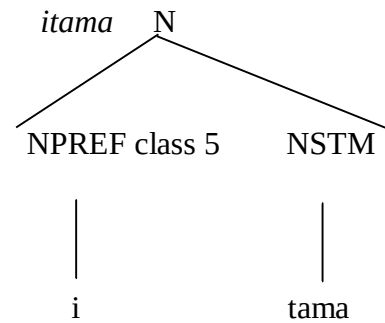
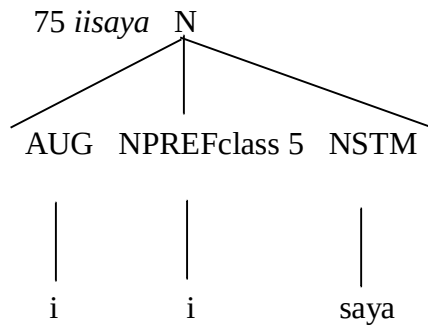
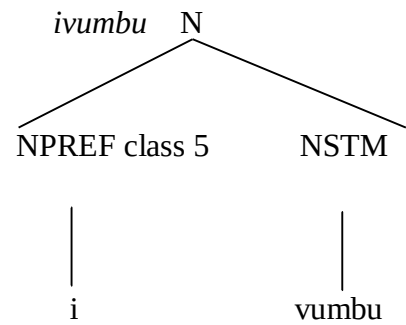
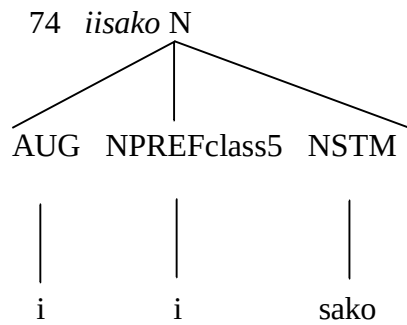
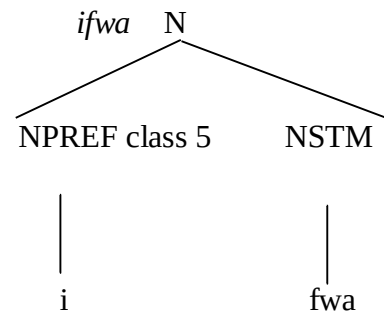
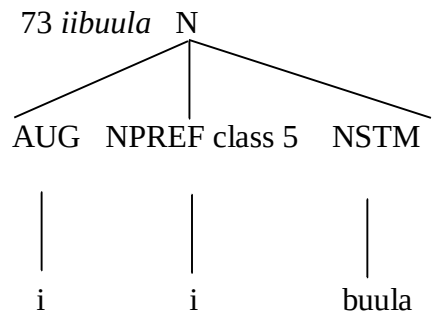
The key informant was interviewed with regard to nouns with nominal prefix class 5. He was requested to provide the equivalents of the English terms in BEM and MAM for the researcher to find out whether there were similarities and differences in relation to those nouns. After this exercise, the informants, including the key informant, verified the responses from the key informant on the findings. Below are the analysis and interpretation of the findings.

Table 30: Differences and similarities in the nouns with the same nominal prefix class 5 and different nominal stems

Gloss	BEM	MAM
Spear	<i>iifumo /i-i-fumo/</i>	<i>isumo /i-sumo/</i>
fishing net	<i>iisumbu /i-i-sumbu/</i>	<i>isumbo /i-sumbo/</i>
Knee	<i>iikufi /i-i-kufi/</i>	<i>ikokola /i-kokola/</i>
floater on a fishing net	<i>iikoloko /i-i-koloko/</i>	<i>izile/i-zile/</i>
Leaf	<i>iibuula /i-i-bula/</i>	<i>ifwa /i-fwa/</i>
feather/fur	<i>iisako /i-i-sako/</i>	<i>ivumbu /i-vumbu/</i>
Cheek	<i>iisaya /i-i-saya</i>	<i>itama i-tama/</i>

In nominal prefix class 5, the prefix for BEM and MAM is i-, and for BEM this is preceded by the augment i-. In BEM, some of the nominal stems which follow this nominal prefix are – *fumo* ‘spear’, – *beende* ‘mortar’ – *kufi* ‘knee’, – *koloko* ‘floater on a fishing net’, – *buula* ‘leaf’, – *sako* ‘feather/ fur’, – *saya* ‘cheek’ and – *sumbu* ‘fishing net’. They form the nouns *iifumo*, *iibeende*, *iikufi*, *iikoloko*, *iibuula*, *iisako*, *iisaya* and *iisumbu*, respectively. The corresponding MAM nouns are *isumo* ‘spear’, *ikokola* ‘knee’, *izile* ‘floater on a fishing net’, *ifwa* ‘leaf’, *ivumbu* ‘feather/fur’, *itama* ‘cheek’ and *isumbo* ‘fishing net’. Below are illustrations of these morphological differences in the tree diagrams:





It is noted in the data that the nominal prefix class 5 for BEM and MAM is -i-; this for BEM is preceded by the augment i- while this is not the case in the MAM nouns. In this category, the nominal stems are different while the nominal prefixes are the same.

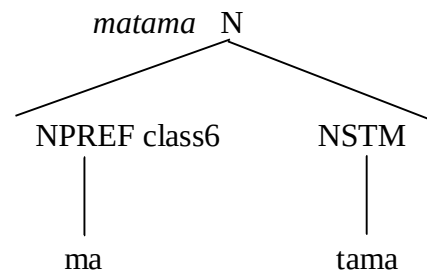
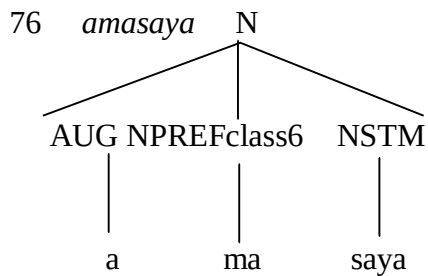
The key informant was interviewed with regard to nouns with nominal prefix class 6. He was requested to provide the equivalents of the English terms in BEM and MAM for the researcher to find out whether there were similarities and differences in relation to those nouns. After this exercise, the informants, including the key informant, verified the responses from the key informant on the findings. Below are the analysis and interpretation of the findings.

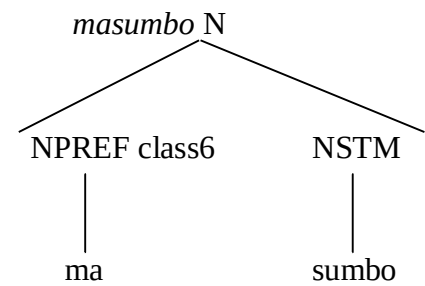
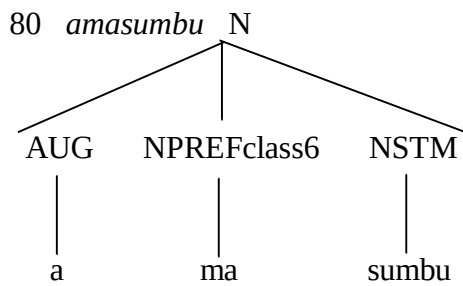
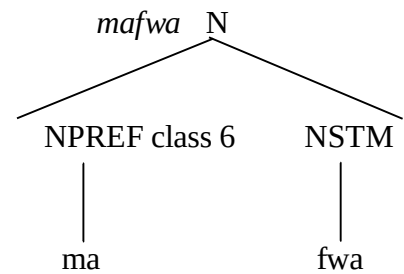
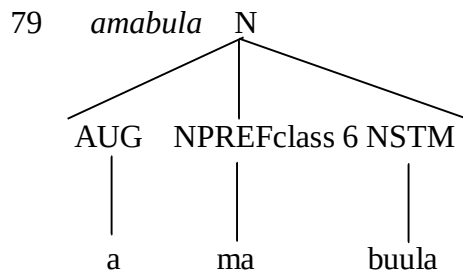
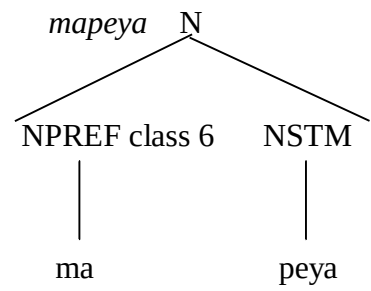
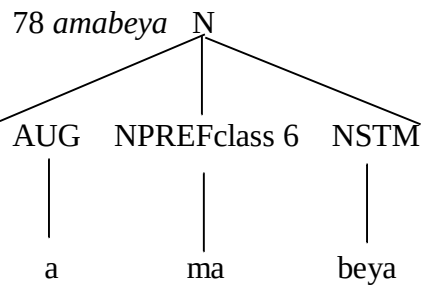
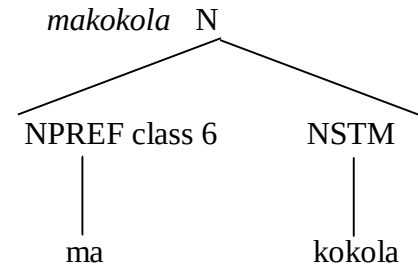
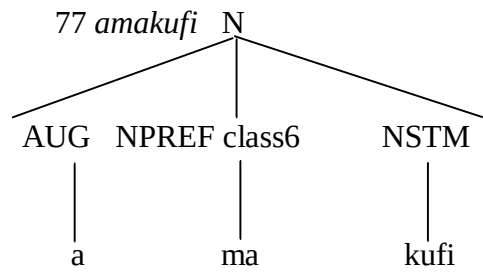
It is also noticed that the nominal prefix class 6, **ma-** is shared by some of the BEM and MAM nominal stems. The table below shows these differences and similarities.

Table 31: Differences and similarities between nouns with the nominal prefix class 6

Gloss	BEM	MAM
cheeks	<i>amasaya</i> /a-ma-saya/	<i>matama</i> /ma-tama/
knees	<i>amakufi</i> /a-ma-kufi/	<i>makokola</i> /ma-kokola/
shoulders	<i>amabeya</i> /a-ma-beya/	<i>mapeya</i> /ma-peya/
leaves	<i>amabuula</i> /a-ma-buula/	<i>mafwa</i> /ma-fwa/
fishing nets	<i>amasumbu</i> /a-ma-sumbu/	<i>masumbo</i> /ma-sumbo/

For BEM, the nominal prefix is preceded by the augment a-. These nominal stems – *saya*, – *kufi*, – *beya*, – *buula*, – *sumbu*, among others, follow the prefix to form nouns. The nouns which are formed are *amasaya* ‘cheeks’, *amakufi* ‘knees’, *amabeya* ‘shoulders’, *amabuula* ‘leaves’ and *amasumbu* ‘fishing nets’, respectively, while the corresponding MAM nouns are *matama* ‘cheeks’, *makokola* ‘knees’, *mapeya* ‘shoulders’, *mafwa* ‘leaves’ and *masumbo* ‘fishing nets’. The morphological differences are illustrated in the tree diagrams below:





The data above show that the nominal prefix class 6 for BEM is preceded by the augment a- whereas the corresponding nouns in MAM do not take the augment a-. While the nominal prefix is the same in this category, the nominal stems are different.

The key informant was interviewed with regard to nouns with nominal prefix class 11. He was requested to provide the equivalents of the English terms in BEM and MAM for the researcher to find out whether there were similarities and differences in relation to those nouns. After this exercise, the informants, including the key informant, verified the responses from the key informant on the findings. Below are the analysis and interpretation of the findings.

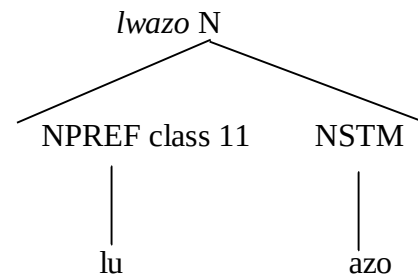
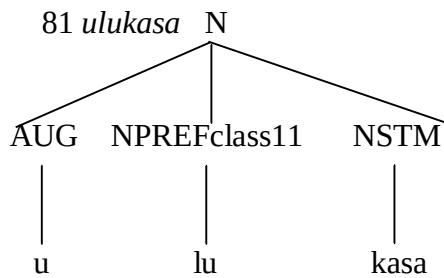
It is evident from the data that some BEM and MAM nouns share the nominal prefix class 11, **lu-**

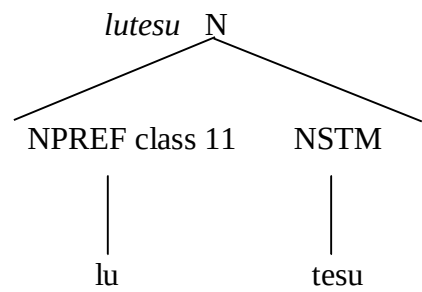
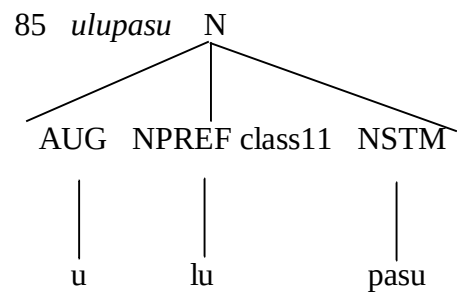
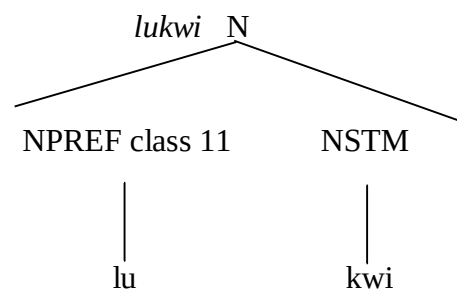
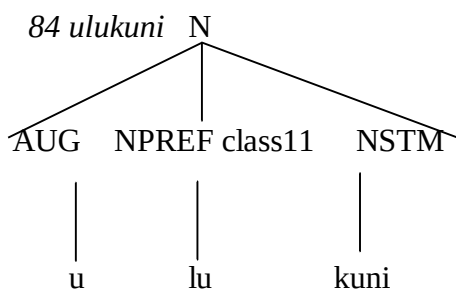
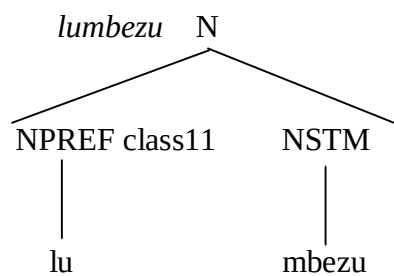
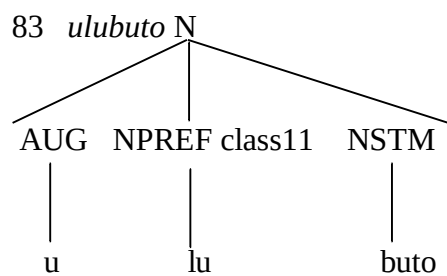
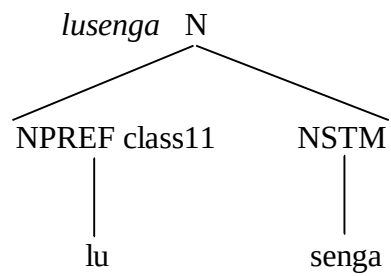
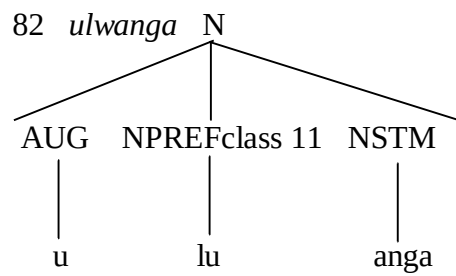
Table 32: Differences and similarities in relation to the nouns that share nominal prefix class

11.

Gloss	BEM	MAM
foot	<i>ulukasa</i> /u-lu-kasa/	<i>lwazo</i> /lu-azo/
fishing basket	<i>ulwanga</i> /u-lu-anga/	<i>lusenga</i> /lu-senga/
seed	<i>ulubuto</i> /u-lu-buto/	<i>lumbezu</i> /lu-mbezu/
a piece of firewood	<i>ulukuni</i> /u-lu-kuni/	<i>lukwi</i> /lu-kwi/
a sneeze	<i>ulupasu</i> /u-lu-pasu/	<i>lutesu</i> /lu-tesu/

In BEM, this nominal prefix is preceded by the augment **u-**. Some of the BEM nominal stems which follow the prefix are – kasa, – anga, – buto, – kuni and – pasu. The combinations of the prefix and these stems form the nouns **ulukasa** ‘foot’, **ulwanga** ‘fishing basket’, **ulubuto** ‘seed’, **ulukuni** ‘a piece of firewood’ and **ulupasu** ‘a sneeze’. The corresponding MAM nouns are **lwazo** ‘foot’, **lusenga** ‘fishing basket’, **lumbezu** ‘seed’, **lukwi** ‘a piece of firewood’ and **lutesu** ‘a sneeze’. Semivocalisation occurs in the MAM noun in 81 and in the BEM noun in 82. The tree diagrams below illustrate the morphological differences:





In the section above, it is noted that for the nominal prefix class 11, *lu-*, BEM nouns have the augment *u-* whereas this is not so for the corresponding MAM nouns. The nominal stems are also different.

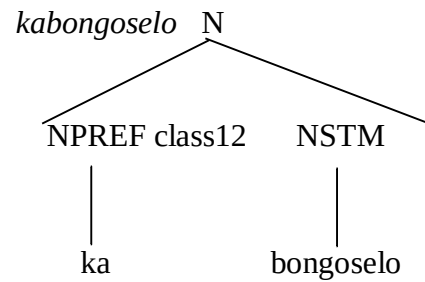
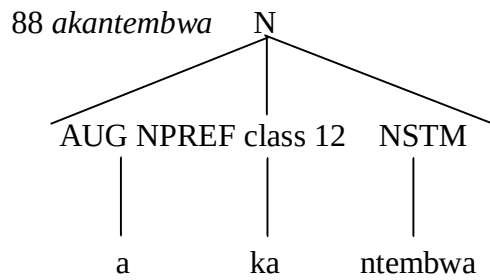
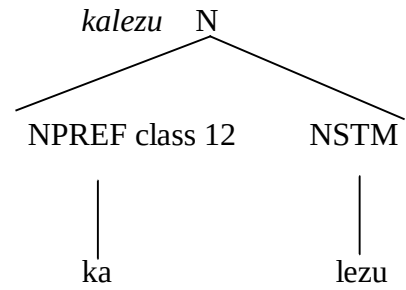
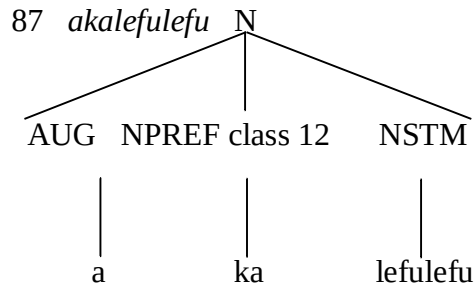
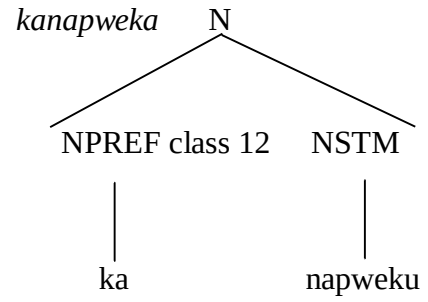
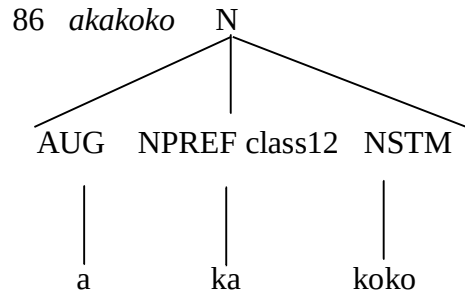
The key informant was interviewed with regard to nouns with nominal prefix class 12. He was requested to provide the equivalents of the English terms in BEM and MAM for the researcher to find out whether there were similarities and differences in relation to those nouns. After this exercise, the informants, including the key informant, verified the responses from the key informant on the findings. Below are the analysis and interpretation of the findings.

The study also notes that some BEM and MAM nouns share the nominal prefix class 12, **ka-** which in BEM is preceded by the augment **a-**. The table below shows the differences concerning the nouns that share the nominal prefix class 12.

Table 33: Differences and similarities concerning the nouns that share nominal prefix class 12.

Gloss	BEM	MAM
a small chicken/ chick	<i>akakoko</i> /a-ka-koko/	<i>kanapweka</i> /ka-napweka/
chin	<i>akalefulefu</i> /a-ka-lefulefu/	<i>kalezu</i> /ka-lezu/
skull/ occipital bone back of head	<i>akantembwa</i> /a-ka-ntembwa/	<i>kabongoselo</i> /ka-bongoselo/

In BEM, the nominal stems which follow this prefix include – *koko*, – *lefulefu* and – *ntembwa*. They form the nouns **akakoko** ‘small chicken/ chick’, **akalefulefu** ‘chin’ and **akantembwa** ‘skull/ occipital bone back of head’. The corresponding MAM nouns are *kanapweka* ‘small chicken/ chick’, **kalezu** ‘chin’ and **kabongoselo** ‘skull/ occipital bone back of head’. Below are illustrations of the morphological differences in the tree diagrams:



While the nominal prefix class 12, *ka-*, is shared by both languages, it is noted that in BEM the nominal prefix is preceded by the augment *a-*, which is not the case in the corresponding MAM nouns. The nominal stems are also different.

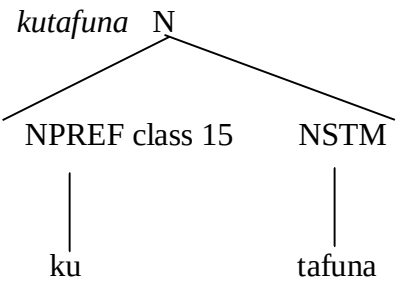
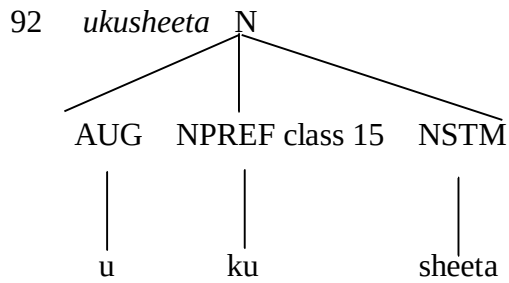
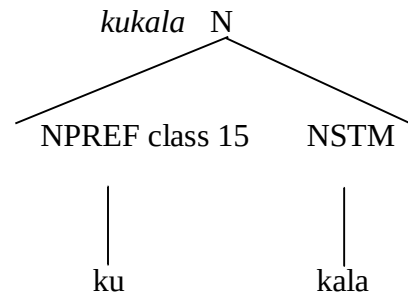
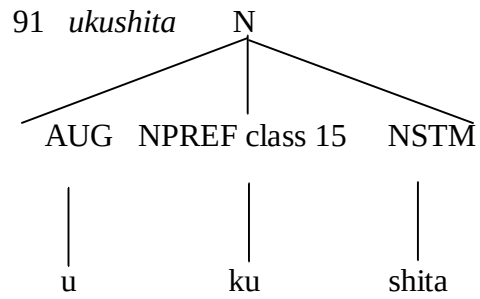
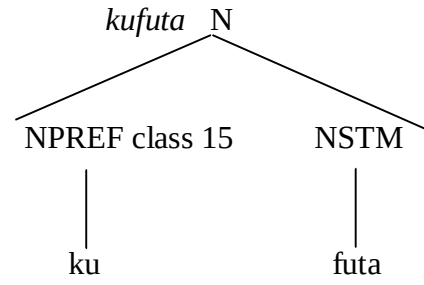
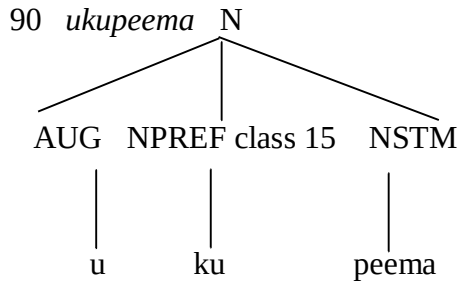
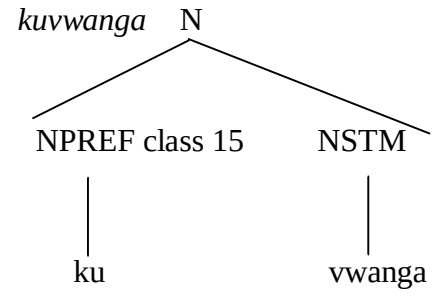
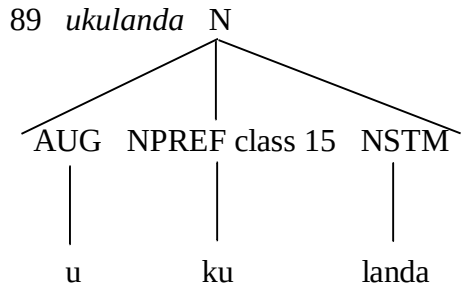
The key informant was interviewed with regard to nouns with nominal prefix class 15. He was requested to provide the equivalents of the English terms in BEM and MAM for the researcher to find out whether there were similarities and differences in relation to those nouns. After this exercise, the informants, including the key informant, verified the responses from the key informant on the findings. Below are the analysis and interpretation of the findings.

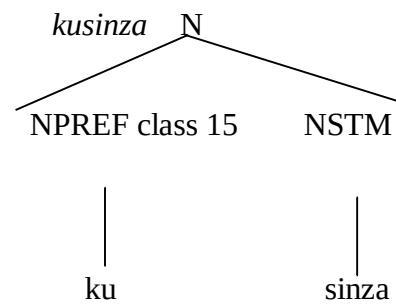
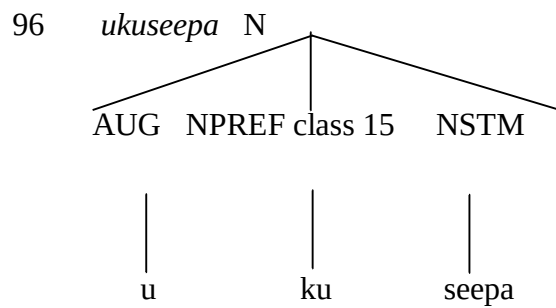
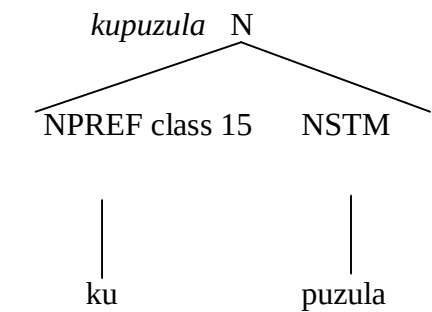
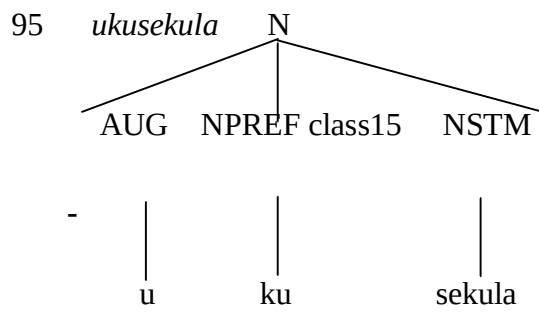
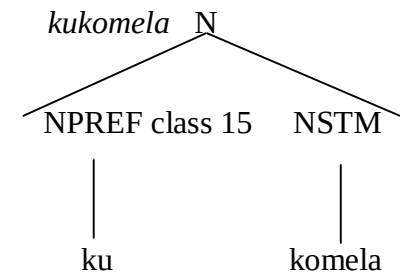
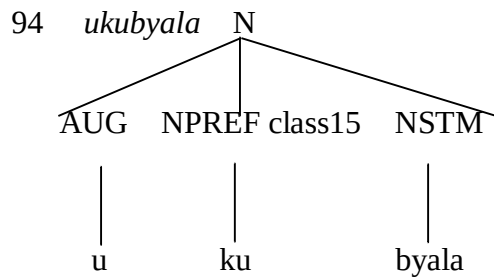
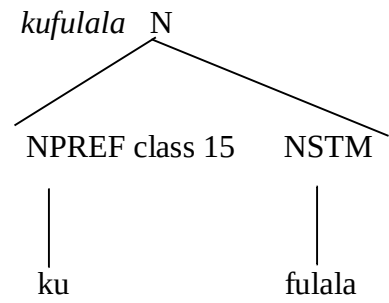
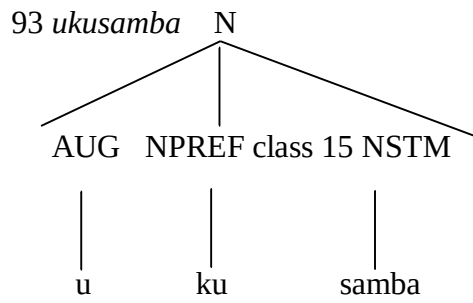
The collected data show that the nominal prefix class 15, **ku-** is shared by BEM and MAM. In BEM, it is preceded by the augment **u-**. The table below shows the differences between the nouns with the nominal prefix class 15.

Table 34: Differences and similarities between the nouns with the same nominal prefix class 15.

Gloss	BEM	MAM
to talk	<i>ukulanda /u-ku-landa/</i>	<i>kuvwanga /ku-vwanga/</i>
to breathe	<i>ukupeema /u-ku-peema/</i>	<i>kufuta /ku-futa/</i>
to buy	<i>ukushita /u-ku-shita/</i>	<i>kukala /ku-kala/</i>
to chew	<i>ukusheeta /u-ku-sheeta/</i>	<i>kutafuna /ku-tafuna/</i>
to wash our bodies	<i>ukusamba /u-ku-samba/</i>	<i>kufulala /ku-fulala/</i>
to sow/ plant seeds	<i>ukubyala /u-ku-byala/</i>	<i>kukomela /ku-komela/</i>
to weed crop	<i>ukusekula /u-ku-sekula/</i>	<i>kupuzula /ku-puzula/</i>
to harvest millet	<i>ukuseepa /u-ku-seepa/</i>	<i>kusinza /ku-sinza/</i>

Some of the BEM nominal stems which follow the nominal prefix class 15 are – *landa*, – *peema*, – *shita*, – *sheeta*, – *samba*, – *byala*, – *sekula* and – *seepa* which form the verbal nouns *ukulanda* ‘to talk’, *ukupeema* ‘to breathe’, *ukushita* ‘to buy’, *ukusheeta* ‘to chew’, *ukusamba* ‘to wash our bodies’, *ukubyala* ‘to sow/ plant seeds’, *ukusekula* ‘to weed the crop’ and *ukuseepa* ‘to harvest millet’. The corresponding MAM nouns are *kuvwanga* ‘to talk’, *kufuta* ‘to breathe’, *kukala* ‘to buy’, *kutafuna* ‘to chew’, *kufulala* ‘to wash our bodies’, *kukomela* to sow/ ‘to plant seeds’, *kupuzula* ‘to weed the crop’ and *kusinza* ‘to harvest millet’. The morphological differences are illustrated below:





It is noted that the nominal prefix class 15, -ku- is preceded by the augment u- in BEM while it is not in MAM. The nominal stems are different.

6.1.3 The corresponding BEM and MAM nouns with different nominal prefixes and nominal stems

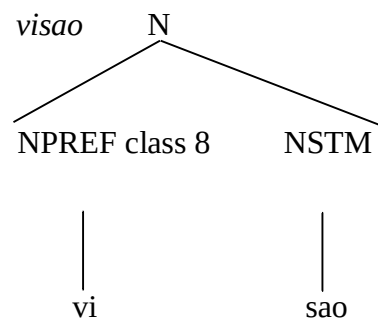
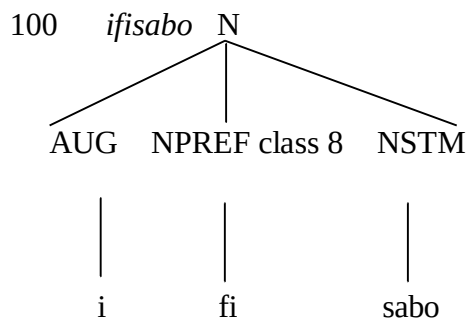
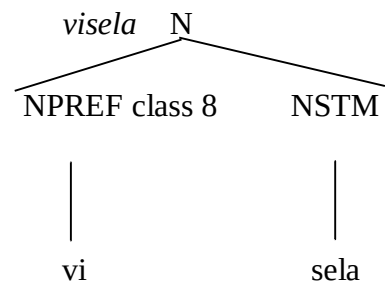
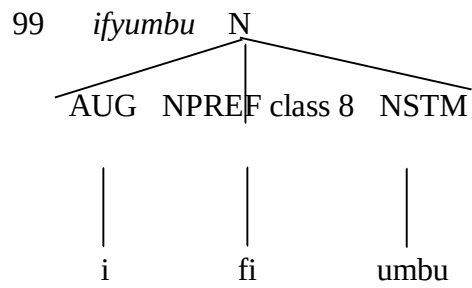
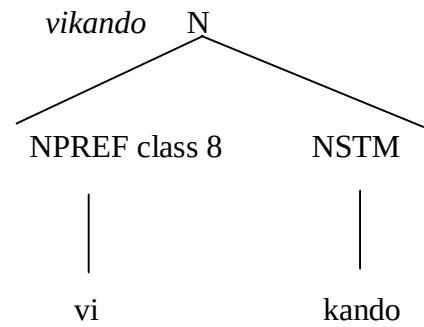
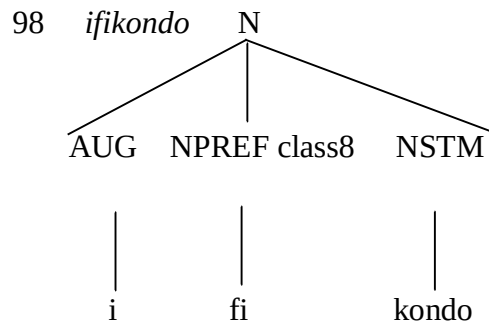
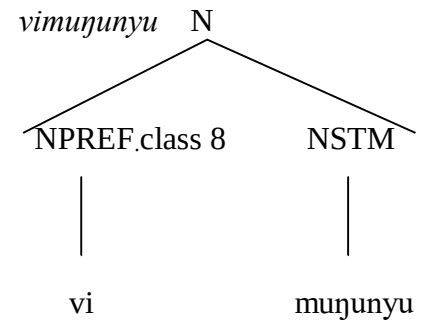
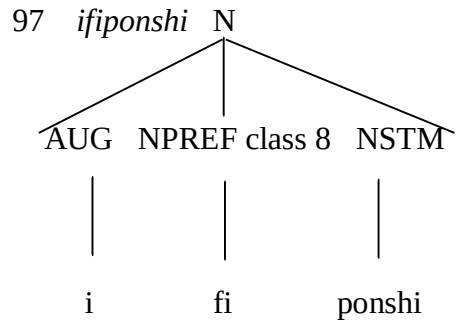
The study has noted that there are several BEM nouns, which are different from MAM nouns because of them having nominal prefixes and nominal stems different from those of their MAM counterparts.

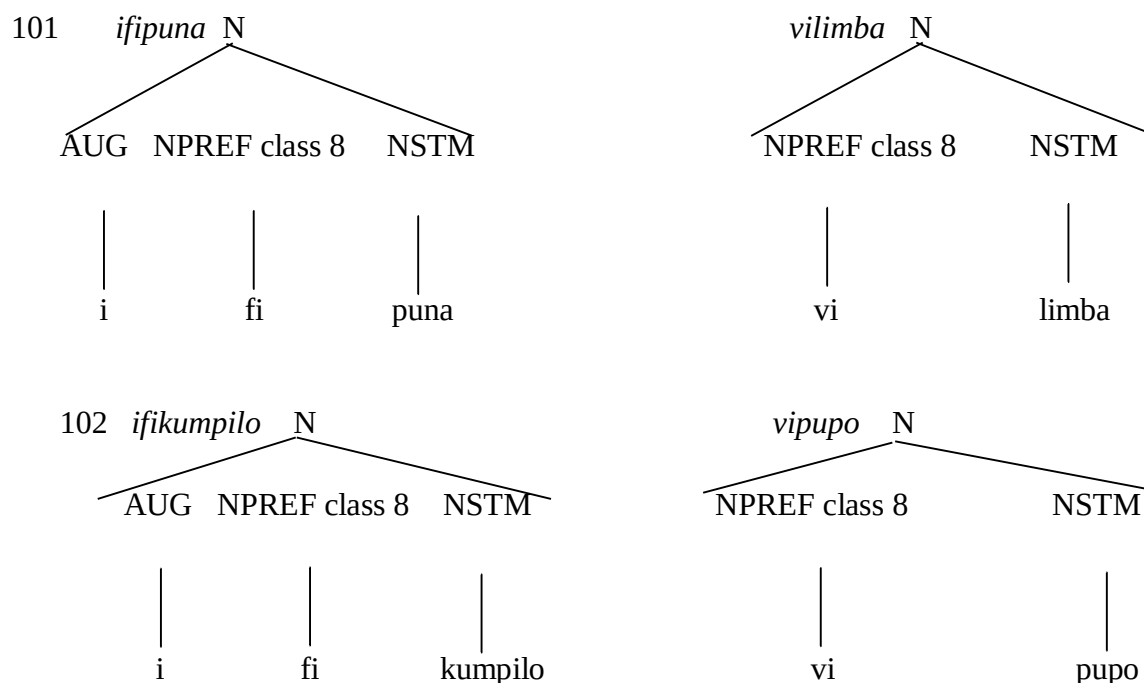
The key informant was interviewed with regard to nouns with nominal prefix class 8 and different nominal stems. He was requested to provide the equivalents of the English terms in BEM and MAM for the researcher to find out whether there were similarities and differences in relation to those nouns. After this exercise, the informants, including the key informant, verified the responses from the key informant on the findings. Below are the analysis and interpretation of the findings.

Table 35: Differences in relation to the nouns with nominal prefix class 8 and different nominal stems

Gloss	BEM	MAM
gums	<i>ifiponshi</i> /i-fi-ponshi/	<i>vimuḡunyu</i> /vi-muḡunyu/
toes	<i>ifikondo</i> /i-fi-kondo/	<i>vikando</i> /vi-kando/
potatoes	<i>ifyumbu</i> /i-fi-umbu/	<i>visela</i> /vi-sela/
crops	<i>ifisabo</i> /i-fi-sabo/	<i>visao</i> /vi-sao/
seats	<i>ifipuna</i> /i-fi-puna/	<i>vilimba</i> /vi-limba/
slashers	<i>ifikumpilo</i> /i-fi-kumpilo/	<i>vipupo</i> /vi-pupo/

We note in this study that among many BEM nominal stems which follow the nominal prefix class 8, **-fi-** are – *ponshi*, – *kondo*, – *umbu*, – *sabo*, – *puna* and – *kumpilo*. These stems and the prefix -fi- which is preceded by the augment **i-** form the nouns *ifiponshi* ‘gums’, *ifikondo* ‘toes’, *ifyumbu* ‘potatoes’, *ifisabo* ‘crops’, *ifipuna* ‘seats’ and *ifikumpilo* ‘slashers’. The corresponding MAM nouns with **vi-** representing the nominal prefix class 8 are *vimuḡunyu* ‘gums’, *vikando* ‘toes’, *visela* ‘potatoes’, *visao* ‘crops’, *vilimba* ‘seats’ and *vipupo* ‘slahers’. Semivocalisation occurs in the BEM noun in 99. Illustrations of the morphological differences are presented below:





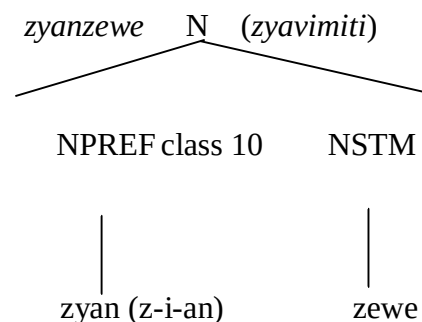
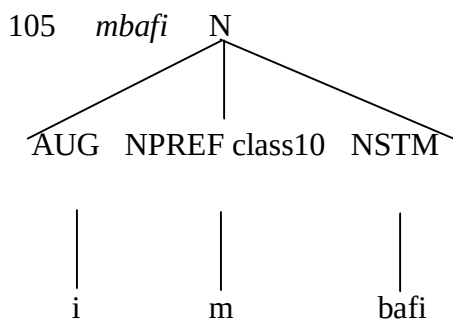
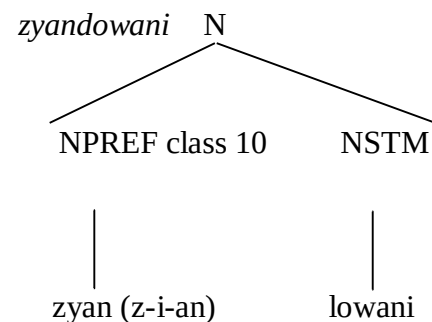
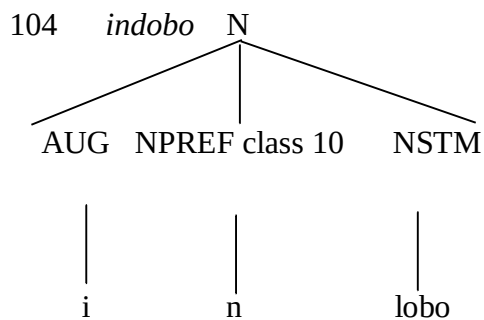
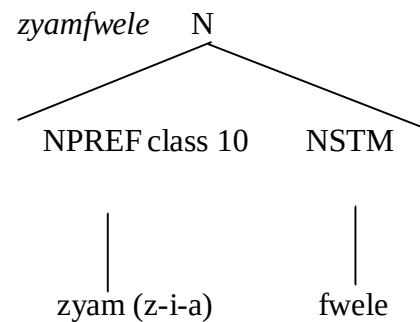
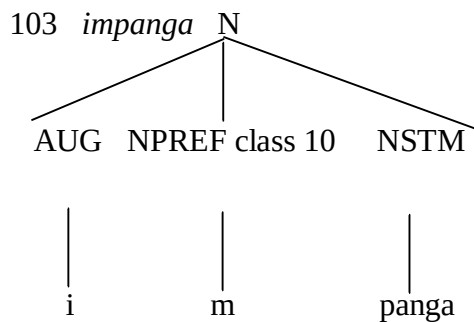
Some aspects emerge here: the nominal prefix class 8 for BEM is -fi- while that for MAM is vi-; the BEM nouns have augments while the corresponding MAM nouns do not. The nominal stems are also different. The feature changing phenomenon (f→v) is also noted here.

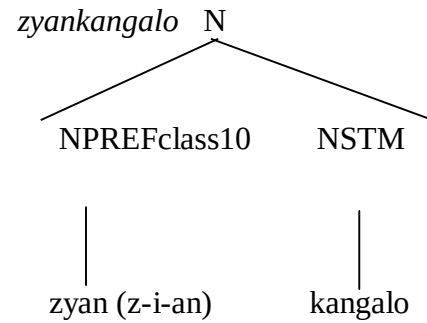
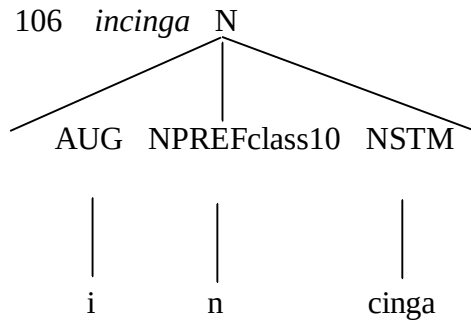
The key informant was interviewed with regard to nouns with nominal prefix class 10 and different nominal stems. He was requested to provide the equivalents of the English terms in BEM and MAM for the researcher to find out whether there were similarities and differences in relation to those nouns. After this exercise, the informants, including the key informant, verified the responses from the key informant on the findings. Below are the analysis and interpretation of the findings.

Table 36: Differences in relation to the nouns with nominal prefix class 10 and different nominal stems

Gloss	BEM	MAM
sheep	<i>impanga</i> /i-m-panga/	<i>zyamfwele</i> /z-i-am-fwele/
fishing hooks	<i>indobo</i> /i-n-lobo/	<i>zyandowani</i> /z-i-an-lowani/
wooden axes	<i>imbafi</i> /i-m-bafi/	<i>zyanzewe</i> (ziavimiti) /z-i-an-zewe/
bicycles	<i>incinga</i> /i-n-cinga/	<i>zyankangalo</i> /z-i-an-kangalo /

The study also shows that some BEM nouns differ from the MAM nouns in relation to the nominal prefix class 10, **n / m** are i-**m**-panga (*impanga*) ‘sheep’, i-**n**-lobo (*indobo*) ‘fishing hooks’, i-**m**-bafi (*imbafi*) ‘wooden axes’ i-**n**-ongo (*inongo*) ‘clay pots for cooking’ and i-**n**-cinga (*incinga*) ‘bicycles’. The corresponding MAM nouns are **zya-m**-fwele (*zyamfwele*) ‘sheep’, **zya-n**-lowani (*zyandowani*) ‘fishing hooks’, **zya-n**-zewe (*zyanzewe zyavimiti*) ‘wooden axes’, **zya-n**-yungu (*zyanyungu*) ‘clay pots for cooking’ and **zya-n**-kangalo (*zyankangalo*) ‘bicycles’. In these MAM nouns, the pre-prefix **zya** has the semantic value of plurality (i.e., **zya** + nominal prefix class 9, **n / m**). The allophonic rule on the voiced alveolar lateral /l/ is applied to both BEM and MAM nouns in 104. The morphological differences are illustrated in the tree diagrams below:





In this section, it is noted that the nominal prefix class 10 for BEM is -n- or -m- preceded by the augment i- whereas for MAM it is zyan- or zyam- without an augment. The nominal stems are also different.

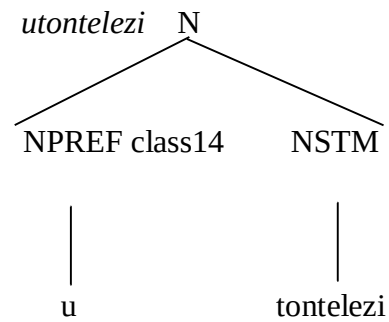
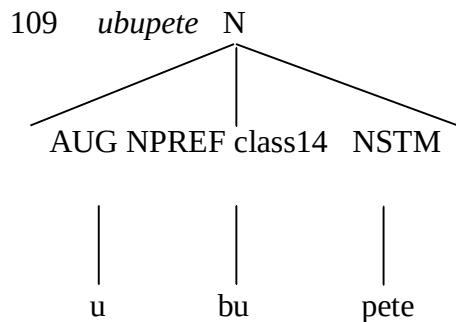
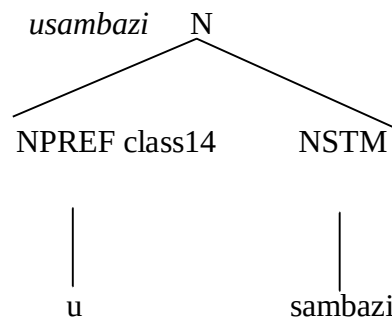
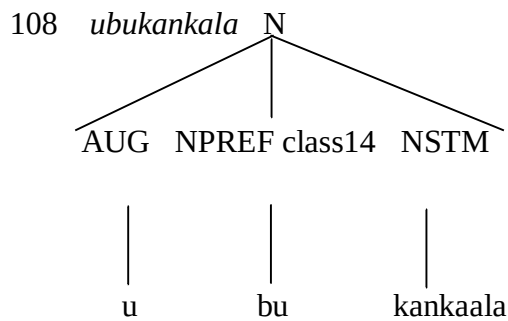
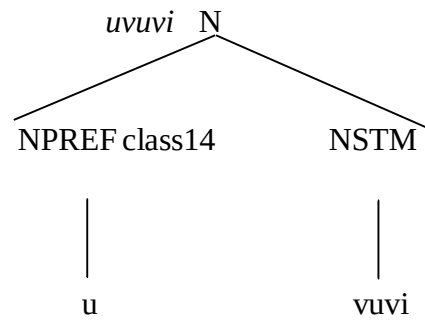
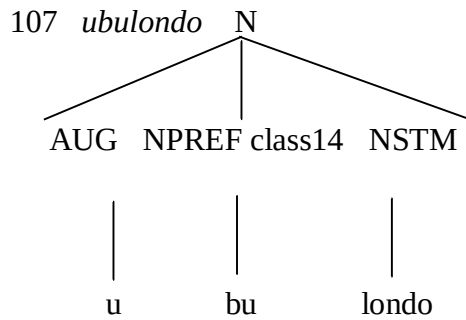
The key informant was interviewed with regard to nouns with nominal prefix class 14 and different nominal stems. He was requested to provide the equivalents of the English terms in BEM and MAM for the researcher to find out whether there were similarities and differences in relation to those nouns. After this exercise, the informants, including the key informant, verified the responses from the key informant on the findings. Below are the analysis and interpretation of the findings.

Table 37: Differences concerning the nouns with nominal prefix class 14 and different nominal stems

Gloss	BEM	MAM
fish occupation	<i>ubulondo</i> /u-bu-londo/	<i>uvuvi</i> /u-vuvi/
state of being wealthy	<i>ubukankaala</i> /u-bu-kankaala	<i>usambazi</i> /u-sambazi/
gentleness	<i>ubupete</i> /u-bu-pete/	<i>utontelezi</i> /u-tontelezi/

In BEM, the nominal stems – kankala, – londo and – pete, among others, follow the nominal prefix **-bu-** which comes after the augment **u-**. The nouns that are formed are u-**bu**-kankaala (*ubukankaala*) ‘the state of being wealthy or rich’, u-**bu**-londo (*ubulondo*) ‘fishing occupation’ and u-**bu**-pete (*ubupete*) ‘gentleness’. In the corresponding MAM nouns, the nominal stems – sambazi, – vuvi and – *tontelezi* follow the prefix **u-** which represents the nominal prefix class 14 and, therefore, the nouns which are formed are **u**-sambazi (*usambazi*) ‘the state being wealthy or

rich' **u**-vuvi (**uvuvi**) 'fishing occupation' and **u**-tontelezi (**utontelezi**) 'gentleness'. The morphological differences are illustrated in the diagrams below:



It is noted in the section above that nominal prefix class 14 for BEM is -bu- ,which follows the augment u- while for MAM it is u- which does not have an augment. It is also noted that the BEM nouns have the voiced bilabial fricative /β/ whereas MAM does not have this.

The data in this study show that some nominal prefixes for singular and plural in BEM nouns are different from the nominal prefixes for singular and plural in the corresponding MAM nouns. The table below presents these data:

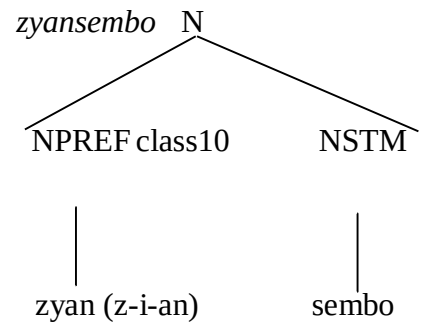
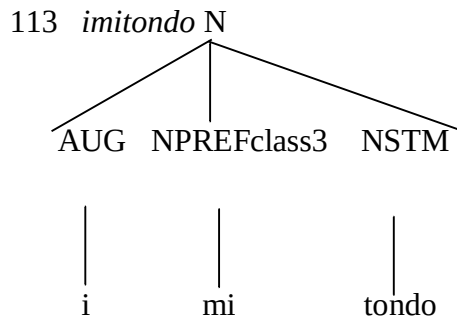
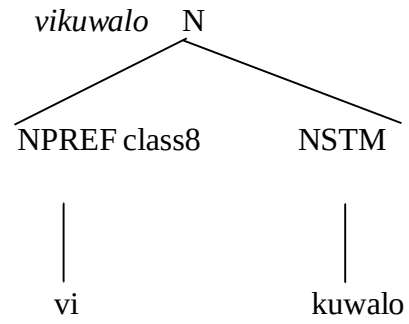
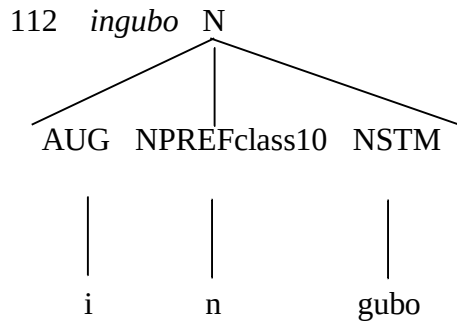
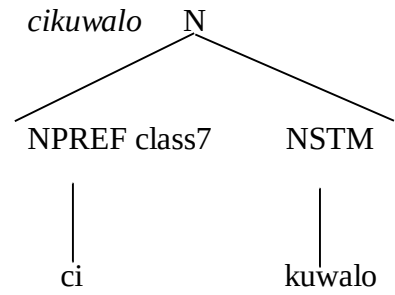
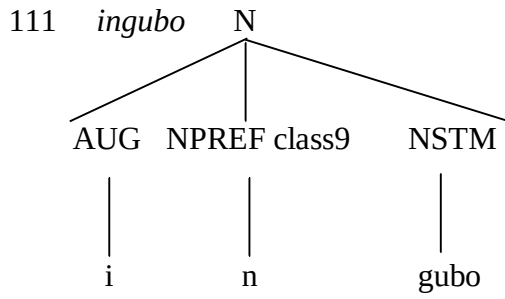
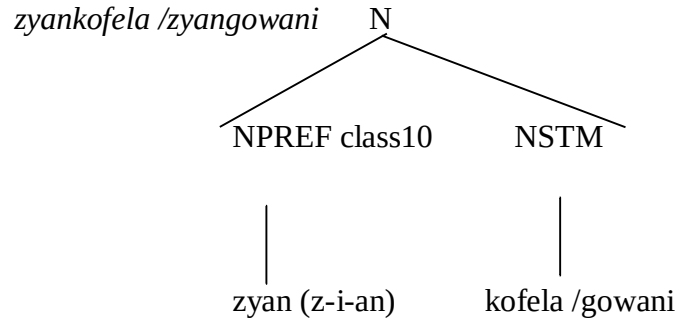
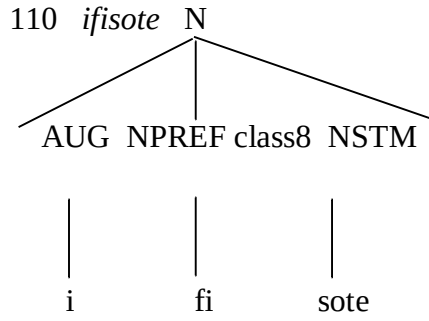
The key informant was interviewed with regard to nouns with nominal prefix classes for singular and plural and with different nominal stems. He was requested to provide the equivalents of the English terms in BEM and MAM for the researcher to find out whether there were similarities and differences in relation to those nouns. After this exercise, the informants, including the key informant, verified the responses from the key informant on the findings. Below are the analysis and interpretation of the findings.

Table 38: Nominal prefixes for singular and plural in BEM nouns different from the nominal prefixes for singular and plural in the corresponding MAM nouns

Gloss	BEM	MAM
hat	<i>icisote /i-ci-sote/(sg)</i>	<i>nkofela /n-kofela/; ngowani /n-gowani/(sg)</i>
hats	<i>ifisote /i-fi-sote/(pl)</i>	<i>zyankofela /z-i-an-kofela/; zyangowani /z-i-an-gowani/(pl)</i>
cloth	<i>ingubo /i-n-gubo/(sg)</i>	<i>cikuwalo /ci-kuwalo/(sg)</i>
cloths(types)	<i>ingubo /i-n-gubo/(pl)</i>	<i>vikuwalo /vi-kuwalo/(pl)</i>
clay pot for storing water	<i>inongo /i-n-ongo (sg)</i>	<i>nyungu /n-yungu/(sg)</i>
clay pots for storing water	<i>Inongo /i-n-ongo(pl)</i>	<i>zyanyungu /z-i-an-yungu/(pl)</i>
axe	<i>iisembe /i-i-sembe/(sg)</i>	<i>mpasa /m-pasa/(sg)</i>
axes	<i>amasembe /a-ma-sembe/(pl)</i>	<i>zyampasa /z-i-an-pasa/(pl)</i>
pot	<i>umupika /u-mu-pika/(sg)</i>	<i>nyungu /n-yungu/(sg)</i>
pots	<i>imipika /i-mi-pika/(pl)</i>	<i>zyanyungu /z-i-an-yungu/(pl)</i>
mortar	<i>iibende /i-i-bende/(sg)</i>	<i>cina /ci-na/(sg)</i>
mortars	<i>amabende /a-ma-bende/(pl)</i>	<i>vina /vi-na/(pl)</i>

In the nouns presented here, the BEM nominal stems are different from the MAM nominal stems. It is noticed that in the BEM singular noun *i-i-sembe* (*iisembe*) ‘axe’, the nominal prefix is class 5, *-i-* which is preceded by the augment *i-*. In the corresponding MAM noun *m-pasa* (*mpasa*) ‘axe’ the nominal prefix is class 9, *m-*. In the BEM plural noun *a-ma-sembe* (*amasembe*) ‘axes’ the nominal prefix is class 6, *-ma-* which follows the augment *a-* whereas in the corresponding MAM

plural noun **zya-m-pasa** (*zyampasa*) ‘axes’ the nominal prefix is **zyam** which realises nominal prefix class 10 (i.e., **zya + m, class 9**). The singular nominal prefix for BEM noun u-**mu**-pika (*umupika*) ‘pot’ is class 3, **-mu-** preceded by the augment **u-** while the nominal prefix in the MAM noun **n-yungu** (*nyungu*) ‘pot’ is class 9, **n**. In the BEM plural noun i-**mi**-pika (*imipika*) ‘pots’ the nominal prefix is class 4, **-mi-** which follows the augment **i-** whereas the nominal prefix in the corresponding MAM noun **zya-n-i-ungu** (*zyanyungu*) ‘pots’ is class 10, **zya-+class 9 (n)**. In the BEM noun i-**i**-bende (*iibende*) ‘mortar’ the nominal prefix is class 5, **-i-**, preceded by the augment **i-**, while the nominal prefix in the corresponding MAM noun **ci-na** (*cina*) is class 7, **ci-**. In the plural forms of these nouns, the nominal prefix for the BEM noun a-**ma**-bende (*amabende*) ‘mortars’ is class 6, **-ma-** preceded by the augment **a-** while the nominal prefix in the corresponding MAM noun **vi-na** (*vina*) ‘mortars’ is **vi-** which represents class 8. It is also noted that in the BEM singular noun i-**ci**-sote (*icisote*) ‘hat’ the nominal prefix is class 7, **-ci-** which follows the augment **i-** whereas the nominal prefix in the MAM singular noun **n-kofela / n-gowani** (*nkofela / ngowani*) ‘hat’ is class 9, **n**. The nominal prefixes in the plural forms of these nouns in BEM and MAM are class 8, **-fi-** preceded by the augment **i-** in i-**fi**-sote (*ifisote*) ‘hats’ and class 10, **zya-n** in **zya-n-kofela / zya-n-gowani** (*zyankofela / zyangowani*) ‘hats’, respectively. *Ingubo* and *cikwalo* meaning cloth are the BEM and MAM singular nouns, respectively. The nominal prefix in the BEM singular noun i-**n**-gubo (*ingubo*) is class 9, **-n-** which follows the augment **i-** while the nominal prefix in the corresponding MAM singular noun **ci**-kwalo (*cikwalo*) is class 7, **ci-**. In the BEM and the MAM plural nouns i-**n**-gubo (*ingubo*) and **vi**-kwalo (*vikwalo*), the nominal prefixes are class 10, **-n-**, which follows the augment **i-**, and **vi-** (representing class 8), respectively. The study also shows that in the BEM noun u-**mu**-tondo (*umutondo*) clay ‘pot for storing water’, the nominal prefix is class 3, **-mu-** preceded by the augment **u-** whereas the nominal prefix in the corresponding MAM noun **n-sembo** (*nsembo*) is class 9, **n-**. The plural nominal prefix in the BEM noun i-**mi**-tondo (*imitondo*) ‘clay pots for storing water’ is class 4, **-mi-** preceded by the augment **i-** while the nominal prefix in the corresponding MAM noun **zya-n-sembo** (*zyansembo*) ‘clay pots for storing water’ is **zya + n (class 9)** which represents class 10. Some of the morphological differences are illustrated in the tree diagrams below:



In the section above, it is observed that the nominal prefixes for singular and plural in BEM are different from the nominal prefixes for singular and plural in the corresponding MAM nouns. It is also noted that the nominal stems in the BEM nouns are different from those in the MAM nouns.

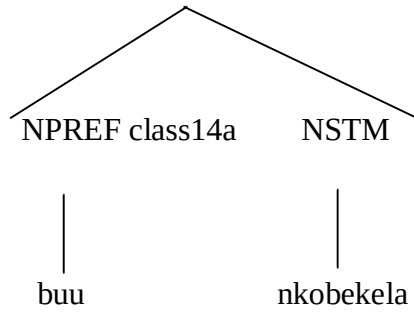
The key informant was interviewed with regard to nominal prefix class 14a in the nouns with different nominal stems. He was requested to provide the equivalents of the English terms in BEM and MAM for the researcher to find out whether there were similarities and differences in relation to those nouns. After this exercise, the informants, including the key informant, verified the responses from the key informant on the findings. Below are the analysis and interpretation of the findings.

Table 39: Differences in the use of nominal prefix class 14a in the nouns with different nominal stems

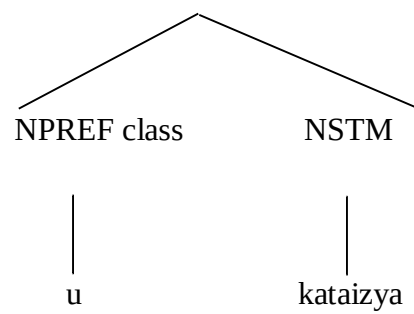
Gloss	BEM	MAM
the state of being a fiancée	<i>buunkobekela</i> /buu-nkobekela/	<i>ukataizya</i> / u-kataizya/
the state of being an advisor	<i>buumpandamano</i> / /buu-mpandamano/	<i>ukapanzya</i> / u-kapanzya/

The findings also show that BEM uses the nominal prefix class 14a, **buu-** followed by nominal stems and among these are – *nkobekela* and – *mpandamano* which contribute to the formation of the nouns ***buunkobekela*** ‘the state of being a fiancée’ and ***buumpandamano*** ‘the state of being an advisor’. In a similar denominalisation process of nouns, MAM uses the nominal prefix **u-**, representing class 14a. The prefix is followed by nominal stems and among them are – *kataizya* and – *kapanzya*; the nouns formed with these stems are ***ukataizya*** ‘the state of being a fiancée’ and ***ukapanzya*** ‘the state of being an advisor’. Illustrations of the morphological differences are presented below:

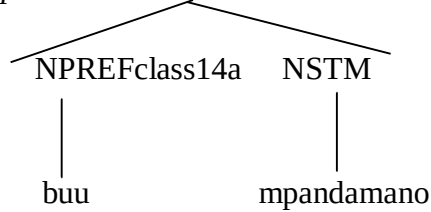
114 *buunkobekela* N



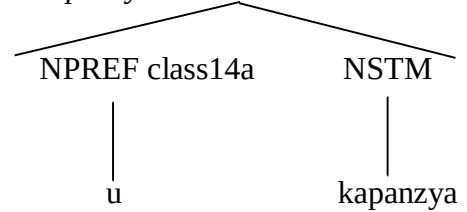
ukataizya N



115 *buumpandamano* N



ukapanzya N



It

is clear from the data in the section above that the nominal prefix class 14a for BEM is buu- while for MAM it is u-. The STDBEM nominal stems are also different from the MAM nominal stems.

6.2 Verbal Morphology

This section of the chapter discusses the findings on verbal morphology in order to bring forth differences and similarities between BEM and MAM. In this section, there are five dimensions to be presented, namely: tenses, verbal extensions, mood, negative verbs and definitisation verb phrases (or verb phrases of definitisation). Under tenses, the following are discussed: pre-hodiernal progressive tense, the future tense of today, post-hodiernal (or remote future) tense, post-hodiernal progressive tense, present progressive (continuous) tense and present simple tense. In relation to verbal extensions, the differences and similarities manifest in the following: passive, causative, intensive, frequentative, applied/applicative, neutre (or stative), reciprocal, reversive active and completive verbal extensions. The findings also reveal the differences and similarities with regard to mood, negative verbs and definitisation verb phrases.

6.2.1 Tenses

The findings show that the verbal structure of the languages under investigation are similar. However, some differences and similarities between these languages have been noted in the tenses indicated. Also important are terminologies, which name some of these tenses. Hodiernal is a grammatical terminology that indicates how far a situation or an event is from the moment of speaking. This word comes from a Latin root **hodie**, which means today. Other terminologies related to hodiernal are pre-hodiernal and post-hodiernal meaning before today and after today, respectively. Crystal (2008) observes that in many Bantu languages a verb form is used for ‘today’ events and another for ‘before today’ events irrespective of their current relevance.

6.2.1.1 Pre-hodiernal progressive tense

This tense is used to talk about an activity that was continuing (or progressing) in the past. This study analyses and interprets the data in relation to this tense.

The key informant was interviewed with regard to pre-hodiernal progressive tense. He was requested to provide the equivalents of the English expressions in BEM and MAM for the researcher to find out whether there were similarities and differences in relation to the tense. After this exercise, the informants, including the key informant, verified the responses from the key informant on the findings. Below are the analysis and interpretation of the findings.

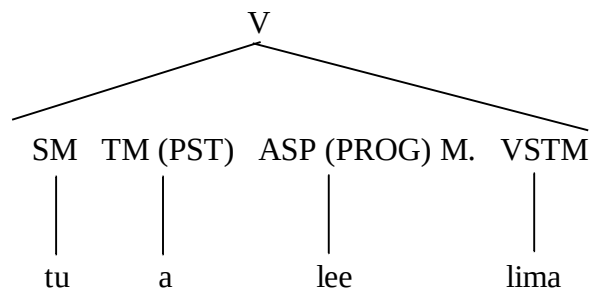
Table 40: Differences and similarities with regard to the verbs in Pre-hodiernal progressive tense

Gloss	BEM	MAM
we were digging	<i>twaleelima / tu-a-lee-lima</i>	<i>twalimanga /tu-a-lima-nga/</i>
we were catching	<i>twaleekata /tu-a-lee-ikata/</i>	<i>twalémanga /tu-a-léma-nga/</i>
I was sowing	<i>naleetanda /n-a-lee-tanda/</i>	<i>natovyanga /n-a-tovyanga/</i>
I was seeing/meeting them	<i>naleebamona /n-a-lee-ba-mona/</i>	<i>nayalolanga /n-a-ya-lola-nga/</i>
she was cooking for someone	<i>a a lee ipikila /a-a-lee-ipik-il-a/</i>	<i>wēlekelang /u-a-elek-il-a-nga/</i>
you were studying	<i>waleesambilila /u-a-lee-sambilila/</i>	<i>wasambililanga /u-a-sambilila-nga/</i>
you were reading	<i>waleebelenga /u-a-lee-belenga/</i>	<i>wawazyanga /u-a-wazyanga/</i>
they were cultivating	<i>baaleelima /ba-a-lee-ipaya/</i>	<i>yalimanga /ya-a-lima-nga/</i>
they were slaughtering	<i>baaleepaya /ba-a-lee-ipaya/</i>	<i>yakomanga /ya-a-koma-nga/</i>

The finding is that the morphological structure for BEM in this tense is subject marker plus tense marker (past) plus progressive aspect marker followed by verb stem (SM+TM+ASP (PROG) M. + VSTM whereas the morphological structure for MAM in this tense is subject marker plus tense marker (past) plus verb stem followed by progressive aspect marker (SM+TM(PST) VSTM+ASP (PROG)M).

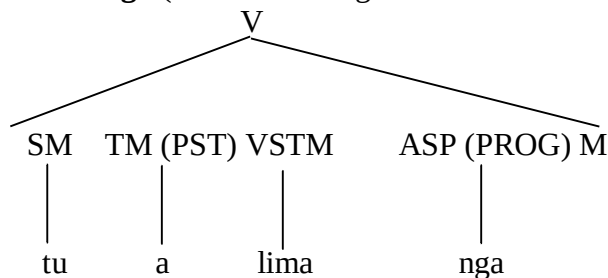
The following are analysis and interpretation of the findings:

116 (i) **tw a lee lima** (mwibala umulungu onse wafumineko) (**BEM**)



In this BEM verb *tw-a-lee-lima* ‘we were digging (in the garden the whole of last week)’, the morphological structure is subject marker **tu-** ‘we’, tense marker (past) **-a-**, progressive aspect marker **-lee-** ‘were’ followed by the verb stem – **lima** ‘dig’, (SM + TM (PST) + ASP (PROG) M. + VSTM).

(ii) **twalimanga** (mucalo mulungu onsi wafumileko) (**MAM**)



In this MAM verb *tw-a-lima-nga* ‘we were digging (in the garden the whole of last week)’, the morphological structure is subject marker **tu-** ‘we’, tense marker (past) **-a-**, the verb stem **-lima-** ‘dig’ followed by the progressive aspect marker **-nga** ‘were’ which is a discontinuous progressive

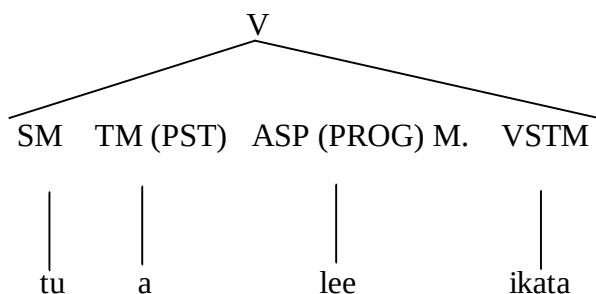
aspect marker working in tandem with the preceding past tense marker **-a-**, (SM+TM (PST) + VSTM +ASP (PROG) M.

It is also worth indicating, phonologically, that in the verbs (16 i. and ii) semivocalisation of the high back vowel /**u** / in the subject marker *tu* ‘we’ has occurred in the environment before the low central vowel /**a** / which is the past tense marker.

One of the differences is the order of verbal elements; in MAM, the ASP (PROG) M follows the VSTM while in BEM it precedes the VSTM. The other difference is in ASP (PROG) M: *-lee-* ‘were’ is for BEM) while *-nga* ‘were’ is for MAM.

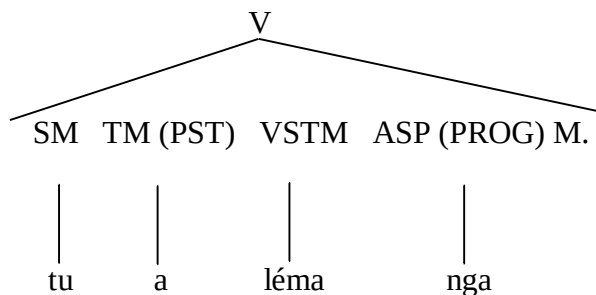
Similarities are SM *tu-* ‘we’, TM (PST) *a-* and the VSTM *-lima* ‘dig’.

117 (i) **twaleelikata** (isabi muli ulya mumana pamyaka ibili) (**BEM**)



In this BEM verb *tw-a-lee-ikata* (isabi) ‘we were catching fish (in that river for two years)’), the morphological structure is SM - **tu**-‘we’, TM (PST) **-a-**, ASP (PROG).M. **-lee-** ‘were’ and the VSTM – **ikata** ‘catch.’

(ii) **twalémanga** (nswi muluzi lulu pamyaka ili) (**MAM**)



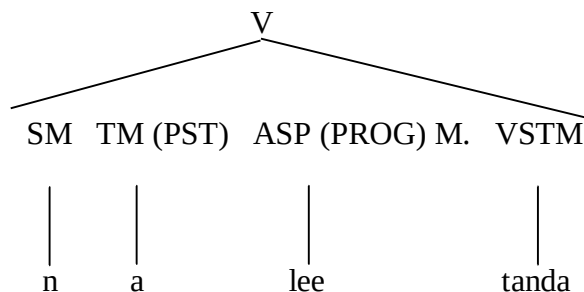
(ii) In this MAM verb *tw-a-léma-nga* (nswi) ‘we were catching (fish) (in that river for two years)’, the morphological structure is SM- **tu-** ‘we’, TM (PST) **-a-**, VSTM **-léma** ‘catch’ and the ASP(PROG) M. – **nga** ‘were’ which is a discontinuous progressive aspect marker functioning in tandem with the preceding past tense marker **-a-**.

It is also worth indicating, phonologically, that in these verbs (17 i. and ii) semivocalisation of the high back vowel /**u**/ in the subject marker *tu* ‘we’ has occurred in the environment before the low central vowel /**a**/ which is the past tense marker.

A difference is noted in the order of verbal elements (Ref. 16, above). The other differences are in ASP (PROG) M: *-lee-* ‘were’ for BEM), *nga* ‘were’ for MAM) and the VSTM *-ikata* ‘catch’ for BEM and *léma* ‘catch’ for MAM.

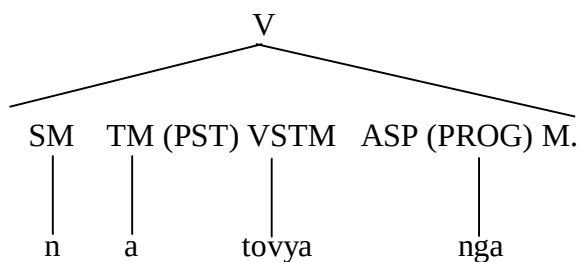
Similarities are in SM *tu-* ‘we’ and TM (PST) *-a-*.

118 (i) **naleetanda** (amale umulungu onse wafumineko) (**BEM**)



In this BEM verb *n-a-lee-tanda* (amale) (umulungu onse wafumineko), ‘I was sowing (the millet)’, the morphological structure is SM - **n-** ‘I’, TM (PST) **-a-**, ASP (PROG)M. **-lee-** ‘was’ and the VSTM – **tanda** ‘sow’.

(ii) **natovyanga** (malezi mulungu onsi wafumileko) (**MAM**)

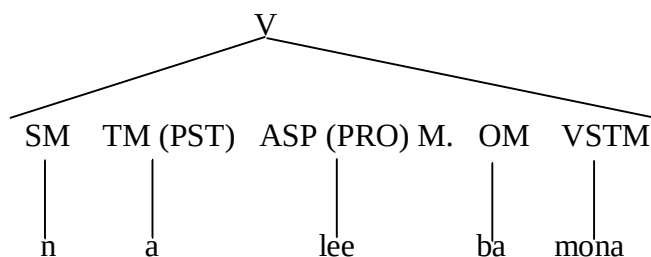


In this MAM verb *n-a-tovya-nga* malezi (mulungu onsi wafumileko) ‘I was sowing the millet’ (the whole of last week)’, the morphological structure is SM- **n-** ‘I’, TM (PST) **-a-**, VSTM –**tovya** ‘sow’ and the ASP (PROG) M. – **nga** ‘was’ which is a discontinuous progressive aspect marker functioning in tandem with the preceding past tense marker **-a-**.

A difference is noted in the order of verbal elements (Ref. 16, etc.). The other differences are in ASP (PROG) M: -lee- ‘was’ for BEM, -nga ‘was’ for MAM and the VSTM -*tanda* ‘sow’ for BEM and *tovya* ‘sow’ for MAM.

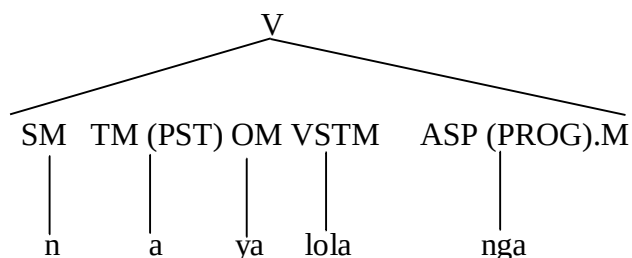
Similarities are in SM n- ‘I’ and TM (PST) -a- .

119 (i) **naleebamona** (pa myeshi ibili) (**BEM**)



In this BEM verb *n- a- lee- ba- mona* (pa myeshi ibili) ‘I was seeing/meeting them (for two months)’, the morphological structure is SM - **n-** ‘I’, TM (PST) **-a-**, ASP (PROG).M. **-lee-** ‘was’, OM- **ba** ‘them’ and the VSTM – **mona** ‘see/meet’.

(ii) **nayalolanga** (pamyenzi ili) (**MAM**)

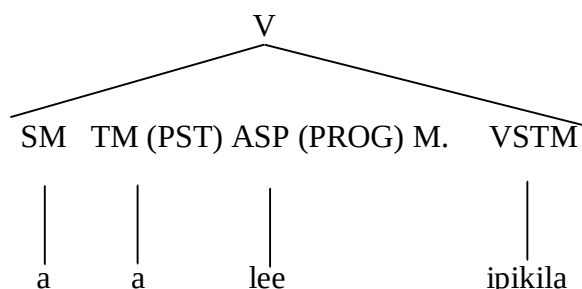


In this MAM verb *na-ya-lola-nga* (pamyenzi ili ‘I was seeing/meeting them for two months)’, the morphological structure is SM- **n-** ‘I’, TM (PST) **-a-**, OM – **ya** ‘them’, VSTM **-lola** ‘see/meet’ and the ASP (PROG) M. – **nga** ‘was’ which is a discontinuous progressive aspect marker functioning in tandem with the preceding past tense marker **-a-**.

A difference is noted in the order of verbal elements (Ref. 16, etc.). The other differences are in ASP (PROG) M: -lee- ‘was’ for BEM), -nga- ‘was’ for MAM) and the VSTM -*mona* ‘see/meet’ for BEM, *lola* ‘see/meet’ for MAM, OM – ba- ‘them’ for BEM, ya ‘them’ for MAM.

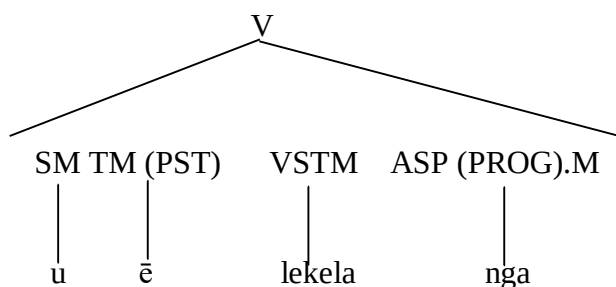
Similarities are in SM n- ‘I’ and TM (PST) -a-.

120 (i) **a a lee ipikila** (baakafundisha wakwe umweshi wafumineko) (**BEM**)



In BEM verb *a-a-lee-ipikila* (baakafundisha wakwe umweshi wafumineko) ‘she was cooking for (her teacher last month)’, the morphological structure is SM - **a**- ‘she/he’, TM (PST) -**a**- the ASP (PROG).M. -**lee**- ‘was’ and the VSTM – **ipikila** ‘cook for’.

(ii) **wēlekelanga** (yakasambilizya yakwe mwezi wafuminleko) (**MAM**)



In this MAM verb *u-ēlek-el-anga* yakasambilizya yakwe (mwezi wafumileko) ‘she was cooking for her teacher (last month)’, the morphological structure is SM- **u**- ‘he/she’, TM (PST) – **ē**-, VSTM –**lekela** ‘cook for’ and the ASP (PROG).M. –**nga** ‘was’, which is a discontinuous progressive aspect marker functioning in tandem with the preceding past tense marker -**a**-. In this verb the tense marker -**a**- ‘past’ has been dropped because it precedes the mid front vowel /**e**/ which is the initial phoneme of the verb stem –*eleka* ‘cook’. The mid front vowel /**e**/, therefore, becomes

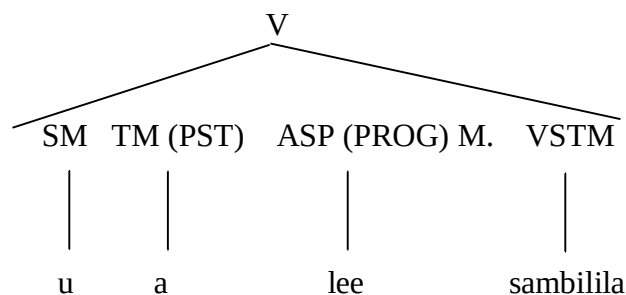
long /ē / through compensatory lengthening and functions as the past tense marker and, hence, the high back vowel /u / which is the subject marker is semivocalised in the environment before the mid front vowel /ē /, and because this vowel is long, the findings reveal that the subject marker **w-** is the third person singular ‘he/she’ instead of being the second (you). The past tense marker /-ē-/ works in conjunction with the discontinuous morph **-nga** to signify the progressive aspect of the activity in this MAM verb.

Differences: It is noted that the BEM verb –ipikila ‘cook for’ in 120(i) is different from the MAM verb –elekela ‘cook for’ in 120 (ii). Both these verbs are applicative, but the high front vowel /i/ in the applicative verbal extension morph **-il-** in the BEM verb does not undergo vowel harmonisation since its verb radical -ipik- ‘cook’ does not contain either the mid front vowel /e/ or the mid back vowel /o/ to induce the conversion and, therefore, the verb stem in 120 (i) is –ipikila ‘cook for’. In the MAM verb, the high front vowel /i/ in the applicative verbal extension morph **-il-** undergoes vowel harmonisation by becoming the mid front vowel /e/ in the environment after the mid front vowel /e/ in its verb radical –elek- ‘cook’. Therefore, the verb stem in 120 (ii) is elekela ‘cook for’.

The other difference is noted in the order of verbal elements (Ref. 16, etc.). There are also differences in ASP (PROG) M: -lee- ‘was’ for BEM), -nga ‘was’ for MAM) and the VSTM - *ipikila* ‘cook for’ for BEM, *elekela* ‘cook for’ for MAM, TM (PST) -a- for BEM, -ē- for MAM.

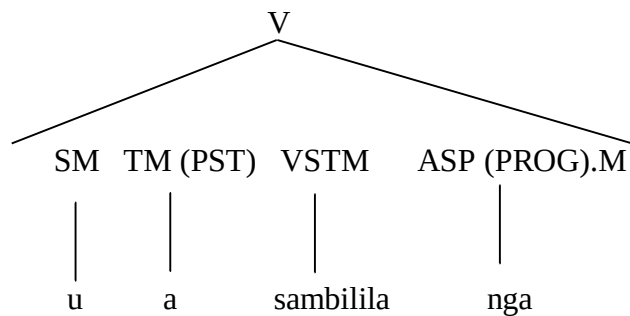
Similarities are in SM a- ‘he/she’.

121(i) **waleesambilila** (mu America umwaka wafumineko) (**BEM**)



In this BEM verb *w-a-lee-sambilila* (mu America umwaka wafumineko) ‘you were studying (in America last year)’, the morphological structure is SM- **u** ‘you’, TM (PST) **-a-**, ASP (PROG) M- **lee-** ‘were’ and the VSTM- **sambilila** ‘study’.

(ii) **wasambililanga** (mu America mwaka wafumileko) (**MAM**)

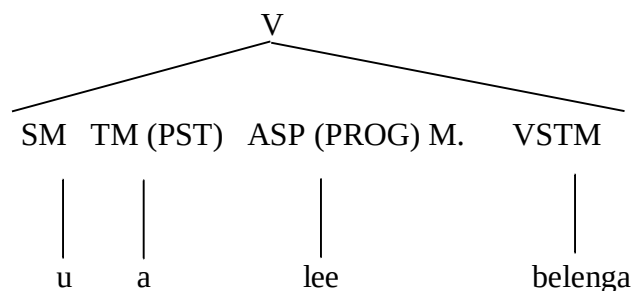


In this MAM verb *w-a-sambilila -nga* (mu America mwaka wafumileko) ‘you were studying (in America last year)’ the morphological structure is SM- **u** ‘you’, TM (PST) **-a-**, VSTM- **sambilila-** ‘study’ and the ASP (PROG) M- **nga** ‘were’ which is a discontinuous progressive aspect marker functioning in tandem with the preceding past tense marker **-a-**. The subject marker is **w-**, which is a result of semivocalisation of the high back vowel /**u**/ in the environment before the low central vowel /**a**/ that happens to be the past tense marker. The **w-** is the second-person subject marker ‘you’ in MAM because the low central vowel /**a**/ that it immediately precedes is short.

A difference is noted in the order of verbal elements (Ref. 16, etc.). The other differences are in ASP (PROG) M: **-lee-** ‘were’ for BEM, **nga** ‘were’ for MAM.

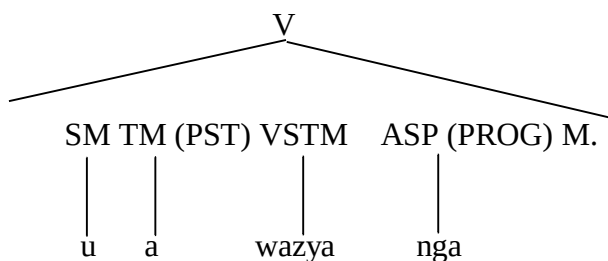
Similarities are in SM **u**-‘you’, TM (PST) **-a-** and the VSTM – *sambilila* ‘study’

122 (i) **waleebelenga** (akatabo pa mweshi ibili) (**BEM**)



In this BEM verb *wa-lee-belenga* (akatabo pa mweshi ibili) ‘you were reading (the book for two months)’, the morphological structure is SM **u-** ‘you’, TM (PST) - **a-**, ASP (PROG) M – **lee** ‘were’ and the VSTM – **belenga** ‘read’.

(ii) **wawazyanga** (ulupapulo pa myezi ili) (**MAM**)

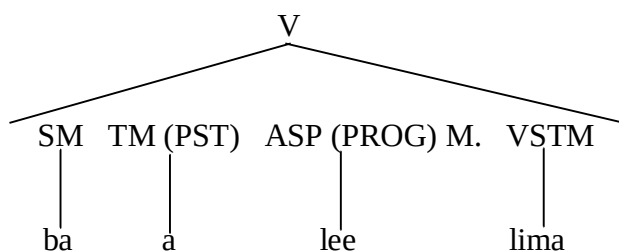


In the MAM verb *w-a-wazy-nga* (ulupapulo pa myezi ili) ‘you were reading (the book for two months)’, the morphological structure is SM – **u** ‘you’, TM (PST) -**a-**, VSTM- **wazy** ‘read’ and the ASP (PROG) M -**nga**, which is a discontinuous progressive aspect marker functioning in tandem with the preceding past tense marker -**a-**.

A difference is noted in the order of verbal elements (Ref. 16, etc.). The other differences are in ASP (PROG) M: -lee- ‘were’ for BEM, nga ‘were’ for MAM and the VSTM -*belenga* ‘read’ for BEM, *wazy* ‘read’ for MAM.

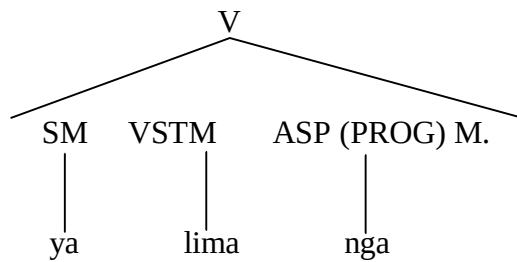
Similarities are in SM u- ‘you’ and TM -a- .

123 (i) **baaleelima** (ifyumbu mu ma 80s) (**BEM**)



In the BEM verb *ba-a-lee-lima* (ifyumbu mu ma 80s), ‘they were cultivating (sweet potatoes in 80s)’, the morphological structure is SM **ba-** ‘they’, TM (PST) –**a-**, ASP (PROG) M. -**lee-** ‘were’ and the VSTM - **lima** ‘cultivate’.

(ii) **yalimanga** (visela mu 80s) (**MAM**)



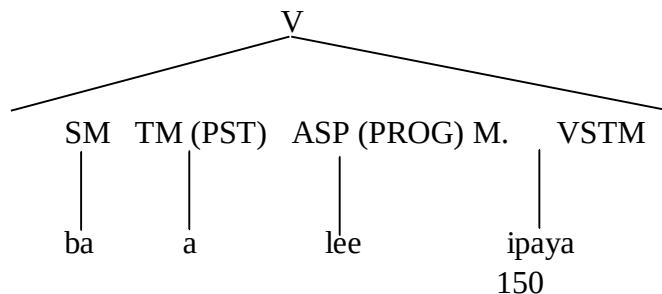
In MAM verb *ya-lima-nga* (visela mu 80s) ‘they were cultivating (sweet potatoes in 80s)’, the morphological structure is SM- **ya** ‘they’, VSTM **-lima** ‘cultivate’ and the ASP (PROG) M – **nga** ‘were’, which is a discontinuous progressive aspect marker working in tandem with the preceding past tense marker **-a-**.

Differences: in 123 (ii) and 124 (ii), the past tense marker **-a-** has been dropped in the likelihood that this phoneme is already present in the subject marker **ya-** which precedes it, (Sims, 1959 – on the dropping and absorption of vowels). This is in contrast to the past tense marker **-a-** in 123 (i) and 124 (i), which is not lost or dropped despite the fact that there is already the low central vowel /a/ in the subject marker **ba-** ‘they’. Instead, the two adjacent low central vowels /aa/ are merged and become long.

A difference is noted in the order of verbal elements (Ref. 16, etc.). The other differences are in ASP (PROG) M: **-lee-** ‘were’ for BEM, **nga** ‘were’ for MAM, SM **ba-** ‘they’, for BEM, **ya** ‘they’ for MAM.

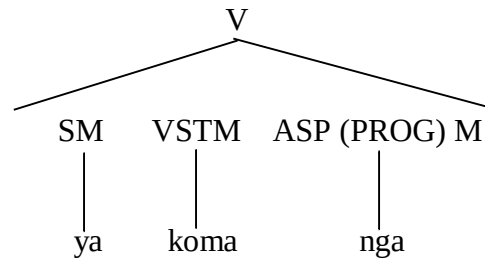
Similarities are in TM **-a-** (in BEM, visible), (in MAM, implied), VSTM **-lima** – ‘cultivate’.

124 (i) **baaleeipaya** (inkoko pa myeshi ibili) (**BEM**)



In the BEM verb *ba-a-lee-ipaya* (inkoko pa myeshi ibili) ‘they were slaughtering (chickens for two months)’; the morphological structure is SM – **ba** ‘they’, TM (PST) - **a-**, ASP (PROG) M. - **lee** ‘were’ and the VSTM **ipaya** ‘slaughter’.

(ii) **yakomanga** (nkoko pa myezi ili) (**MAM**)



In the MAM verb *ya-koma-nga* (nkoko pa myezi ili) ‘they were slaughtering (chickens for two months)’; the morphological structure is SM – **ya** ‘they’, VSTM - **koma** ‘slaughter’ and the ASP (PROG) M- **nga** – ‘were’, which is a discontinuous progressive aspect marker functioning in conjunction with the preceding past tense marker **-a-**.

A difference is noted in the order of verbal elements (Ref. 16, etc.). The other differences are in ASP (PROG): -lee- ‘were’ for BEM, nga ‘were’ for MAM), SM ba- ‘they’, for BEM, ya- ‘they’ for MAM and VSTM -*ipaya* ‘slaughter’ for BEM, *koma* ‘slaughter’ for MAM.

Similarity is in TM -a-, (visible for BEM, but implied for MAM).

In the above section, the difference is noted in relation to the progressive aspect marker: the BEM progressive aspect marker in this tense is –lee- while its counterpart in MAM is -nga-, which is discontinuous. Other differences are that the tense marker in BEM immediately precedes the progressive aspect marker while in MAM it is covert or implied in some cases. The verb stem (VSTM) in BEM comes immediately after the progressive aspect marker whereas in MAM it immediately precedes the progressive aspect marker. There are instances where the subject markers, object markers and verb stems in BEM are different from those in MAM.

6.2.1.2 Future Tense of Today

In this tense, the speaker talks about what will be done on the same day. This study analyses and interprets the data with regard to this tense.

The key informant was interviewed with regard to future tense of today. He was requested to provide the equivalents of the English expressions in BEM and MAM for the researcher to find out whether there were similarities and differences in relation to the tense. After this exercise, the informants, including the key informant, verified the responses from the key informant on the findings. Below are the analysis and interpretation of the findings.

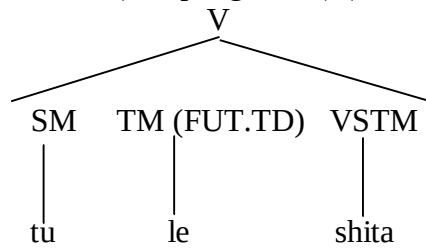
Table 41: Differences and similarities of the verbs in the future tense of today

Gloss	BEM	MAM
we will/shall buy today	<i>tuleshita /tu-le-shita/</i>	<i>tumakala /tu-ma-kala/</i>
we will/shall begin today	<i>tuletendeka /tu-le-tendeka/</i>	<i>tumatalika /tu-ma-talika/</i>
you will /shall talk/speak to (them) today	<i>ulelanda /u-le-landa/</i>	<i>umavwanga /u-ma-vwanga/</i>
he will/shall grind today	<i>alepela /a-le-pela/</i>	<i>amazya /a-ma-zya/</i>
she will/shall clean today	<i>alewamya /a-le-wamya/</i>	<i>amazivya /a-ma-zivya/</i>
they will/shall inquire today	<i>balefula /ba-le-fula/</i>	<i>yamavula /ya-ma-vula/</i>
I will/shall meet them today	<i>ndebakumanya</i> <i>/n-le-ba-kumanya/</i>	<i>nkuyakomenkanya</i> <i>/n-ku-ya-komenkanya/</i>

In BEM, the encoders use the tense marker for future of today **-le-** ‘will / shall’, which is immediately followed by a verb stem. However, MAM encoders use **-ma-** ‘will / shall’, which is the tense marker for future of today and this is followed by a verb stem. It should also be noted in this study that the tense markers for the future of today **-le-** (BEM) and **-ma-** (MAM) are cumulative morphs realising the morphemes of futurity, commitment and determination.

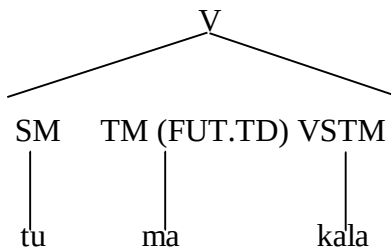
The following are analysis and interpretation of data under this tense:

125(i) **tuleshita** (umupunga ilelo) (**BEM**)



In this BEM verb *tu-le-shita* (umupunga) ilelo ‘we will/shall buy (rice) today’, the morphological structure is SM **tu-** ‘we’, TM (FUT.TD) **-le** ‘will/shall’ and the VSTM – **shita** ‘buy’.

(ii) **tumakala** (mupunga ilelo) (**MAM**)

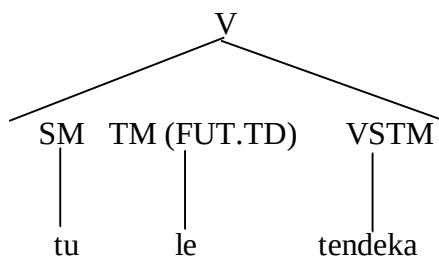


In the MAM verb *tu-ma-kala* (mupunga) ilelo ‘we will/shall buy’ (rice) today, the morphological structure is SM –**tu** ‘we’, TM (FUT.TD) – **ma** ‘will/shall’ and the VSTM –**kala** ‘buy’.

Differences are noted in the following: TM (FUT.TD) – le ‘will/shall’ for BEM), ma for MAM and the VSTM – *shita* ‘buy’ for BEM, *kala* ‘buy’ for MAM.

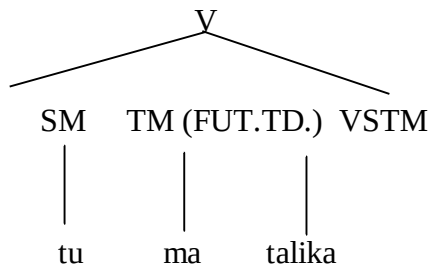
The similarity is the SM- tu ‘we’.

126 (i) **tuletendeka** (ilelo) (**BEM**)



In the BEM verb *tu-le-tendeka* ilelo ‘we will/shall begin today’, the morphological structure is SM **tu-** ‘we’, TM (FUT.TD) **-le-** ‘will/shall’ and the VSTM – **tendeka** ‘begin’.

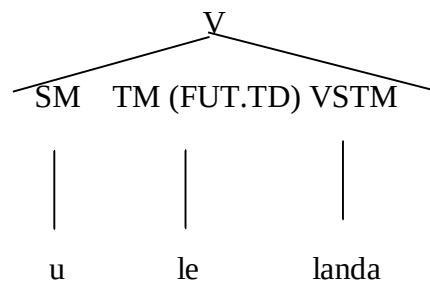
(ii) **tumatalika** (ilelo) (**MAM**)



In the MAM verb *tu-ma-talika* ilelo ‘we will/shall begin today’, the morphological structure is SM **tu-** ‘we’, TM (FUT.TD) – **ma-** ‘will/shall’ and VSTM – **talika** ‘begin’.

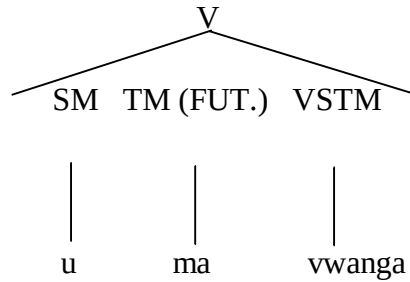
Differences are in tense marker for future of today (TM FUT.TD) - le for BEM), ma for MAM. and in VSTM-, *tendeka* ‘begin’ for BEM); *talika* ‘begin’ for MAM. Similarity is the SM -tu ‘we’.

127(i) **ulelanda** (kulibene ilelo) (**BEM**)



In the BEM verb *-u-le-landa* (kulibene) ilelo ‘you will/shall talk/speak (to them) today, the morphological structure is SM **u-** ‘you’, TM (FUT.TD) **-le-** ‘will/shall’ and the VSTM – **landa** ‘talk/speak’.

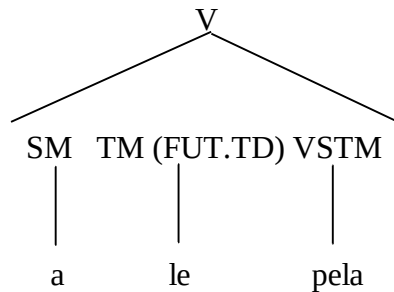
(ii) **umavwanga** (kuno yali ilelo) (**MAM**)



In the MAM verb *u-ma-vwanga* (kuno yali) ilelo ‘you will/shall talk or speak (to them) today’, the morphological structure is SM **u-** ‘you’, TM (FUT.) **-ma** ‘will/shall’ and the VSTM **-vwanga** ‘talk/speak’.

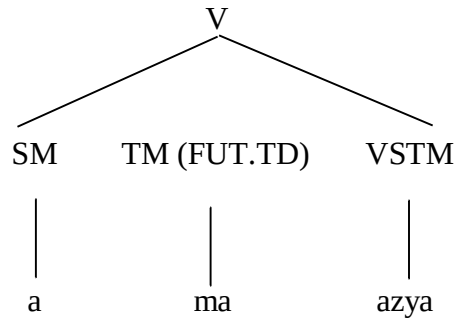
The following are the differences: TM (FUT.TD) – *le-* ‘will/shall’ for BEM, *-ma-* for MAM and the VSTM *-landa* ‘talk/speak’ for BEM), *vwanga* ‘talk/speak’ for MAM). Similarity is the SM *u-* ‘you’.

128 (i) **alepela** (inyange ilelo) (**BEM**)



In the BEM verb *a-le-pela* (inyange) (ilelo) ‘he/she will/shall grind the (maize) today’, the morphological structure is SM **a-** ‘he/she’, TM (FUT.TD) **-le** ‘will/shall’ and the VSTM **-pela** ‘grind’.

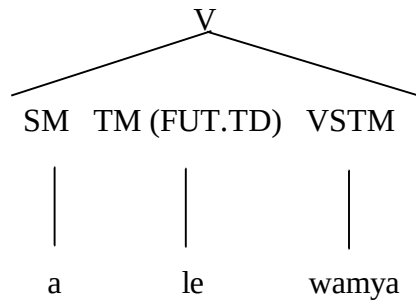
(ii) **amazya** (cisaka) (ilelo) (**MAM**)



In this MAM verb *a-ma-zya* (cisaka) (ilelo) ‘he will/shall grind (the maize) today’, the morphological structure is SM **a-** ‘he/she’, TM (FUT.TD) – **ma-** ‘will/shall’ and the VSTM – **azya** ‘grind’.

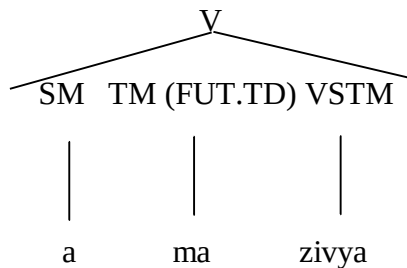
Differences are in the following: TM (FUT.TD.) -le- ‘will/shall’ for BEM, -ma- ‘will/shall’ for MAM, VSTM -*pela* ‘grind’ for BEM, -*azya* ‘grind’ for MAM. Similarity is SM – a.

129 (i) **alewamya** (iṇanda icungulo) (**BEM**)



In this BEM verb *a-le-wamya* (iṇanda) ilelo ‘he/she will/shall clean (the house) today’, the morphological structure is SM **a-** ‘he/she’, TM (FUT.TD) –**le-** ‘will/shall’ and the VSTM - **wamya** ‘clean’.

(ii) **amazivya** (iṇanda amanguzi) (**MAM**)

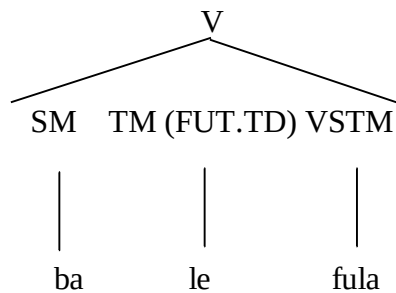


The morphological structure of this MAM verb *a-ma-zivya* (ɲanda) ilelo ‘he/she will/shall clean (the house) today’ is SM **a-**, TM (FUT.TD) **-ma-** ‘will/shall’ and VSTM **-zivya** ‘clean’

Differences are noted in TM (FUT.TD) – le- ‘will/shall’ for BEM, ma ‘will/shall’ for MAM and the VSTM *-wamya* clean’ for BEM, *zivya* ‘clean’ for MAM.

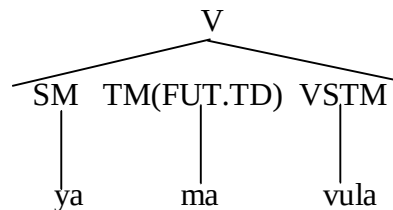
Similarity is the SM- a.

130 (i) **balefula** (palupiya lwalubile ilelo) (**BEM**)



The morphological structure of this BEM verb *ba-le-fula* (palupiya lwalubile) ilelo ‘they will/shall inquire about (the lost money) today’ is SM **-ba-** ‘they’, TM (FUT.TD) **-le-** ‘will/shall’ and the VSTM – **fula** ‘inquire about’.

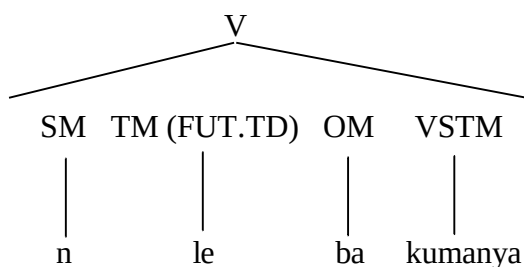
(ii) **yamavula** (pampiya zyapozile ilelo) (**MAM**)



The morphological composition of this MAM verb *ya-ma-vula* (pampiya zyapozile) ilelo ‘they will/shall inquire about (the lost money) today’ is SM **-ya-** ‘they’, TM (FUT.TD.) **-ma-** ‘will/shall’ and the VSTM **-vula**.

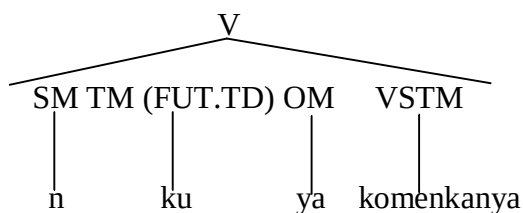
These are the differences: SM – ba- ‘they’ for BEM, ya- ‘they’ for MAM, TM (FUT.TD) -le- for BEM, - ma- for MAM). The similarity is VSTM -*fula* ‘inquire about’ (BEM), *vula* ‘inquire about’ (MAM) (cognates).

131 (i) **ndebakumanya** (ilelo) (**BEM**)



The morphological structure of this BEM verb *n-le-ba-kumanya* (**ndebakumanya**) (ilelo) ‘I will/shall meet them (today)’ is SM **n-** ‘I’, TM (FUT.TD) **-le-**, OM **-ba-** ‘them’ and the VSTM – **kumanya** ‘meet’. On tense marker **le**, the voiced alveolar lateral / l / has been converted to the voiced alveolar plosive /d / under the influence of the allophonic rule on this phoneme (i.e. l) when it is immediately preceded by the voiced alveolar nasal /n / (Ref. section 5.1.2.1).

(ii) **nkuyakomenkanya** (ilelo) (**MAM**)



In this MAM verb *n-ku-ya-komenkanya* ilelo ‘I will/shall meet them today’, the morphology is SM **n-** ‘I’, TM (FUT.TD) **-ku-** ‘will/shall’, OM **-ya** ‘them’ and the VSTM – *komenkanya* ‘meet’. It is noted that the voiced bilabial nasal /**m**/ in the tense marker **-ma-** is not homorganic with the voiced alveolar nasal /**n** /- ‘I’, which is the subject marker. Instead, the subject marker, which is the voiced alveolar nasal /**n**/, is converted to the voiced velar nasal [**ŋ**] to make it homorganic with the voiceless velar plosive /**k**/ in the tense marker **-ku** representing the future tense of today.

Here are the differences: TM (FUT.TD.) -le- ‘will/shall’ for BEM, -ku -‘will/shall’ for MAM, OM ba- ‘them’ for BEM, ya- ‘them’ for MAM, VSTM –*kumanya* ‘meet’ for BEM, -*komenkanya* ‘meet’ for MAM;

Similarities: SM -n (BEM), n/ η- (MAM).

It is noted in the section above that the tense marker in BEM for future of today is –le- ‘will/shall’ while for MAM it is -ma- ‘will/shall’. There are also differences with regard to verb stems, for example, 125 (i) and (ii) – *shita* ‘buy’ for BEM and *kala* ‘buy’ for MAM; subject markers as in 130 (i) and (ii) – ba- ‘they’ for BEM and ya- ‘they’ for MAM; object markers as in 131 (i) and (ii) – ba ‘them’ for BEM and ya ‘them’ for MAM. One of the similarities is in 131, subject markers n- (BEM) and n/η- (MAM). The findings are that there are more differences than similarities in this tense. The other revelation is that the ordering or positioning of the verbal elements in this tense is the same for both languages.

6.2.1.3 Post-hodiernal (or Remote future) tense

In this tense, the speaker talks about an action that happens after today. The focus in this tense is not on progression. This study analyses and interprets the data in relation to this tense.

The key informant was interviewed with regard to post-hodiernal (remote future) tense. He was requested to provide the equivalents of the English expressions in BEM and MAM for the researcher to find out whether there were similarities and differences in relation the tense. After this exercise, the informants, including the key informant, verified the responses from the key informant on the findings. Below are the analysis and interpretation of the findings.

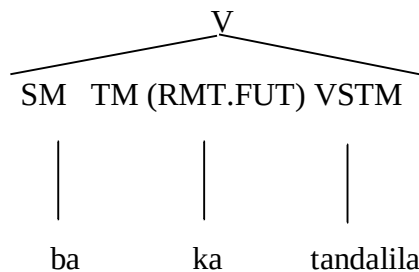
Table 42: Differences and similarities of the verbs in Posthodiernal (or Remote future) tense

Gloss	BEM	MAM
they will/shall visit	<i>bakatandalila</i> /ba-ka-tandalila /	<i>yálatandala</i> /yá-la-tandala/
they will/shall build	<i>bakakuula</i> / ba-ka-kuula /	<i>Yálakula</i> /yá-la-kula/
he will/shall marry	<i>akoopa</i> /a-ka-upa/	<i>álatwala</i> / á-la-twala/
he/she will/shall attend	<i>akasangwa</i>	<i>álazamwa</i>

	/a-ka-sangwa/	/á-la-zamwa/
I will/shall begin	<i>nkatampa</i> /n-ka-tampa/	<i>ńdatalika</i> /ń-la-talika/
I will/ shall complete	<i>nkapwisha</i> /n-ka-pwisha/	<i>Ńdamala</i> /ń-la-mala/
we will/ shall cultivate	<i>tukalima</i> /tu-ka-lima/	<i>Túlalima</i> /tú-la-lima/

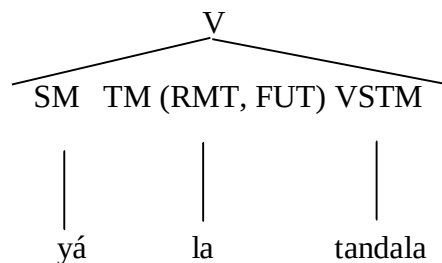
The tense marker for remote future in BEM is **-ka-** ‘will/shall/’ while in MAM it is **-la-** ‘will/shall’. It has been found that ‘**la**’ has low tone (**LT**) because it does not express continuity of an action.

132 (i) **bakatandalila** (umusumba wa London uyu mwaka uleisa) (**BEM**)



In this BEM verb *ba-ka-tandalila* (umusumba wa London uyu mwaka uleisa) ‘they will/shall visit (London next year)’, the verbal elements are SM **ba-** ‘they’, TM (RMT.FUT) **-ka** ‘will/shall’ and the VSTM – **tandalila** ‘visit’.

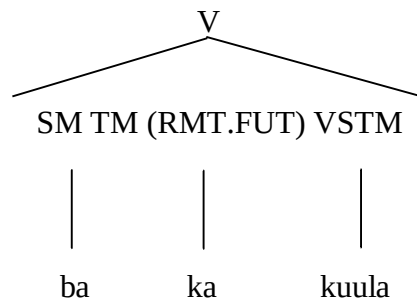
(ii) **yá la tandala** (kumusumba wa London mwaka ukwiza) (**MAM**)



The structure of this MAM verb *yá-la-tandala* (kumusumba wa London umwaka ukwiza) ‘they will/shall visit (London next year)’ is SM- *yá* ‘they’, TM (RMT. FUT) **-la** ‘will/shall’ and the VSTM – **tandala** ‘visit’.

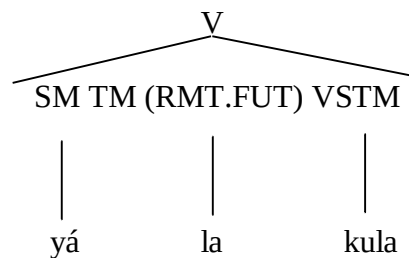
The differences: the SM – *ba* ‘they’ is for BEM whereas *yá* ‘they’ is for MAM. For TM (RMT. FUT), *ka* ‘will/shall’ is for BEM while *la* is for MAM. The VSTM *tandalila* ‘visit’ for BEM is similar to *tandala* ‘visit’ for MAM.

133 (i) **bakakuula** (iṇanda panuma ya uyu mwaka) (**BEM**)



The morphological composition of this BEM verb *ba-ka-kuula* (iṇanda panuma ya uyu mwaka) ‘they will/shall build (a house after next year)’ is SM **ba-** ‘they’, TM (RMT.FUT) **ka-** ‘will/shall’ and the VSTM **-kuula** ‘build’.

(ii) **yálakula** (ṇanda pacisila ca mwaka ukwiza) (**MAM**)

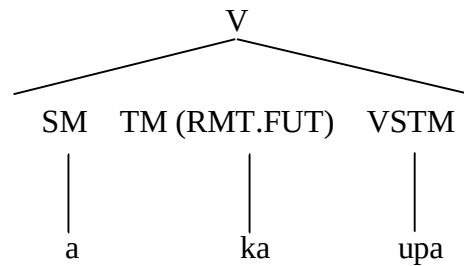


The verb elements of this MAM verb *yá-la-kula* (ṇanda pacisila ca mwaka ukwiza) ‘they will/shall build (a house after next year)’ is SM - **yá** ‘they’, TM (RMT.FUT) – **la** ‘will/shall’ and the VSTM – **kula** ‘build’.

The differences are SM – *ba* ‘they’ for BEM, *yá* ‘they’ for MAM, TM.(RMT.FUT.) -*ka* ‘will/shall’ for BEM, *la* ‘will/shall’ for MAM.

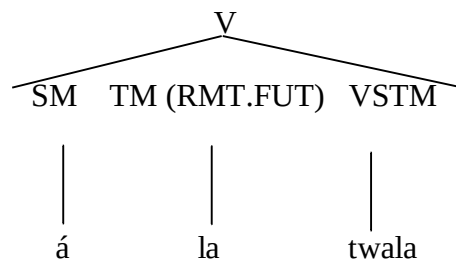
The VSTM *kuula* ‘build’ (BEM) is similar to *kula* ‘build’ (MAM).

134 (i) **aka upa** (= **akoopa**) (mu mweshi wa Mupundu umwaka uleisa) (**BEM**)



The verbal elements in the BEM verb *a-ka- upa* (*akoopa*) (mu mweshi wa Mupundu umwaka uleisa) ‘he/she will/shall marry (in December next year)’ are SM **-a** ‘he/she’, TM (RMT.FUT) – **ka** ‘will/shall’ and the VSTM **upa** ‘marry’. In this verb, there is coalescence between the low central vowel /a/ in the tense marker **ka** and the high back vowel /u/ in the verb stem **upa** (a+u = oo) and because of this the verb is pronounced as (a)-koopaa.

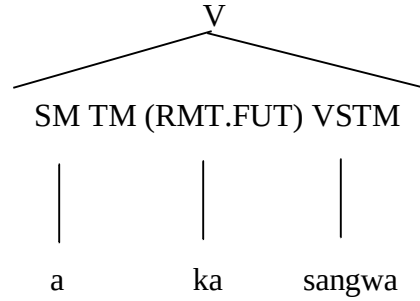
(ii) **álatwala** (mu mwezi wa December umwaka ukwiza) (**MAM**)



The morphological structure of the MAM verb *á-la-twala* (mu mwezi wa December mwaka ukwiza) ‘he/she will/shall marry (in December next year)’ is SM **á-** ‘he/she’, TM (RMT.FUT) **la** ‘will/shall’ and VSTM **twala** ‘marry’.

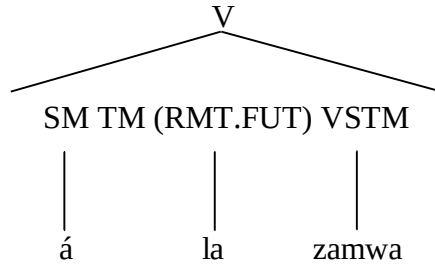
The differences are TM (RMT.FUT.) –ka- ‘will/shall’ for BEM, -la- ‘will/shall’ for MAM and the VSTM- *upa* ‘marry’ for BEM, *twala* ‘marry’ for MAM. The SM a- is the same for both languages.

135 (i) **akasangwa** (kukusefya mu 2023) (**BEM**)



In the BEM verb *a-ka-sangwa* (kukusefya mu 2023), ‘he/she will attend (the ceremony in 2023)’ the verb elements are SM **a-** ‘he/she’, TM (RMT.FUT) **-ka** ‘will/shall’ and the VSTM **-sangwa** ‘attend’.

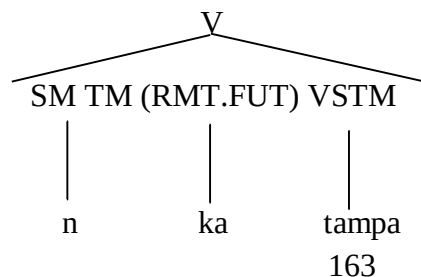
(ii) **álazamwa** (ku kuzevya mu 2023) (**MAM**)



The morphological structure of the MAM verb *á-la-zamwa* (ku kuzevya mu 2023) ‘he/she will/shall attend (the ceremony in 2023)’ is SM – **á-** ‘he/she’, TM (RMT.FUT) – **la** ‘will/shall’ and VSTM – **zamwa** ‘attend’.

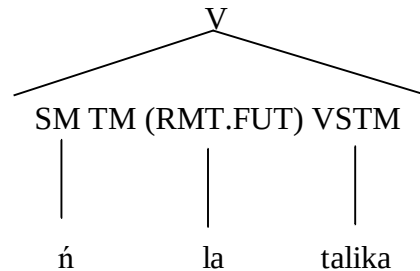
The differences are TM (RMT.FUT.) -ka ‘will/shall’ for BEM, -la- ‘will/shall’ for MAM and the VSTM – *sangwa* ‘attend’ for BEM, *zamwa* ‘attend’ for MAM, The SM a- ‘he/she’ is the same for both languages.

136 (i) **nkatampa** (ifyakutukutatukuta mummyeshi ibili ileisa) (**BEM**)



The BEM verb *n-ka-tampa* (ifyakutukutatukuta mumyeshi ibili ileisa) ‘I will/shall begin (the project in the next two months)’ is composed of these elements: SM **n-** ‘I’, TM (RMT.FUT) **-ka** ‘will/shall’ and the VSTM **-tampa** ‘begin’.

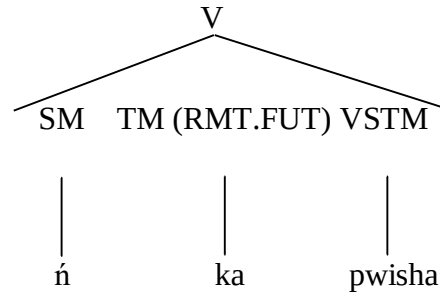
(ii) **ńdatalika** (vyakwezyaezya myezi ili ikwiza) (**MAM**)



This MAM verb *ń-lá-talika* (**ńdatalika**) (vyakwezyaezya myezi ili ikwiza) ‘I will/shall begin (the project in the next two months)’ is made up of the SM **n-** ‘I’, TM (RMT.FUT) – **la** ‘will/shall’ and VSTM – **talika** ‘begin’. It is also observed that there is a phonological process based on the allophonic rule in the MAM verbs **ndatalika** ‘I will/shall begin’ in 136 (ii) and **ndamala** ‘I will/shall complete’ in 137 (ii) in relation to the tense marker for remote future **-la-** in which the voiced alveolar lateral /l/ becomes the voiced alveolar plosive /d/ in the environment after the voiced alveolar nasal /n/ which is the subject marker **n** ‘I’ in- 136 (i) and 136(ii), 137 (i) and 137 (ii), but the allophonic rule does not apply to the BEM verbs **nkatampa** ‘I will/shall begin’ in 136 (i) and **nkapwisha** ‘I will/shall complete’ in 137 (i) because the voiceless velar plosive /k/ in these verbs is not affected by the allophonic rule.

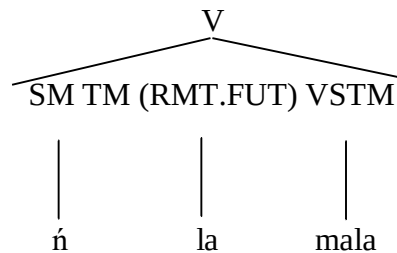
The differences are TM (RMT.FUT) – **ka-** ‘will/shall’ for BEM, **la-** ‘will/shall’ for MAM and VSTM – **tampa** ‘begin’ for BEM, **-talika** ‘begin’ for MAM. The SM – **n-** is the same for both languages.

137 (i) **nkapwisha** (imilimo yandi mu 2023) (**BEM**)



The morphological structure of this verb *n-ka-pwisha* (imilimo yandi mu 2023) ‘I will/shall complete (my work in 2023)’ is SM **n-** ‘I’, TM (RMT.FUT) – **ka** ‘will/shall’ and the VSTM – **pwisha** ‘complete’.

(ii) **ndamala** (incito zyane mu 2023) (**MAM**)

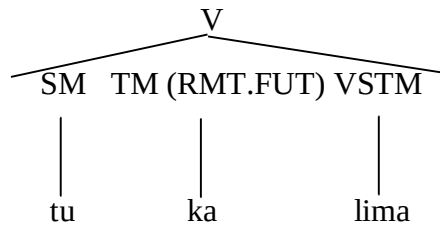


The verbal elements in this verb *n-la-mala* (*ndamala*) incito zyane mu 2023) ‘I will complete (my work in 2023)’ are SM - **n** ‘I’, TM (RMT.FUT) – **la** ‘wil/shall’ and VSTM – **mala** ‘complete’.

The TM (RMT.FUT.) *ka* ‘will/shall’ (BEM) is different from the TM (RMT.FUT) *la* ‘will/shall’ (MAM) and the VSTM - *pwisha* ‘complete’ (BEM) is different from the VSTM *mala* ‘complete’ (MAM).

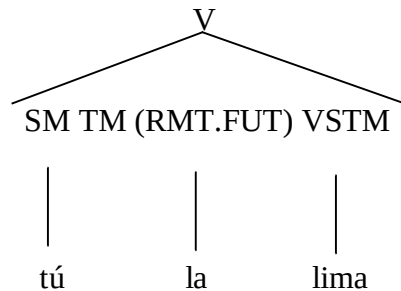
The SM –n ‘I’ is the same for both languages.

138 (i) **tukalima** (amasaka mumainsa yaleeisa) (**BEM**)



This verb *tu-ka-lima* (amasaka mumainsa yaleeisa) ‘we will/shall cultivate (sorghum next planting season)’ comprises these elements: SM **tu-** ‘we’, TM (RMT.FUT) – **ka** ‘will/shall’ and the VSTM – **lima** ‘cultivate’.

(ii) **túlalima** (nkona mucisiku cikwiza) (MAM)



The verb *túlalima* nkona mucisiku cikwiza ‘we will/shall cultivate (sorghum next planting)’ is composed of these elements SM **tú-** ‘we’, TM (RMT.FUT) –**la-** ‘will/shall’ and VSTM –**lima** ‘cultivate’.

The differences with regard to TM (RMT.FUT.) have already been indicated in the previous sections of this tense. The SM - tu ‘we’ and the VSTM lima ‘cultivate’ are for both languages.

The tense marker for posthodiernal (remote) future for BEM is -ka- ‘shall/will’ whereas for MAM it is la ‘shall/will’. While this is not the case for –ka-, la has low tone because it does not express continuity of the activity. Other differences include subject markers as in 132 (i) and (ii) – ba ‘they’ for BEM and ya ‘they’ for MAM; verb stems as in 134 (i) and (ii) *upa* ‘marry’ for BEM and *twala* ‘marry’ for MAM, respectively.

6.2.1.4 Post hodiernal (or Remote Future) Progressive Tense

The encoder using this tense expresses the notion that the activity talked about will be progressing for a period in future.

The study analyses and interprets the data with reference to this tense.

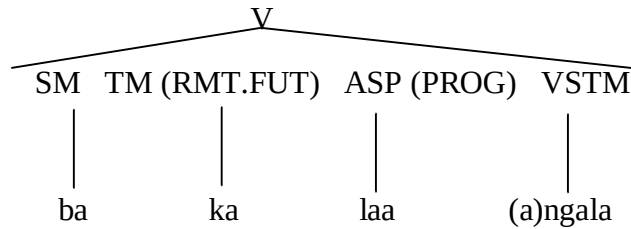
The key informant was interviewed with regard to post-hodiernal (or remote future) progressive tense. He was requested to provide the equivalents of the English expressions in BEM and MAM for the researcher to find out whether there were similarities and differences in relation to the tense. After this exercise, the informants, including the key informant, verified the responses from the key informant on the findings. Below are the analysis and interpretation of the findings.

Table: 43 Differences and similarities of the verbs in Post-hodiernal (or Remote Future) Progressive Tense

Gloss	BEM	MAM
they will/shall be playing	<i>bakalaangala</i> /ba-ka-laa-ngala/	<i>yalácimya</i> /ya-lá-cimya/
they will /shall be carrying	/bakalaasenda/ /ba-ka-laa-senda/	/yalásenda/ /ya-lá-senda/
they will/shall be commemorating	/bakalaaibukisha/ /ba-ka-laa-ibukisha/	/yaláiusya/ /ya-lá-iusya/
he will/shall be going	/akalaaya/ /a-ka-laa-ya/	/aláya/ /a-lá-ya/
she / he will/shall be coming	/akalaaisa/ /a-ka-laa-isa/	/aláiza/ /a-lá-iza/
you will/shall be cultivating	/ukalaalima/ /u-ka-laa-lima/	/ulálima/ /u-lá-lima/

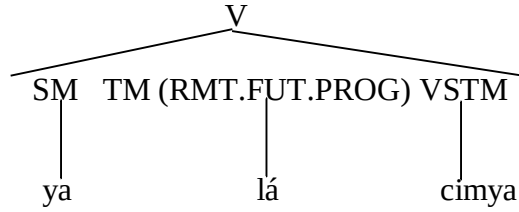
The following are the analysis and ininterpretation of the data on the tense.

139 (i) **bakalaangala** (muma bumba) (**BEM**)



The morphological composition of this verb *ba-ka-laa-ngala* (*mumabumba*) ‘they will/shall be playing in the teams’ is SM **ba-** ‘they’, TM (RMT.FUT) **-ka** ‘will/shall’, ASP (PROG) **-laa-** and the VSTM – **(a) ngala** ‘play’.

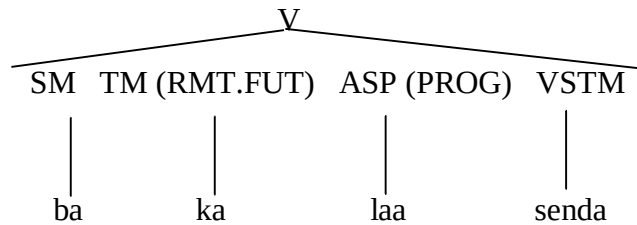
(ii) **yalácimya** (muma umba) (**MAM**)



The verbal elements in this MAM verb *ya-lá-cimya* ‘they will/shall be playing (in the teams)’ are SM **ya-** ‘they’, TM (RMT.FUT.PROG) – **lá-** ‘will/shall be’ and the VSTM **-cimya** ‘play’.

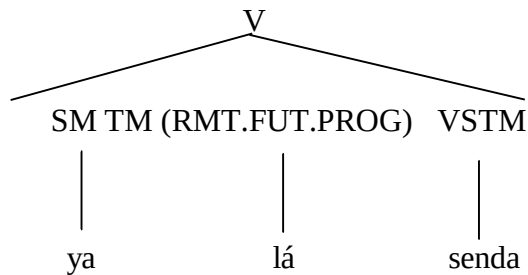
The differences are SM – *ba-* ‘they’ for BEM and *ya* ‘they’ for MAM; TM *-ka-* ‘will/shall’ and ASP (PROG) –*laa-* ‘be’ for BEM, TM (RMT.FUT.PROG) *lá* ‘will/shall be’ for MAM and VSTM – *angala* ‘play’ for BEM, *cimya* ‘play’ for MAM.

140 (i) **bakalaasenda** (umupando wandi) (**BEM**)



The morphological composition of this verb *ba-ka-laa-senda* umupando wandi ‘they will/shall be carrying my chair’ is SM **ba-** ‘they’, TM (RMT.FUT) –**ka-** ‘will/shall’, ASP (PROG) –**laa-** ‘be’ and the VSTM **-senda** ‘carry’.

(ii) **yalásenda** (mupando wane) (**MAM**)

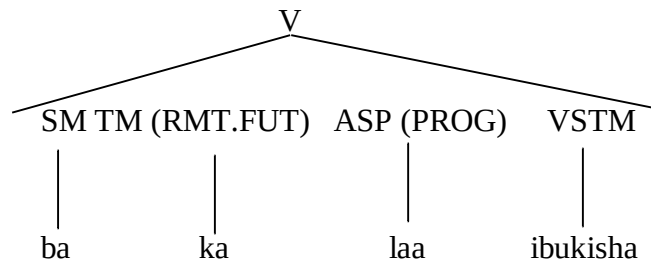


The verbal elements in this MAM verb *ya-lá-senda* mupando wane ‘they will/shall be carrying my chair’ are SM **ya-** ‘they’, TM (RMT.FUT.PROG) - **lá** ‘will/shall be’ and the VSTM – **senda** ‘carry’.

The differences are SM *ba-* ‘they’ for BEM and *ya* ‘they’ for MAM; TM *-ka-* ‘will/shall’ and ASP (PROG) *-laa-* ‘be’ for BEM), TM (RMT.FUT.PROG) *lá* for MAM.

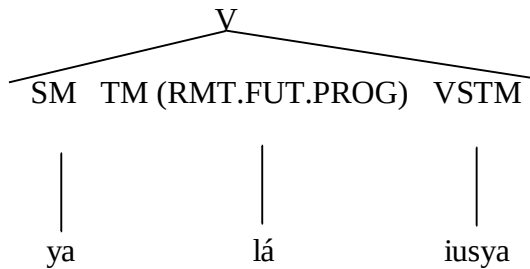
The similarity is noted in the VSTM: *senda* for both languages.

141 (i) **bakalaaibukisha** (ici cicitwa lyonse) (**BEM**)



The morphological composition of this verb *ba-ka-laa-ibukisha* icicitwa lyonse ‘they will/shall be commemorating the performance’ is SM **ba-** ‘they’, TM (RMT.FUT) –**ka-** ‘will/shall’, ASP (PROG) –**laa-** ‘be’ and the VSTM –**ibukisha** ‘commemorate’.

(ii) **yaláiusya** (ciombwa lyonsi) (**MAM**)

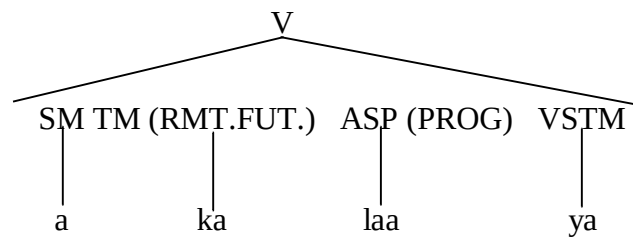


The verbal elements in this MAM verb *ya-lá-iusya* (ciombwa lyonsi) ‘they will/shall be commemorating the performance’ are SM **ya-** ‘they’, TM (RMT.FUT.PROG) - **lá** ‘will/shall be’ and the VSTM – **iusya** ‘commemorate’.

The differences are SM – ba- ‘they’ for BEM and ya ‘they’ for MAM, TM -ka- ‘will/shall’ and ASP (PROG) –laa- ‘be’ for (BEM), TM (RMT.FUT.PROG) lá ‘will/shall be’ for MAM).

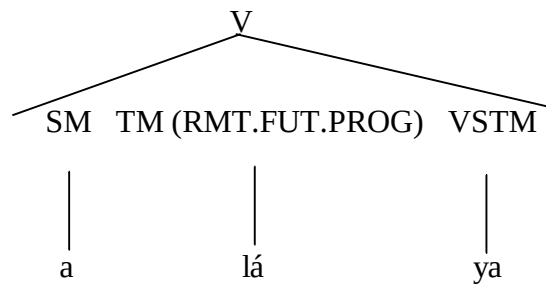
The similarity is noted in the VSTM: *ibukisha* ‘commemorate’ for BEM, *iusya* ‘commemorate’ for MAM. (cognates).

142 (i) **akalaaya** (kulya pali Cibili) (**BEM**)



The morphological composition of this BEM verb *a-ka-laa-ya* (kulya pali Cibili) ‘he/she will/shall be going there on Tuesdays’ is SM **a-** ‘he/she’, TM (RMT.FUT) **-ka** ‘will/shall’, ASP (PROG) – **laa-** ‘be’ and the VSTM – **ya** ‘go’.

(ii) **aláya** (ko lyonsi pali Cili) (**MAM**)

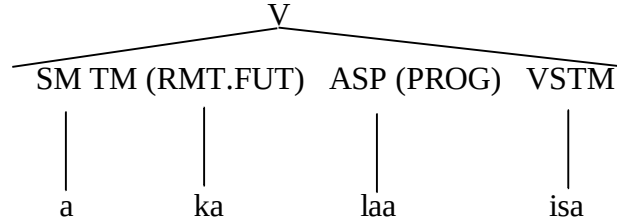


The verbal elements in this MAM verb *a-lá-ya* (ko lyonsi pali Cili) ‘he/she will/shall be going there on Tuesdays’ are SM – **a** ‘he/she’, TM (RMT.FUT.PROG) – **lá-** ‘will/shall be’ and the VSTM – **ya** ‘go’.

The differences are TM -ka- ‘will/shall’ and ASP (PROG) –laa- ‘be’ for BEM, TM (RMT.FUT.PROG) lá for MAM.

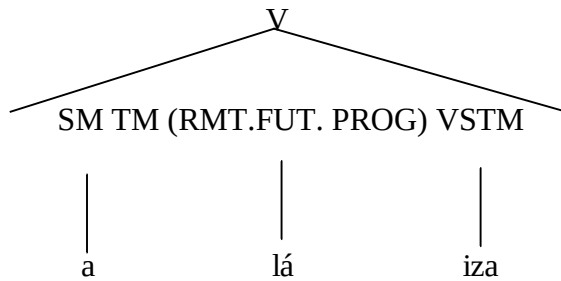
The similarities are noted in the SM and VSTM: SM – ‘a’-, VSTM – *ya* ‘go’ for both languages.

143 (i) **akalaaisa** (nga papita imilungu ibili) (**BEM**)



The morphological composition of this BEM verb *a-ka-laa-isa* (nga papita imilungu ibili) ‘he/she will/shall be coming (fortnightly)’ is SM **a-** ‘he/she’, TM (RMT.FUT) –**ka** ‘will/shall’, ASP (PROG) –**laa-** ‘be’ and the VSTM –**isa** ‘come’.

(ii) **aláiza** (nga pasila milungu ili) (**MAM**)

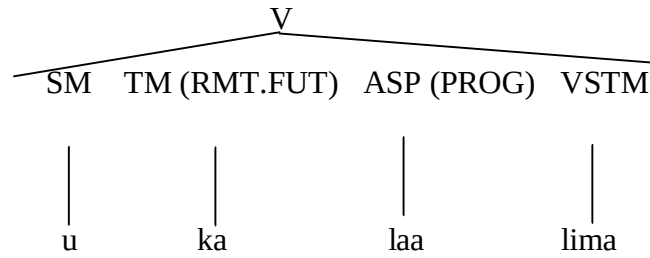


The verbal elements in this MAM verb *a-lá-iza* (nga pasila milungu ili) ‘he/she will/shall be coming (fortnightly)’ are SM **a-** ‘he/she’, TM (RMT.FUT.PROG) – **lá** ‘will/shall be’ and the VSTM –**iza** ‘come’.

The differences are TM -ka- ‘will/shall’ and ASP (PROG) -laa- ‘be’ for BEM, TM (RMT.FUT.PROG) lá for MAM.

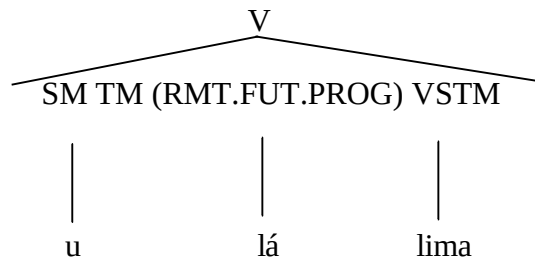
The similarities are noted in the SM and VSTM: SM a- ‘he/she’, VSTM -isa ‘come’ for BEM, -iza ‘come’ for MAM. (cognates).

144 (i) **ukalaalima** (ifyumbu lyonse) (**BEM**)



The morphological composition of this BEM verb *u-ka-laa-lima* (ifyumbu lyonse) ‘you will/shall be cultivating potatoes every time’ is SM **u-** ‘you’, TM (RMT.FUT) **-ka** ‘will/shall’, ASP (PROG) **-laa-** ‘be’ and the VSTM **-lima** ‘cultivate’.

(ii) **ulálima** (visela lyonsi) (**MAM**)



The verbal elements in this MAM verb *u-lá-lima* (visela lyonsi) ‘you will/shall be cultivating potatoes every time’ are SM **u-** ‘you’, TM (RMT.FUT.PROG) **-lá** ‘will/shall be’ and the VSTM **-lima** ‘cultivate’.

The differences are TM **-ka-** ‘will/shall’ and ASP (PROG) **-laa-** ‘be’ for BEM, TM(RMT.FUT.PROG) **lá** for MAM.

The similarities are noted in the SM and VSTM: SM – ‘u’- ‘you’, VSTM – *ya* ‘go’ for both languages.

6.2.1.5 Present Progressive (or Continuous) Tense

The speaker uses this tense when talking about an action which taking place at the present moment or now. This study analyses and interprets the data in relation to this tense.

The key informant was interviewed with regard to the present progressive (continuous) tense. He was requested to provide the equivalents of the English expressions in BEM and MAM for the researcher to find out whether there were similarities and differences in relation to the tense. After this exercise, the informants, including the key informant, verified the responses from the key informant on the findings. Below are the analysis and interpretation of the findings.

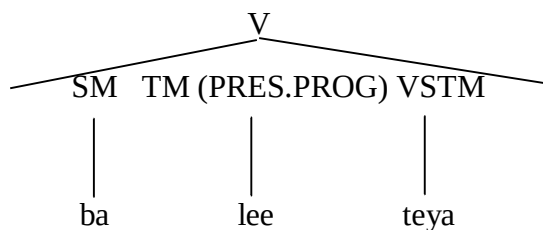
Table 44: Differences and similarities of the verbs in Present Progressive (or Continuous)

Tense

Gloss	STDBEM	RULMAM
they are playing (football)	<i>baleeteya</i> /ba-lee-teya/	<i>yakuteya</i> /ya-ku-teya/
they are chasing (an animal)	<i>baleetamfya</i> /ba-lee-tamfya/	<i>yakuzinga</i> /ya-ku-zinga/
he is driving (a lorry)	<i>aleensha</i> /a-lee-nsha/	<i>akupisya</i> /a-ku-pisya/
she is sewing for someone	<i>aleebilila</i> /a-lee-bil-il-a/	<i>akusumila</i> /a-ku-sum-il-a/
I am eating	<i>ndeelya</i> /n-lee-lya/	<i>nkulya</i> /n-ku-lya/
I am looking (at the flower)	<i>ndeetamba</i> /n-lee-tamba/	<i>nkutamba</i> /n-ku-tamba/
we are learning	<i>tuleesambilila</i> /tu-lee-sambilila/	<i>tukusambilila</i> /tu-ku-sambilila/
you are making (noise)	<i>uleepanga</i> /u-lee-panga/	<i>ukupanga</i> /u-ku-panga/

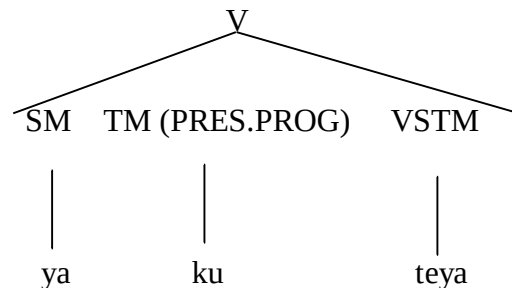
With regard to this tense, the findings are that some differences and similarities between BEM and MAM manifest in relation to verbal elements.

145 (i) **baleeteya** (umupila) (**BEM**)



The morphological make-up of the BEM verb *ba-lee-teya* (umupila) ‘they are playing (football)’ is SM- **ba-** ‘they’, TM (PRES.PROG) **lee-** ‘are’ and the VSTM **-teya** ‘play’.

(ii) **yakuteya** (mpila) (**MAM**)

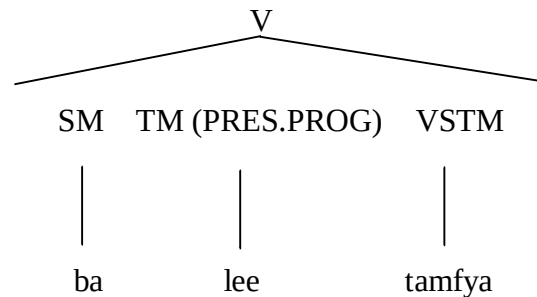


This MAM verb *ya-ku-teya* (mpila) ‘they are playing (football)’ comprises SM **ya-** ‘they’, TM (PRES.PROG) **–ku-** ‘are’ and the VSTM **–teya** ‘play’.

The differences which have been noted are SM- *ba* ‘they’ for BEM, *ya* ‘they’ for MAM and the TM (PRES.PROG.) **–lee** ‘are’ for BEM, *ku* ‘are’ for MAM.

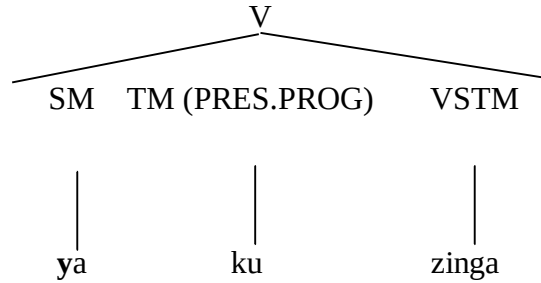
The similarity is VSTM: *teya* ‘play’, for both languages.

146 (i) **baleetamfya** (inama) (**BEM**)



The structure of this verb *ba-lee-tamfya* (inama) ‘they are chasing an (animal)’ is SM **ba-** ‘they’, TM (PRES.PROG) **–lee-** ‘are’ and the VSTM- **tamfya** ‘chase’.

(ii) **yakuzinga** (nyama) (**MAM**)

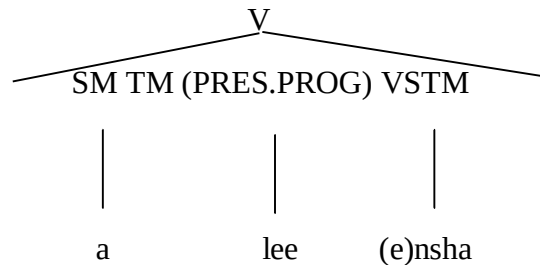


The verbal elements in the verb *ya-ku-zinga* (nyama) ‘they are chasing an (animal)’ are SM **ya-** ‘they’, TM (PRES.PROG) – **ku** ‘are’ and the VSTM – **zinga** ‘chase’.

The differences which have been noted are SM- *ba* ‘they’ for BEM, *ya* ‘they’ for MAM; TM (PRES.PROG). –*lee* ‘are’ for BEM, *ku* ‘are’ for MAM and the VSTM- *tamfya* ‘chase’ for BEM, *zinga* ‘chase’ for MAM.

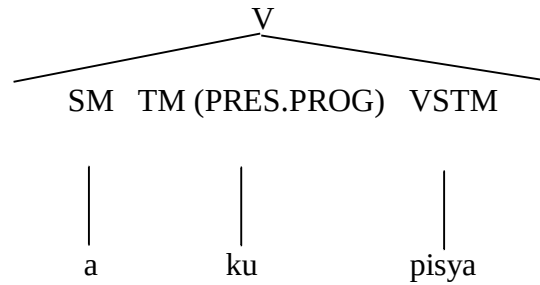
No similar verbal elements have been noted in this verb.

147 (i) **aleensha** (icimbayambaya cakwe) (**BEM**)



The verbal elements in this BEM verb *a-lee-(e)nsha* (icimbayambaya cakwe) ‘he/she is driving (a lorry)’ are SM **a-** ‘he/she’, TM (PRES.PROG) –**lee** - ‘is’ and the VSTM – **ensha** ‘drive’.

(ii) **akupisya** (cimbayambaya cakwe) (**BEM**)

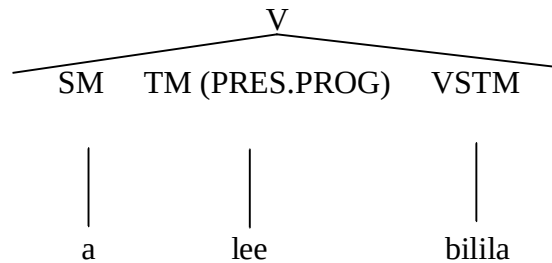


The morphological make-up of this MAM verb *a-ku-pisya* (cimbayambaya cakwe) ‘he/she is driving (a lorry)’ is SM **a-** ‘he/she’, TM (PRES.PROG) **-ku-** ‘is’ and the VSTM **-pisya** ‘drive’.

The differences that have been noted are TM (PRES.PROG.) -lee- for BEM, -ku- ‘is’ for MAM and VSTM: *-ensha* ‘drive’ for BEM), *-pisya* ‘drive’ for MAM.

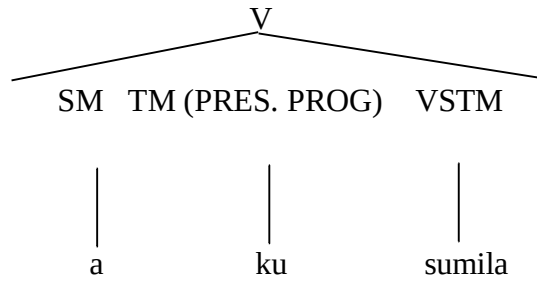
The similarity that is noted is the SM: a-, for both languages.

148 (i) **aleebilila** (umubiye ilaya) (**BEM**)



The structure of the BEM verb *a-lee-bilila* (umubiye ilaya) ‘she/he is sewing for his/her friend (a shirt /dress)’ is SM **a-** ‘/he/she’, TM (PRES.PROG) **-lee-** ‘is’ and the VSTM – **bilila** ‘sew for’.

(ii) **akusumila** (muze ilaya) (**MAM**)

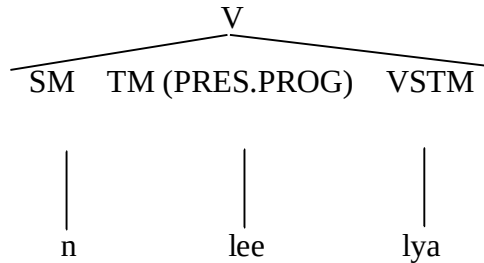


The verbal elements in this MAM verb *a-ku-sumila* (muze ilaya) ‘heshe is sewing his/ her friend (a shirt / dress)’ are SM **a-** ‘he/she’, TM (PRES. PROG) **-ku-** ‘is’ and the VSTM – **sumila** ‘sew for’.

The differences that have been noted are TM (PRES.PROG.) –lee- ‘is’ for BEM, ku ‘is’ for MAM and VSTM: - *bilila* ‘sew for’ (BEM), *sumila* ‘sew for’ (MAM).

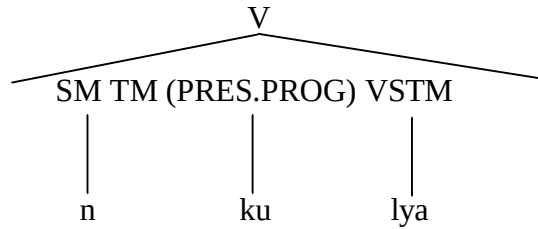
The similarity is SM: a ‘he/she’- , for both languages.

149 (i) **ndeelya** (isabi) (**BEM**)



The internal structure of this BEM verb *n-lee-lya* (isabi) ‘Iam eating’ (the fish) is SM **-n-** ‘I’, TM (PRES.PROG) –**lee-** ‘am’ and the VSTM - **lya** ‘eat’.

(ii) **nkulya** (nswi) (**MAM**)

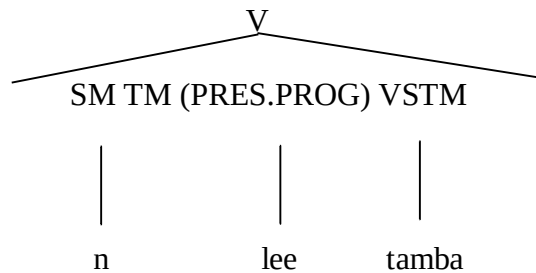


The verbal elements in this MAM verb *n-ku-ly*a (nswi) ‘I am eating (the fish)’ are SM - **n-** ‘I’, TM (PRES.PROG) -**ku** ‘am’ and the VSTM –**ly**a ‘eat’.

The differences that have been noted are TM (PRES.PROG). –lee- ‘am’ for BEM), *ku* ‘am’ for MAM.

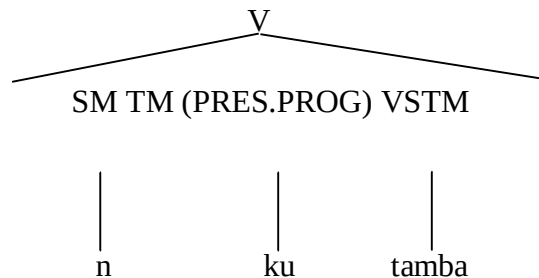
The similarities are SM: *n-* ‘I’ and VSTM – *ly*a ‘eat’, for both languages.

150 (i) **ndeetamba** (amaluba) (**BEM**)



This BEM verb *n-lee-tamba* (amaluba) ‘I am looking (at the flowers)’ comprises these verbal elements SM **n-** ‘I’, TM (PRES.PROG) -**lee-** ‘am’ and the VSTM -**tamba** ‘look at’.

(ii) **nkutamba** (maluwa) (**MAM**)

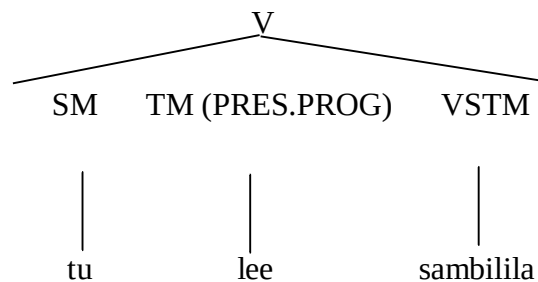


The internal structure of this MAM verb *n-ku-tamba* (maluwa) ‘I am looking at (the flowers)’ is SM **n-** ‘I’, TM (PRES.PROG) – **ku-** ‘am’ and the VSTM **-tamba** ‘look at’

The differences that have been noted are TM (PRES.PROG.) –lee- ‘am’ for BEM, ku ‘am’ for MAM.

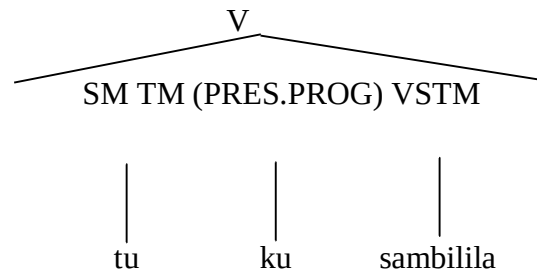
The similarities are SM: n- ‘I’ and the VSTM - *tamba* ‘look at’, for both languages.

151 (i) **tuleesambilila** (icingeshi) (**BEM**)



The BEM verb *tuleesambilila* (icingeshi) ‘we are learning (English)’ has these verbal elements: SM **tu-** ‘we’, TM (PRES.PROG) **-lee-** ‘are’ and the VSTM **-sambilila** ‘learn’.

(ii) **tukusambilila** (cizungu) (**MAM**)

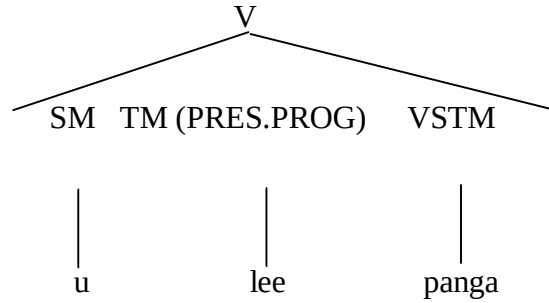


The verbal elements in this MAM verb *tu-ku-sambilila* (cizungu) ‘we are learning (English)’ are SM **tu-** ‘we’, TM (PRES.PROG) - **ku-** ‘are’ and the VSTM **-sambilila** ‘learn’.

The differences are TM (PRES.PROG.) -lee ‘are’ for BEM, ku ‘are’ for MAM

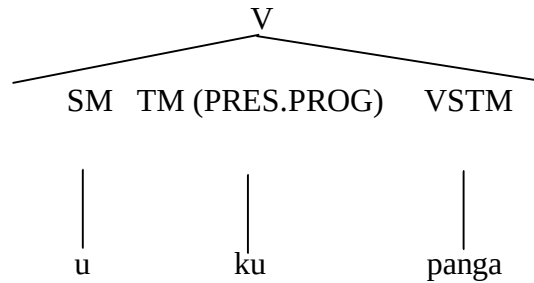
The similarities are SM: tu- ‘we’ and VSTM - *sambilila* ‘learn’, for both languages.

152 (i) **uleepanga** (icoongo) (**BEM**)



The morphology of this BEM verb *u-lee-panga* (icoongo) ‘you are mking (noise)’ is SM **u-** ‘you’, TM (PRES.PROG) **-lee-** ‘are’ and the VSTM – **panga** ‘make’.

(ii) **ukupanga** (congo) (**MAM**)



The morphology of the verb *u-ku-panga* (congo) ‘you are making (noise)’ is SM **u-** ‘you’, TM (PRES.PROG) **-lee-** ‘are’ and the VSTM **-panga** ‘make’.

The differences are TM (PRES.PROG.) -lee ‘are’ for BEM, ku ‘are’ for MAM.

The similarities are SM: u- ‘you’ and the VSTM - *panga* ‘make’, for both languages.

It has been noted that the progressive aspect marker -lee- ‘is/are/am’ for BEM is different from the progressive aspect marker -ku- ‘is/ are/ am’ for MAM. However, there are differences and similarities with regard to some subject markers, verb stems and object markers. The revelation is that there are more differences than similarities in this tense.

6.2.1.6 Present Simple Tense

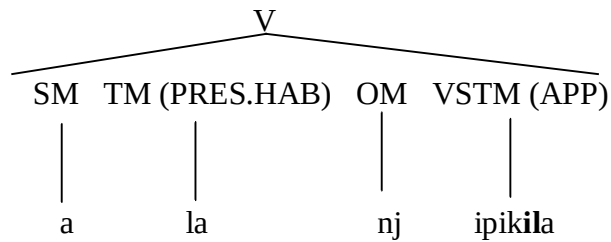
This tense expresses habitual actions, permanent states and scientific facts.

The key informant was interviewed with regard to the Present simple tense. He was requested to provide the equivalents of the English expressions in BEM and MAM for the researcher to find out whether there were similarities and differences in relation to the tense. After this exercise, the informants, including the key informant, verified the responses from the key informant on the findings. Below are the analysis and interpretation of the findings.

Table 45: Differences and similarities of the verbs in Present Simple Tense

Gloss	BEM	MAM
he/she cooks for me	<i>alanjipikila</i> /a-la-nj-ipik-il-a/	<i>akangelekela</i> /a-ka-ng-elek-el-a/
he cuts (trees)	<i>alatema</i> /a-la-tema/ <i>alaputula</i> /a-la-putula/	<i>akatema</i> /a-ka-tema/ <i>akaputula</i> /a-ka-putula/
we plant (trees)	<i>tulalimba</i> /tu-la-limba/	<i>tukalemá</i> /tu-ka-lemá/
they speak on my behalf	<i>balanandila</i> /ba-la-n-land-il-a/	<i>yakamvwangila</i> /ya-ka-n-vwang-il-a/

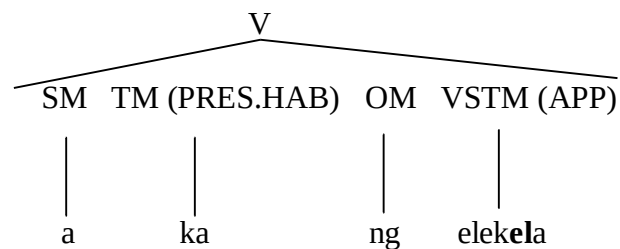
153 (i) **alanjipikila (BEM)**



The morphology of the BEM verb *a-la-nj-ipikila* ‘he/she cooks for me’ is SM **a-** ‘he/she’, TM (PRES.HAB) – **la-** ‘s-form’, OM- ‘**nj-** ‘me’ and the VSTM (APP) – **ipikila** ‘cook for’.

The verb stem in 153 (i) is –ipikila ‘cook for’ and is immediately preceded by object marker **-nj-** meaning **me** because the verb is applicative (**nj**-ipik-**il**-a) while the corresponding MAM verb stem in 153 (ii) is -elekela ‘cook for’ which is also immediately preceded by the object marker **ng** meaning **me** since the verb is applicative (**ng**-elek-**el**-a). The difference between the BEM consonant cluster /-**nj**-/ in 153 (i) and the MAM consonant cluster /-**ng**-/ in 153 (ii) arises from the rule in BEM which stipulates that “when **n-** (which may be subjective or objective is followed by **a, e, or i, a /j/** is inserted”, (Sims, 1959:65).

(ii) **akanglelekela (MAM)**

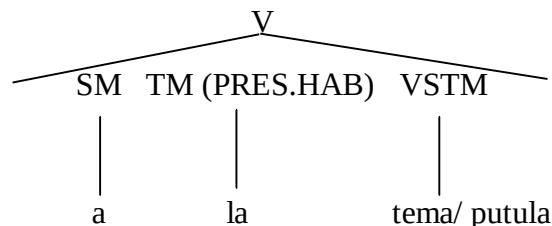


The elements of the MAM verb *a-ka-ng-elekela* ‘she/he cooks for me’ are SM **a-** ‘he/she’, TM (PRES.HAB) **-ka-** ‘s-form’, OM- **ng-** ‘me’ and the VSTM (APP) –**elekela** ‘cook for’.

The differences that have been noted are TM (PRES.HAB) -la-‘s-form’ for BEM -ka-‘s-form’ for MAM, OM-nj- ‘me’ for BEM, ng ‘me’ for MAM and VSTM (APP) - *ipikila* ‘cook for’ for BEM, *elekela* ‘cook for’ for MAM.

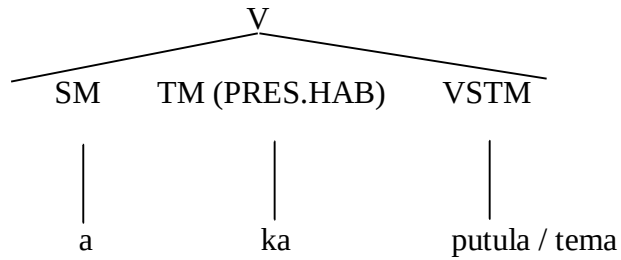
The similarity is SM-a- ‘he/she’, for both languages.

154 (i) **alatema /alaputula (imiti) (BEM)**



This BEM verb *a-la-tema/a-la-putula* imiti ‘he cuts trees’ is composed of these elements: SM **a-** ‘he/she’, TM (PRES.HAB) –**la-** ‘s-form’ and the VSTM – **tema / putula** ‘cut’.

(ii) **akaputula/akatema** (vimiti) (**MAM**)

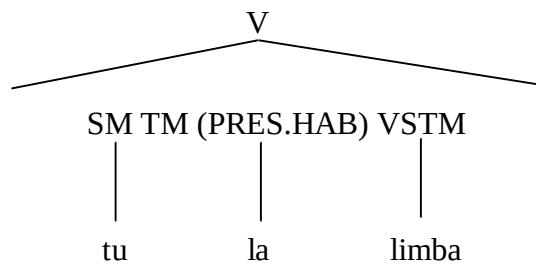


The structure of this MAM verb *a-ka-putula/a-ka-tema* (vimiti) ‘he cuts trees’ is SM **a-** ‘he/she’, TM (PRES.HAB) –**ka-** ‘s-form’ and the VSTM – **putula / tema** ‘cut’.

The difference is TM (PRES.HAB) -la-‘s-form’ for BEM, -ka-‘s-form’ for MAM.

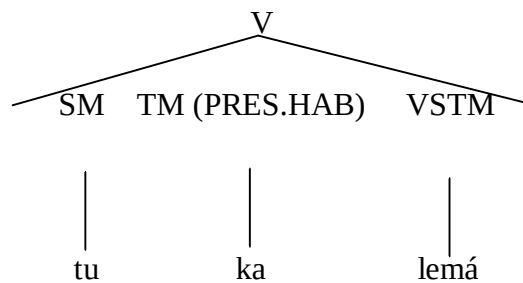
The similarities are SM – a- ‘he/she’ and VSTM – *putula/tema* ‘cut’, for both languages.

155 (i) **tulalimba** (imiti) (**BEM**)



The morphological structure of the BEM verb *tu-la-limba* imiti ‘we plant tress’ is SM **tu-** ‘we’, TM (PRES.HAB) - **la-** ‘simple-form’ and the VSTM - **limba** ‘plant’.

(ii) **tukalemá** (vimiti) (**MAM**)

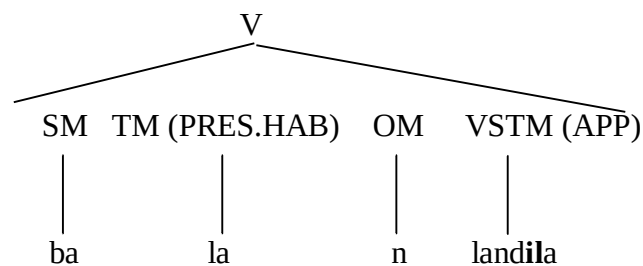


The elements of this MAM verb *tu-ka-lemá* vimiti ‘we plant trees’ are SM **tu-** ‘we’, TM (PRES.HAB) – **ka** ‘simple-form’ and the VSTM- **lemá** ‘plant’.

The differences are TM (PRES.HAB) –*la-* ‘simple-form’ for BEM, -*ka-* ‘simple-form’ for MAM and VSTM -*limba* ‘plant’ for BEM, - *lemá* ‘plant’ for MAM.

The similarity is SM – *tu* ‘we’, for both languages.

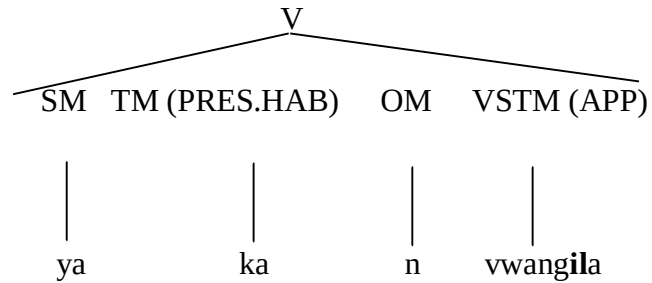
156 (i) **balanandila (BEM)**



The structure of the BEM verb *ba-la-n-landila* ‘they speak for me’ is SM **ba-** ‘they’, TM (PRES.HAB) -**la-** ‘simple-form’, OM- **n-** ‘me’ and the VSTM (APP)- **landila** ‘speak for’.

In the BEM verb *ba-la-n-land-il-a (balanandila)* ‘they speak **for me**’, the verb stem is –landila ‘speak for’. It is noted that in the verb *balanandila*, the initial phoneme of the verb stem (landila), the voiced alveolar lateral /l/, becomes the voiced alveolar nasal /n/ by undergoing progressive nasal assimilation (as can be seen in: *ba-la-**nn**and-il-a*) in the environment after the voiced alveolar nasal /n/ which happens to be the object marker. The discontinuous applicative verbal extension morph /il/ in the verb works in tandem with this object marker. On the other hand, the verb stem in the corresponding MAM verb *ya-ka-n-vwang-il-a (yakanvwangila)* ‘they speak **for me**’ is –vwangila ‘speak for’. The voiced alveolar nasal /n/ preceding the verb stem is the object marker and functions in conjunction with the applicative verbal extension morph /-il-/. The object marker /n/ which has been phonologically converted to the voiced bilabial nasal /m/ is phonetically assimilated to the voiced labio-dental nasal [ɱ] in order to make it homorganic with the voiced labio-dental fricative /v/ which immediately follows it. The phonetic transcription of *yakamvwangila* is, therefore, [jakámɱváŋgíla] ‘they speak on my behalf’.

(ii) **yakamvwangila (MAM)**



The verb *ya-ka-n-wangila* ‘they speak for me’ consists of SM **ya-** ‘they’, TM (PRES.HAB) - **ka-** ‘simple-form’, OM – **n-** ‘me’ and the VSTM (APP) -**vwangila** ‘speak for’.

The differences that have been noted are: SM- *ba-* ‘they’ for BEM, *ya-* ‘they’ for MAM, TM (PRES.HAB) -*la-* ‘simple-form’ for BEM, -*ka-* ‘simple-form’ for MAM, and VSTM (APP) - *landila* ‘speak for’ for BEM, *vwangila* ‘speak for’ for MAM.

The similarity is OM -*n-* ‘me’, for both languages.

The tense marker (HAB.PRES) for BEM is -*la-* while that for MAM is -*ka-*. Other differences include some of the subject markers, verb stems and object markers. The conclusion from this section is that there are more differences than similarities between BEM and MAM.

6.2.2 Morphological Structure of Verbal Extensions

As part of this chapter, this section analyses and interprets the morphological structure of some verbal extensions. This has to do with extension of meaning by adding a morph to a verbal base or stem in order to realise a particular morpheme. The verbal extensions discussed in this section are passive, causative, intensive, frequentative, applied (or applicative), neuter (or stative), reciprocal, reversive active and completive.

6.2.2.1 Passive Verbal Extension

In this verbal extension, the subject of the verb is acted upon by an agent or that the action stated by the verb, root or radical has been experienced by the subject of the verb, (Kamfuli, 2009).

The key informant was interviewed with regard to passive verbal extension. He was requested to provide the equivalents of the English expressions in BEM and MAM for the researcher to find out whether there were similarities and differences in relation to this verbal extension. After this exercise, the informants, including the key informant, verified the responses from the key informant on the findings. Below are the analysis and interpretation of the findings.

Table 46: Differences and similarities in relation to passive verbal extension

Gloss	BEM	MAM
be or get imprisoned	<i>kakishiwa/kak-ishiw-a/ kakwa/ kak-u-a/</i>	<i>nyepesiwa/nyep-esiw-a/ nyepwa /nyep-u-a/</i>
be chased or dismissed	<i>tamfiwa / tamfi-u-a /</i>	<i>zingwa / zing-iu-a/</i>
be scattered, dispersed or levelled	<i>paswa /pas-u-a /</i>	<i>salanganiwa /salangan-iu-a /</i>

The morphs used in the BEM and the MAM passive extensions are **-ishiw-** and **-esiw-**, respectively; the key morph, however, is **-u-**. The findings have revealed that in BEM, if the passive verbal extension morph is infixed between the verb radical **-kak-** ‘imprison’ and the final vowel **-a**, the derived verb is *kakishiwa* ‘be or get imprisoned’. The corresponding MAM term is formed from the passive verbal extension morph **-esiw-** infixed between the verb radical **-nyep-** and the final vowel **-a**; the verb made from this is *nyepesiwa* ‘be or get imprisoned’. It is clear from the findings that the two morphs are different in that the BEM morph begins with the high front vowel [i] followed by the voiceless postalveolar fricative [ʃ] whereas the MAM morph begins with the mid front vowel [e] followed by the voiceless alveolar fricative [s]. The alternative passive forms meaning be or become imprisoned in BEM and MAM are *kakwa* and *nyepwa*, respectively. It is also evident that between the BEM verb radical **-tamfi-** ‘chase/dismiss’ and the final vowel **-a**, the passive verbal extension morph **-u-** is infixed to derive the passive verb form *tamfi-u-a*, which becomes *tamfiwa* ‘be chased or dismissed’. Similarly, between the MAM verb radical **-zing-** ‘chase/dismiss’ and the final vowel **-a**, the passive verbal extension morph **-u-** is infixed to form the passive verb *zing-u-a* which becomes *zingwa* ‘be chased/dismissed’, or the other passive verbal extension morph **-iu-** is placed between the verb radical **-zing-** and the final vowel **-a** to

derive the passive verb zing-**iu**-a which is rendered as *zingiwa*, also meaning to be chased. The passive forms, which mean be scattered, dispersed or levelled in BEM and MAM are pas-**u**-a which becomes pasuwa and salangan-**iu**-a which is written as *salanganiwa*, respectively.

Some examples of the differences from the table above are:

157 (i) *kakishiwa* ‘be or get imprisoned’ (BEM)

(ii) *nyepesiwa* ‘be or get imprisoned’ (MAM)

158 (i) *tamfiwa* ‘be chased or dismissed’ (BEM)

(ii) *zingwa* / *zingiwa* ‘be chased or dismissed’ (MAM)

Both languages undergo passive verbal extension process; -u- is used by both as a passive verbal extension morph. However, there is a difference in the use of the two other morphs, -which are **ishiw-** for BEM and **-esiw-** for MAM.

6.2.2.2 Differences and similarities in the causative verbal extension

The morph attached to the verb radical in this extension indicates that the subject of the verb is caused to do something stated by the verb; the morph is the high front vowel / i /.

The key informant was interviewed with regard to causative verbal extension. He was requested to provide the equivalents of the English expressions in BEM and MAM for the researcher to find out whether there were similarities and differences in relation to this verbal extension. After this exercise, the informants, including the key informant, verified the responses from the key informant on the findings. Below are the analysis and interpretation of the findings.

Table 47: Causative verbal extension

Gloss	BEM	MAM
cause to stop	<i>lesha</i> : /lek-a/ /lesi-a/ [leʃá]	<i>lesya</i> : /lek-a/ /lesi-a/ [lesjá]
cause to vomit	<i>lusha</i> : /luk-a/ /lusi-a / [luʃá]	<i>lusya</i> : /luk-a / /lusi-a [lusjá]
cause to be lost	<i>lufya</i> : /lub-a/ /lufi-a / [lufjá]	<i>ponzya</i> : /pong-a//ponzi-a/ [pónzjá]
cause to be lengthened	<i>leefya</i> : /leep-a/ /leefi-a/ [le:fjá]	<i>talimvya</i> : /talimp-a/ /talimvi-a/ [tálimvjá]
cause to be defeated	<i>cimfya</i> : /tʃimb-a/ /tʃimfi-a / [tʃimfjá]	<i>cimvya</i> : /tʃimb-a/ /tʃimvi-a/ [tʃimvjá]

This study shows that between the BEM verb radical –**lek-** ‘stop’ and the final vowel –a, the high front vowel /i/ is infixed to get lek-i-a, but the voiceless velar stop /k/ in the verb radical is converted to the voiceless alveolar fricative /s/ in the environment before the high front vowel /i/; the resultant form is *lesia* which, because of semivocalisation, becomes *lesya*. The presence of the voiced palatal approximant [j] in the form leads to palatalisation of the voiceless alveolar fricative /s/, and in BEM palatalisation of this consonant segment results in its postalveolarisation. In other words, the voiceless alveolar fricative [s] becomes the voiceless postalveolar fricative [ʃ] in the environment before the high front vowel [i], thereby forming the causative verb *lesha* ‘cause to stop’. However, this is not the case in MAM in which the process terminates at the palatalisation of the voiceless alveolar fricative [sj] resulting in the causative verb form *lesia* which becomes *lesya* ‘cause to stop’. The distinction between these causative verbs is that the second syllable of the BEM verb *lesha* begins with the voiceless postalveolar fricative [ʃ] while the second syllable of the MAM verb *lesya* begins with the voiceless alveolar fricative /s/, which is palatalised [sj]. The same processes occur in relation to the BEM and MAM causative verbs *lusha* ‘cause to vomit’ and *lusya* ‘cause to vomit’, respectively; both these verbs come from the verb root –**luk-**a ‘vomit’. Other causative verbal forms in BEM and MAM are *cimfya* ‘cause to be defeated’, *lufya* ‘cause to be lost’, *leefya* ‘cause to be lengthened’ and *cimvya* ‘cause to be defeated’, *ponzya* ‘cause to be lost’, *talimvya* ‘cause to be lengthened’, respectively. To derive the causative verbal forms from the BEM verbs *cimba*, *luba* and *leepa*, the voiced bilabial plosive [b] in *cimba* ‘be defeated’ and the voiced bilabial fricative [β] in *luba* ‘be lost’ are converted to the voiceless labio-dental fricative [f]; in the verb *leepa* ‘be long’, the voiceless bilabial plosive [p] is changed to the voiceless labio-dental fricative [f]: in these processes, the plosives undergo spirantisation (fricativisation). To derive the causative verbal forms in the corresponding MAM verbs *cimba* ‘be defeated’, *ponga* ‘be lost’ and *talimpa* ‘be long’, the voiced bilabial plosive [b] in *cimba* is changed to the voiced labio-dental fricative [v], the voiced velar plosive [g] in *ponga* is converted to the voiced alveolar fricative [z] and the voiceless bilabial plosive [p] in *talimpa* changes to the voiced labio-dental fricative [v]: similarly, in these processes, the plosives undergo spirantisation (fricativisation).

Some examples of the differences from the table above are:

159 (i) *lufya* ‘cause to be lost’ (**BEM**)

(ii) *ponzya* ‘cause to be lost’ (**MAM**)

160 (i) *leefya* ‘cause to be lengthened’ (**BEM**)

(ii) *talimvya* ‘cause to be lengthened’ (**MAM**)

Both languages use this extension. There are some cognates such as *lusha* cause to ‘vomit’ (BEM), *lusya* cause ‘vomit’ (MAM); this a similarity. Though both languages use this process, some words, which are involved are different. Refer to the examples in 159 and 160, above. While BEM undergoes postalveolarisation to forms words in this extension, MAM undergoes palatalisation to do so.

6.2.2.3 Intensive verbal extension

The morpheme in this verbal extension expresses intensification of the action of the verb to which its morph is attached. The morphs are **–esh-** or **–ish-** for BEM and **–esy-** or **–isy-** for MAM.

The key informant was interviewed with regard to intensive verbal extension. He was requested to provide the equivalents of the English expressions in BEM and MAM for the researcher to find out whether there were similarities and differences in relation to this verbal extension. After this exercise, the informants, including the key informant, verified the responses from the key informant on the findings. Below are the analysis and interpretation of the findings.

Table 48: Differences and similarities in the intensive verbal extension

Gloss	BEM	MAM
read very much or too much	<i>belengsha</i> /beleng-esh-a /	<i>wazisya</i> / waz-isy-a /
rain very much or too much	<i>lokesha</i> /lok-esh-a /	<i>lokesya</i> / lok-esy-a /
shout very much or too much	<i>pundisha</i> /pund-ish-a /	<i>laizisya</i> /laiz-isy-a /
cook very much or too much	<i>ipkisha</i> /ipik-ish-a /	<i>elekesya</i> /elek-esy-a /
clap very much or too much	<i>tootesha</i> /toot-esh-a	<i>komelesya</i> / komel-esy-a

Between the BEM verb radical **–beleng–** ‘read’ and the final vowel **–a**, the intensive verbal extension morph **–esh–** is infixed to derive the intensive verb *beleng**esha*** ‘read very much or too much’; the initial vowel of the intensive verbal extension morph **–esh**, the mid front vowel [e], harmonises well with the mid front vowel [e] in the verb radical (–beleng–). On the other hand, between the MAM verb radical **–waz–** ‘read’ and the final vowel **–a**, the intensive verbal extension morph **–sy–** is infixed to form the intensive verb *waz**isya*** ‘read very much or too much’. The noticeable difference, here, is that the BEM intensive verbal extension morph begins with the mid front vowel [e] followed by the voiceless postalveolar fricative [ʃ] whereas the MAM intensive verbal extension morph has the high front vowel [i] followed by the voiceless alveolar fricative [s] which is palatalised to [sj]. The findings also show that between the verb radical **–lok–** ‘rain’ and the final vowel **–a**, the BEM intensive verbal extension morph **–esh–** is placed to derive the intensive verb *lok**esha*** ‘rain very much or too much’ while the MAM intensive verbal extension morph **–esy–** is infixed between the verb radical **–lok–** ‘rain’ and the final vowel **–a** to form the intensive verb *lok**esya*** ‘rain very much or too much’. It is noted that between the BEM verb radicals **pund–** and **ipik–** and their final vowel **–a**, the intensive verbal extension morph **–ish–** is placed to form the intensive verbs *pund**isha*** ‘shout very much or too much’ and *ipik**isha*** ‘cook very much or too much’, respectively whereas between the corresponding verb radical **laiz–** and **elek–** and their final vowel **–a**, are fixed the intensive verbal extension morphs **–isy–** and **–esy–**, to form the intensive verbs *laiz**isya*** ‘shout too much or very much’ and *elek**esya*** ‘cook too much or very much’, respectively. The similar pattern is noted in the BEM and MAM verbs *toot**esha*** ‘clap very much or too much’ and *kome**esya*** ‘clap very much or too much’, respectively.

Some examples of the differences from the table above are:

161(i) *pund**isha*** ‘shout very much or too much’ (**BEM**)

(ii) *Laiz**isya*** ‘shout very much or too much’ (**MAM**)

162 (i) *toot**esha*** ‘clap very much or too much’ (**BEM**)

(ii) *kome**esya*** ‘clap very much or too much’ (**MAM**)

The difference is that the morphs- *esh-* or *-ish-* is for BEM whereas *-esy-* or *-isy-* is for MAM. The similarity is that some words which undergo this process are cognates, for example the words *lokesha* ‘rain too/very much’ (BEM), *lokesya* ‘rain too/very much’ (MAM).

6.2.2.4 Frequentative verbal extension

The morpheme in this extension shows that the action of the verb to which its morph is attached is distributed widely because of repetition.

The key informant was interviewed with regard to frequentative verbal extension. He was requested to provide the equivalents of the English expressions in BEM and MAM for the researcher to find out whether there were similarities and differences in relation to this verbal extension. After this exercise, the informants, including the key informant, verified the responses from the key informant on the findings. Below are the analysis and interpretation of the findings.

Table 49: Differences and similarities in the frequentative verbal extension

Gloss	BEM	MAM
touch in many places	<i>ikataula</i> / <i>ikat-aul-a</i> /	<i>lemola</i> / <i>lem-ol-a</i> /
plant seeds in many places	<i>byaula</i> / <i>byal-aul-a</i> /	<i>komelakomela</i> / <i>komela-komela</i> /
carve in many parts of the wood	<i>basaula</i> / <i>bas-aul-a</i> /	<i>wazaula</i> / <i>waz-aul-a</i> /
break into pieces	<i>tobaula</i> / <i>tob-aul-a</i> /	<i>tamaula</i> / <i>tam-aul-a</i> /
kiss or lick many times or in many parts	<i>myangaula</i> / <i>myang-aul-a</i>	<i>tomola</i> / <i>tom-ol-a</i> /

The findings show that in BEM, the frequentative verbal extension morph **-aul-** is placed between the verb radical **-ikat-** ‘touch’ and the final vowel **-a** to derive the frequentative verb *ikataula* ‘touch in many places’ while between the MAM verb radical **-lem-** ‘touch’ and the final vowel **-a**, the frequentative verbal extension morph **-ol-** is infixed to form the frequentative verb *lemola* ‘touch in many places’. Another difference is noted in the BEM and MAM verbs which mean plant seeds in many places: Between the BEM verb radical **-byal-** ‘plant seeds’ and the final vowel **-a**,

the frequentative verbal extension morph **–aul-** is placed to derive the frequentative verb *byaulaula* ‘plant seeds in many places’. In contrast to this, the corresponding MAM verb *komela* ‘plant seeds’ does not take the frequentative verbal extension morph **–ol-**. Instead, it is reduplicated. The reduplication of *komela* ‘plant seed’ is *komelakomela*, which conveys the notion of frequentativeness. Among others, there are these BEM frequentative verb forms: *tobaula* ‘break into pieces’, *basaula* ‘carve in many parts of wood’, *myangaula* ‘kiss or lick many times or in many parts’ whereas their corresponding MAM intensive verb forms are: *tamaula* ‘break into pieces’, *wazaula* ‘carve in many parts of wood’ and *tomola* ‘kiss or lick many times or in many parts’.

Some examples of the differences from the table above are:

163 (i) *ikataula* ‘touch in many places’ (**BEM**)

(ii) *lemola* ‘touch in many places’ (**MAM**)

164 (i) *tobaula* ‘break into pieces’ (**BEM**)

(ii) *tamaula* ‘break into pieces’ (**MAM**)

The fact from this study is that the morphs **–aul-** for BEM and **–ol-** or **–aul-** for MAM are used to derive verbs in this extension category. BEM frequentative verb forms are different from the MAM frequentative verb forms: either the root morphs or the frequentative verbal extension morphs are different. Very few cognates have been noted under this section.

6.2.2.5 Applicative (or applied) verbal extension

In this extension, the morph is attached to the verb radical to express the notion that the object of the verb has something done for them: the action is done on behalf of the object. The applicative verbal extension morph is **-il-**.

The key informant was interviewed with regard to applied (or applicative) verbal extension. He was requested to provide the equivalents of the English expressions in BEM and MAM for the researcher to find out whether there were similarities and differences in relation to this verbal extension. After this exercise, the informants, including the key informant, verified the responses from the key informant on the findings. Below are the analysis and interpretation of the findings.

Table 50: Differences and similarities in the applicative (or applied) verbal extension

Gloss	BEM	MAM
throw on behalf of	<i>poosela</i> : /poos-il-a / / poos-el-a /	<i>sumbila</i> : /sumb-il-a /
chew on behalf of	<i>shetela</i> : / shet-il-a / /shet-el-a/	<i>tafunila</i> : /tafun-il-a /
cut (tress) on behalf of	<i>temena</i> : / tem-il-a / /tem-en-a/	<i>komela</i> : /kom-il-a/ /kom-el-a/; <i>temela</i> : /tem-il-a / /tem-el-a/
fold on behalf of	<i>petela</i> : /pet-il-a / /pet-el-a /	<i>vungila</i> : /vung-il-a /

This study shows that between the BEM verb radical –**poos-** ‘throw’ and the final vowel –**a**, the applicative verbal extension morph –**il-** is infixed to derive the applicative verb poos-**il**-a which becomes *poosela* ‘throw on behalf’; in the derivation of this verb, the high front vowel / **i** / in the applicative verbal extension morph / **il** / becomes the mid front vowel /**e**/ due to the influence of the mid back vowel /**o**/ in the verb radical –**poos-**; it is also evident from the findings that between the MAM verb radical –**sumb-** ‘throw’ and the final vowel –**a**, the applied verbal extension morph –**il-** is placed to form the applicative verb sumb-**il**-a which becomes *sumbila* ‘throw on behalf of’. It is noticed in this extension that the high front vowel /**i**/ in the applicative verbal extension morph –**il-** is not converted to the mid front vowel /**e** / because the vowel in the verb radical –**sumb-** is neither the mid front vowel /**e**/ nor the mid back vowel /**o**/.

It is also clear from the data that in BEM, the applicative verbal extension morph **-il-** is infixes between the verb radical **-shet-** ‘chew’ and the final vowel **-a** to derive the applicative verb **shet-il-a** which becomes *shetela* ‘chew on behalf of’: the high front vowel /i/ in the applicative verbal extension morph **-il-** becomes the mid front vowel /e/ in the environment after the mid front vowel /e/ in the verb radical **-shet-**. Between the MAM verb radical **-tafun-** ‘chew’ and the final vowel **-a**, the applied verbal extension morph **-il-** is placed to form the applicative verb **tafun-il-a** which becomes *tafunila* ‘chew on behalf of’. In this process, the conversion of the high front vowel /i/ in the applicative verbal extension morph **-il-** does not occur because the vowels in the verb radical **-tafun-** are neither the mid front vowel /e/ nor the mid back vowel /o/. Vowel harmonisation occurs in the corresponding BEM applicative verb, *shetela*. Also evident from the data is the fact that between the BEM verb radical **-tem-** ‘cut (trees)’ and the final vowel **-a**, the applied verbal extension morph **-il-** is infixes to derive the applicative verb **tem-il-a** which becomes *temena* ‘cut (trees) on behalf of’; two processes have occurred in the derivation of this applicative verb, and these are: (1) vowel harmonisation – the high front vowel /i/ in the applicative verbal extension morph **-il-** becomes the mid front vowel /e/ in the environment after the mid front vowel /e/ in the verb radical **-tem-** (2) progressive nasal assimilation – the voiced alveolar lateral /l/ in the applicative verbal extension morph **-il-** becomes the voiced alveolar nasal /n/ in the environment after the voiced bilabial nasal /m/ in the verb radical **-tem-**. Between the corresponding MAM verb radical **-kom-** ‘cut (trees)’ and the final vowel **-a**, the applicative verbal extension morph **-il-** is infixes to form the applicative verb **kom-il-a** which becomes *komela* ‘cut (trees) on behalf of’; in this derivation, only one process has occurred, and this is vowel harmonisation in which the high front vowel /i/ in the applicative verbal extension morph **-il-** becomes the mid front vowel /e/ in the environment after the mid back vowel /o/ found in the verb radical **-kom-**. Besides other physical characteristics, this creates a distinction between these BEM and MAM applicative verbs *temena* and *komela*, respectively; *temela* is also a MAM counterpart for the BEM applicative verb form *temena*. The other pair is the BEM and MAM applicative verbs *petela* ‘fold on behalf of’ and *vungila* ‘fold on behalf of’, respectively. In the former, vowel harmonisation has occurred because the vowel in the verb radical **-pet-** is the mid front vowel /e/. In the latter verb radical, **vung-**, the vowel is neither the mid front vowel /e/ nor the mid back vowel /o/.

Some examples of the differences from the table above are:

- 165 (i) *poosela* ‘throw on behalf of’ (**BEM**)
 (ii) *sumbila* ‘throw on behalf of’ (**MAM**)
- 166 (i) *petela* ‘fold on behalf of’ (**BEM**)
 (ii) *vungila* ‘fold on behalf of’ (**MAM**)

The data show that both languages use this extension. However, very few cognates have been noted. Many differences are evident in the process of extending verbs into the applicative forms.

6.2.2.6 Neutre (or Stative) verbal extension

This extension expresses the state in which the object of the verb to which it is attached is. The morph in this extension is **-ik-**.

The key informant was interviewed with regard to neutre (or stative) verbal extension. He was requested to provide the equivalents of the English expressions in BEM and MAM for the researcher to find out whether there were similarities and differences in relation to this verbal extension. After this exercise, the informants, including the key informant, verified the responses from the key informant on the findings. Below are the analysis and interpretation of the findings.

Table 51: Differences and similarities in the neutre (stative) verbal extension

Gloss	BEM	MAM
appear, be visible	<i>moneka</i> : /mon-ik-a /	<i>loleka</i> : /lol-ik-a /
be audible	<i>umfwika</i> : /umfw-ik-a /	<i>umvwika</i> : /umvw-ik-a /
shine	<i>balika</i> : /bal-ik-a /	<i>walika</i> : /wal-ik-a /

One of the findings is that between the BEM verb radical –mon- ‘see’ and the final vowel –a, the stative verbal extension morph **-ik-** is placed to derive the stative verb mon-**ik**-a which becomes *moneka* ‘appear, be visible’. In this derivation, the high front vowel /i/ in the stative verbal

extension morph **-ik-** becomes the mid front vowel /**e**/ in the environment after the mid back vowel /**o**/ found in the verb radical **-mon-**. In a similar manner, the high front vowel /**i**/ in the stative verbal extension morph **-ik-** in the corresponding MAM stative/neutre verb **-lol-ik-a** becomes the mid front vowel /**e**/ in the environment after the mid back vowel /**o**/ in the verb radical **-lol-** ‘see’. Hence, the derived stative verb is *loleka* ‘appear’. Despite the BEM and MAM neutre verbs undergoing the same vowel harmonisation process, they are two different words. It is also clear that between the BEM verb radical **-umfu-** ‘hear’ and the final vowel **-a**, the neutre verbal extension morph **-ik-** is infixed to form the neutre verb *umfwika* ‘be audible’: semivocalisation of the high back vowel /**u**/ in the verb radical **-umfu-** occurs in the environment before the high front vowel /**i**/ in the neutre verbal extension morph **-ik-**. Similarly, the neutre verbal extension morph **-ik-** is placed between the MAM verb radical **-umvu-** ‘hear’ and the final vowel **-a** to derive the neutre verb *umvwika* ‘be audible’. It is noticed in these processes that both the BEM and MAM neutre verbs have not undergone vowel harmonisation seeing that the vowels in their verb radicals are neither the mid front vowel /**e**/ nor the mid back vowel /**o**/. Between the BEM verb radical **bal-** and the final vowel **-a**, the neuter verbal extension morph **-ik-** is infixed to form the neuter verb *balika* ‘shine’ while between the corresponding MAM verb radical **wal-** and the final vowel **-a**, the neuter verbal extension morph is placed to derive the neuter verb *walika* ‘shine’.

Some examples of the differences from the table above are:

167 (i) *moneka* ‘appear, be visible’ (**BEM**)

(ii) *loleka* ‘appear, be visible’ (**MAM**)

168 (i) *balika* ‘shine’ (**BEM**)

(ii) *walika* ‘shine’ (**MAM**)

The conclusion is that there are many differences between BEM and MAM with regard to neutre verb forms. However. A few cognates have been noted.

6.2.2.7 Reciprocal verbal extension

This extension expresses the notion that the action of the verb affects both the subject and the object of the verb to which it is attached. The reciprocal verbal extension morph is **-an-**.

The key informant was interviewed with regard to reciprocal verbal extension. He was requested to provide the equivalents of the English expressions in BEM and MAM for the researcher to find out whether there were similarities and differences in relation to this verbal extension. After this exercise, the informants, including the key informant, verified the responses from the key informant on the findings. Below are the analysis and interpretation of the findings.

Below are the analysis and interpretation of the data on reciprocal verbal forms.

Table 52: Differences and similarities in the reciprocal verbal extension

Gloss	BEM	MAM
hate each other	<i>patana</i> : /pat-an-a /	<i>yelana</i> (akafindwe): /yel-an-a /
not to give each other	<i>tanana</i> :/tan-an-a/	<i>imana</i> :/ im-an-a/
help each other	<i>afwana</i> : / afw-an-a /	<i>avwana</i> : / avw-an-a /

This study reveals that between the BEM verb radical –**pat**- ‘hate’ and the final vowel–**a**, the reciprocal verbal extension morph –**an**- is placed to form the reciprocal verb *patana* ‘hate each other’. In like manner, the reciprocal verbal extension morph –**an**- is infixed between the corresponding MAM verb radical –**yel**- ‘hate’ and the final vowel –**a** to form the reciprocal verb *yelana* (akafindwe) ‘hate each other. The reciprocal verbal extension morph –an- is infixed between the BEM and MAM verb radicals tan- and im- and the final vowel –a to form the reciprocal verbs *tanana* and *imana* meaning not to give each other, respectively. Furthermore, the reciprocal verbal extension morph –an- is placed between the BEM verb radical afw- and the final vowel –a to derive the reciprocal verb *afwana* which means help each other. Similarly, the reciprocal verbal extension morph –an- is infixed between the MAM verb radical avw- and the final vowel –a to form the reciprocal verb *avwana* ‘help each other’.

Some examples of the differences from the table above are:

169 (i) *patana* ‘hate each other’ (**BEM**)

(ii) *yelana* (akafindwe) ‘hate each other’ (**MAM**)

170 (i) *tanana* ‘not to give each other’ (**BEM**)

(ii) *imana* ‘not to give each other’ (MAM)

It is revealed that BEM and MAM use the same reciprocal verbal extension morph. What makes the differences be on the higher side are their verb radicals as noted in 169 and 170.

6.2.2.8 Reversive active verbal extension

This extension indicates that the action of the radical is undone or reversed. The morphs used are –ulul-, -olol- and –unun-.

The key informant was interviewed with regard to reversion active verbal extension. He was requested to provide the equivalents of the English expressions in BEM and MAM for the researcher to find out whether there were similarities and differences in relation to this verbal extension. After this exercise, the informants, including the key informant, verified the responses from the key informant on the findings. Below are the analysis and interpretation of the findings.

Table 53: Differences and similarities in the reversion active verbal extension

Gloss	BEM	MAM
save somebody from poverty	<i>piinununa</i> : /piin-unun-a /	<i>pinulula</i> : /pin-ulul-a /
undo the plaited hair	<i>lukulula</i> : / luk-ulul-a /	<i>Pombolola</i> (inyele): /pomb-olol-a /
(of plants) pull from the ground	<i>limbulula</i> : /limb-ulul-a /	<i>lemulula</i> : / lem-ulul-a /
remove earth from the poles of a hut	<i>masulula</i> : / mas-ulul-a /	<i>matulula</i> : /mat-ulul-a /

Differences between BEM and MAM have emerged from this study in relation to the usage of these morphs. Between the BEM verb radical –**piin**- ‘be or become poor’ and the final vowel –**a**, the reversion verbal extension morph –**unun**- is placed to form the reversion verb *piinununa* ‘save somebody from poverty’ while between the MAM verb radial –**pin**- ‘be or become poor’ and the final vowel –**a**, the reversion verbal extension morph –**ulul**- is infix to derive the reversion verb

pinulula ‘save somebody from poverty’. Therefore, there is a difference in the usage of these morphs. Another difference is noted in these verbs: between the BEM verb radical –**luk-** ‘plait hair’ and the final vowel –**a**, the reversive verbal extension morph –**ulul-** is infixed to form the reversive verb *lukulula* ‘undo the plaited hair’ whereas between the MAM verb radical –**pomb-** [*pomba* (inyele)] ‘plait hair’ and the final vowel –**a**, the reversive verbal extension morph –**olol-** is placed to derive the reversive verb *pombolola* (inyele) ‘undo the plaited hair’. In like manner, the reversive extension morph –**ulul-** is infixed between the BEM verb radical **limb-** and the final vowel –**a** to derive the reversive verb *limbulula* ‘(of plants) pull from the ground’ and the corresponding MAM reversive verb *lemulula* ‘(of plants) pull from the ground’ is formed by infixing the reversive verbal extension morph –**ulul-** between the verb radical **lem-** and the final vowel –**a**. It is also noted that the BEM reversive verb *masulula* ‘remove earth from the poles of a hut’ is derived by infixing the reversive verbal extension morph –**ulul-** between the verb radical **mas-** and the final vowel –**a**. To derive the corresponding MAM reversive verb *matulula* ‘remove earth from the poles of a hut’, the reversive verbal extension morph –**ulul-** is infixed between the verb radical **mat-** and the final vowel –**a**; though these verb radicals (**limb-** and **-lem**; **mas-** and **mat-**) take the same reversive verbal extension morph **ulul**, they are different in terms of root morphs.

Some examples of the differences from the table above are:

171 (i) *piinununa* ‘save somebody from poverty’ (**BEM**)

(ii) *pinulula* ‘save somebody from poverty’ (**MAM**)

172 (i) *limbulula* ‘(of plants) pull from the ground’ (**BEM**)

(ii) *lemulula* ‘(of plants) pull from the ground’ (**MAM**)

Based on these data, it is noted that the reversive verbal extension morphs –**ulul**, –**olol**– **unun**– are shared by both languages, but the verbs where they are used differ as can be seen in 172 above. In 171, the words are similar; the major difference is seen in the reversive verbal extension morphs. There are more such examples.

6.2.2.9 Completive verbal extension

A morph under this extension expresses the notion that the action of the verb to which it is attached is done completely. The completive verbal extension morphs are: **-ilil-**, **-elel-**, **-inin-** and **-enen-**.

The key informant was interviewed with regard to completive verbal extension. He was requested to provide the equivalents of the English expressions in BEM and MAM for the researcher to find out whether there were similarities and differences in relation to this verbal extension. After this exercise, the informants, including the key informant, verified the responses from the key informant on the findings. Below are the analysis and interpretation of the findings

Table 54: Differences and similarities in the completive verbal extension

Gloss	BEM	MAM
be or become completely mad	<i>penenena</i> : / pen-enen-a /	<i>penelela</i> : / pen-elel-a /
dry up completely	<i>kaminina</i> : / kam-inin-a /	<i>kamilila</i> : / kam-ilil-a /
be or become completely poor	<i>piininina</i> : / piin-inin-a /	<i>pinilila</i> : / pin-ilil-a /
fall or fail completely	<i>ponenena</i> : / pon-enen-a /	<i>ponelela</i> : / pon-elel-a /

The findings are that in BEM, the completive verbal extension morph **-enen-** is placed between the verb radical **-pen-** ‘be or become mad’ and the final vowel **-a** to form the completive verb *penenena* ‘be or become completely mad’ while in MAM the completive verbal extension morph **-elel-** is infixed between the verb radical **-pen-** ‘be or become mad’ and the final vowel **-a** to derive the completive verb *penelela* ‘be or become completely mad’. Similarly, between the BEM verb radical **-kam-** ‘dry up’ and the final vowel **-a**, the completive verbal extension morph **-inin-** is placed to form the completive verb *kaminina* ‘dry up completely’ while in MAM the completive verbal extension morph **-ilil-** is placed between the verb radical **-kam-** ‘dry up’ and the final vowel **-a** to derive the completive verb *kamilila* ‘to dry up completely’. The same completive verbal extension morphs **-inin-** and **-ilil-** are noted in the BEM completive verb *piininina* ‘be or become completely poor’ and in the MAM completive verb *pinilila* ‘be or become completely poor’, respectively. It is also noted that the BEM completive verbal extension morph **-enen-** is infixed between the verb radical **pon-** and the final vowel **-a** to form the completive verb *ponenena* ‘fall or fail completely’ whereas the MAM completive verbal extension morph **-elel-** is infixed between

the verb radical *pon-* and the final vowel *-a* to form the completive verb *ponelela* ‘fall or fail completely’.

Some examples of the differences from the table above are:

173 (i) *kaminina* ‘dry up completely’ (**BEM**)

(ii) *kamilila* ‘to dry up completely’ (**MAM**)

174 (i) *ponenena* ‘fall or fail completely’ (**BEM**)

(ii) *ponelela* ‘fall or fail completely’ (**MAM**)

The findings reveal that the completive verbal extension morphs for BEM are different from those for MAM, but similarities are noted in verb radicals as can be seen in 173 and 174, above.

6.2.3 Mood

This section of the chapter analyses and interprets the findings in relation to the differences and similarities in the area of mood, which is viewed from three standpoints, namely: imperative mood, subjunctive mood and indicative mood. Mood of the verb reflects whether or not something is a fact: the intention of the speaker or writer is understood by the mood of the verb; the statement can be factual or presumed to be factual. Mood is “a term used in the theoretical and descriptive study of sentence/clause types and especially of the **verbs** they contain”, (Crystal, 1991:223). In addition, Crystal indicates that, semantically, a wide range of meanings is involved, more especially the attitudes the speaker shows towards the factual content of the utterance.

6.2.3.1 Imperative Mood

The imperative mood refers to verbs or sentence/clause type usually used in expression of command, (Crystal, 2008).

This study notes that there is expectation of command to be executed: the stem of the verb is used for the second person singular, (Sims, 1959).

The key informant was interviewed with regard to imperatives with second person singular. He was requested to provide the equivalents of the English expressions in BEM and MAM for the researcher to find out whether there were similarities and differences in relation to the imperatives with second person singular. After this exercise, the informants, including the key informant, verified the responses from the key informant on the findings. Below are the analysis and interpretation of the findings.

Table 55: Differences and similarities with regard to the imperative mood with second person singular verbs

Gloss	BEM	MAM
175 carry/take	<i>sendá</i>	<i>sénda</i>
176 dance	<i>cindá</i>	<i>cína</i>
177 come	<i>isa</i>	<i>iza</i>
178 close (the door)	<i>isala (iciibi)</i>	<i>yala (cisasa)</i>

In 175, it is noted that the difference between *sendá* and *sénda* in BEM and MAM, respectively, is that in the BEM word *sendá* ‘carry/take’ the second syllable carries **HT** while in the MAM word *sénda*, the first syllable carries **HT**. In 176, the BEM and MAM words are different: while in the BEM word *cindá*, the second syllable begins with a nasal complex /nd/, the second syllable in the MAM word *cina* begins with the voiced alveolar nasal /n/. The other difference noted in the words is that in the BEM word *cindá* in (176), the second syllable carries **HT** whereas in the MAM word *cína* in (176), the first syllable carries **HT**. In 177, the second syllable in the BEM word *isa* (i-sa) begins with the voiceless alveolar fricative /s/ while the second syllable in the MAM word *iza* (i-za) begins with the voiced alveolar fricative /z/. In 178, the BEM imperative verb *isala* ‘close’ is completely different from the MAM verb stem *yala* ‘close’.

It is also evident from this study that the command addressed to the second person plural requires the adjunction of the morph **-ini** to the verb stem (i.e the singular form), (Sims, 1959).

The key informant was interviewed with regard to imperatives with second person plural. He was requested to provide the equivalents of the English expressions in BEM and MAM for the researcher to find out whether there were similarities and differences in relation to the imperatives with second person plural. After this exercise, the informants, including the key informant, verified the responses from the key informant on the findings. Below are the analysis and interpretation of the findings

Table 56: Differences and similarities in relation to the imperative mood with second person plural verbs

Gloss	BEM	MAM
179 dance	<i>cindeeni /cinda-ini/</i>	<i>cinini /cina-ini/</i>
180 come near(er)	<i>palameeni /palama-ini/</i>	<i>palamini /palama-ini/</i>
181 enter	<i>ingileeni /ingila-ini/</i>	<i>ingilini /ingila-ini/</i>
182 come	<i>iseeni /isa-ini/</i>	<i>izini /iza-ini/</i>
183 stand up	<i>imanineeni /imanina-ini/</i>	<i>imililini /imilila-ini/</i>
184 take	<i>twaleeni /twala-ini/</i>	<i>twalini /twala-ini/</i>

It is evident from the study that in the items from 179 to 184 under BEM, the second person plural imperative verbs undergo vowel coalescence when the low central vowel /a/ in the stems merges with the initial high front vowel /i/ in the suffix **-ini** (i.e., the morph realising plural or honorific morpheme or both). In MAM, the terminal low central vowel /a/ in the stems is dropped or lost as the plural morph **-ini** is added.

It is noted from the section above that positive imperative in BEM is different from positive imperative in MAM. However, it should be added that pairs such as *palameeni* (BEM) and *palamini* (MAM), *ingileeni* (BEM) and *ingilini* (MAM) and others in the table can be comprehended by both BEM and MAM speakers; this is a similarity.

It is also evident from the study that in the negative imperative, the pronouns are used with all persons together with the negative particle ‘i’ in BEM, (Sims, 1959).

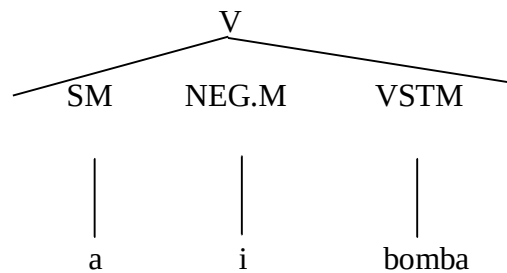
The key informant was interviewed with regard to negative imperatives. He was requested to provide the equivalents of the English expressions in BEM and MAM for the researcher to find out whether there were similarities and differences in relation to negative imperatives. After this exercise, the informants, including the key informant, verified the responses from the key informant on the findings. Below are the analysis and interpretation of the findings.

Table 57: Differences and similarities concerning negative imperative verbs

Gloss	BEM	MAM
let him/her not work	<i>eebomba</i> /a-i-bomba/	<i>ataomba</i> /a-ta-omba/
don't come	<i>wiisa</i> /u-i-isa/	<i>utiza</i> /u-ta-iza/
let him/her not enter	<i>eeingila</i> /a-i-ingila/	<i>atingila</i> /a-ta-ingila/
don't eat	<i>mwilya</i> /mu-i-lya/	<i>mutalya</i> /mu-ta-lya/
let them not start off	<i>beeima</i> /ba-i-ima/	<i>yatakatuka</i> /ya-ta-katuka/

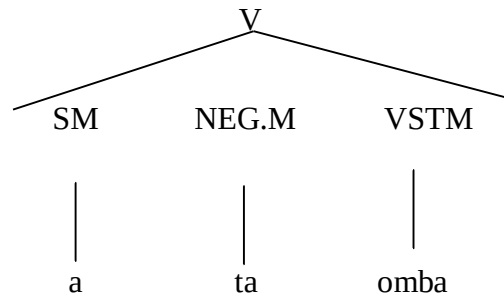
The morphological differences of the imperative verbs are shown in the tree diagrams below:

185 (i) **eebomba (BEM)**



This BEM imperative verb undergoes vowel coalescence; the low central vowel /a/ and the high front vowel /i/ fuse into the long mid front vowel /ee/ [e:] and the resultant imperative verb is *eebomba* ‘let him/her not work’.

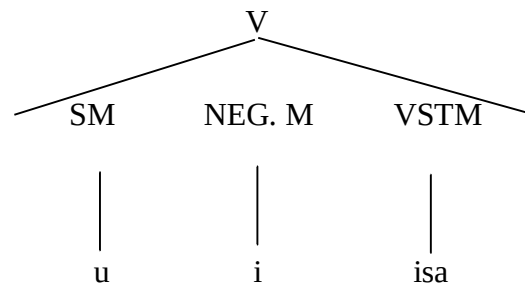
(ii) **ataomba (MAM)**



In the MAM verb *ataomba* ‘let him/her not work’: there are no conditions for coalescence or semivocalisation to occur.

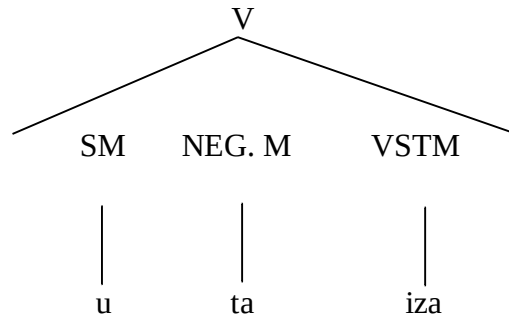
The difference is the NEG.M: -i- ‘not’ for BEM whereas -ta- not is or MAM. Similarities are SM – a- ‘he/she’ and the VSTM *b/omba* ‘work’.

186 (i) **wiisa (BEM)**



The imperative verb has undergone semivocalisation; the high back vowel /u/ becomes the voiced labio-velar approximant /w/ in the environment before the high front vowel /i/. The imperative verb u-i-isa becomes *wiisa* ‘don’t come’ and, in this case, there is a long high front vowel /ii/ [i:] after the voiced labio-velar approximant /w/: there is vowel fusion of two high front vowels in this verb.

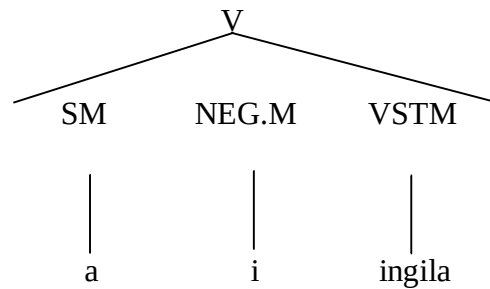
(ii) **utiza (MAM)**



In this MAM verb *utiza* ‘don’t come’: there are no conditions for coalescence and semivocalisation to occur. However, there is deletion or dropping of the central vowel / a /in the negative particle -ta-.

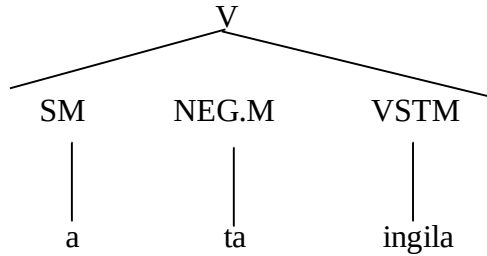
The difference is NEG.M -i- ‘not’ for BEM and -ta-‘not’ for MAM; the similarities are SM –u- ‘you’ and VSTM –isa/iza ‘come’ (cognates).

187 (i) **eeingila (BEM)**



This BEM imperative verb ***a-i-ingila*** undergoes vowel coalescence: the low central vowel /a/ and the high front vowel /i/ fuse into the long mid front vowel /**ee**/ [e:] and the resultant imperative verb is ***eeingila*** ‘let him/her not enter’.

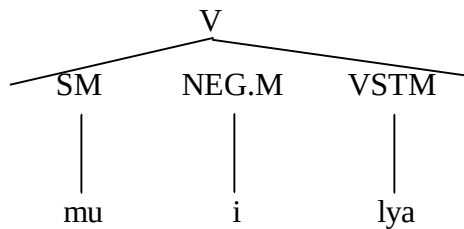
(ii) **atingila (MAM)**



In this MAM verb *atingila* ‘let him/her not enter’: there are no conditions for coalescence and semivocalisation to occur. However, there is deletion or dropping of the central vowel / a / in the negative particle –ta-.

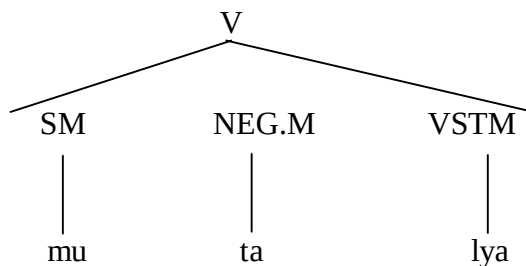
The difference is NEG.M -i- ‘not’ for BEM but -ta- ‘not’ is for MAM and the similarities are SM –a- ‘he/she’ and the VSTM -*ingila* ‘enter’.

188 (i) **mwilya (BEM)**



The high back vowel /u/ in the imperative verb *mu-i-lya* becomes the voiced labio-velar approximant /w/ in the environment before the high front vowel /i/ and, therefore, the imperative BEM verb, *mu-i-lya* becomes *mwilya* ‘don’t eat’.

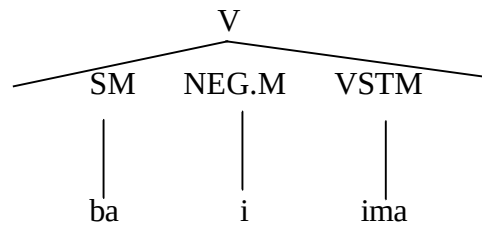
(ii) **mutalya (MAM)**



In this MAM verb *mutalya* ‘don’t eat’: there are no conditons for coalescence and semivocalisation to occur.

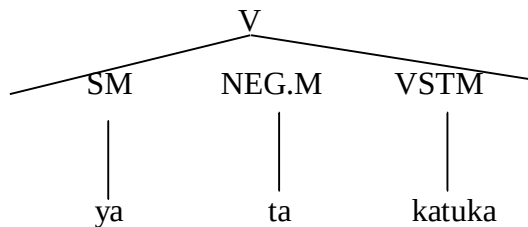
The difference is NEG.M -i- ‘not’ for BEM while -ta- ‘not’ is for MAM and the similarities are SM –mu-‘you (pl)’ and the VSTM -*lya* ‘eat’.

189 (i) **beeima (BEM)**



The imperative BEM verb *ba-i-ima* undergoes vowel coalescence; the low central vowel /a/ and the high front vowel /i/ fuse into the long mid front vowel /ee/ [e:] and the resultant imperative verb is *beeima* ‘let them not start off’.

(ii) **yatakatuka (MAM)**



In the MAM verb, *ya-ta-katuka* ‘let them not start off’ there are no conditons for coalescence and semivocalisation to occur.

Differencces are SM- *ba-* ‘they’ is for BEM) whereas *ya-* ‘they’ is for MAM, NEG.M –i- ‘not’ is for BEM, -ta- ‘not’ for MAM) and the VSTM – *ima* ‘start off’ is for BEM, but *katuka* ‘start off’ is for (MAM).

As observed from the data presented above, negative imperatives in BEM are different from negative imperatves in MAM. Nevertheless, some similarities have been noted in a few verbal elements.

6.2.3.2 Subjunctive mood

This mood deals with the grammatical classification of sentence types which are usually seen in contrast to indicative and imperative moods; it refers to verb forms or sentence/clause types used in the expression of a range of attitudes of speakers to reflect notions such as tentativeness, uncertainty, possibilities, wishes and many other such feelings. (Crystal, 2008).

The key informant was interviewed with regard to verbs in subjunctive mood. He was requested to provide the equivalents of the English expressions in BEM and MAM for the researcher to find out whether there were similarities and differences in relation to verbs in subjunctive mood. After this exercise, the informants, including the key informant, verified the responses from the key informant on the findings. Below are the analysis and interpretation of the findings.

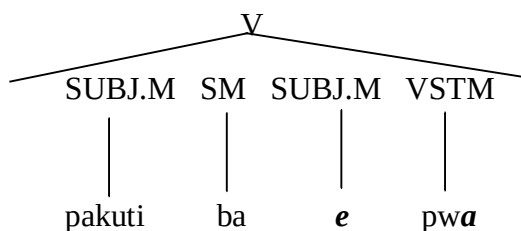
Table 58: Differences and similarities with verbs in the Subjunctive mood

Gloss	BEM	MAM
so that they could finish	<i>pakutibapwe</i> /pakuti-ba-e-pwa/	<i>kutiyamale</i> /kuti-ya-e-mala/
they may not speak/ talk	<i>tetibasose</i> /teti-ba-e-sosa/	<i>yatangayavwange</i> /ya-ta-nga-ya-e-vwanga/
he/she couldn't/ may not refuse	<i>teti akaane (tetyaakaane)</i> /teti-a-e-kaana/	<i>atangakane</i> /a-ta-nga-a-e-kana/
lest he/she fall	<i>epali awa (epalyaawa)</i> /epali-a-wa/	<i>limwi angapona</i> /limwi-a-nga-pona/
lest they steal	<i>epali baiba /epali-ba-iba/</i>	<i>limwiyangiya</i> /limwi-ya-ng(a)-iya/
lest we be late	<i>epalitwacelwa</i> /epali-tu-a-celwa/	<i>limwitungacelwa</i> /limwi-tu-nga-celwa/

In this study, it is noted that some forms of ‘ukuti’ such as ‘pakuti’, ‘mwakuti’ or ‘ukuti’ itself in BEM are used to introduce the subjunctive and may generally be translated as ‘in order that’, (Sims, 1959). The usual negative form of kuti is tekuti, which is abbreviated to teti ‘may not/cannot, in order not...’

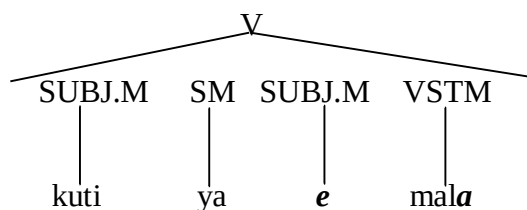
The following are illustrations of the morphological differences in tree diagrams:

190 (i) (beele abengi) **pakuti bapwe** (ilelo) (BEM)



It is clear in this verb that the subjunctive marker for BEM is *pakuti* ‘so that’. However, the subjunctive marker *ukuti* is also used in BEM. The BEM subject marker is *ba* ‘they’. The discontinuous subjunctive marker for BEM is the mid front vowel /e/ which causes segmental modification of the low central vowel in the verb stem *pwa* (*pwe*) ‘finish’: (beele abengi) **pakuti bapwe** (ilelo) ‘many people went so that they could finish.’

(ii) (yaile aingi) **kuti yamale** (ilelo) (MAM)

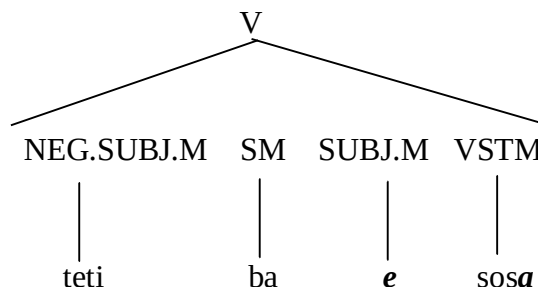


The subjunctive marker for MAM is *kuti* ‘in order that’; *pakuti* is not used in MAM. The subject marker is *ya* ‘they’. The discontinuous subjunctive marker is the mid front vowel /e/ which causes segmental modification of the low central vowel in the verb stem *mala* (*male*) ‘could finish’: (yaile aingi) **kuti yamale** (ilelo) ‘(many people went) so that they could finish’.

Differences are SM –ba- ‘they’ is for BEM, -ya- ‘they’ is for MAM), VSTM –*pwa* ‘finish’ is for BEM whereas -*mala* ‘finish’ is for MAM.

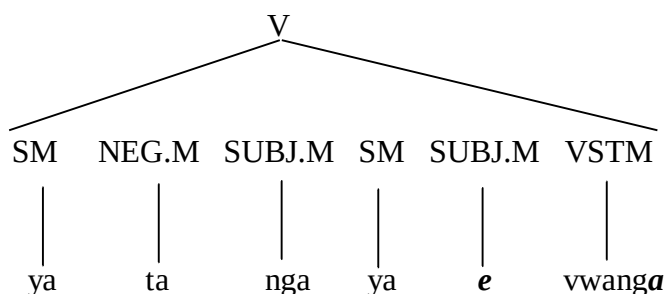
Similarities are SUBJ.M – *ukuti*- ‘so that /in order that’, SUBJ.M (Disc.) -e- (for verb modification).

191 (i) **teti basose (BEM)**



In this verb, the negative subjunctive marker for BEM is *teti*. This works in tandem with the discontinuous subjunctive marker – the mid front vowel /*e*/ which replaces the central vowel /*a*/ in the verb stem *sos*a** (i.e., the verb stem becomes *sose*) ‘speak/talk’. The subject marker in the BEM verb is *ba* ‘they’: (they could/may not talk/speak).

(ii) **yatangayavwange (MAM)**



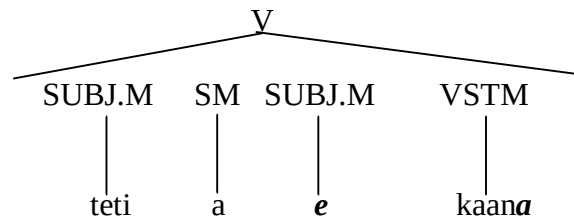
In this MAM verb there is no negative subjunctive marker, but it has the negative marker *ta* which negates the subjunctive marker *nga*. This subjunctive marker works in conjunction with the discontinuous subjunctive marker– the mid front vowel /*e*/ which substitutes the low central vowel /*a*/ in the verb stem *vwang*a** (i.e., the verb stem becomes *vwange*) ‘could speak/talk’. The subject marker is *ya* ‘they’; the verb stem is *vwanga* (vwange) ‘could/may not speak/talk’.

Differences are that the SM in the BEM verb is –ba- ‘they’, but in the MAM verb it is *ya* ‘they’; VSTM –*sosa* ‘speak/talk’ is BEM, -*vwanga* ‘speak/talk’ is MAM; NEG.M. *te*- ‘not’ is BEM and -*ta*- ‘not ’(in this context) is MAM; the SUBJ.M. -*pakuti* ‘in order that’ is BEM, but the

SUBJ.M.(Disc.) -nga- is MAM. The difference is also noted in the number of SM: there are two subject markers in the MAM verb, but one in the BEM verb. The positioning of verbal elements is another difference.

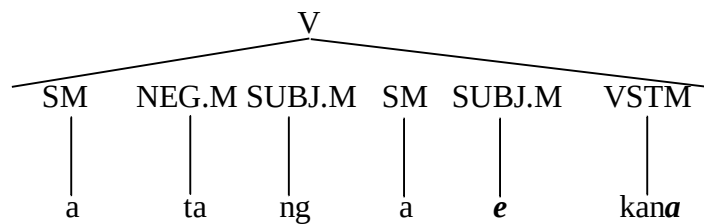
Similarity is SUBJ.M - *ukuti*- ‘(in order that)’, SUBJ.M (Disc.) -e-.

192 (i) **teti akaane (tetyaakaane) (BEM)**



The order of verbal elements in the BEM subjunctive verb *teti-a-kaane* ‘couldn’t refuse’ is the negative subjunctive marker **teti**, the subject marker **a-** which is followed by the discontinuous subjunctive marker /**e**/. The grammatical function of the mid front vowel /**e**/ has already been indicated in 190 and 191. The final element is the verb stem *kaana* (*kaane*) ‘refuse’. Semivocalisation occurs between the high front vowel /i/ in the negative subjunctive marker **teti** and the low central vowel /**a**/, which is the subject marker and, therefore the subjunctive verb is pronounced as *tetyaakaane* ‘he/she **couldn’t/ may not** refuse’.

(ii) **atangakane (MAM)**



In this verb there are two subject markers, the first one co-referencing with the second. Unlike the negative subjunctive marker **teti** for BEM, the MAM negative subjunctive marker comprises the negative marker -**ta**- and the subjunctive marker -nga: the low central vowel /**a**/ in **nga** is dropped

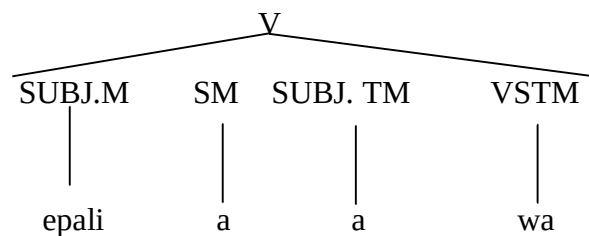
because of the following low central /a/ representing the second co-referential subject marker **-a-**. The MAM verb stem *kana* (kane) is slightly different from the corresponding BEM verb stem, *kaana* (kaane) ‘he/she **couldn’t**/ **may not** refuse’.

Differences are SUBJ.M -(ku)ti- ‘could/may’ for BEM, *nga-* ‘could/may’, for MAM, NEG.M -te- ‘not’ for BEM, -ta- ‘not’ for MAM; number of SM: there are two subject markers in the MAM verb, but one in the verb BEM. The positioning of verbal elements is another difference.

Similarities are SUBJ.M. (Disc.) -e-, SM *a*, VSTM – *kaana* ‘refuse’ (BEM), *kana* ‘refuse’ (cognates).

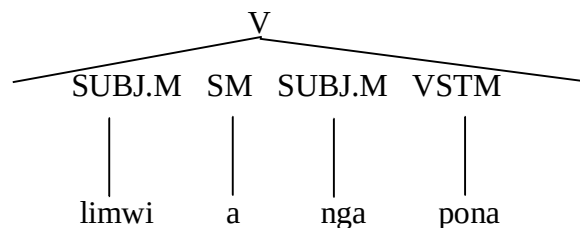
193 (ii) (afwa umunobe) **epali awa**

(= *epalyaawa*) (BEM)



The subjunctive verb *epali-a-wa* (*epalyaawa*) ‘lest he fall’ begins with the subjunctive marker *epali* ‘lest’ followed by the subject marker **a** ‘he/she’, the subjunctive tense marker **a** and the verb stem **wa** ‘fall’.

(ii) (azwa muzo) **limwi angapona** (MAM)

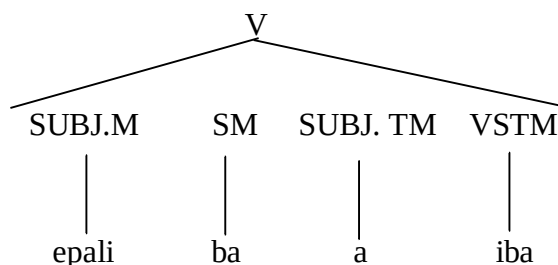


The subjunctive verb *limwi-a-nga-pona* ‘lest he fall’ begins with the subjunctive marker *limwi* ‘lest’ which is followed by the subject marker **a** ‘he/she’, the discontinuous subjunctive marker *nga* which works in conjunction with the subjunctive marker **limwi** to express subjunctiveness and the verb stem *pona* ‘fall’.

The differences are SUBJ.M –epali ‘lest’ for BEM, - limwi- ‘lest’ for MAM, VSTM -wa ‘fall’ for BEM), - pona‘fall’ for MAM, SUBJ.TM.(Disc.) –a- ‘could’ (BEM), -nga- ‘could’ for MAM

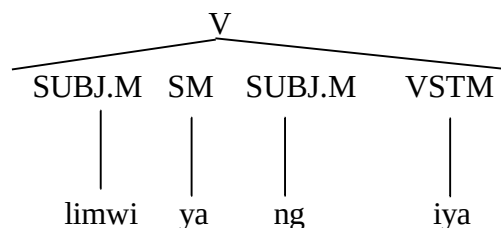
Similarity is noted in SM –a- ‘he/she’.

194 (i) (isala iciibi) **epalibaiba** (BEM)



The subjunctive verb consists of the subjunctive marker epali ‘lest’, the subject marker ba ‘they’, the subjunctive tense marker **a** and the verb stem iba ‘steal’ and, therefore, the subjunctive verb is epali-ba-a-iba (epalibaaiba) ‘lest they steal’ (‘(close the door) **lest** they steal’).

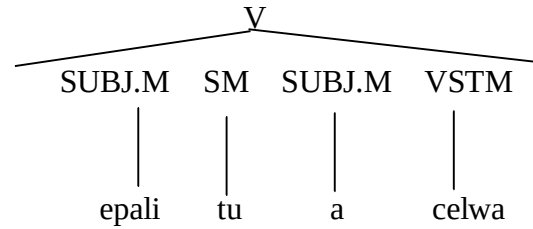
(ii) (yala cisasa) **limwiyangiya** (MAM)



The subjunctive verb is composed of the subjunctive marker limwi, the subject marker **ya** ‘they’, the discontinuous subjunctive marker nga which together with limwi means lest; the final element is the verb stem iya which means steal. The low central vowel /a/ in **nga** is lost. Hence, the high front vowel /i/ in the verb stem **iya** fills the space. The subjunctive verb, therefore, is limwiyangiya ‘lest they steal’ :(close the door) **lest** they steal’.

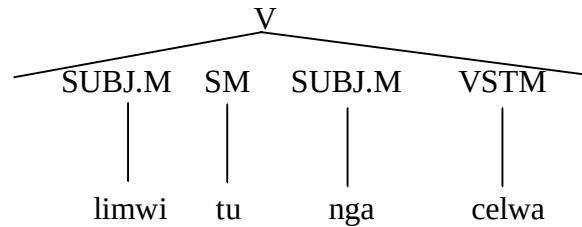
Differences are noted in SM- ba ‘they’ for BEM, ya ‘they’ for MAM), SUBJ.M –epali ‘lest’ for BEM, - limwi- ‘lest’ for MAM, VSTM -iba ‘steal’ for BEM, - iya ‘steal’ for MAM, SUBJ.TM. (Disc.) –a- ‘could’ for BEM, -nga- ‘could’ for MAM.

195 (i) (twime nombaba) **epalitwacelwa (BEM)**



This subjunctive verb begins with the subjunctive marker *epali* ‘lest’ which is followed by the subject marker *tu* ‘we’ and the discontinuous subjunctive marker ‘**a**’ which works in tandem with *epali*; the terminal element is the verb stem *celwa* ‘be late’. The subjunctive verb is *epalitwacelwa* ‘lest we be late’. In this verb, semivocalisation of the high back vowel /u/ in the subject marker **tu** has occurred in the environment before the low central vowel /a/. ‘(let’s start off) **lest** we be late’.

(ii) (tukatuke likwene) **limwitungacelwa (MAM)**



The subjunctive verb begins with the subjunctive marker *limwi* ‘lest’ followed by the subject marker *tu* ‘we’ and the discontinuous subjunctive marker *nga*, which completes the notion of subjunctiveness. The verb stem *celwa* ‘be late’ comes at the end. ‘(let’s start off) **lest** we be late’.

Differences are noted in SUBJ.M. -*epali*- ‘lest’ for BEM), *limwi* ‘lest’ for MAM, SUBJ.M. (Disc.) - *a*- ‘could’ (BEM), -*anga*- ‘could’ (MAM).

Similarities are noted in SM –*tu*- ‘we’, VSTM –*celwa* be ‘late’.

6.2.3.3 Indicative mood

This is yet another type of mood; it concerns the classification of sentence types usually seen in contrast to other types of mood (imperative and subjunctive) presented earlier. It refers to verb forms or sentence/ clause types used in expression of statement and questions, (Crystal, 2008).

The key informant was interviewed with regard to verbs in indicative mood. He was requested to provide the equivalents of the English expressions in BEM and MAM for the researcher to find out whether there were similarities and differences in relation to verbs in indicative mood. After this exercise, the informants, including the key informant, verified the responses from the key informant on the findings. Below are the analysis and interpretation of the findings.

Table 59: Differences and similarities with regard to the use of verbs in the indicative mood

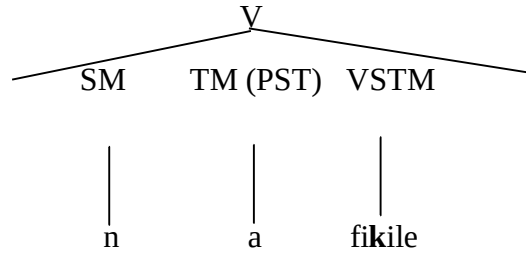
Gloss	BEM	MAM
I arrived	<i>nafikile</i> <i>/n-a-fikile/</i>	<i>nafisile</i> <i>/n-a-fisile/</i>
I didn't arrive	<i>nshafikile</i> <i>/n-shi-a-fikile/</i>	<i>ntafisile</i> <i>/n-ta-fisile/</i>
he/she arrived	<i>aafikile</i> <i>/a-a-fikile/</i>	<i>afisile</i> <i>/a-fisile/</i>
he/she didn't arrive	<i>taafikile</i> <i>/ta-a-fikile/</i>	<i>atafisile</i> <i>/a-ta-fisile/</i>
we arrived	<i>twafikile</i> <i>/tu-a-fikile/</i>	<i>twafisile</i> <i>/tu-a-fisile/</i>
we didn't arrive	<i>tatwafikile</i> <i>/ta-tu-a-fikile/</i>	<i>tutafisile</i> <i>/tu-ta-fisile/</i>
they arrived	<i>baafikile</i> <i>/ba-a-fikile/</i>	<i>yafisile</i> <i>/ya-fisile/</i>
they didn't arrive	<i>tabaafikile</i> <i>/ta-ba-a-fikile/</i>	<i>yatafisile</i> <i>/ya-ta-fisile/</i>

Below are analysis and interpretation of the data:

Positive

196 (i) n-a-fikile (mailo) (**BEM**)

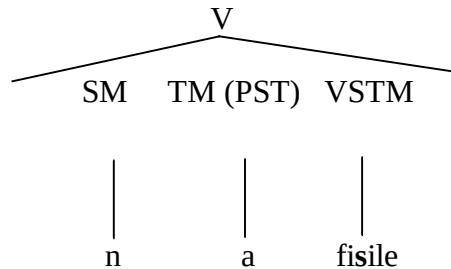
nafikile (mailo)



The elements of the verb *n-a-fikile* mailo ‘I arrived (yesterday)’ are SM- **n-** ‘I’, TM (PST) -**a-** ‘simple-form’ and the VSTM – **fikile** ‘arrived’. The second syllable of the BEM verb stem (**fikile**) begins with the voiceless velar plosive /**k**/.

(ii) *n-a-fisile* (mutondo) (**MAM**)

nafisile**** (mutondo)



The morphological make-up of the verb *n-a-fisile* (mutondo) ‘I arrived (yesterday)’ is SM -**n-** ‘I’, TM (PST) -**a-** ‘simple-form’ and the VSTM **fisile** ‘arrived’. The second syllable of the MAM verb stem (**fisile**) begins with the voiceless alveolar fricative /**s**/.

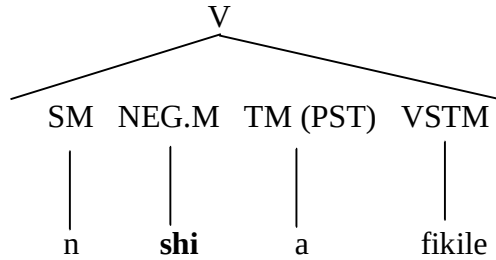
Difference is noted in VSTM- *fikile* ‘arrived’ for (BEM), *fisile* ‘arrived’ for MAM.

Similarities are SM-n ‘I’, TM (PST) –a- ‘simple-form’.

Negative

(i) *n-shi-a-fikile* (mailo) (**BEM**)

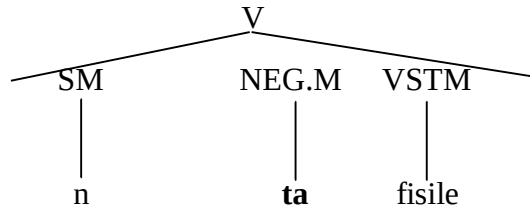
nshafikile (mailo)



The morphology of the verb *n-sh-a-fikile* (mailo) ‘I didn’t arrive (yesterday)’ is SM **-n-** ‘I’, NEG.M **-shi-** ‘not’, TM (PST) **-a-** ‘simple-form’ VSTM **fikile** ‘arrived’. The negative morph is **-shi-**, which goes with the first person singular subject marker **n-**. Under the negative verb, the high front vowel /i/ in the negative morph **-shi-** is dropped and the low central vowel /a/, which is the past tense marker, takes its place.

(ii) *n-ta-fisile* (mutondo) (**MAM**)

ntafisile (mutondo)



The internal structure of the *n-ta-fisile* (mutondo) ‘I didn’t arrive (yesterday)’ is SM **-n-** ‘I’, NEG.M **-ta-** ‘not’ and the VSTM – **fisile** ‘arrived’ . The ngative morph -ta is subsequent to the first person singular subject marker n-.

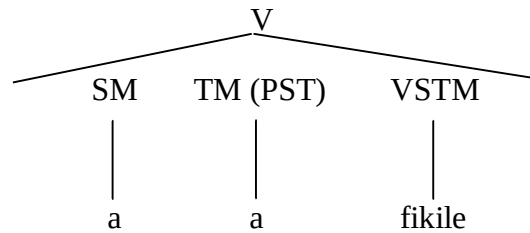
Differences are NEG.M. -shi- ‘not’ for BEM, -ta- ‘not’ for MAM, VSTM –fikile ‘arrived’ for BEM, fisile ‘arrived’ for MAM.

Similarities are noted in SM -n- ‘I’, TM (PST) -a- ‘simple-form’ (visible in BEM), (implied in MAM).

Positive

197 (i) a-a-fikile (mailo) (**BEM**)

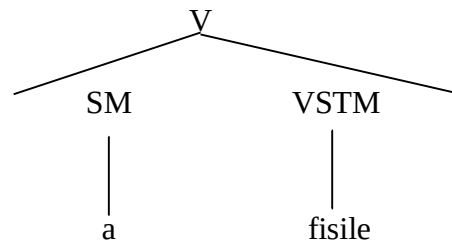
aafikile (mailo)



The internal structure of the verb *a-a-fikile* (mailo) ‘he/she arrived (yesterday)’ is SM -**a**- ‘he/she’, TM (PST) - **a**- ‘simple-form’ and the VSTM – **fikile** ‘arrived’.

(ii) a-fisile (mutondo) (**MAM**)

afisile (mutondo)



The elements of the verb *a-fisile* (mutondo) ‘he/she arrived (yesterday)’ are SM -**a**- ‘he/she’ and VSTM - **fisile** ‘arrived’.

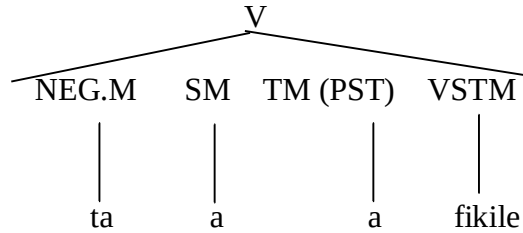
Differences VSTM- (Ref. 196, 197).

Similarities are SM –a- ‘he/she’, TM (PST) -a- ‘simple-form’ (visible in BEM), (implied in MAM).

Negative

(i) ta-a-fikile (mailo) (**BEM**)

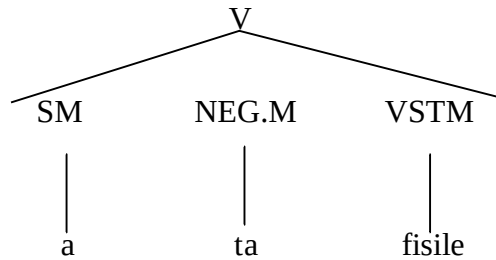
taafikile (mailo)



The internal structure of the verb *taafikile* (mailo) ‘he/she didn’t arrive (yesterday)’ is NEG.M - **ta-** ‘not’, SM -**a-** ‘he/she’, TM (PST) -**a-** ‘simple-form’ and the VSTM - **fikile** ‘arrived’. In this verb, the negative marker **ta-** precedes the subject marker -**a-**. Besides that, the past tense marker -**a-** is covert; this is to avoid repetition of the low central vowel, which is already heard in the negative marker (ta-) and in the subject marker (-a-).

(ii) a-ta-fisile (mutondo) (**MAM**)

atafisile (mutondo)



The morphology of the verb *atafisile* (mutondo) ‘he/she didn’t arrive (yesterday)’ is SM -**a-** ‘he/she’, NEG.M -**ta-** ‘not’ and the VSTM – **fisile** ‘arrived’. In this verb the subject marker **a-** precedes the negative marker -**ta-**. The tense marker -**a-** is also covert: there is already the low central vowel /a/ in the preceding negative marker -**ta-**. The past tense marker -**a-** is implied in this verb.

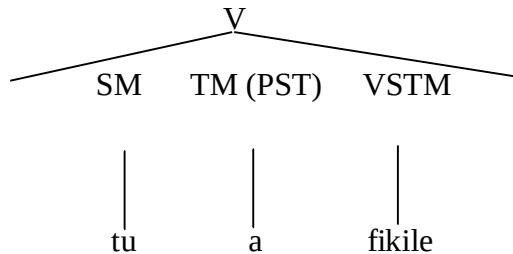
Difference is noted in VSTM (Ref.196, 197, etc.); in BEM, the NEG.M precedes the SM whereas in MAM it follows the SM.

Similarities are SM -a- ‘he/she’, TM (PST) -a- ‘simple-form’ (visible in BEM), (implied in MAM).

Positive

198 (i) *tu-a-fikile* mailo (**BEM**)

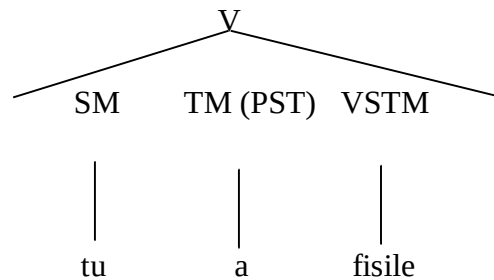
twafikile (mailo)



The morphology of the verb *tu-a-fikile* (mailo) ‘we arrived (yesterday)’ is SM –**tu-** ‘we’, TM (PST) –**a-** ‘simple-form’ and the VSTM **fikile** ‘arrived’. Semivocalisation has occurred in this verb.

(ii) *tu-a-fisile* mutondo (**MAM**)

twafisile (mutondo)



The internal structure of the verb *tu-a-fisile* (mutondo) ‘we arrived (yesterday)’ is SM- **tu-** ‘we’, TM (PST) –**a-** ‘simple-form’ and the VSTM – **fisile** ‘arrived’. Semivocalisation has occurred in this verb.

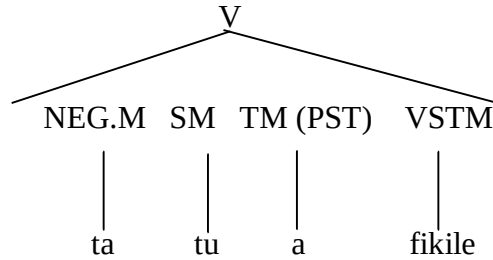
Difference is noted in VSTM (Ref. 196, etc).

Similarities are in SM – *tu-* ‘we’, TM (PST) –*a-* ‘simple-form’.

Negative

(i) *ta-tu-afikile* (mailo) (**BEM**)

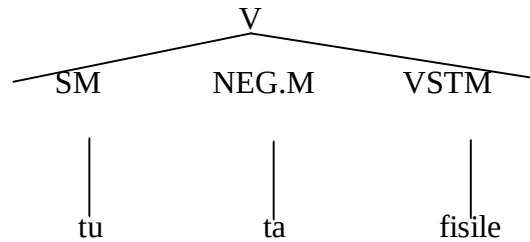
tatwafikile (mailo)



The elements of the verb *ta-tu-afikile* (mailo) ‘we did n’t arrive (yesterday)’ are NEG.M- **ta-** ‘not’, SM- **tu-** ‘we’, TM (PST) **-a-** ‘simple-form’ and the VSTM **fikile** ‘arrived’. Semivocalisation has occurred in this verb. The past tense marker **-a-** is visible in this verb.

(ii) *tu-ta-fisile* (mutondo) (**MAM**)

tutafisile (mutondo)



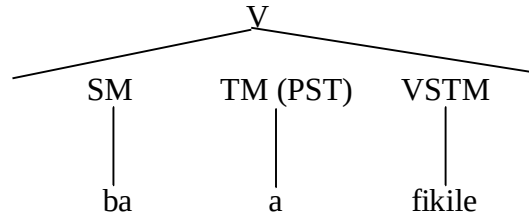
The elements of the verb *tu-ta-fisile* (mutondo) ‘we did n’t arrive (yesterday)’ are SM **-tu-** ‘we’, NEG.M **-ta-** ‘not’ and the VSTM **-fisile** ‘arrived’. The past tense marker **-a-** is implied in this verb.

Difference in the ordering/positioning of the verbal elements which otherwise are same; VSTM (Ref. previous numbers).

Positive

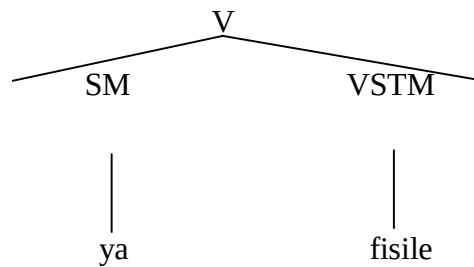
199 (i) *ba-a-fikile* mailo (**BEM**)

baafikile (mailo)



The internal structure of the verb *ba-a-fikile* mailo they arrived (yesterday) is SM- **ba** ‘they’, TM (PST) -**a**- ‘simple-form’ and the VSTM – **fikile** ‘arrived’.

- (ii) *ya-fisile* mutondo (**MAM**)
yafisile (mutondo)



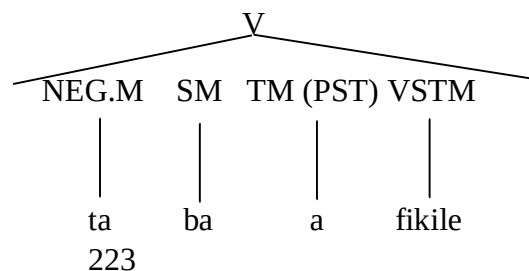
The elements of the verb *ya-fisile* (mutondo) ‘they arrived (yesterday)’ are SM -**ya**- ‘they’ and the VSTM- **fisile** ‘arrived’.

Differences are SM -ba- ‘they’ for BEM, ya ‘they’ for MAM, VSTM (Ref. the previous numbers).

Similarities are noted in TM (PST), (Ref.197 (ii) under negative.

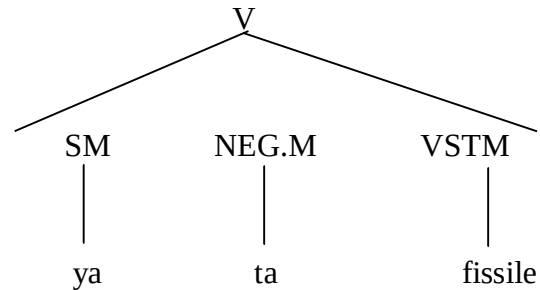
Negative

- (i) *ta-ba-a-fikile* (mailo) (**BEM**)
tabaafikile (mailo)



The internal structure of the verb *ta-ba-a-fikile* (mailo) they did not arrive (yesterday) NEG.M - **ta-** ‘not’, SM **-ba-** ‘they’, TM (PST) **-a-** ‘simple-form’ and the VSTM – **fikile** ‘arrived’.

(ii) *ya-ta-fisile mutondo* (**MAM**)
yatafisile (mutondo)



The morphology of the verb *ya-ta-fisile* (mutondo) ‘they did not arrive (yesterday)’ is SM –**ya-** ‘they’, NEG.M – **ta** ‘not’ and the VSTM –**fisile** ‘arrived’.

Differences are noted in SM- (Ref. 198(ii) under negative; VSTM – (Ref. 199(ii) under positive and under the differences section.

6.2.4 Negative Verbs

This section presents the continuation of the findings on the negative verbs dealt with in the previous section of negative verbs under inductive mood. The basic role of negative is in asserting that something is not the case, (Mathews, 2005). Crystal (1991:23) points out that “negation is a process or construction in grammatical and semantic analysis which typically expresses the contradiction of some or the entire sentence’s meaning”. Negation is expressed by the presence of the negative particles (Sims, 1959).

The key informant was interviewed with regard to negative verbs. He was requested to provide the equivalents of the English expressions in BEM and MAM for the researcher to find out whether there were similarities and differences in relation to this type of verbs. After this exercise, the informants, including the key informant, verified the responses from the key informant on the findings. Below are the analysis and interpretation of the findings.

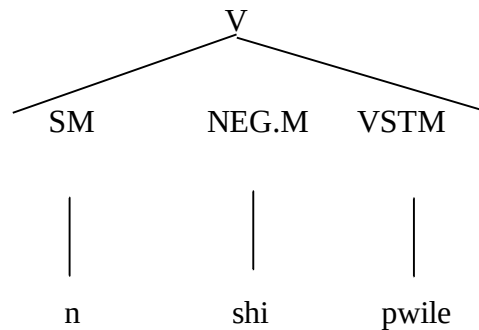
Table 60: Differences and similarities in relation to negative verbs

Gloss	STDBEM	RULMAM
I have n't finished	<i>nshipwile</i> /n-shi-pwile/	<i>ntamazili</i> /n-ta-mazili/
he/she doesn't bring back	<i>taabwasha</i> /ta-a-bwasha/	<i>asiwezya</i> /a-si-wezya/
they didn't go	<i>tabaale</i> /ta-ba-a-ile/	<i>yatapisile</i> /ya-ta-pisile/
I don't like it	<i>nshácítémwá</i> /n-shá-cí-témwá/	<i>ntácítémwá</i> /n-tá-cí-témwá/

The following are analysis and interpretation of data in relation to negative verbs

200 (i) n-shi-pwile (**BEM**)

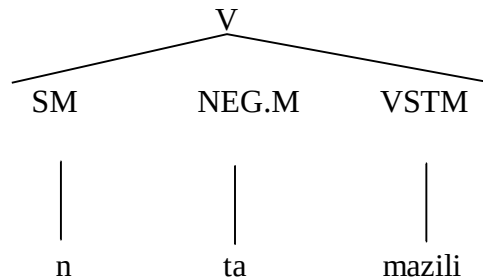
nshipwile



The morphological make-up of this verb *n-shi-pwile* ‘I have not finished’ is SM **-n-** ‘I’, NEG.M- **shi-** ‘not’ and the VSTM **pwile** ‘finished’.

(ii) *n-ta-mazili* (**MAM**)

ntamazili



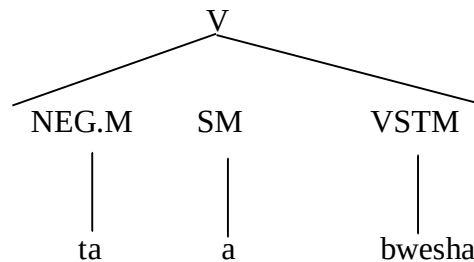
The elements of the verb *n-ta-mazili* ‘I have not finished’ are SM **-n-** ‘I’, NEG.M **-ta-** ‘not’ and the VSTM – **mazili** ‘finished’.

Differences are that the BEM negative marker **-shi-** is different from the MAM negative marker **-ta-**. Besides, the BEM verb stem – *pwile* ‘finished’ is different from the MAM verb stem – *mazili* ‘finished’).

Similarity is that the order of verbal elements in BEM is the same as that in MAM. In both, the subject marker is followed by the negative marker. The other similarity is noted in SM **-n-** ‘I’.

201 (i) *ta-a- bwesha* (**BEM**)

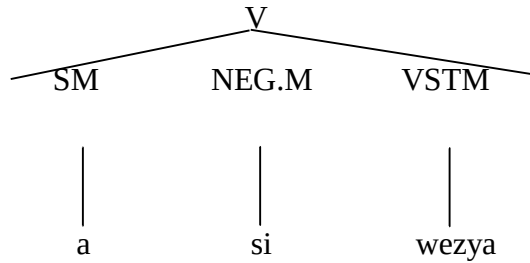
taabwesha



The internal structure of the verb *ta-a- bwesha* ‘he/she does n’t bring back’ is NEG.M **-ta-** ‘not’, SM **-a-** ‘he/she’ and the VSTM **-bwesha** ‘bring back’.

(ii) a-si-wezya (**MAM**)

asiwezya



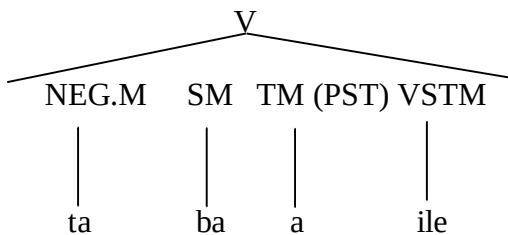
The verb a-si-wezya ‘he/she does n’t bring back’ is composed of SM **-a-** ‘he/she’, NEG.M **-si-** ‘not’ and the VSTM **-wezya** ‘bring back’.

The differences are that in the BEM verb *taabwesha* ‘he/she does n’t bring back’, the negative particle **ta-** comes before the subject marker **-a-** while in the MAM verb *asiwezya* ‘he/she does n’t bring back’ it is the other way round: the subject marker **a-** precedes the negative particle **-si-**. Besides, the BEM verb stem *-bwesha* ‘bring back’ is different from the MAM verb stem *-wezya* ‘bring back’.

Similarities are noted in SM **-a-** ‘he/she’ and NEG.M **-ta-** ‘not’.

202 (i) ta-ba-a-ile (**BEM**)

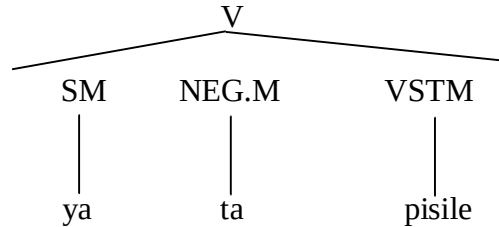
tabaale



The internal structure of the verb *ta-ba-a-ile* ‘they did n’t go’ is NEG.M **-ta-** ‘not’ SM **-ba-** ‘they’ TM(PST) **-a-** ‘simple-form’ and the VSTM **-ile-** ‘go’.

(ii) *ya-ta-pisile* (**MAM**)

yatapisile

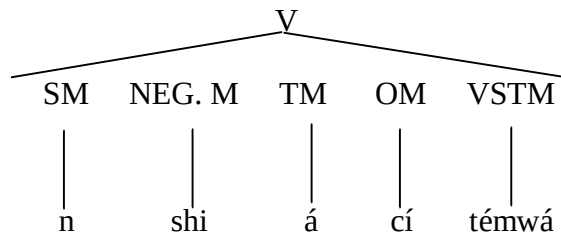


The morphology of the verb *ya-ta-pisile* ‘they did n’t go’ is SM **-ya-** ‘they’, NEG.M **-ta-** VSTM – **pisile** ‘go’.

The difference between BEM and MAM in the ordering of negative and subject markers has already been indicated. Other differences are SM **-ba-** ‘they’ (BEM), **-ya-** ‘they’ (MAM) and VSTM- **-ile** ‘went’ (negated) (BEM), **-pisile** ‘went’ (negated) (MAM).

The similarity is NEG.M **-ta-** ‘not’.

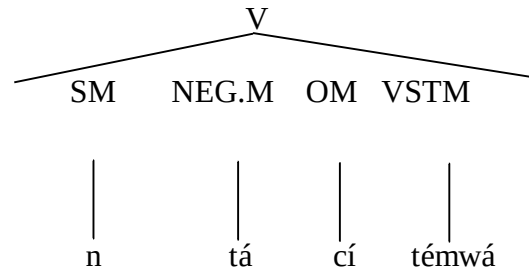
203 (i) *n-shi-a- ci-temwa* (**BEM**)
nshácítémwá



The morphological elements of the verb *n-shi-a- ci-temwa* ‘I don’t like it’ are SM **n-** ‘I’ NEG. M- **shi-** ‘not’ TM **á** (PRES. HAB) ‘Simple-form’ OM **ci** ‘thing’ VSTM **témwá** ‘like’ It is also noted that the high front vowel /i / in **-shi-** is dropped and, therefore, its space is occupied by the low central vowel /a / functioning as the present tense marker which is the remaining part of **-ali-** when the negative marker is introduced.

(ii) *n-ta-ci-temwa* (MAM)

ntácítémwá



The verb *n-ta-ci-temwa* ‘I don’t like it’ is made up of SM **-n-** ‘I’, NEG.M **-ta-** ‘not’, OM **-ci-** ‘it’ and the VSTM – **temwa** ‘like’.

In this verb, the tense marker (-a-) is implied: it could have been absorbed by the low central vowel /a/ found in the negative marker **-ta-**, which immediately precedes it: there is dropping or absorption of the vowel phoneme).

The difference is noted with regard to the negative markers. In the BEM verb *nshácítémwá* ‘I don’t like it’, the negative particle is **-shi** - whereas in the MAM verb *ntácítémwá* ‘I don’t like it’ is **-ta-**.

The similarities: order of the subject marker and the negative marker in BEM is the same as that in MAM; the other similarities are SM -n- ‘I’, OM -ci- ‘it’ and VSTM -temwa ‘like’.

6.2.5 Definitisation Verb Phrase

Definitisation comes from the verb *definitise* which means to express an idea or concept free of all ambiguity, uncertainty or obscurity; to give limitation to a concept; make it definite or crystalised. The encoder expresses the idea clearly and, hence, leaves the decoder without any doubt.

Using this phrase, the speaker or writer refers to a specific, identifiable entity (Crystal, 1991). The encoder characteristically indicates reference to a thing, person or concept, (Mathews, 2005). In this study, the verb ‘be’ is key in the whole definitisation verb phrase.

This section analyses and interprets the findings concerning positive and negative definitisation verb phrases.

6.2.5.1 Differences and similarities in relation to Positive definitisation verb phrase

Under this phrase, the specification or identifiability of a concept is in the positive.

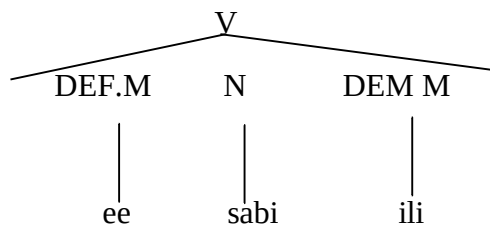
The key informant was interviewed with regard to positive definitisation verb phrase. He was requested to provide the equivalents of the English expressions in BEM and MAM for the researcher to find out whether there were similarities and differences in relation to positive definitisation verb phrase. After this exercise, the informants, including the key informant, verified the responses from the key informant on the findings. Below are the analysis and interpretation of the findings.

Table 61: Differences and similarities concerning positive definitisation verb phrases

Gloss	BEM	MAM
this is the fish	<i>eesabiili / ee-sabi-ili/</i>	<i>zilinswizi /zili-nswi-zi/</i>
this is the game	<i>eecangalweci /ee-cangalo-ici/</i>	<i>cicilicila /ci-cili-cila/</i>
these are the games	<i>eemangalwaya /ee-mangalo-aya/</i>	<i>vivilivila /vi-vili-vila/</i>
this is the price	<i>eemúténgóóyu /ee-múténgo-uyu/</i>	<i>u ulimúténgo /u-uli-múténgo/</i>

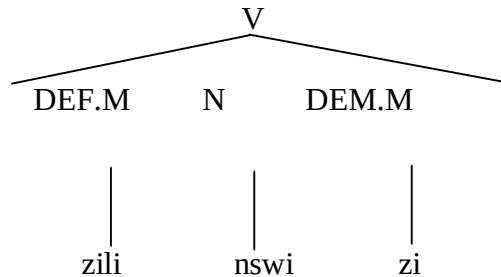
Below are analysis and interpretation of data on positive definitisation verb phrase:

204 (i) **eesabiili (BEM)**



The internal structure of the verbal phrase *ee-sabi-ili* ‘this is the fish’ is DEF.M **ee-** ‘is the’, N **-sabi-** and the DEM M **ili** ‘this’.

(ii) **zilinswizi** (MAM)

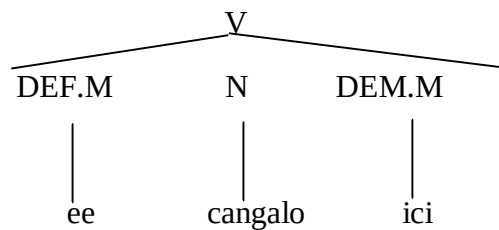


The morphology of the verb phrase *zili-nswi-zi* ‘this is the fish’ is DEF.M **zili-** ‘is the’, N **-nswi-** ‘fish’ and the DEM.M **-zi-** ‘this’.

The difference is that the BEM verbal elements: *ee-* ‘is the’, *sabi* ‘fish’ and *-ili* ‘this’ are different from the MAM verbal elements: *zili-* ‘is the’ *-nswi-* ‘fish’ *-zi* ‘this’.

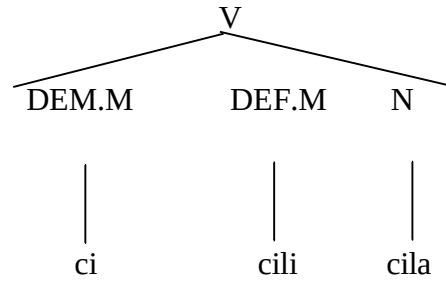
The order of the verbal elements in the MAM verb phrase *zilinswizi* ‘this is the fish’ is the same as in the BEM verb phrase *eesabiili* ‘this is the fish.’

205 (i) **eecangalweci** (BEM)



The internal structure of the verb phrase *ee-cangalo-ici* ‘this is the game’ is DEF.M **ee-** ‘is the’, N **-cangalo-** ‘game’ and the DEM.M **-ici** ‘this’.

(ii) **cicilicila** (MAM)



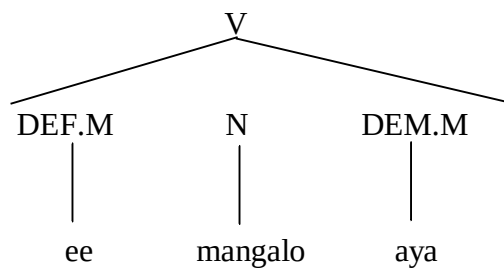
The elements of the phrase verb *ci-cili-cila* ‘this is the game’ are DEM.M **ci-** ‘this’, DEF.M **-cili** ‘is the’ and the N **-cila** ‘game’.

This study shows that in the BEM verb phrase *eecangalweci* ‘this is the game’ the order of verbal elements is different from that in the MAM verb phrase *cicilicila* ‘this is the game’. In the BEM verb phrase, the definite marker **ee-** ‘is the’ is in the initial position followed by the noun – *cangalo* ‘game’ in the medial position and the demonstrative morph **-ici-** ‘this’ is in the terminal position.

On the other hand, the order of the verbal elements in the MAM verb phrase is that the demonstrative marker **ci** ‘this’ begins the series followed by the definite morph **-cili** ‘is the’ and the noun **-cila** ‘game’ follows in terminal position.

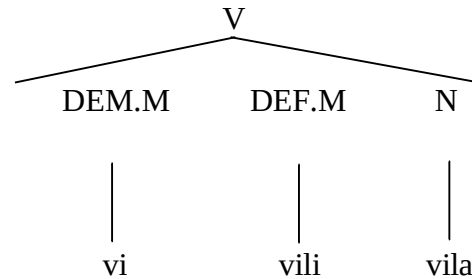
It is also clear that the verbal elements in the BEM verb phrase: *ee-cangalo-ici* are different from the verbal elements in the MAM verb phrase: *ci-cili-cila*. There is also coalescence (i.e. o+i = we) between the mid back vowel /o/ in the final syllable of the noun *cangalo* and the high front vowel /i/ that begins the demonstrative morph **-ici**, producing the BEM verb phrase *eecangalweci*.

206 (i) **eemangalwaya** (BEM)



The verb phrase *ee-mangalo-aya* ‘these are the games’ is composed of DEF.M **ee-** ‘is the’, N - **amangalo-** ‘games’ and the DEM.M – **aya** ‘these’.

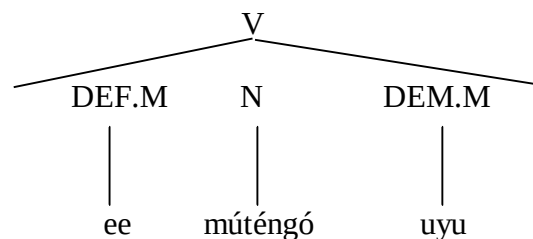
(ii) **vivilivila (MAM)**



The internal structure of the verb phrase *vi-vili-vila* ‘these are the games’ is DEM.M **vi-** ‘these’, DEF.M –**vili-** ‘are the’ and the N – **vila** ‘games’.

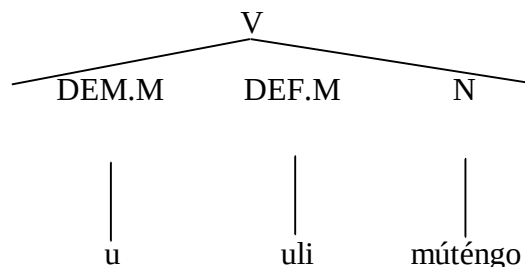
In the BEM verb phrase *eemangalwaya* ‘these are the games’, the definite marker *ee-* ‘are the’ precedes the noun *-mangalo-* ‘games’ which is followed by the demonstrative marker *-aya* ‘these’ whereas in the MAM verb phrase *vivilivila* ‘these are the games’, the demonstrative marker **vi-** ‘these’ precedes the definite marker *-vili* ‘are the’ followed by the noun *-vila* ‘games’. The verbal elements in the BEM verb phrase: *ee-mangalo-aya* are different from the verbal elements in the MAM verb phrase: *vi-vili-vila*. It is also noted that vowel coalescence (i.e. *o+a = wa*) occurs between the mid back vowel /**o**/ in the noun *-mangalo-* and the low central vowel /**a**/ in the demonstrative marker **aya** in the BEM verb phrase and, therefore, the resultant verb phrase is *emangalwaya*.

207 (i) **eemúténgóóyu (BEM)**



The verb phrase *ee-múténgó-uyu* ‘this is the price’ is made up of DEF.M **ee-** ‘is the’ N **múténgó** ‘price’ and the DEM.M **-uyu** ‘this’.

(ii) **u ulimúténgo (MAM)**



The morphology of the verb phrase *u uli múténgo* ‘this is the price’ is DEM.M **-u** ‘this’, DEF.M **-uli-** ‘is the’ and the N – **múténgo** ‘price’.

The findings show that the ordering of the elements in the BEM verb phrase in 207 (i) is consistent with that in the BEM verb phrases in 204 (i), 205 (i) and 206 (i) in which the definite marker begins the series followed by the noun and then the demonstrative marker. In the BEM verb phrase *eemúténgóóyu* ‘this is the price’ in 207 (i), the definite marker **ee-** ‘is the’ occupies the initial position followed by the noun *-múténgó-* ‘price’ and in the terminal position is the demonstrative marker *-uyu* ‘this’.

In the corresponding MAM verb phrase *u ulimúténgo*, the demonstrative marker **u-** ‘this’ precedes the definite marker *-uli* ‘is the’ and in the final position is the noun *-múténgo* ‘price’. The definite marker and the demonstrative marker in the BEM verb phrase *ee-múténgó-uyu* are different from the definite marker and the demonstrative marker in the MAM verb phrase *u- uli -múténgo*, respectively.

The noun ‘*mutengo*’ is found in both BEM and MAM, but there is a tonal difference between them: the BEM noun carries **HT** on ‘mu’, ‘te’ and ‘ngo’ whereas in the MAM noun the **HT** is on ‘mu’ and ‘-te.’

It is also manifest that vowel coalescence (i.e. o + u = oo) occurs between the mid back vowel /o/ in the terminal syllable of the noun *mutengo* and the initial high back vowel /u/ in the demonstrative marker **uyu** of the BEM verb phrase *ee-múténgó-uyu* which creates the form

emúténgóóyu whereas in the MAM verb phrase **u ulimúténgo**, there is an interval, as the speaker utters the phrase, between the two high back vowels /u-u/ at the beginning of the phrase.

6.2.5.2 Negative definitisation

This study reveals the specification or identifiability of a concept in the negative.

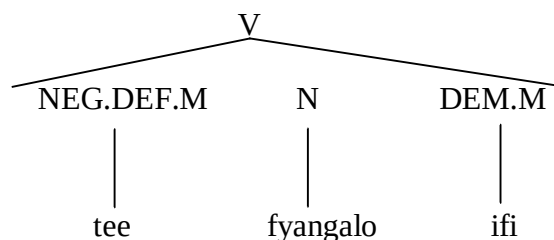
The key informant was interviewed with regard to negative definitisation verb phrase. He was requested to provide the equivalents of the English expressions in BEM and MAM for the researcher to find out whether there were similarities and differences in relation to negative definitisation verb phrase. After this exercise, the informants, including the key informant, verified the responses from the key informant on the findings. Below are the analysis and interpretation of the findings.

Table 62: Differences and similarities in the use of negative definitisation verb phrases

Gloss	STDBEM	RULMAM
these are not the games	<i>teefyangalwefi</i> /tee-fyangalo-ifi/	<i>vivisivila</i> /vi-visi-vila/
these are not the people	<i>teebantwaba</i> /tee-bantu-aba/	<i>yayásiyantu</i> /ya-yási-yantu/
that is not the price	<i>teemúténgóóyo</i> /tee-múténgó-uyo/	<i>uousimúténgo</i> /uo-usi-múténgo/

Analysis and interpretation of data on negative definitisation:

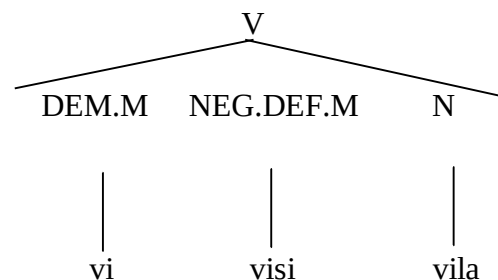
208 (i) **teefyangalwefi (BEM)**



The internal structure of the verb phrase *tee-fyangalo-ifi* ‘these are not the games’ is NEG.DEF.M **tee-** ‘are not the’, N – **fyangalo-** ‘games’ and the DEM.M – **ifi** ‘these’.

The arrangement of verbal elements in the BEM negative definitisation verb phrase in 208 (i) is consistent with that in BEM under the positive definitisation verb phrase and this is why in 208(i) the negative definite marker *tee-* ‘is not the’ occupies the initial position followed by the noun – *fyangalo-* ‘games’ and the terminal position is occupied by the demonstrative marker *-ifi-* ‘these’. There is vowel coalescence between the mid back vowel /**o**/ in the penultimate syllable of the noun *-fyangalo-* and the initial high front vowel /**i**/ in the demonstrative marker *-ifi*, and this is why we have the verb phrase *teefyangalwefi* ‘these are not the games’.

(ii) **vivisivila (MAM)**

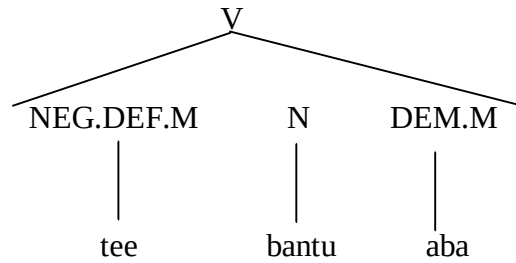


The morphology of the verb phrase *vi-visi-vila* ‘these are not the games’ is DEM.M **vi-** ‘these’, NEG.DEF.M **-visi-** ‘are not the’ and the N **-vila** ‘games’.

The order of the elements in the negative definitisation verb phrase in MAM in 208 (ii) is: the demonstrative marker *vi-* ‘these’ precedes the negative definite marker *-visi-* ‘are not the’ which is followed by the noun *-vila* ‘games’.

The differences are that the order of the elements in the negative definitisation verb phrase in MAM in 208 (ii) is different from that in BEM in 208 (i). Besides, the elements in the BEM verb phrase *tee-fyangalo-ifi* in 208 (i) are different from the verbal elements in the MAM verb phrase *vi-visi-vila* in 208 (ii). There is vowel coalescence in the verb phrase *tee-fyangalo-ifi* (*teefyangalwefi*) whereas there is no vowel fusion in the MAM verb phrase *vi-visi-vila* (*vivisivila*).

209 (i) **teebantwaba (BEM)**

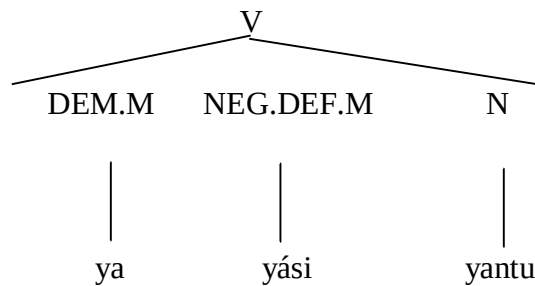


The elements of the verb phrase *tee-bantu-aba* ‘these are not the people’ are NEG.DEF.M **tee-** ‘are not the’, N -bantu- ‘**people**’ and the DEM.M -**aba** ‘these’.

In the BEM verb phrase *teebantwaba* in 209 (i), the negative definite marker **tee-** ‘are not the’ is in the initial position and the noun -bantu ‘people’ follows it; in the end position comes the demonstrative morph -aba ‘these’.

It is also noted that semivocalisation of the high back vowel /u/ in the BEM noun -bantu- occurs in the environment before the initial low central vowel /a/ in the demonstrative morph – **aba**, resulting in the negative BEM verb phrase *teebantwaba*.

(ii) **yayásiyantu (MAM)**



The verb phrase *ya-yási-yantu* ‘these are not the people’ is composed of DEM.M **ya-** ‘these’, NEG.DEF.M – **yási** ‘are not’ and the N – **yantu** ‘people’.

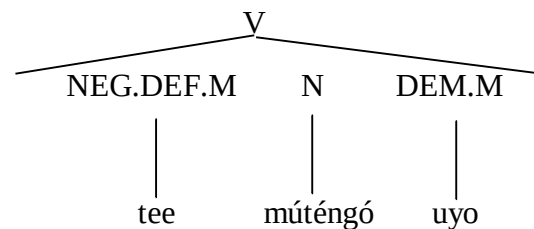
The ordering of the elements in the MAM verb phrase *yayásiyantu* in 209 (ii) is: the demonstrative marker **yà** ‘these’ precedes the negative definite marker –yasi ‘are not the’ followed by the noun –yantu ‘people’.

There are differences noted here; the ordering of the elements in the MAM verb phrase *yayásiyantu* in 209 (ii) is different from that in the BEM verb phrase *tee-bantu-aba* in 209 (i).

It is also noted that the verbal elements in the BEM verb phrase *tee-bantu-aba* in 209 (i) are different from the verbal elements in the MAM verb phrase *ya-yási-yantu* in 209 (ii).

There is semivocalisation in the BEM verb phrase *tee-bantu-aba* (*teebantwaba*) while it does not occur in the corresponding MAM verb phrase *ya-yási-yantu* (*yayásiyantu*).

210 (i) **teemúténgóoyo** (BEM)

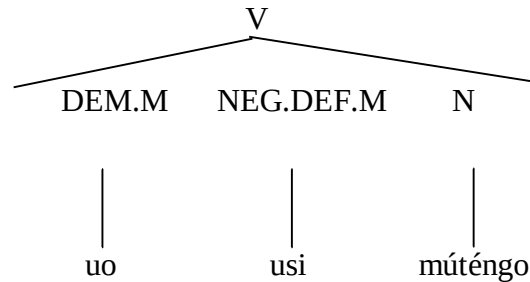


The elements of the verb phrase *teemúténgóoyo* ‘that is not the price’ are NEG.DEF.M **tee-** ‘is not the’, N – **múténgó** and the DEM.M **-uyo** ‘that’.

The arrangement of the elements in the BEM verb phrase *teemúténgóoyo* in 210 (i) is: the negative definite marker **tee** ‘is not the’ is followed by the noun –múténgó ‘price’ and the demonstrative marker –uyo ‘that’ is in the end position.

There is coalescence of the mid back vowel /**o**/ in the penultimate syllable of the noun *múténgó* and the high back vowel /**u**/ in the demonstrative marker **uyo** in the BEM verb phrase *tee-mútengo-uyo* and, therefore, the verb phrase converts to *teemúténgóoyo*.

(ii) **uousimúténgo** (MAM)



The internal structure of the verb phrase *uo-usi-múténgo* ‘that is not the price’ is DEM.M **uo-** ‘that’ NEG.DEF.M – **usi-** ‘is not the’ and the N – **múténgo** ‘price’. The order of the MAM verb phrase *uousimúténgo* in 210 (ii) is the demonstrative marker *uo-* ‘that’ precedes the negative definite marker –*usi* ‘is not the’ which is followed by the noun –*múténgo* ‘price’.

The arrangement of the elements in 210 (i) is different from that in 210 (ii).

The negative definite marker (**tee**) and the demonstrative marker (*uyo*) in the BEM verb phrase *teemúténgóoyo* in 210 (i) are different from the negative definite marker (*usi*) and the demonstrative marker (*uo*) in the corresponding MAM verb phrase *uousimúténgo* in 210 (ii), respectively.

The tonal distinction between the nouns in 210 (i) and 210 (ii) is also provided in 207.

There is coalescence of the mid back vowel /**o**/ in the penultimate syllable of the noun *múténgó* and the high back vowel /**u**/ in the demonstrative marker **uyo** in the BEM verb phrase *tee-múténg**o**-uyo* and, therefore, the verb phrase converts to *teemúténg**óó**oyo*, but coalescence does not occur in the corresponding MAM verb phrase *uousimúténgó*.

6.2.6 Chapter Summary

This chapter has analysed and interpreted the data under the two major themes, namely: (1) Nominal Morphology (2) Verbal Morphology. Each of these has contributed to answering the

research question which is “How does the morphology of BEM compare with the morphology of MAM?

In Nominal Morphology, the differences and similarities between BEM and MAM manifest as a result of: the nouns in both BEM and MAM having different nominal prefixes, but with the same nominal stems; the nouns in both BEM and MAM having the same nominal prefixes but with different nominal stems; the BEM nouns having the nominal prefixes and the nominal stems, which are different from the nominal prefixes and the nominal stems of the MAM nouns. From the third and last sub-theme, only the differences emerged. Based on the verified data, the conclusion is that more differences than similarities have emerged in nominal morphology.

Under verbal morphology and in relation to the tenses which are prehodiernal progressive, future tense of today (or hodiernal future), posthodiernal (i.e., remote future), posthodiernal (or remote future) progressive, present progressive (or continuous) and present simple: differences and similarities emerge when it comes to subject markers, tense markers, progressive aspect markers, object markers, verb stems, negative markers, the order or position of some of these verbal elements and others. Concerning verbal extensions, differences and similarities manifest in the use of verbal extension morphs and verb radicals that form these extensions which are passive, causative, intensive, frequentative, applied or applicative, neuter or stative, reciprocal, reversive active and completive. In terms of mood, differences and similarities are noted in use of verbal elements that go into expressing mood such as subject markers, verb stems, subjunctive markers, subjunctive discontinuous markers, negative makers, object markers and the order of these elements and others in such verbs. In the negative verbs, differences and similarities manifest with regard to verbal elements and the order of these verbal elements. The definitisation verb phrase is another aspect where differences and similarities are noted in relation to verbal elements and the order of these elements.

Depending on the environment of the verbal elements, there may occur morphophonological processes or not in which case there can be points of differences or similarities.

According to the researcher's findings, there are far more differences than similarities in verbal morphology.

The next chapter presents the analysis and interpretation of data in relation to the third objective: To compare the lexicon of BEM with the lexicon of MAM.

CHAPTER SEVEN

LEXICAL DIFFERENCES AND SIMILARITIES

7.0 Introduction

The previous chapter analysed and interpreted the data on morphology to bring to the fore similarities and differences between BEM and MAM. This chapter, therefore, analyses and interprets the data in relation to the third objective of this study, which is ‘to compare the lexicon of BEM with the lexicon of MAM’. The analysis and interpretation of the data is based on one hundred and sixty-two lexical items in terms of glosses drawn from the lists totalling four hundred eighty-two lexical items. In fact, the total number of lexical items from the nine tables below is one hundred eighty five (185) because some glosses have more than one term each from either language under study. These tables present the terms from the six semantic fields and miscellaneous terms, which are human body parts terms with twenty-five lexical items, kinship terms with twelve lexical items, domesticated animals and birds’ terms with six lexical items, fishing terms with eleven lexical items, agricultural terms with twenty-three lexical items, household terms with twenty-eight lexical items, miscellaneous terms (A) with twenty-four lexical items, miscellaneous terms (B) with twenty-nine lexical items and miscellaneous terms (C) with twenty-seven lexical items. The analysis and interpretation of the data is based on Proto-Bantu radicals sourced from Malcolm Guthrie’s classification of Bantu languages (1948). It is also important to indicate that where there are dashes in the tables, it is not possible to state conclusively whether the terms in BEM and MAM derive from Proto-Bantu.

Brief comments and interpretation of the findings follow each of the tables provided below.

7.1 Human body parts terms

The key informant was interviewed with regard to the lexicon under human body parts terms: to provide the equivalents of the English terms in BEM and MAM for the researcher to find out whether there were similarities and differences in this semantic field. After this exercise, the informants, including the key informant, verified the findings. Below are the analysis and interpretation of the findings.

Table 63: Human body parts terms

Nº	BEM	MAM	PB	Gross
1	-fumo/-fu	-da	-DÀ- / -BÙMŌ/ PÙ	belly/stomach
2	<i>-kasa</i>	<i>-azo</i>	—	foot
3	<i>-shishi</i>	<i>-nyele</i>	- BUD	hair
4	-tima	<i>-enzo</i>	-TÈMÀ	heart
5	<i>-kufi</i>	<i>-kokola</i>	- DỤ	knee
6	-beelee	-yele	-BÈDÈ	breast
7	<i>-ona</i>	<i>-puno</i>	- JÓDÒ	nose
8	<i>-kubukubu /-konkoni</i>	<i>-nkonki</i>	-KŌKŌDÀ	elbow
9	<i>-kumo</i>	<i>-nkumwa</i>	—	thumb
10	<i>-komfola musunga</i>	<i>sontamuntu</i>	—	first finger
11	-koshi	<i>-singo</i>	-KŌTÌ	neck
12	<i>-ponshi</i>	<i>-munyunyu</i>	—	gum
13	<i>-saya</i>	-tama	-TÀMÀ	cheek
14	<i>-tanta</i>	<i>-pamba</i>	-BÈDŌ	thigh
15	-twe	-twe	-TÓ	head
16	<i>-beya</i>	<i>-peya</i>	-YÁPÀ	shoulder
17	-numa	<i>-sizi</i>	YÌMÀ /CŌDŌŌ	back
18	<i>-kobo</i>	<i>-bongoselo</i>	—	occipital bone back of head
19	-twi	-twi	-TÓ	ear
20	-nwe(nkalamba)	-nwe (wa pakati)	-NÒÈ-	(second) finger
21	<i>-konkakantengesha</i>	<i>-londelakantengelezya</i>	—	third finger
22	<i>-kolokoso</i>	<i>-nkulungu</i>	—	ankle
23	-boko	<i>-kasa</i>	-BŌKŌ-	arm

It is clear from the table above that the terms in bold print originate from Proto-Bantu radicals. There are seventeen terms, which come from Proto-Bantu. Out of these, eleven BEM terms originate from Proto-Bantu whereas six MAM terms come from Proto-Bantu; both languages share four Proto-Bantu radicals. One BEM term is similar to one MAM term and three BEM terms are the same as three MAM terms.

Examples of the differences from the table above are:

211(i) *-fumo/-fu* ‘belly/stomach’: from the Proto-Bantu radicals *-BÙMŌ/ PÙ*, respectively, (BEM).

(ii) *-da* ‘belly/stomch’: from the Proto-Bantu radical *-DÀ-* (MAM)

212(i) *-tima* ‘heart’: from the Proto-Bantu radical *-TÈMÀ* (BEM)

(ii) *-enzo* ‘heart’: not from the Proto-Bantu radical *-TÈMÀ* (MAM)

213(i) *-koshi* ‘neck’: from the Proto-Bantu radical *-KOTÌ* (BEM)

(ii) *-singo* ‘neck’: not from the Proto-Bantu radical *-KOTÌ* (MAM)

The table above shows that twenty-one out of the twenty-five BEM terms are different from the MAM terms. Both languages share four Proto-Bantu radicals. One BEM term is similar to one MAM term and three BEM terms are the same as three MAM terms.

7.2 Kinship terms

The key informant was interviewed with regard to the lexicon of the languages under Kinship terms: to provide the equivalents of the English terms in BEM and MAM for the researcher to find out whether and there were similarities and differences in this semantic field. After this exercise, the informants, including the key informant, verified the findings. Below are the analysis and interpretation of the findings.

Table 64: Kinship terms

Nº	BEM	MAM	PB	Gross
1	<i>-lume</i>	<i>-iya</i>	<i>-DÓMε</i>	husband
2	<i>-kashi</i>	<i>muci</i>	<i>-KÁDì</i>	wife
3	<i>yaama</i>	<i>yama</i>	—	maternal uncle
4	<i>-taata</i>	<i>-tata</i>	<i>-TÀÀTÁ</i>	father
5	<i>maayosenge</i>	<i>mangusenge</i>	—	paternal aunt
6	<i>shikulu</i>	<i>kuku</i>	—	grandfather
7	<i>munyina</i>	<i>mwinane</i>	—	brother
8	<i>inkashinkalamba</i>	<i>mangulenzi</i>	—	elder sister
9	<i>munyinamwaice</i>	<i>mutowane</i>	—	younger brother
10	<i>kabinda/kasuli</i>	<i>kayala uvyazi</i>	—	last born
11	<i>ibeli</i>	<i>katota</i>	—	first born

The four terms in bold print in the table above are from Proto-Bantu. Three of these are BEM terms while one term is MAM; both languages share one Proto-Bantu radical. Three BEM terms are similar to three MAM terms.

Examples of the differences from the table above are:

214(i) *-kashi* ‘wife’: from the Proto-Bantu radical *-KÁDì* (BEM)

(ii) *muci* ‘wife’: not from the Proto-Bantu radical *-KÁDì* (MAM)

215 (i) *ibeli* ‘first born’: not sure of its Proto-Bantu radical (BEM)

(ii) *katota* ‘first born’: not sure of its Proto-Bantu radical (MAM)

216 (i) *shikulu* ‘grandfather’: not sure of its Proto-Bantu radical (BEM)

(ii) *kuku* ‘grandfather’: not sure of its Proto-Bantu radical (MAM)

The table above shows that out of twelve BEM terms, nine are different from the MAM terms. Both languages share one Proto-Bantu radical. Three BEM terms are similar to three MAM terms.

7.3 Domesticated animals and birds’ terms

The key informant was interviewed with regard to the lexicon of the languages under Domesticated animals and birds’ terms: to provide the equivalents of the English terms in BEM and MAM for the researcher to find out whether there were similarities and differences in this semantic field. After this exercise, the informants, including the key informant, verified the findings. Below are the analysis and interpretation of the findings.

Table 65: Domesticated animals and Birds terms

Nº	BEM	MAM	PB	Gloss
1	<i>-koko</i>	<i>-napweka/ koko</i>	<i>-KÓKÓ-</i>	chicken
2	<i>-koko iikota</i>	<i>-musuzu</i>	<i>-KÓKÓ-</i>	hen
3	<i>mukolwe</i>	<i>-kokoliko/kapandala</i>	<i>-KÓKÓ-</i>	cock
4	<i>cona</i>	<i>nyau</i>	—	cat
5	<i>-mpanga</i>	<i>mfwele</i>	—	sheep

The table above shows four terms in bold print originating from Proto-Bantu. Two of these are BEM terms while the other two are MAM. Both languages share one Proto-Bantu radical. One BEM term is the same as one MAM term.

Examples of the differences from the table above are:

- 217 (i) *-koko* iikota ‘hen’: from the Proto-Bantu radical **-KÓKÓ-** (BEM)
 (ii) *-musuzu* ‘hen’: not from the Proto-Bantu radical **-KÓKÓ-** (MAM)
- 218 (i) *cona* ‘cat’: not sure of its Proto-Bantu radical (BEM)
 (ii) *nyau* ‘cat’: not sure of its Proto-Bantu radical (MAM)
- 219 (i) *-mpanga* ‘sheep’: not sure of its Proto-Bantu radical (BEM)
 (ii) *mfwele* ‘sheep’: not sure of its Proto-Bantu radical (MAM)

It is noted that five out of six BEM terms are different from the MAM terms. Both languages share one Proto-Bantu radical. One BEM term is the same as one MAM term.

7.4 Fishing terms

The key informant was interviewed with regard to the lexicon of the languages under Fishing terms : to provide the equivalents of the English terms in BEM and MAM for the researcher to find out whether there were similarities and differences in this semantic field. After this exercise, the informants, including the key informant, verified the findings. Below are the analysis and interpretation of the findings

Table 66: Fishing terms

Nº	BEM	MAM	PB	Gloss
1	<i>-sabi</i>	<i>nswi</i>	-CỤ	fish
2	<i>-lwanga</i>	<i>-lusenga</i>	—	fishing basket
3	<i>-koloko</i>	<i>-zile</i>	—	floater on a fishing net
4	<i>-dobo</i>	<i>-dowani</i>	-DỌBỌ	fishing hook
5	<i>-ijwena</i>	<i>-ngwena</i>	—	crocodile
6	<i>-buba</i>	<i>utupa</i>	—	leaves used for poisoning fish

7	-bwato	wato	-YÁTO	canoe
8	-mana	<i>luzi</i>	-DODGA	river
9	<i>cooba</i>	<i>sikafiya</i>	—	paddler
10	-mulondo	<i>muvuvi</i>	—	fisherman
11	-bulondo	<i>uvuvi</i>	—	occupation of fishing

The three terms in bold print are of Proto-Bantu origin: two BEM terms originate from Proto-Bantu while only one MAM term comes from Proto-Bantu. Both languages share one Proto-Bantu radical. Two BEM terms are similar to two MAM terms.

Examples of the differences from the table above are:

220 (i) *-dobo* ‘fishing hook’: from the Proto-Bantu radical **-DOB** (BEM)

(ii) *-dowani* ‘fishing hook’: not from the Proto-Bantu radical **-DOB** (MAM)

221 (i) *-mana* ‘river’: not sure of its Proto-Bantu radical (BEM)

(ii) *luzi* ‘river’: not sure of its Proto-Bantu radical (MAM)

222 (i) *cooba* ‘paddler’: not sure of its Proto-Bantu radical (BEM)

(ii) *sikafiya* ‘paddler’: not sure of its Proto-Bantu radical (MAM)

The table above shows that nine out of the eleven BEM terms are different from the MAM terms. Nevertheless, both languages share one PB radical; two BEM terms are similar to two MAM terms.

7.5 Agricultural terms

The key informant was interviewed with regard to the lexicon of the languages under Agricultural term: to provide the equivalents of the English terms in BEM and MAM for the researcher to find out whether there were similarities and differences in this semantic field. After this exercise, the informants, including the key informant, verified the findings. Below are the analysis and interpretation of the findings.

Table 67: Agricultural terms

Nº	STDBEM	RULMAM	PB	Gloss
1	<i>-buula</i>	<i>ifwa</i>	-YÁÑÌ	leaf
2	<i>-shila</i>	<i>-sisi</i>	-DÌ-	root
3	<i>-nyanje</i>	<i>cisaka</i>	—	maize
4	<i>kalundwe/ tuute</i>	<i>kalya</i>	—	cassava/manioc
5	<i>-umbu</i>	<i>cisela</i>	—	sweet potato
6	<i>-mbatata</i>	<i>cisela ulaya</i>	—	irish potatoes
7	<i>-male</i>	<i>malezi</i>	—	millet
8	<i>-masaka</i>	<i>nkona</i>	—	sorghum
9	<i>cibwabwa</i>	<i>cungwa</i>	—	pumpkin leaves
10	<i>cilemba</i>	<i>kaoli/coli</i>	—	beans
11	<i>cibimbi ca cisungu</i>	<i>-bilika</i>	—	water melon
12	<i>matimati</i>	<i>manteka</i>	—	tomato
13	<i>-sunsami</i>	<i>-toyo</i>	—	monkey nuts
14	<i>-luba lyakasuba</i>	<i>montakasanya</i>	—	sun flower
15	-mono	<i>lupulya</i>	-BONŌ-	castor bean
16	-buto	<i>lumbezu</i>	-BÓTŌ	seed
17	<i>kacesha</i>	<i>soswa</i>	—	cow pea leaves
18	<i>-byala</i>	<i>-komela</i>	—	Plant, sow seed
19	<i>-insa</i>	<i>cisiku</i>	—	rainy season
20	<i>-sekula</i>	<i>-puzula</i>	- CÀKŌD	weed the crops
21	<i>-seepa (amale)</i>	<i>-sinza (malezi)</i>	—	harvest millet
22	<i>-tonge</i>	<i>pamba</i>	—	cotton

The two terms in bold print in the table above originate from Proto-Bantu. Both are BEM terms. We are not sure of the Proto-Bantu radicals of the rest.

Examples of the differences from the table above are:

223 (i) *-mono* ‘castor bean’: from the Proto-Bantu radical **-BONO-** (BEM)

(ii) *lupulya* ‘castor bean’: not from the Proto-Bantu radical **BONO-** (MAM)

224 (i) *-buto* ‘seed’: from the Proto-Bantu radical **-BÓTO** (BEM)

(ii) *lumbezu* ‘seed’: not from the Proto-Bantu radical **-BÓTO** (MAM)

225 (i) *-male* ‘millet’: not sure of its Proto-Bantu radical (BEM)

(ii) *malezi* ‘millet’: not sure of its Proto-Bantu radical (MAM)

The table above shows that all the twenty-three BEM terms are different from the MAM terms, implying that there are no similarities.

7.6 Household terms

The key informant was interviewed with regard to the lexicon of the languages under Household terms: to provide the equivalents of the English terms in BEM and MAM for the researcher to find out whether there were similarities and differences in this semantic field. After this exercise, the informants, including the key informant, verified the findings. Below are the analysis and interpretation of the findings.

Table 68: Household terms

Nº	BEM	MAM	PB	Gloss
1	<i>-ceeswa</i>	<i>cisanza</i>	—	broom
2	<i>-mwele</i>	<i>-peni</i>	-YEDÉ	knife
3	<i>-mwinshi</i>	<i>musi</i>	—	pestle
4	<i>-fwilifwili</i>	<i>-lako</i>	—	mat made out of papyrus
5	<i>-kumpilo</i>	<i>-pupo</i>	—	slasher
6	<i>-supa</i>	<i>-kolo</i>	-CÓPÀ	calabash
7	<i>-iko</i>	<i>muzwa</i>	-YÌKO	ladle/pallet/stirring stick
8	<i>-cele</i>	<i>-silya</i>	—	salt
9	<i>-talo/ -longo</i>	<i>namanduzu</i>	-YÓŋGÒ-	large pot

10	- <i>ciibi</i>	- <i>cisasa</i>	—	door
11	- <i>tondo</i>	- <i>sembo</i>	—	clay pot for storing water
12	-pika	-yungu	-YIPEK, -YÓŋGÒ	pot
13	- <i>sembe</i>	<i>mpasa</i>	-COKÁ, TÈMƆ	axe
14	-nongo	-yungu	-YÓŋGÒ	clay pot for cooking
15	- <i>nani</i>	- <i>cifwa</i>	—	relish
16	-beelee/-shiba	-yele/-iziya	-BεDε	milk from mother/ from animal
17	- <i>puna</i>	- <i>limba</i>	—	seat
18	-kuni	- <i>kwi</i>	-KÓNÌ	firewood
19	- <i>kombo</i>	- <i>ako</i>	—	cup
20	- <i>sote</i>	- <i>kofela/-gowani</i>	—	hat
21	- <i>nyeleti/-akeela/-shindano</i>	- <i>nyeleti/-sindano</i>	—	needle
22	<i>makashi</i>	<i>icengo</i>	—	a pair of scissors
23	<i>insalu yamukati</i>	<i>insalu ya cikuwalo</i>	—	bedsheet
24	- <i>lini</i>	- <i>ndanda</i>	—	egg

In the table above, the eleven terms in bold print come from Proto-Bantu: eight of these are BEM while three are MAM. Both languages share two of the eleven Proto-bantu radicals. One BEM term is the same as one MAM term and the other four are similar to the MAM ones. Examples of the differences from the table above are:

226 (i) *-mwele* ‘knife’: from the Proto-Bantu radical -YEDε (BEM)

(ii) *-peni* ‘knife’: not from the Proto-Bantu radical -YEDε (MAM)

227 (i) *-supa* ‘calabash’: from the Proto-Bantu radical -CÓPÀ (BEM)

(ii) *-kolo* ‘calabash’: not from the Proto-Bantu radical -CÓPÀ (MAM)

228 (i) *-iko* ‘ladle/pallet/stirring stick’: from the Proto-Bantu radical -YÌKƆ (BEM)

(ii) *muzwa* ‘ladle/pallet/stirring stick’: not from the Proto-Bantu radical (MAM)

It is clear from the table above that twenty-three out of twenty-eight BEM terms are different from the MAM terms. However, both languages share two of the eleven PB radicals, and one BEM term is the same as one MAM term, and the other four are similar to MAM ones.

7.7 Miscellaneous terms A

The key informant was interviewed with regard to the lexicon of the languages under Miscellaneous terms A: to provide the equivalents of the English terms in BEM and MAM for the researcher to find out whether there were similarities and differences in the miscellaneous terms in table A. After this exercise, the informants, including the key informant, verified the findings. Below are the analysis and interpretation of the findings.

Table 69: Miscellaneous terms (A)

Nº	BEM	MAM	Proto- Bantu	Gloss
1	-onse	-onsi	-YONCε-	all of them
2	-to	-itwi	-Tɔ-	ashes
3	-dawa/-dawi	-mulembo	-GÀDGÀ	medicine
4	-peema	-futa	-PεM- /PQOM	breathe
5	-shita	-kala	-GÒD-	buy
6	-sheta	-tafuna	-TAKUN-	chew
7	-talala	-zuka	-POD-	become cold
8	-mo	congá	-MO-	one
9	-cibulu	-cintavwanga/-acibulu	—	dumb person
10	-lingala/-isako	-ivumbu	—	feather
11	-fine	-vini	-Nεε- /-NÀ-	four
12	-fina	-nyoma	—	become heavy
13	-kaba	-kaya	-DÒDGQD-	become hot
14	-aume	-monsi	-DOMε-	man (male)
15	-kote	-kombe	-KÓDÒ-	very old person
16	-shitisha	-kazya	—	sell
17	-suba	kasanya	-JÓBÀ-	sun
18	-samba (pamubili)	-fulala	-YOG-	to have a bath (or wash one's body)

19	<i>umwela uleepupa</i>	<i>muza</i>	—	wind
20	<i>-somalí</i>	<i>-sunga</i>		nail
21	<i>-ɲana</i>	-kata	-KÁTA-	a pad on which a load rests on the head (or shoulder)
22	<i>-sonshi</i>	<i>-pumpulwe</i>	—	apex of a roof

The terms in bold print in the table above are from Proto-Bantu. Eight of these are BEM whereas three are MAM, and both languages share one Proto-Bantu radical. Three BEM terms are similar to three MAM terms.

Examples of the differences from the table above are:

229 (i) *-peema* ‘breathe’: from the Proto-Bantu radical **-PɛɛM-** (BEM)

(ii) *-futa* ‘breathe’: not from the Proto-Bantu radical **-PɛɛM-** (MAM)

230 (i) *-sheta* ‘chew’: not from the Proto-Bantu radical **-TAKUN-** (BEM)

(ii) *-tafuná* ‘chew’: from the Proto-Bantu radical **-TAKUN-** (MAM)

231 (i) *-mo* ‘one’: from the Proto-Bantu radical **-Mɔ-** (BEM)

(ii) *-congá* ‘one’: not from the Proto-Bantu radical **-Mɔ-** (MAM)

Twenty-one out of twenty-four BEM terms are different from MAM terms. However, Three BEM terms are similar to three MAM terms.

Miscellaneous terms B

The key informant was interviewed with regard to the lexicon of the languages under Miscellaneous terms B : to provide the equivalents of the English terms in BEM and MAM for the researcher to find out whether there were similarities and differences in the miscellaneous terms in table B. After this exercise, the informants, including the key informant, verified the findings. Below are the analysis and interpretation of the findings.

Table 70: Miscellaneous terms (B)

Nº	BEM	MAM	PB	Gloss
1	<i>-ntelelwe</i>	<i>cisao</i>	—	shade
2	<i>-lafi</i>	<i>ciya</i>	—	forgetfulness
3	<i>-fwasa</i>	<i>-soswa</i>	—	very small anthill
4	-alwa	<i>-wengwa</i>	-YÁDOA-	beer
5	<i>-beshamulilo</i>	<i>kamungu</i>	—	firefly
6	<i>-bili</i>	<i>-vili</i>	-BÀDÉ	two
7	<i>-futu/-puku</i>	<i>-panga</i>	-PÓKÒ-	rodent that lives in plains
8	<i>-ndelwa</i>	<i>-nsiwa</i>	—	orphan
9	<i>bwangubwangu</i>	<i>zuwazuwa</i>	—	fast
10	-uni	-unyi	-YONÌ-	bird
11	<i>-fwambulo / -shiko</i>	-siko	-GÌKÒ-	match box or fire-place
12	<i>-cinelubali</i>	<i>-cinimbali</i>	—	seven
13	-mina	-mila	-MÌD-	swallow
14	<i>-mushiika/-sankano</i>	<i>isokoni</i>	—	market
15	<i>-abu/-salala</i>	<i>-lambwa</i>	—	ford
16	<i>-lupato/mpatila</i>	<i>mfyeli</i>	—	hatred
17	<i>-misha/-kongole</i>	<i>makope</i>	—	debts/borrowed goods
18	<i>-fushi/kafula</i>	<i>sikasula</i>	—	blacksmith
19	<i>shimicelo/shimalungu</i>	<i>simapembwe/simalungu</i>	—	smelter of iron
20	<i>-kofu/-bala</i>	<i>ciyazi</i>	-BADA-	scar

The table above shows that the nine terms in bold print originate from Prot-Bantu. Six of these are BEM whereas three are MAM. Both languages share three Proto-Bantu radicals. Six BEM terms are similar to six MAM terms.

Examples of the differences from the table above are:

232 (i) *-alwa* ‘beer’: fom the Proto-Bantu radical **-YÁDOA-** (BEM)

(ii)-*wengwa* ‘beer’: not fom the Proto-Bantu radical-**YÁDOA-** (MAM)

233 (i)-*ntelelwe* ‘shade’: not sure of its Proto-Bantu radical (BEM)

(ii) *cisao* ‘shade’: not sure of its Proto-Bantu radical (MAM)

234 (i) *bala* ‘scar’: fom the Proto-Bantu radical -**BADA-** (BEM)

(ii) *ciyazi* ‘scar’: not fom the Proto-Bantu radical-**BADA-** (MAM)

It is noted from the table above that twenty-three out of twenty-nine BEM terms are different from the MAM terms. On the other hand, both languages share three PB radicals, and six BEM terms are similar to six MAM terms.

Miscellaneous terms C

The key informant was interviewed with regard to the lexicon of the languages und Miscellaneous terms C: to provide the equivalents of the English terms in BEM and MAM for the researcher to find out whether there were similarities and differences in the miscellaneous terms in table C. After this exercise, the informants, including the key informant, verified the findings. Below are the analysis and interpretation of the findings

Table 71: Miscellaneous terms (C)

N ^o	BEM	MAM	PB	Gloss
1	- <i>lumano</i>	- <i>amulema</i>	—	pair of tongs
2	- <i>sendo</i>	<i>civiya</i>	- DÌGŎ	burden/load
3	- <i>shibisho</i>	- <i>manililo</i>	—	notice
4	- <i>mbesa</i>	<i>mbato</i>	—	adze
5	- <i>mwata</i>	<i>miyele</i>	—	way of doing things
6	- <i>seeba</i>	- <i>syewa</i>	—	shell
7	- <i>mfubu</i>	<i>nkambwe</i>	CŬBÓ	hippo
8	<i>ingubo</i>	- <i>kuwalo</i>	—	cloth
9	- <i>shibilo/-langililo</i>	- <i>manyililo</i>	—	sign/arrow
10	- <i>fulwe</i>	- <i>munumbe</i>	KŬDŎ	tortoise
11	- <i>busha</i>	<i>uzya</i>	—	slavery
12	- <i>cendo</i>	<i>kacecela</i>	—	habit of belittling

13	<i>-suuma</i>	<i>-zwa</i>	-DỤ-	ooze
14	<i>-pupuka</i>	<i>papuka</i>	-GÒDỌK-	fly
15	<i>-tanto</i>	<i>mupanda</i>	—	ladder
16	<i>-cekumi</i>	<i>uwila</i>	—	tithe
17	<i>-penga</i>	<i>-tolilo</i>	—	trumpet
18	-limi	<i>-vwango</i>	-DEMÌ-	language (tongue)
19	<i>-tantamfula</i>	<i>-zwizwi</i>	—	swollen gland in groin caused by a septic wound
20	<i>-musongesonge/ -kusonsomba</i>	<i>kucokozya</i>	—	provocation
21	<i>-ciliko</i>	<i>-kupiko</i>	—	stopper
22	-cemeko/-saasa	-cemeko	-KÈD- (Verb radical)	strainer
23	<i>-bila-</i>	-suma-	-TỤM-	sew
24	<i>-longolola</i>	-pakulula	-PÁK- (verb radical: pack)	to unpack

The five terms in bold print come from Proto-Bantu. Three of these are MAM and two are BEM; both languages share one Proto-Bantu radical, and one BEM term is the same as one MAM term.

Examples of the differences from the table above are:

235 (i) *-fulwe* ‘tortoise’: not from the Proto-Bantu radical **KỤDỌ** (BEM)

(ii) *-muṇumbe* ‘tortoise’: not sure of its Proto-Bantu radical **KỤDỌ** (MAM)

236 (i) *-limi* ‘language/ tongue’: from the Proto-Bantu radical **-DEMÌ-** (BEM)

(ii) *-vwango* ‘language/ tongue’: not from the Proto-Bantu radical **-DEMÌ-** (MAM)

237 (i) *-bila-* ‘sew’: not from the Proto-Bantu radical **-TỤM-** (BEM)

(ii) *-suma-* ‘sew’: from the Proto-Bantu radical **-TỤM-** (MAM)

In the table above, twenty-five out of the twenty-seven BEM terms are different from the MAM terms. However, BEM and MAM share one PB radical, and one BEM term is the same as one MAM term.

7.8 Chapter Summary

This chapter focused on analysis and interpretation of the data related to the third objective, which sought to compare the lexicon of BEM with the lexicon of MAM). The ‘analysis and interpretation’ based on the six semantic fields and miscellaneous terms concerned one hundred and sixty-two lexical items which were extracted from four hundred and eighty-two (482) lexical items from the semantic fields and miscellaneous terms as follows: human body parts terms with twenty-three items, kinship terms with eleven items, domesticated animals and birds terms with five items, fishing terms with eleven items, agricultural terms with twenty-two items, household terms with twenty-four items, miscellaneous terms (A) with twenty-two items, miscellaneous terms (B) with twenty items and miscellaneous terms (C) with twenty-four items.

Based on the data from the tables, the chapter has shown that forty-four BEM terms in our selected list originate from Proto-Bantu while twenty-two MAM terms come from Proto-Bantu. Fourteen BEM terms and fourteen MAM terms share the Proto-Bantu radicals. This implies that the BEM terms have thirty Proto-Bantu radicals, which it does not share with MAM while MAM has eight Proto-Bantu radicals, which it does not share with BEM. It is also evident from the tables that one hundred fifty-nine (159) out of one hundred eighty-five (185) BEM terms are different from MAM terms; twenty BEM terms are similar to twenty MAM terms while both languages share six terms.

CHAPTER EIGHT

CONCLUSION

8.0 Introduction

This chapter concludes the research titled “A Comparative Study of Bemba and Mambwe at Phonological, Morphological and Lexical levels”. This chapter presents the results that have emerged from the study with regard to the objectives: the extent to which the objectives have been achieved. The chapter also gives a brief account of the implications of the study, the contribution of the study to the field of linguistics and the recommendation(s) for further research in the related field.

8.1 The findings

8.1.1 Differences and similarities in phonology

The purpose of this chapter was to address the first research objective, which is “To compare the phonology of BEM with the phonology of MAM. The chapter has presented and discussed the elements of segmental phonology and suprasegmental phonology.

In segmental phonology the areas covered were feature-changing rules with some consonants, the allophonic rules, palatalisation and postalveolarisation in causative and intensive verbal extensions, morphophonological rule of vowel harmony in applicative verbal extension, semivocalisation, coalescence and nasal assimilation. The chapter has brought to the fore some differences and similarities in segmental phonology. First, the similarities: with the feature changing rules ($f \rightarrow v$ and $\int \rightarrow z$), all the words were cognates; the rule of nasal assimilation is applicable to both languages and some words that were involved are cognates; allophonic rule on the voiced bilabial fricative $/\beta/$ is applicable to BEM only, but most of the words involved with this rule are cognates; some words undergoing palatalisation in MAM and postalveolarisation in BEM in causative and intensive verbal extension processes were cognates; semivocalisation occurred where words in both languages are similar or the same. The differences were: the vowel harmony rule is applicable to both languages, but there were some minor differences in its application; the allophonic rule on the voiced alveolar lateral $/l/$ with regard to the present simple

and present continuous tenses in BEM and MAM is applicable only to BEM; with regard to semivocalisation, where the BEM word is different from the MAM word, this process occurs in one word, but not in the other or the environments of semivocalisation in both words are different.

In suprasegmental phonology, the study sought to find out the differences and similarities between the languages under study in relation to: shift in tone in the same words, application of tone in recent and remote past tenses, vowel length in minimal pairs and vowel length in nominal stabilisation.

. A similarity was noted under the shift in tone in the same word; in the light of this, cognates with different tonal patterns can be understood by both BEM and MAM speakers, given the context; the differences were: where the phonemic composition of words in BEM differs from that of words in MAM, the use of tone to distinguish recent past from remote past is different; vowel length in minimal pairs and in nominal stabilisation is applicable only to BEM.

In these areas of analysis and interpretation, it has been concluded that there are more differences than similarities between BEM and MAM despite that they are spoken in the same geographical space.

The research question: ‘How does the phonology of BEM compare with the phonology of MAM?’ This has been answered.

8.1.2 Differences and similarities in Morphology

This chapter has analysed and interpreted the data under the two major themes, namely: (1) Nominal Morphology (2) Verbal Morphology. Each of these has contributed to answering the research question which is “How does the morphology of BEM compare with the morphology of MAM?”

In Nominal Morphology, the differences and similarities between BEM and MAM manifest as a result of: the nouns in both BEM and MAM having different nominal prefixes, but with the same nominal stems; the nouns in both BEM and MAM having the same nominal prefixes but with different nominal stems; the BEM nouns having the nominal prefixes and the nominal stems, which are different from the nominal prefixes and the nominal stems of the MAM nouns. From

the third and last sub-theme, only the differences have emerged. Based on the verified data, the conclusion is that more differences than similarities have emerged in nominal morphology.

Under verbal morphology and in relation to the tenses which are prehodiernal progressive, future tense of today (or hodiernal future), posthodiernal (i.e., remote future), posthodiernal (or remote future) progressive, present progressive (or continuous) and present simple: differences and similarities emerge when it comes to subject markers, tense markers, progressive aspect markers, object markers, verb stems, negative markers, the order or position of these verbal elements and others. Concerning verbal extensions, differences and similarities manifest in the use of verbal extension morphs and verb radicals that form these extensions which are passive, causative, intensive, frequentative, applied or applicative, neuter or stative, reciprocal, reversive active and completive. In terms of mood, differences and similarities are noted in use of verbal elements that go into expressing mood such as subject markers, verb stems, subjunctive markers, subjunctive discontinuous markers, negative makers, object markers and the order of these elements and others in such verbs. In the negative verbs, differences and similarities manifest with regard to verbal elements and the order of these verbal elements. The definitisation verb phrase is another aspect where differences and similarities are noted in relation to verbal elements and the order of these elements. Depending on the environment of the verbal elements, there may occur morphophonological processes in which case there can be points of differences or similarities.

According to the researcher's findings, there are far more differences than similarities in verbal morphology.

The research question: 'How does the morphology of BEM compare with the morphology of MAM?' This question has been answered.

8.1.3 Differences in the lexicon

This section focused on the analysis and interpretation of the data in relation to the third objective, which was to compare the lexicon of BEM with the lexicon of MAM. The analysis and interpretation were based on the Proto-Bantu radicals and the terms from six semantic fields and the miscellaneous terms. The list of the terms that were used comprised one hundred and eighty five (185) lexical items extracted from four hundred and eight-two lexical items in human body

parts terms, kinship terms, domesticated animals-and-birds terms, fishing terms, agricultural terms, household terms and miscellaneous terms.

The differences and the similarities are noted in relation to the use of Proto-Bantu radicals: where one language, but not the other, uses the Proto-Bantu radical related to the lexical item in question; where both languages use different Proto-Bantu radicals both of which are related to the lexical item being considered; where both languages do not use a Proto-Bantu radical and their lexical items being considered are different, similar or the same.

In view of the foregoing, it is noted that in the section for human body parts, twenty-one out of the twenty-five BEM terms are different from the MAM terms. In the section for kinship terms, out of twelve BEM terms, nine are different from the corresponding MAM terms. In the section for domesticated animals and birds, five out of six BEM terms are different from the MAM terms. In the section for fishing, nine out of eleven BEM terms are different from the MAM terms. In the section for agricultural terms, all the twenty-three BEM terms are different from the MAM terms. In the section for household terms, twenty-three out of twenty-eight BEM terms are different from the corresponding MAM terms. In the section for miscellaneous terms A, twenty-one out of twenty-four BEM terms are different from the corresponding MAM terms. In the section for miscellaneous terms B, twenty-three out of twenty-nine BEM terms are different from the corresponding MAM terms. Finally, in the section for miscellaneous terms C, twenty-five out of twenty-seven BEM terms are different from the corresponding MAM terms. This means that one hundred and fifty nine (159) out of one hundred eighty five (185) BEM terms are different from MAM terms. Twenty (20) BEM terms are similar to twenty (20) MAM terms while both languages share six (6) terms.

The research question: ‘How does the lexicon of BEM compare with the lexicon of MAM?’ This question has been answered.

8.2 Implications and conclusion of the study

In concluding this Thesis, it is appropriate to restate that this study was motivated by the close proximity of the BEM and the MAM speaking communities. The researcher sought to find out how BEM and MAM compared with each other phonologically, morphologically and lexically.

Based on the data from these three thematic dimensions, it is concluded that there are far more differences than similarities between BEM and MAM.

In relation to mutual intelligibility which Kashoki (1978) and others have researched on, Hudson (1980:36) points out “if speakers of two varieties can understand each other, then the varieties concerned are instances of the same language. Otherwise, they are not.” He further explains that mutual intelligibility is not really a relation between varieties of a language, but it is between people because it is they, and not the varieties, that understand one another. He adds that the situation being so, the degree of mutual intelligibility depends not just on the number of overlaps between items in two varieties, but on the qualities of the people concerned. He mentions the two qualities, which are: (i) motivation and (ii) experience. Hudson indicates that the highly relevant quality is motivation: how much does person A want to understand person B? He indicates that this depends on numerous factors such as how much an individual likes another, how far that individual wishes to emphasise the cultural differences or similarities between him/her and the other. He explains that motivation is important as understanding another person always requires effort and commitment on the part of the hearer: one is likely to switch off when one’s motivation is low. In view of the foregoing, Hudson (1980:36) points out “the greater the difference between the varieties concerned, the more effort is needed. So, if A cannot understand B, this simply tells us that the task was too great for A’s motivation.”

In connection with the foregoing, this study has noted many more differences than similarities in phonology, morphology and the lexicon between the languages under study. Based on this fact, the attestation, by implication of the findings, is that these languages have some degree of mutual comprehensibility on the mutual intelligibility continuum, which runs from low to high. In fact, Kashoki’ (1978) study on vocabulary correspondences gives 63% of mutual intelligibility between BEM and MAM. The current study feels this percentage is too high seeing that the data on which this percentage was arrived at needed to be inclusive of the other levels of linguistic analysis. Against this background and the findings of this study, it is felt that a lower percentage of mutual intelligibility between BEM and MAM be considered.

8.3 Contribution to the field of study and recommendation

Every research is unique as it is justified by its own aim and objectives. The findings in this study ('A comparative Study of BEM and MAM at phonological, morphological and lexical levels), therefore, provided another window through which linguistics can be viewed, especially the comparison being between the structure of a Regional Official Language and that of a non-Official Vernacular.

This study was informed by Lexical Phonology theory developed by Kiparsky (1982, 1985), Halle and Mohanan (1985), Mohanan (1985), Kaisse and Shaw (1985). As indicated by Udemba (2004), this is a theory in which morphological and phonological rules are brought together in a single framework. It is an approach to phonology that shows the interaction of morphology and phonology in the word building processes. Word formation rules relate to the formation of words. These morphological rules are used to combine morphs realising various morphemes to form words. These particular morphological rules put together the morphs that are required to form words. Then the words are cycled or submitted to the rules of phonological module, which are triggered by these particular morphological rules. In this manner, the phonological rules indicate how the words created by the morphological rules are to be pronounced.

Equally important to this study is the Comparative Bantu morphology and phonology theoretical framework. Malcom Guthrie developed this theory during the period 1967- 1971. According to Nurse and Philippson (2014), the communities speaking Bantu languages are indigenous to twenty-seven African countries. The Comparative Bantu morphology and phonology theory reflected in Nurse and Philippson's (2014) introductory pages 5, 6, 7 and 8 is viewed from the perspective of historical definition and typological characteristics. The focus is on the latter to contextualise the study. The typological characteristics are viewed in terms of the following, as presented by Nurse and Philippson (2014):

1. Phonology: Vowels: most Bantu languages have seven or five vowels (Ref. Nurse and Philippson, 2014: introductory page 7). Consonants (Ref. Nurse and Philippson on the discussion of this); syllables: open in many Bantu languages; tone: most Bantu languages are tonal
2. Morphology: Bantu languages are agglutinating. Verbs have an elaborate set of affixes. Most Bantu languages have non-derived and derived nouns, the latter having an inflectional prefix and derivational suffix, and so on. All nouns are assigned to a class. Over twenty such classes are reconstructed for Proto-Bantu (PB) although most of today's languages have between twelve and twenty while a few languages have reduced or eliminated classes. A class is characterised by a distinct prefix: a specific singular / plural pairing, (a gender) and agreement with other constituents; Bantu languages have been described as verby. This means that the verb is pivotal in the sentence; it incorporates much information and may stand alone as a sentence; Nearly all Bantu languages are pro-drop. In many languages, verbs have six possible pre-stem position positions. Because most of these may be occupied by one morpheme, it is possible to get a string of a dozen or more morphemes in a verbal word, and so on.
3. Syntax: The default order of sentence constituents across Bantu is S (Aux) VO (Adjunct).

The combination of Lexical Phonology and Comparative Bantu morphology and phonology theoretical frameworks has enabled the researcher to answer the research questions.

Considering the gaps left behind by the studies done earlier in the field of linguistics, the researcher has been able to fill a gap with regard to phonological, morphological and lexical differences and similarities that exist between BEM and MAM speakers in the Northern Province. Based on these differences and similarities, the re-affirmation is that these are languages spoken in the same geographical space, not dialects of the same language. Indeed, this study contributes to the existing literature in the field of linguistics.

Secondly, the findings in this study will be of value to scholars, researchers, university and college lecturers and students in the field of Linguistic Science. Furthermore, curriculum developers and Ministry of Education policy makers may find the material in this study beneficial.

Considering the fact that there have been few studies of this nature:

- I wish to recommend that more research similar to this be conducted so that the Non-Regional Official Languages of Zambia can be promoted linguistically, politically and academically in one way or another.

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APPENDICES

Appendix 1: Phonology

(A) Segmental phonology

Phonological similarities and differences manifest in some consonant sounds in relation to feature changing rules: $f \rightarrow v$, from STDBEM to RULMAM and $\int \rightarrow z$, from STDBEM to RULMAM.

NUMBER	ENGLISH	BEMBA	MAMBWE
1	all	bonse	yonsi
2	animal	inama	nyama
3	ashes	imito	itwi
4	belly/stomach	ifumo	nda
5	bird	icuuni	cunyi
6	blind person	impofu	mpafu
7	blood	umulopa	uwazi
8	big	icikulu	cikulu/cikalamba
9	bone	ifupa	ifupa
10	to breathe	ukupema	kufuta
11	to buy	ukushita	kukala
12	canoe	ubwato	wato
13	cattle	ijombe	jombe
14	to chew	ukusheta	kutafuna
15	chicken	inkoko	napweka/ nkoko
16	child	umwana	mwana
17	cloud	ikumbi	ikumbi
18	to be cold	ukutalala	kuzuka
19	one	cimo	conga
20	two	fibili	vili
21	three	fitatu	vitatu
22	four	fine	vini
23	five	fisano	visano
24	six	mutanda	mutanda
25	seven	cine lubali	cinimbali
26	eight	cine konsekonse	cinani
27	nine	pabula	fundimbali
28	ten	ikumi	ikumi
29	eleven	ikumi na cimo	ikuminaconga
30	twelve	ikumi na fibili	ikuminavili
31	crocodile	iqwena	ngwena
32	to cry	ukulila	kulila
33	to die	ukufwa	kufwa

34	dog	imbwa	simbwa
35	to drink	uukunwa	kumwa
36	dumb person	cibulu	acibulu
37	ear	ukutwi	ikutwi/amakutwi
38	to eat	ukulya	kulya
39	egg(s)	iilini (amani)	lindanda(amandanda)
40	elephant	insofu	nzovu
41	eye	iilinso	ilinso
42	to fall	ukupona	kupona
43	father (my_)	taata	tata
44	their father	wishi	isi
45	his/her father	baawishi	yaisi
46	feather	isako	ivumbo
47	fire	umulilo	moto (swahili)
48	fish	isabi	nswi
49	to fly	ukupupuka	kupapuka
50	flower	iiluba/ amaluba	luwa/maluwa
51	foot	ulukasa	lwazo
52	frog	cula	cula
53	to give	ukupu	kupela
54	hair	umushishi	nyele
55	hand	icisansa	cizanza
56	head	umutwe	mutwe
57	nose	umona	mpuno
58	old	icakale	campiti
59	rain	imfula	mvula
60	root	umushila	musisi
61	to hear	ukumfwa	kumvwa
62	heart	umutima	mwenzo
63	heavy	icafina	icanyoma
64	hot/to be hot	Icakaba/ ukukaba	icakaya/kukaya
65	how	shani	canyi
66	house fly	lunshi	lunzi
67	husband	umulume	iya/yaiya(pl)
68	kill	ipaya	koma
69	knee	ikufi	ikokola
70	laugh	seka	seka
71	leaf	ibula	ifwa
72	leg	ukulu	ikulu
73	man (human being)	umuntu	muntu/antu (pl)
74	man (male person)	umwaume	monsi
75	many	ifingi	vingi
76	meat (flesh of animal)	inama	nyama
77	milk (breast)	ibele	yele

78	moon	umweshi	mwezi
79	mother (my)	maayo	mayo (sg) amayo (hon.)
80	his/her mother	nyina	nyina/anyina
81	their mother	banyina	anyina/yanyina (pl)
82	your (sg) mother	noko	nyoko/anyoko
83	your (pl) mother	baanoko	yanyoko (pl/hon.)
	horifific (also)		
84	mouth	akanwa	kamwa
85	new	icipya	yanyokoma
86	name	ishina	zina
87	night	ubushiku	uziku
88	see	mona	lola
89	be sick	lwala	lwala
91	sky	umuulu	iyulu
92	small	icinono	cinono/kanono
93	snake	insoka	nzoka
94	spit	ukusaka	kuswa
95	sun	akasuba	kasanya
96	swallow	mina	mila
97	tongue	ululimi	lulimi
98	tooth	iilino	lino
99	tree	icimuti	cimuti
100	vomit	luka	luka
101	to walk	ukwenda	kupita
102	water	a-ma-inshi/ameenshi	manzi
103	to wash (body)	ukusamba	kufulala
104	be/get wet	bomba	ómbà
105	when	nililali	lilaci
106	where	nikwi	mbalikwi
107	wife	umukashi	uwane
108	wind	umwela ulepupa	muza
109	woman (female person)	umwanakashi	mwanaci

Continuation

NUMBER	ENGLISH	BEMBA	MAMBWE
110	hand (s)	icisansa (sg) ifisansa (pl)	cizanza (sg) vizanza (pl)
111	leg (s)	ukuulu (sg) a-ma-ulu amoolu	ma-ulu maulu (no fus)
112	breast (s)	ibeele amabeele	yele (sg) mayele (pl)
113	chin (s)	akalefulefu (sg) utulefulefu (pl)	cilevu (sg) vilevu (pl) kalezu (sg) tulezu (pl)
114	backbones	imingololo (no gliding)	myongololo (palatalization /gliding)
115	toe (s)	icikondo (sg) ifikondo (pl)	cikando vikando (pl)
116	fiancee	nkobekela	nkowekela
117	ancestors	ifikolwe	vikolwe
118	your grand mother	nokokulu	nyokokulu
119	cousin	umufyala	muvyala
120	ducks	imbata	vibata
121	dog	imbwa (sg)	simbwa
122	goat	imbushi (sg)	mbuzi
123	canoe	ubwato (sg)	wato
124	spear	ifumo	isumo
125	lake	beemba	yemba
126	rain	imfula	mvula
127	cucumber	icibimbi	cimbi
128	pineapple	icinanashi	cinanazi
129	crop	icisabo	cisao
130	to harvest	ukusombola	kuzombola
131	fertilizer	umufundo	muwundo
132	pestles (s)	umwinshi (sg) iminshi (pl)	musi (sg) misi (pl)
133	mat made out of reeds	ubutanda	utanda
134	fire place	ishiko	ziko
135	cups	inkomaki (sg)	nkomaki

		inkomaki (pl)	zyankomaki
136	honey	ubuci	uci
137	bird (s)	icuuni/ifyuni	cunyi/viunyi
138	to drink	ukunwa	kumwa
139	to become hot	ukukaba	kukaya
140	to hear	ukumfwa	kumvwa
141	darkness	imfinshi	mfinzi
142	to swallow	ukumina	kumila
143	to cause to drink	ukunwesh	kumwezya
144	woman/female person	umwanakashi	mwanaci
145	a jump/leap	Ibaka	iwaka

(B) Similarities and differences between the languages under study with regard to palatalisation and postalveolarisation

Gloss	Bemba Pronunciation	Mambwe pronunciation
cause to be defeated	u-ku-cimb-a → ukucimba /ukucimfya/ [ukutʃi: mʃja]	/ku-cimb-a → kucimba /kucimvya/ [kutʃi: mʋja]
cause to be lost	u-ku-lub-a → ukuluba /ukulufya/ [ukulufja]	/ku-pong-a → kuponga /kuponzya / [kuponzja]
cause to move everywhere	u-ku-lulumb-a → ukululumba /ukululumfya/ [ukululu: mʃja]	ku-pitan-a → kupitana /kupitanya / [kupita:ɲa]
cause to be long	u-ku-leep-a → ukuleepa /ukuleefya / [ukule:fja]	/ku-talimp-a → kutalimpa /kotalimfya / [kutali: mʃja]
cause to be/look stupid	u-ku-tump-a → ukutumpa /ukutumfya / [ukutu: mʃja]	ku-zingot-a → kuzingota /kuzingosya / [kuzi:ŋgosja]
cause to be thin	u-ku-ond-a → ukooonda /ukoonsya / ukonsja/ [uko:ɲja]	u-ku-ond-a → ukonda /konzya/ [ko:nzja]
(of the heart) cause to beat fast	u-ku-tunt-a → ukutunta ukutunsya /ukutunsja/ [ukutu:ɲja]	ku-tunt-a → kutunta /kutunsya / [kutu:nsja]
cause to pass	u-ku-pit-a → ukupita ukupisya /ukupisja/[ukupiʃ a]	ku-pit-a → kupita /kupisya / [kupisja]
cause to burst	u-ku-pook-a → ukupooka /ukupoosya/ukupoojsa[ukupo:ʃ a]	ku-pusi-a → /kupusya / [ku:pusja]
cause to hunt	u-ku-lung-a → ukulunga ukulunsya /ukulunsja / [ukulu:ɲja]	ku-vwim-a → kuvwima /kuvwimisya / [kuvwimisja]
cause to become hard	u-ku-kos-a → ukukosa ukukosya /ukukosja/ [ukukoʃa]	ku-kom-a → kukoma /kukomya / [kukomja]
cause to speak	u-ku-sos-a → ukusosa /ukusosya/ → /ukusosja/ [ukusoʃa]	ku-vwang-a → kuvwanga kuvwanzya [kuvwanzja]

cause to heat	u-ku-kab-a → ukukaba /ukukafya / [ukukafja]	ku-kai-a → kukaya /kukavya / [kukavja]
a big rat that lives on the plain	in-sensi→ /insensi/ [insenʃi]	m-beya→ /mbeya/ [mbeja]
slave	u-mu-sia:→ umusya /umusja/ [umuʃa]	mu-zia→/muzya/ [muzja]
thank	tasi-a:→ tasya /tasja/ [taʃa]	taizi-a→/taizya / [taizja]
press/huddle together, pin down; oppress	titikisi-a:→ titikisya /titikisja/ →[tɪtɪkɪʃa]	titikizi-a→/titikizya / [tɪtɪkɪzja]
press down	tininkisi-a→ tininkisya /tininkisja / [tɪnɪ:nkɪʃa]	tininkizi-a→/tininkizya / [tɪnɪ:nkɪzja]
harden oneself against pain; to persevere	shipikisi-a → shipikisya /shipikisja / [ʃɪpɪkɪʃa]	zizimizi-a→/zizimizya / [zizimizja]
change places with one another	kombosiani-a → kombosyanya /kombosjanya/ [ko:mboʃana]	komboziani-a→/kombozyanya / [ko:mbozjana]

Appendix 2: Lexis

(A) HUMAN BODY PARTS TERMS

NUMBER	ENGLISH	BEMBA	MAMBWE
1	belly / Stomach(es) bellies	iifumo/icifu amafumo / ififu	nda,
2	bone (s)	iifupa (sg) amafupa (pl)	ifupa
3	blood	umulopa	uwazi
4	eye (s)	iilinso (sg) ameenso (pl)	ilinzo/aminzo(pl)
5	foot feet (pl)	ulukasa inkasa (pl)	lwazo ngazo (pl)
6	hair	umushishi	nyele
7	hand (s)	icisansa ifisansa (pl)	cizanza vizanza
8	head (s)	umutwe imitwe (pl)	mutwe (sg) mitwe (pl)
9	heart (s)	Umutima(sg) imitima (pl)	mwenzo (sg) myenzo (pl)
10	knee (s)	iikufi amakufi (pl)	ikokola (sg) makokola (pl)
11	leg (s)	ukuulu amoolu (pl)	ikulu (sg) maulu (pl)
12	breast (s)	iibeele amabeele (pl)	yele mayele (pl)
13	mouth (s)	akanwa utunwa (pl)	kamwa (sg) tumwa (pl)
14	nose (s)	umoonaa imyoonaa (pl)	mpuno (sg) zyampuno
15	tongue (s)	ululimi indimi (pl)	lulimi (sg) ndimi (pl)
16	tooth teeth (s)	iilino ameeno (pl)	lino (sg) amino (pl)
17	elbows (s)	icikubukubu /inkonkoni ifikubukubu (sg/pl)	kankonki (sg) utunkonki (sg)
18	chin (s)	akalefulefu utulefulefu (pl)	cilevu/akalezu vilevu/ utulezu
19	finger nail	ulwala ingala (pl)	icala vyala
20	thumb (s)	icikumo/ifikumo	cinkumwa (sg) vinkumwa (pl)
21	first finger (s)	inkomfola musunga (sg/pl)	nsonta muntu (sg)

			nsonta yantu (pl)
22	backbone (s)	umungololo (sg) imingololo (pl)	mongololo (sg) myongololo (pl)
23	face (s)	impumi (sg/pl)	mpumi (pl) zyampumi (pl)
24	lip (s)	umulomo imilomo (pl)	mulomo (sg) milimo (pl)
25	skin (s)	inkanda (sg/pl)	nkanda
26	neck (s)	umukonshi imikoshi (pl)	nsingo (sg) zyansingo (pl)
27	chest (s)	icifuba ififuba (pl)	cifuba (sg) vifuba (pl)
28	ear (s)	ukutwi amatwi (pl)	ikutwi (sg) makutwi (pl)
29	gum (s)	iciponshi ifiponshi (pl)	cimunjnyu (sg) vimunjnyu (pl)
30	cheek (s)	isaya amasaya (pl)	itama (sg) matama
31	thigh (s)	itanta amatanta (pl)	mpamba
32	hip (s)	ulutungu intungu (pl)	lutungu/ntungu
33	calf (of a leg) calves	ulusafu insafu (pl)	kapafu/yakapafu (pl) (from English claf/claves)
34	toe (s)	icikondo ifikondo (pl)	cikando (sg) vikando
35	finger (s)	umunwe (pl)	munwe minwe
36	armpits (s)	ukwapa amaapa (pl)	kwapa (sg) mapa (pl)
37	shoulder (s)	ukubeya amabeya (pl)	cipeya/ mapeya (pl)
38	back	inuma	nsizi
39	eyelids	icipa ca palinso icikumbi ca palinso	cipeni ca linzo vipeni vyaminzo
40	eye lashes	ulukopyo (sg) inkopyo (pl)	Lukopyo (sg) Nkopyo(pl)
41	waist (s)	umusana imisana (pl)	musana (sg) misana (pl)
42	occipital bone back of head or skull	ulukobo; inkobo (pl) akantembwa; utuntembwa (pl)	kabongoselo (sg) tubongoselo (pl)

43	a physical abstrction on the eye	icibubi ifibubi	mutuzu (sg) mituzu (pl)
44	second finger	umunwenkalamba (sg) iminwenkalamba (pl) munwewapakati; imi... (pl)	umunwe wapakasi
45	third finger (s)	cikonkakantengesha	cilondelela kantengelezuya
46	little finger (s)	akantengesha utuntengesha (pl)	kantengelezuya (sg)tuntengelezuya (pl)
47	Heels	icitende ca lukasa ifitende fya nkasa	katende/kantunta (sg) tuntunta (pl)
48	ankle (s)	ulukolokosa inkolokoso (pl)	kankulungu (sg) tunkulungu (pl)
49	arm (s)	ukuboko amaboko (pl)	ikasa (sg) makasa (pl)
50	rib (s)	ulubafu imbafu (pl)	ilubavu (sg) mbavu pl)
51	tongue	ululimi indimi (pl)	lulimi (sg) ndimi (pl)

(B) KINSHIP TERMS

1	father	taata bataata (with respect)	tata (sg) yatata (pl or hon.)
2	his/her father	wishi	isi (sg/no respect) yaisi (pl or hon.)
3	my mother	mayo(sg), baamaayo (pl)	mayo (sg) yamayo (pl)
4	his/her mother	nyina	nyina (sg) yanyina (pl and hon.)
5	husband	umulume	iya (sg) yaiya (pl)
6	wife	umukashi	muci (sg) aci (pl)
7	fiancé	lumbwe(sg) baalumbwe (pl)	nkowekela(sg) yankowekela (pl)
8	fiancée	nkobekela(sg) baankobekela(pl)	nkowekela(sg), yankowekela (pl)
9	parent (s)	umufyashi(sg) abafyashi (pl)	muvyazi (sg) avyazi (pl) mukwasi/akwasi (typical)
10	child (ren)	umwana abaana (pl)	mwana (sg) ana/ayana (pl)
11	A ncestors (s) fore fathers (s)	icikolwe(sg) ifikolwe (pl)	cikolwe (sg) vikolwe (pl)
12	descendants	uluko (sg) inko (pl)	iuvi (sg) amauvi (pl)
13	sister-in-marriage	cufimwanakashi/	citwazi ungi mwanaci

		cufimunandi umwanakashi	
14	brother-in-marriage	cufimwaume/cufimunandi	citwazi ungi umonsi
15	maternal uncle	yaama	yama /mujomba (swahili)
16	totem	umukolwa (sg) imikowa (pl)	mwiko (sg) imiko (pl)
17	sister-in-law	bukwe/mulamu mwanakashi	tai wanaci ↓ mulamu
18	younger sister	nkashi yandi mwaice	nkazi mwance
19	paternal aunt	maayosenge	mangusenge
20	parternal uncle	taata mukalamba/ mwaice	tata mukalamba (sg) yatata mukalamba (pl)
21	grandson	umwishikulu mwaume	mwizikulu monsi
22	grand daughter	umwishikulu mwanakashi	mwizikulu mwanaci
23	maternal aunt	maayo mukalamba	yansongo yako mayo ↓ ↓ elder sister of my mother
24	bother-in-law	bukwe/mulamu mwaume	tai umonsi yatai aonsi
25	father-in-law	taata fyala(sg) baataatafyala (pl) (amako)	tatavyala(sg), yatatavyala(pl)
26	great grandson(s)	icishikulula caume (pl) ifishikulula fyaume (pl)	cizi kululwa consi (sg) vizikululwa vyonsi (pl)
27	great granddaughter	icishikulula canakashi(sg), ifishikulula fyanakashi(pl)	cizikululwa canaci (sg) vizikululwa vyanaci (pl)
28	mother-in-law	maayo fyala/amako	manguvyala (sg) yamanguvyala(pl or hon.)
29	grandfather	shikulu baashikulu	kuku: akuku (sg/hon.) yakuku (pl or hon.)
30	grandmother	maama	mama: amama (sg or hon.) yamama (pl or hon.)
31	your grand mother	nokokulu	nyokokulu (sg) yanyokokulu (pl or hon)
32	family	ulupwa(sg)/indupwa(pl) uluko (sg)/inko	lupwa/uluko (sg) inko (pl)
33	son(sg)	umwana umwaume	mwanamonsi (sg) anaonsi (pl)
34	daughter	ummwana mwanakashi (sg) abana banakashi (pl)	mwna mwanaci (sg) anayanaci (pl)
35	your grandfather	sokulu	sokulu/ asokulu) (sg or hon.) yasokulu (pl.or hon.)
36	cousins	umufyala (sg) abafyala (pl)	muvyala(sg), avyala(pl)
37	nephew	umwipwa umwaume	mwipwa monsi
38	niece	umwipwa umwanakashi	mwipwa mwanaci

39	brother (s)	munyina(sg) baamunyunane (pl)	mwinane (sg) ainane(pl)
40	sister	inkanshi	kaciwane or nkazi
41	elder brother	munyina mukalamba(sg) baamunyunamukaamba (pl)	tatalenzi (sg) yatatalenzi (pl)
42	elder sister	inkashinkalamba(sg) baankashinkalamba(pl)	mangulenzi (sg) yamangulenzi (pl)
43	younger brother	munyina mwaice	mutowane/ citowane
44	younger sister	inkashi yaice	nkazi wane mwance (sp) yankazi yane oce (pl)
45	last born	kabinda/kasuli(sg) baakabinda/ baakasuli (pl)	kayala uvyazi utuyala uvyazi
46	first born	ibeli	katota wane ibeli wandi yakatota yane

(C) DOMESTICATED ANIMALS AND BIRDS TERMS

1	chicken (sg/pl)	inkoko (sg/pl)	napweka (sg)/inkoko(sg/pl) yanapweka (pl) (yane) of mine
2	hen	inkokoiikota(sg) inkoko ishikota(pl)	musuzu (sg) misuzu (pl)
3	cock	mukolwe(sg), baamukolwe(pl)	kokoliko (sg) yakokoliko(pl) kapandala(sg) yakapandala (pl)
4	cattle	ijombe (sg/pl)	ijombe cipambasi (bull)
5	pig	inkumba (sg/pl)	kapoli mutiswe (sg) yakapoli yatiswe (pl)
6	dog	imbwa (sg/pl)	simbwa yasimbwa
7	goat	imbushi (sg/pl)	mbuzi (sg) zyambuzi (pl)
8	he-goat	sawe/pumbwe(sg), baasawe/baapumbwe (pl)	mbuzi yakalume (sg) mbuzi zyakalume (pl)
9	cat	cona(sg) baacona(pl)	nyau (sg) yanyau (pl)
10	sheep	impanga(sg/pl)	mfwele (sg) zyamfwele (pl)
11	duck	imbata (sg/pl)	cibata (sg) vibata (pl)

12	pigeon/dove	inkunda (sg/pl)	nkunda (sg) zyankunda (pl)
13	rabbit/hare	kalulu	kalulu
14	guinea fowl	ikanga(sg), amakanga (pl)	ikanga (sg) makanga (pl)
15	donkey	kabaalwe(sg), baakabalwe(pl)	punda(sg), yapunda(pl)

(D) FISHING TERMS

1	fish	isabi(sg/pl)	nswi (sg) zyanswi (pl)
2	canoe	ubwato(sg), amaato(pl)	uwato (sg) amawato (pl)
3	oar	inkafi(sg/pl)	nkafi(sg) zyankafi(pl)
4	fishing basket	ulwanga (sg), inanga (pl)	lusenga(sg) nsenga (pl) cilimila (sg) vilimila (pl)
5	fishing net	iisumbu(sg) amasumbu (pl)	isumbo (sg) masumbo (pl)
6	floater on a fishing net	ikoloko(sg), amakoloko(pl)	zile(sg) mazile (pl)
7	fishing hook	indobo (sg/pl)	ndowani(sg) zyandowani (pl)
8	fisherman	umulondo (wesabi)	muvuvi (sg) avuvi (yanswi) (pl)
9	rope/bark fibre string	umwando(sg) imyando(pl)	mwando(sg) myando(pl)
10	catching fish by using fishing basket	ukwelá	kusenga
11	catching fish by using a fish hook	ukuloba	kuloba
12	bait (used for hooking fish)	lyambi(sg), baalyambi/ifyambi(pl)	cambi(sg) vyambi(pl)
13	fish trap	umoono (sg) imyoono (pl)	umono (sg) myono(pl)
14	spear	Iifumo(sg), amafumo(pl)	isumo(sg) masumo(pl)
15	leaves used for poisoning water	ububa	utupa
16	catfish	umuta (sg) imita (pl)	mulonge (sg) milonge (pl)
17	leech	umusundu(sg) imisundu(pl)	munsundo (sg) minsundo (pl)
18	floods/inundation of water from the rivers/lakes	ilyeshi	kuzula

19	to wade	ukutubula	kutubula
20	river	umumana(sg), imimana(pl)	luzi (sg) nguzi (pl)
21	lake	beemba(sg), baabeemba(pl)	yemba (sg) yayemba (pl)
22	paddlers	cooba/kooba	sikafiya (wa wato)
23	crocodile	injwena(sg/pl)	ngwena (sg) zyangwena (pl)
24	occupation of fishing	ubulondo	uvuvi

(E) AGRICULTURE TERMS

1	leaf/leaves (pl)	iibuula(sg) amabuula(pl)	ifwa (sg) mafwa (pl)
2	rain	imfula	mvula
3	roots (s)	umushila(sg) Imishila(pl)	musisi (wacimuti) (sg) misisi (yacimuti)(pl)
4	maize	inyanje(sg/pl)	cisaka (sg) yacisaka(pl)
5	cassava/manioc	kalundwe(sg/pl)	kalya (sg) yakalya (pl)
6	sugar cane	icisali(sg) ifisali (pl)	cisali(sg) visali(pl)
7	sweet potatoes	icumbu(sg) ifyumbu (pl)	cisela (sg) visela (pl)
8	irish potato (es)	Imbatata(sg/pl)	cisela ulaya(sg) viselavyaula/visela ulaya (pl)
9	pumpkins (s)	icipushi (sg) ifipushi (pl)	cipuzi(sg) vipuzi(pl)
10	millet	amale	malezi
11	sorghum	amasaka	nkona
12	cocoa yam	icilungwa(sg) ifilungwa(pl)	cilungwa(pl) vilungwa (pl)
13	guava (s)	iipeela (sg) amapeela (pl)	mupela(sg) mapela (pl)
14	banana	inkonde(sg/pl)	nkonde(sg/pl)
15	pumpkin leaves	cibwabwa	cungwa
16	potato leaves	kalebwe	kalebwe
17	cassava leaves	katapa	katapa
18	beans	cilemba	kaoli/coli
19	mango	yemba(embe)(sg) imyembe(pl)	mwembe myembe
20	bean leaves	cimpapila	mpapile
21	cucumber	icibimbi(sg)	cimbi(sg)

		ifibimbi (pl)	vimbi(pl)
22	water melon	icibimbi cacisungu(sg) ifibimbi fyacisunga(pl)	cibiliki (sg) vibiliki (pl)
23	tomato	matimati	manteka
24	onion	kanyense(sg/pl)	kanyenze(sg) yakanyenze(pl)
25	monkey nuts	ulusunsami(sg), insunsami(pl)	lutoyo ntoyo
26	cowpeas	iilanda	ilanda
27	rice	umupunga	mupunga
28	orange	icuungwa(sg) amacuungwa (pl)	cungwa(sg) macungwa(pl)
29	lemon	kantu(sg) baakantu (pl) /iilindimu(sg) amandimu (pl)	ndimu(sg) zyandimu(pl)
30	paw paw	ipapaya amapapaya	ipapao mapapao
31	wheat	ijanuu	ngano
32	pepper/hot chillis	impilipili	mpilipili
33	marrow/guord (s)	umungu(s) imyungu (pl)	mungu myungu (pl)
34	palm tree (for oil)	ingashi amafutayangashi	umungazi (tree) mafutayamungazi mafutayangazi
35	sunflower	ilubalyakasuba	montakasanya (kasanya 'sun')
36	pineapple (s)	icinanashi ifinanashi (pl)	cinanazi vinanazi
37	castor (bean(s))	ulumono (castor tree) ulumono (a seed of castor) imono (seeds of castor or castor trees)	mupulya (castor tree) lupulya (a seed of castor) mpulya (seeds of castor or castor trees)
38	vegetables	musalu	musalu
39	fertilizers (s)	umufundo(sg) imifundo (pl)	muvundo (sg) mivundo(pl)
40	seed (s)	ulubuto(sg) imbutop (pl)	lumbezu (sg) mbezu (pl)
41	cowpea leaves	kacesha	soswa
42	marrow/guord leaves	lungulungu	lungulungu
43	Crop(s)	icisabo (sg) ifisabo (pl) icilimwa (sg) ifilimwa (pl)	cizao(sg) vizao(pl)

44	a bundle of bananas	umusemo wankonde	musowankonde
45	to sow/plant seed	ukubyala	kukomela
46	rainy season	amainsa	cisiku
47	to weed the crop	ukusekula	kupuzula
48	to harvest	ukusombola	kuzombola
49	to harvest millet	ukuseepa amale	kusinja malezi
50	cotton	ubutonge	pamba

(F) HOUSEHOLD RELATED TERMS

1	egg	iilini(sg), amani(pl)	lindanda mandanda
2	sieve	ulunyungo inyungo (pl)	lunyungo(sg) zyanyungo(pl)
3	pillow	Umusao(sg) imisao (pl) umusamino (sg) imisamino(pl)	musamilo (sg) misamilo (pl)
4	wooden axe	imbafi(sg/pl)	nzewe yacimuti(sg) zyanzewe zyavimiti(pl)
5	plate	imbale (sg/pl)	mbale(sg/pl) nsani
6	mortar	iibende(pl) amabende (pl)	cina(sg) vina (pl)
7	pestle (s)	umwinshi iminshi (pl)	musi(sg) misi(pl)
8	bed	ubusanshi amasanshi (pl)	musanzi (sg) misanzi (pl)
9	knife/knives	umwele(sg) imyele (pl)	mupeni (sg) mipeni (pl)
10	broom (s)	iceeswa(sg) ifyeeswa(pl)	cisanzi (sg) visanzi (pl)
11	chair	umupando(sg) imipando (pl)	mupando (sg) mipando (pl)
12	seat (s)	icipuna(sg) ifipuna (pl)	cilimba (sg) vilimba (pl)
13	mat(s) made out of reeds	ubutanda(sg) amatanda (pl)	utanda (sg) matanda (pl)
14	mat(s) made out of papyrus	akafwilifwili utufwilifwili (pl)	cilako(sg) vilako(pl)
15	sickle	icikwakwa(sg) ifikwakwa(pl)	cikwakwa(sg) cikwakwa(pl)
16	slasher	icikumpilo(sg) ifikumpilo(pl)	mpupo/cipupo(sg) vipupo(pl)

17	calabash	insupa (sg/pl)	nkolo (sg) zyankolo(pl)
18	pallets (s) (striring)	umwinko/umwiko(sg) iminko/imiko(pl)	muzwa (sg) mizwa (pl)
19	winnowing basket	ulupe(sg) indupe (pl)	lupe(sg) ndupe(pl)
20	salt	umucele	musilya
21	shoes	ulusapato /insapato (pl)	ndyato(sg/pl)
22	cassava powder	ubungabwakalundwe	suwakokalya
23	mealie meal (mealie powder)	ubunga bwanyanje	suwakocisaka
24	radio	icilimba(sg) ifilimba (pl)	cilimba(sg)/vilmba(pl), ca/vya kulizya
25	door	iciibi (sg) ifiibi (pl)	cisasa(sg) visasa
26	clay pot (s) for storing water	umutondo(sg) imitondo(pl)	nsembo (sg) zyansembo (pl)
27	pot (s)	umupika imipika	nyungu(sg) zyanyungu(pl)/ mwipika (sg) mipika(pl)
28	axe (s)	iisembe(sg) amasembe (pl)	mpasa zyampasa
29	clay pot (s) for cooking	inongo (sg/pl)	nyungu (sg) zyanyungu (pl)
30	basket (s) made out of bamboo	umuseke (sg) imiseke (pl)	muse (sg) mise (pl)
31	keys	ulufungulo imfungulo (pl)	lufungulo (sg) mfungulo (pl)
32	relish	umunani (only in sg form), iminani(pl: types)	cifwa (sg) vifwa (pl)
33	milk	umukaka ishiba	izyiya: from animals note: milk from mother is iyele
34	sauce made from peanut butter	umusweswe	musweswe
35	cooking oil	amafuta yakwipikila	mafuta yakwelekela
36	bread	umukate(sg) imikate (pl)	cimbala cakisungu(sg) vimbala vyacisungu (pl)
37	fire place	iishiko(sg) amashiko(pl)	ziko (sg) maziko (pl)
38	bottle	umusukupala(sg) imisukupala (pl)	ncupa (sg) zyancupa (pl)

			musukupala
39	firewood	ulukuni/inkuni (pl)	lukwi (sg) nkwi (pl)
40	cup (s)	inkomaki(sg/pl)/ ulukombo(sg)	nkumaki/zyankomaki (Swahili) lwako/ngako (pl)
41	umbrella (s)	umwamfuli (sg) imyaamfuli (pl)	mwamvuli (sg) myamvuli (pl)
42	fire	umulilo	umoto (from Swahili) myoto (pl)
43	meat (flesh of animal)	inama	nyama (sg) zyanyama (pl)
44	breasts (s)	iibeele(sg), amabeele (pl)	yele (sg) mayele (pl)
45	water	ameenshi	manzi
46	mirror	umulolani(sg) imilolani(pl)	cilolani (sg) vilolani(pl)
47	needle	inyeeti /akeela inshindano	nyeeti inshindano
48	tooth brush	umuswaki(sg) imismwaki (pl)	muswaki (wamino)(sg) mismwaki(pl)
49	a pair of scissors	makashi	cengo/ ivyengo mukasi (from Arabic)
50	bicycle (s)	incinga (sg/pl) amacinga (pl, also)	nkangalo(sg) zyankangalo(pl)
51	verandah	ulukungu/inkungu (pl) ulukolo/inkolo (pl)	lukungu(sg) nkungu(pl)
52	sitting room	umupule wakutushishamo	mbalaza (yakupuzilamo)
53	peanut	icikonko	ncinkonko
54	honey	ubuci	uci
55	necktie	inkoolo	nkolo
56	televeision	icitunshitunshi ifitunshitunshi	unkolanya wavinzingwa vinzingwa viaunkolanya
57	mush	inshima/ubwali	nsima
58	sandals	indyato/inkwabilo	nkwabilo
59	ring	imbalaminiwe inindaminwe	mbalaminiwe
60	cane from maize	imise	misali yakucisaka
61	strainer	incemeko; ulusansa	ncemeko
62	bucket	imbeketi	imbeketi
63	trousers	amantangasa(indigenous) itooloshi	mantagasa itolosi
64	socks; stockings	insookoshi	insokosi (modern use) (English)
65	dress	indeleeshi, ilaya	katulongo /umwingila (not common) (long dress)

			kalindimuna (mini dress) indelesye (modern usage)
66	table	itebulo icintamba(indigenous)	itebulo (English)
67	blanket	ilangeeti /ubulangeeti	nkumbasi (indigenous) ubulangeti
68	bed sheet	insaluyamukati	insaluyacikubalo
69	a large pot	intalo/icilongo/cimutondo	namanduzu yanamanduzu
70	a hat	icisote	nkofela /ngowani
71	cloth	ingubo	cikuwalo
72	shirt	ilaya	ilaya

(G) MISCELLANEOUS TERMS

1	all of them	bonse	yonsi
2	animal	inama (meat)	nyama vifwa vyanyama
3	ashes	imito	itwi
4	big things	icikulu/icikalamba ifikulu/ifikalamba	cikalamba vikalamba
5	bird	icuuni/ifyuuni (pl)	cunyi viunyi
6	blind person	impofu	mpafu
7	to breathe	ukupeema	kufuta
8	to buy	ukushita	kukala
9	to chew	ukusheta	kutafuna
10	cloud(s)	ikumbi amakumbi (pl)	ikumbi makumbi (pl)
11	to become cold	ukutalala	kuzuka
12	one	cimo	conga
13	two	fibili	vili
14	three	fitatu	vitatu
15	four	fine	vini
16	five	fisano	visano
17	six	mutanda	mutanda
18	ten	ikumi	ikumi
19	to cry	ukulila	kulosya
20	to die	ukufwa	kufwa
21	to drink	kunwa	kumwa
22	dumb person	cibulu	cinta vwanga acibulu

23	to eat	ukulya	kulya
24	elephant(s)	insofu (sg/pl)	nzovu
25	to fall	ukuwa	ukupona
26	feather	iisako(sg) amsako(pl)	ivumbu (sg) of bird / animal mavumbu
27	to fly	ukupupuka	kupapuka
28	flower (s)	iiluba	iluwa
29	seven	cinelubali	cinimbali
30	eight	cine konse konse	cinani
31	to give	ukupa ukupeela	kupa
32	to hear	ukumfwa	kumvwa
33	to be or become heavy	ukufina	kunyoma
34	to be or become hot	ukukaba	kukaya
35	how	shaani	canyi
36	housefly	lunshi	lunzi
37	to kill	ukwipaya	kukoma
38	person	umuntu	muntu
39	to laugh	ukuseka	kuseka
40	man	umwaume	umonsi
41	many	ifingi	vingi
42	moon	umweshi	mwezi
43	name	iishina	zina
44	new	icipya	yanyokoma
45	night	ubushiku	usiku
46	very old person	umukote	mukombe mukoloci
47	darkeness	infinshi	mfinzi
48	to see	ukumona	kulola
49	to sell	ukushitisha	kukazya
50	o become sick/unwell/ill	ukulwala	kulwala
51	sky	umuulu ulwelele	lwelele
52	heaven	umuulu	iyulu
53	small thing	icinono	kanono
54	snake	insoka	nzoka
55	spit	ukufwisa	kuswa (amati)
56	sun	akasuba	kasanya
57	to swallow	ukumina	kumila
58	tree(s)	icimuti ifimuti (pl)	cimuti (sg) vimiti/ pl

59	to vomit	ukuluka	kuluka
60	to walk	ukwenda	kupita
61	to have a bath (to wash the body)	ukusamba	kufulala
62	to become wet	ukubomba	kuomba
63	when	nililali	lilaci
64	where	nikwii	aukwi (mbalikwi)
65	wind	umwela uleelwa	muza
66	woman/female person	umwanakashi	mwanaci
67	deaf person	nkoma-matwi	nkoma-matwi
68	nail	umusomali(sg) imisomali(pl)	lusunga (sg) nsunga (pl)
69	to dissolve	ukusunguluka	kunguluka
70	to cause to drink	ukunweshā	kumwezya
71	to drown	ukunwena	kumwela (muluzi)
72	drum	injoma	ngoma
73	papyrus	uluko	luko
74	a pad on which a load rests on the head or shoulder	injana (sg/pl)	nkata(sg) zyankata (pl)
75	apex of a roof	akasonshi	pumpulwe
76	wealth	icuumā(sg)	vyuma
77	pile/heap	umwina imiina (pl)	mutumba (sg) mitumba (pl) mwina (sg) mina (pl)
78	driver	namutekenya	namutekenya
79	bundle	umwanshi(sg) imyanshi (pl) icifinga(sg) ififinga (pl)	mwanzi (wankwi ‘firewood’) myanzi (wisote ‘grass’)
80	shade	icintelelwe(sg) ifintelelwe(pl)	cisao(sg) visao(pl)
81	shadow	icinshingwa(sg) ifinshingwa (pl)	cinzingwa(sg) vinzingwa(pl)
82	suckle/breast feed	ukoonsha	konsya
83	visitor/guest	umutandashi (sg) abatandashi(pl) umweni(sg) abeeni(pl)	mutandazi(sg) atandazi(pl)
84	to provoke	ukusonsomba	kusonsomba

85	forgetfulness	icilafi	ciya
86	rainbow	umukolamfula	mulalamvula
87	obedience	ubupete/ukufuuka	kufuka/utontelezi
88	tradition	icishilano ifishilano	cisilano(sg) visilano(pl)
89	well (s)	icishima(sg) ifishima(pl)	cilambe (camanzi)(sg) vilambe vyamanzi(pl)
90	spiderweb	tandabube	tandabube
91	very small anthill (s)	iifwasa (sg) amafwasa (pl)	isoswa(sg) masoswa(pl)
92	village (s)	umushi(sg) imishi(pl)	muzi(sg) mizi (pl)
93	beer	ubwalwa	uwengwa
94	lizard	mulinso (sg) baamulinso(pl)	malinso(sg) yamalinso (pl)
95	palace	isano	musumba
96	road	umusebo	museo
97	firefly	akabeshamulilo(sg) utubeshamulilo(pl)	kamungu (sg) tumungu (pl)
98	quickly	bwangubwangu	zuwazuwa
99	hunter	fundi(sg) baafundi) pl) umulunshi(sg) abalunshi(pl)	amwami(sg) yamwami(pl)
100	trap for rats	akaliba(sg) utuliba (pl)	kampanika(sg) tumpanika(pl)
101	gun	ubuta(sg) amata(pl)	mfuti(sg) izyamfuti (pl)
102	chief's constable	kapaso (sg) baakapaso (pl)	kapaso yakapaso
103	sneeze (n)	ulupasu / ulutesu	ulutesu
104	motor cycle	mpumpumpu(sg) baampumpumpu(pl)	citukutuku (sg) vitukutuku(pl)
105	a pair of tongs	ulumano (sg) imano(pl)	amulema (sg) yamulema (pl)
106	bamboo	ulushembe(sg) imishembe(pl)	lusengu (sg) nsengu(pl) zyansengu (variety)
107	rodent that lives in plains	ifutu (sg) amafutu(pl)	ipanga (sg) mapanga(pl)

108	mosquito	mu ṅwiṅwi lubwibwi	muṅji yamūṅji
109	hospital	icipatala (sg) ifipatala (pl)	cipatala vipatala
110	orphan	ndelwa(sg), baandelwa(pl) kashiwa	nsiwa
111	climb	ukukwela ikunina	kukwela
112	sea eagle	cembe nkwashi	cembe
113	parade	peleeti	pelete
114	fast	taputapu/bwangubwangu	zuwazuwa
115	corporal	koopolo	kopolo
116	machine gun	umunshinga/ubutabukalamba iminshinga (pl)	munsinga minsinga (pl)
117	beware (Afr. Pasop) nasopa (K)	cenjela, pasopo	cengela pasopo (rare)
118	Broer (Afr relative, brother, blulu (kabanga)	bululu	lupwalwane; bululu (brought from copperbelt)
119	not at all (nikis, Afr), nilis (K.)	ninkishi	ninkisi (brought by town dwellers)
120	lopa (loop (Afr.) be off; slink off; be timid. lopa (K)	ukulopa	ukukwinda ukulopa (rare)
121	match box (kibiriti, Arab)	icifwambulo	lusiko (typical)
122	tin of square shape (four-gallon petrol can)	itepe	itepe commercial use
123	tin/can	icikopo	icikopo
124	youth	umusepela/umupungwe	mpumpula(sg), zyampumpula(pl)
125	market	umushika/icisakano	isokoni
126	a generous person	umupe(sg) abape(pl)	kapela(sg) yakapela(pl) kapekape(sg) yakapekape(pl)
127	frog	luuwo/cula	cula
128	a ford	icabu (sg) ifyabu(pl) ulusalala(sg) insalala(pl)	ilambwa(sg) malambwa (pl)
129	hatred	ulupato/impatila	mfyeli

130	mercy/pity	uluse	nkumbu
131	public announcements; massage	imbila	mbila
132	debts, borrowed goods	imisha/inkongole	makope
133	a blacksmith	umufushi/kafula	simapembwe
134	cicada	nyenye	nyenye
135	to wither, to dry up	ukulokota; ukufuta	kulokota
136	to sprout (of tree, grass)	ukulemuka, ukulimbuka, ukupuuka	kulemuka
137	to forbid	ukulesha/ukukaanya	kulesya
138	a jump, a leap	ibaka/ibimbili	iwaka
139	to give a gift	ukuninka ukufupa /ukupela	kupela
140	to soothe/appease/placate	nyanyantila/cicintila	kutembelezya
141	messenger; envoy	intumi/inkombe	nkombe (sg) zyankombe (pl)
142	hippo	imfubu	nkambwe/ciboko vinkambwe/ viciboko
143	to squeeze	ukufina, ukukama, ukutina	kufina/ukukama
144	world	isonde/icaalo	mpanga yonsi nsi yonsi
145	prayer	ipepo(sg) amapepo (pl)	itaizyo(sg) mataizyo(pl) ipepo(sg) mapepo(pl)
146	good fortune	iishuko	zyuko/ulongo
147	scar	umukofu(sg) imikofu (pl) icibala(sg) ifibala (pl)	ciyazi (sg) viyazi(pl)
148	brick kiln	itanuna(sg) amatanuna (pl) icibili(sg) ifibili (pl)	cibili((sg) vibili(pl)
149	shepard herdsman/herdsmen	kacema(sg) baakacema(pl)	kakumba(sg) yakakumba(pl)
150	boys	abalumendo	alumendo
151	impartiality	umulinganya	mulinganya
152	burden (s); load(s)	icisendo(sg) ifisendo(pl)	civiya(sg) viviya(pl)
153	thorn (s)	umunga(sg) imyunga(pl)	munga(sg) myunga(pl)

154	length	ubutali	utali
155	notice	icishibisho(sg) ifishibisho (pl)	cimanililo(pl) vimanililo (pl)
156	to prepare	ukupekanya	kuteyanya
157	shell	umuseeba	mushewa
158	adze	imbesa	mbato
159	way of doing things	umwata	miyele
160	sign/arrow	icishibilo(sg)ifishibisho(pl)icilangililo(sg) ifilangililo (pl)	cimanyililo (sg) vimanyililo(pl)
161	to loosen, to weaken, to discourage	ukunenuna	kutompola
162	captivity/slavery	ubusha bunkole	uzya
163	make known	alasha bilisha sabankanya	tanganzya
164	slowly, little by little	bucebuce panopano	panopano
165	wait; stay; remain	linda	lolela/pembela
166	habit of stealing	ulunwe	upupu
167	habit of disparaging others	umucendo	kukwelengula
168	to be empty (of a shell)	ukupoboka	kupoboka
169	to be empty (of shell/husk)	ukupoba	kupafuka
170	to be empty (of shell/husk)	ponta	kupoboka
171	to be empty (of shell/husk)	pukuta	kupoboka
172	to be empty (of shell/husk)	auka	kupoboka
173	cell phone	(ka) musange	lamya
174	song	ulwimbo/injimbo	ngimbo
175	money	ulupiya/impiya (or indalama)	mpiya/ulupiya
176	bottle	umusukupala	ncupa (Swahili)
177	adviser	mpandamano	cimbuza vimbuza (pl)
178	holy ghost	mweo mutakatifu	mupashi wakuleza
179	ladder	umutanto	mupanda
180	tithe	umululo wacekumi (icekumi)	uwila
181	trumpet	ipenga (sg) amapenga (pl)	mutolilo(sg) mitolilo(pl)

182	language	ululimi (sg) indimi(pl)	muvwango
183	swollen gland in groin caused by a septic wound	umutantamfula	muzwizwi
184	ooze	tumuka/puuka/suuma	kuzwa (inf), -zwa (root)
185	change places with one another	komboshanya pyanishanya	kombozyanya (kombokombo 'load')
186	a bend	icinsoko	cinzyoko
187	bellows	umuuba	muba
189	benediction	ibalaka/ipaalo	ipalo
190	creator	kabuumba/ kalenga	kalenga
191	doctor (of hospital)	shijanga/ndokotala	shijanga
192	earthquake	icinkukuma	cinkunka
193	emissary	inkombe/umutumishi /intumi	nkombe
194	evocation	ulubuko	uluko
195	example	icilangililo	cimanyililo
196	eyewitness	kambone	kambone
197	foundation	umufula	mukolwa/umufula
198	lukewarm	(aya) cifulefule	cisunzuwi
199	miracle (s)	icisungusho (sg), ifisungusho (pl)	cipapusyo vipapusyo
200	meanness	akaso	kaso
201	moisture	umutonshi	mutonsi
202	a habit of belittling	umucendo imicendo	kacecela
203	provocation	ukusonsomba	kucokozya
204	make smooth (of skin, road)	telesha	telezya
205	snare	ulukose	lukose
206	stopper	inciliko	nkumpiko
207	tortoise	fulwe(sg) baafulwe(pl)	muṇumbe (sg) yamuṇumbe (pl)
208	unmarried person	umushimbe	musimbe
209	unpack	longolola	pakulula
210	whistle (n)	kapyelele (sg) tupyelele (pl) pintu(sg) baapintu (pl)	cipolilo(sg), vipolilo(pl) pintu(sg) yapintu(pl)
211	winnow	-ela: sensebula	ulusya
212	frank incense	ubu-baani (ubani: Arabic)	ubani

213	saint	umutakatifu (pl) abatakatifu (pl)	mutakatifu wamuzilo
214	bishop	shikoofu/shima pepo mukalamba	simapepo mukalamba
215	sacrament (s)	insakalamenta	icabupe camusilo
216	eucharist	imfumu/ icimuno	cimulo
217	loafer (E)	ushibomba(sg) abashibomba(pl)	usiomba(sg), yasiomba(pl)
218	teacher (s)	kafundisha baakafundisha	kasambilizya(sg), yakasambilizya(pl)
219	teaching profession	buukafundisha buukasambilisha	ukasambilizya
220	state of being a hunter/fundus	ubulunshi	uvwimi
221	hunter	umulunshi	muvwimi
222	person	umuntu(sg) abantu(pl)	muntu(sg) antu(pl) mulawa(sg) alawa (pl)
223	causing somebody to fight with another person	ukusokesha	kusongelekanya
224	medicine	indawa/indawi umuti(sg) imiti (pl)	mulembo(sg) milembo (pl)

Appendix 3: Interview Schedule for Phonetics and Phonology

Each interview will be followed by a focus group discussion

The interview questions will be based on the following material:

Phonetics and phonology

(1) Segmental phonology

- Vowel segments
- Consonantal segments

Phonetic and phonological similarities and differences may manifest with regard to vowel segments and consonantal segments: words from Bemba and Mambwe referring to the same objects or concept may provide potentiality for similarities and differences between the languages. The researcher will elicit such words from the subjects.

Feature changing rules may be applied to bring out similarities and differences between the languages under study

Consonantal segments:

Consonants and semi-vowels

- The significance of the three-term label, namely: manner of articulation, place of articulation and voice.
- Manner of articulation: plosive, nasal, fricative, affricate, lateral and approximant.
- Place of articulation: bilabial, labio-dental, alveolar, post alveolar, palatal, velar, labio-velar.

The interviewees will be requested to say a few words naming the same concept or referent where such aspects may manifest in order for the researcher to identify similarities and differences

The following phonological processes and rules may potentiate for similarities and differences between the languages under investigation. The participants will be requested to say something in relation to the following in order for the researcher to check for similarities and differences:

- Palatalisation in causative verbal forms
- Palatalisation in intensive verbal forms
- Nasal assimilation
- Allophonic rules with regard to [l] and [β]
- Morphophonological rules:
 - Semivocalisation (gliding)
 - Coalescence of vowels
 - Vowel harmony

(2)Suprasegmental phonology

Some similarities and differences may manifest in relation to tone and length between the languages under study.

- Tone shift in the same words, creating semantic distinction; do we have examples in both languages or not, or are examples in one language the same as in the other?
- Use of tone involving recent past and remote past: is the situation in one language the same as in the other?
- Minimal pairs with regard to vowel length: Are examples in one language the same as in the other?
- Nominal stabilisation in the languages under study: Are examples in one language the same as in the other?

Semi-structured questions on phonetics and phonology:

- Participants should be requested to mention words referring to the same objects or concepts in the languages under investigation, using the English equivalents provided by the researcher in order for him to establish similarities and differences in relation to vowel and consonantal segments in the responses given
- The participants should be requested to say the causative and intensive verbal forms in their languages using the given English expressions so that the researcher can establish the phonological similarities and differences between them.

Table: Phonetic production involving causative verbal extension

Gloss	Bemba pronunciation	Mambwe pronunciation
Causing something to burst		
Causing something to hunt		
Causing somebody to drink		
Causing somebody to pass		
Causing somebody to talk		

Table above: Phonetic production involving causative verbal extension.

Phonetic production involving intensive verbal extension

Gloss	Bemba pronunciation	Mambwe pronunciation
to cultivate very/ too much		
to run very/ too much		
to shout very/too much		
to clap very/too much		
to resemble very/too much		
to shine very/too much		
to play very/too much		
to cook very/too much		

Table above: phonetic production involving intensive verbal forms

- The participants should be requested to say in their languages the equivalents of the following English expressions in order for the researcher to establish whether or not the allophonic rule operating on the consonant [l] applies to both or one of the languages under study.

- I eat
- I am eating
- I see them everyday
- I go
- I laugh
- I dance

The participants should be requested to pronounce the consonant segment [β] in the words where it is immediately preceded by the bilabial nasal [m] and where it is not. This is with a view to establishing the similarities and differences between the languages under study

The participants should be requested to provide the equivalents of the English infinitives in their languages in order for the researcher to establish whether there are similarities and differences between them with regard to Nasal assimilation.

- to use me
- to see me
- to work for me/operate on me.
- to make me wet.

The participants should be requested to provide the equivalents of the given English words / expression in their languages in order for the researcher to establish the similarities and differences between them in the process of Semivocalisation (gliding).

The process of Semivocalisation (gliding)

Gloss	Bemba	Mambwe
guest		
boat/ canoe		
owner		
knives		
moon		
a little water		
baby/child		
wedding		

The table above is concerned with the process of Semivocalisation (gliding)

- The participants should be requested to give the equivalents of the English expressions in their languages in order for the researcher to establish similarities and differences between them in the process of Vowel harmony.
 - to throw on behalf of someone
 - to harvest on behalf of someone
 - to fold on behalf of someone
 - to write on behalf of someone
 - to cut trees on behalf of someone
 - to guard on behalf of someone
- The participants should be requested to provide the equivalents of the English words and expressions in their languages in order for the researcher to establish similarities and differences between them in the process of Coalescence of vowels.
 - all the things
 - all the small things
 - my hat
 - guests

- teeth
- legs
- these men
- this milk
- this mirror
- this small radio
- this hen house
- this straw
- this gun
- this hill
- this small grasshopper
- this tin
- this work
- these Europeans
- this caterpillar
- to hear

Suprasegmental phonology

- The participants should be requested to provide the equivalents of the English expressions in their languages in order for the researcher to establish whether or not there is a semantic distinction on account of the shift of tone in the same word:

-to vomit and to plait hair

-a cob of maize and answer a call

-price and forest

- the participants should be requested to provide the equivalents of the English clauses in their languages in order for the researcher to find out whether or not there are similarities and differences in the use of tense to show recent past and remote past in their language:
 - we learnt (recent past)
 - we learnt (remote past)
 - they saw (recent past)
 - they saw (remote past)
 - she ate (recent past)
 - she ate (remote past)
 - he carried (recent past)
 - he carried (remote past)
 - you laughed (recent past)
 - you laughed (remote past)
- The participants should be requested to provide the equivalents of the English expressions in their languages in order for the researcher to establish similarities and differences between them in relation to the minimal pairs different in vowel length with the resultant semantic distinction.
 - Something bad and door
 - to laugh and to be found everywhere
 - bowels and finger nails
 - to compensate and to erase
 - to choose and to surrender
- The participants in the study should be requested to provide the equivalents of the English expressions in their languages in order for the researcher to find out whether there are similarities and differences between them with regard to Nominal stabilisation

- he is a slave
- it is a pumpkin
- it is a hat
- it is a chair
- it is a hoe
- they are human beings
- they are oranges
- it is water
- it is forgetfulness

Appendix 4: Interview Schedule for Morphology

Each interview will be followed by a focus group discussion.

The interview questions will be on Nominal morphology and Verbal morphology.

(i) Nominal morphology: similarities and differences manifest in (a) and (b), but differences in (c).

(a) nouns have different nominal prefixes, but same nominal stems.

(b) nouns have the same nominal prefixes, but different nominal stems.

(c) nouns have different nominal prefixes and different nominal stems.

Nominal prefixes of Bemba and Mambwe.

NOMINAL PREFIX CLASS	BEMBA PREFIXES	MAMBWE PREFIXES	GLOSS
1			person
1a			monkey
2			persons
2a			monkeys
3			village
4			villages
5			fish, egg
5a			a person or a thing possessing some special quality
6			eggs
7			-a hat, tree, a huge person, a huge thing
8			hats, trees, huge persons, huge things
8a			huge/ugly/ evil monkeys
9			chicken, goat, cow
9a			cup (kaapu) stick of candle (kaandulo)
10			chickens, goats cattle

10a			cups (baakaapu) sticks of candle (baakaandulo)
11			foot, hoe
12			chick
12a			small monkey, small rat
13			chicks
13a			small monkeys, small rats
14			goodness, the state of being old
14a			the teaching profession, the state of being a fiancé
15			to dislike, to eat, to laugh, to dance
16			on the
17			to/at the village to the doctor
18			in (to) village

The table above is concerned with the nominal prefixes of BEM and MAM

Types of derived nouns.

Using the corresponding English words or expressions in the table above, the participants will be requested to say the following types of nouns in their languages in order for the researcher to check for similarities and differences:

(a) De-nominal nouns

- augmentative/ pejorative nouns
- diminutive nouns
- abstract nouns

(b) De-adjectival nouns

(c) De-verbal nouns

(ii) Verbal morphology: similarities and differences may occur in the following: the researcher should request the participants to construct sentences in their language under each of the following tenses, using the English equivalents prepared by the researcher:

- (a) Prehodiernal progressive aspect
- (b) Future tense of today
- (c) Post hodiernal (i.e. remote) future
- (d) Post hodiernal progressive aspect
- (e) Present tense: progressive aspect
- (f) Present Simple

- **Morphological structure of verbal extensions**

- (a) Passive extension
- (b) Causative extension
- (c) Reciprocal extension
- (d) Intensive extension
- (e) Frequentative extension
- (f) Applied extension
- (g) Neuter/ stative extension
- (h) Reversive active extension
- (i) Completive extension

- **Mood**

- (a) Imperative mood
- (b) Subjunctive mood
- (c) Indicative mood

- Negative verb
- Definitisation verb phrase

(a)Positive definitisation verb phrase

(b)Negative definitisation verb phrase

Morphology

(i) Nominal morphology.

The participants in the study should be requested to provide in their language the nouns for each nominal prefix shown in the previous table.

They should also be requested to give the equivalents of the English words and expressions denoting the derived nouns in their language: this is with a view to establishing similarities and differences between the languages under investigation.

- worker
- workers
- writer
- writers
- dead person
- dead persons
- journey
- tool
- tools
- writing instrument
- writing instruments
- gifts
- speaking anyhow

- manner of eating
- manner of working
- elder
- elders
- big thing
- big things
- your grand mother
- your grand father
- my grand mothers
- my grand fathers

(ii) Verbal morphology

The participants in the study should be requested to provide in their languages the equivalents of the English sentences in order for the researcher to establish similarities and differences.

- Prehodiernal progressive Aspect

(a) I was sowing the millet the whole of last week

(b) we were fishing in that river for two years

(c) She was cooking for her teacher last month

(d) they were cultivating potatoes in the 80s

(f) she was studying in America last year

(g) I was teaching English for two weeks

- Future tense of today

(a) I am meeting them today

(b) they are going back today

(c) she is cleaning the house this afternoon

(d) you are talking to her this evening

(e) we are buying rice today

(f) they are participating in the competition today

(g) he is flying to Paris today.

- Post hodiernal (i.e remote) future

(a) they will visit London next year

(b) I will begin the project in two months' time

(c) we will hoe sorghum next planting season.

(d) he will marry in December next year

(e) they will build a house after next year

(f) she will attend the ceremony in 2019

(g) I will complete my programme in 2022

- Post hodiernal progressive aspect

(a) they will be playing in the team

(b) I will be carrying my chair

(c) we will be singing every Friday

(d) he will be going there on Tuesdays

(e) she will be coming fortnightly

(f) you will be cultivating potatoes

(g) they will be commemorating the event annually.

- Present Tense: progressive aspect

(a) I am eating the fish

(b) they are playing football

(c) we are learning English

(d) he is driving his car now

(e) she is sewing her friend a dress

(f) they are running after the animal

(g) I am looking at the flowers

- Present Simple Tense

(a) he/she cooks for me

(b) he cuts trees

(c) we plant trees

(d) they speak on my behalf

- **Morphological structure of verbal extensions.**

The participants should be requested to provide in their languages the equivalents of the verbal extensions given in English in order for the researcher to establish similarities and differences:

- Passive extension

(a) to be imprisoned

(b) to be chased/ dismissed

(c) to be scattered/ dispersed or levelled

- Causative extension

(a) cause to stop somebody from doing something

(b) cause to make somebody vomit

(c) cause to be lost

(d) cause to lengthened

(e) cause to be defeated

- Intensive extension

(a) to read very much or too much

(b) to shout very much or too much

(c) to rain very much or too much

(d) to cook very much or too much

(e) to clap very much or too much

- Frequentative extension

(a) to touch in many places or parts of the body

(b) to sow the seeds in many places

(c) to carve in many parts of the wood

(d) to break into pieces

(e) to kiss or lick many times or in many parts

- Applied extension

(a) to cut (trees) for somebody

(b) to draw a picture on behalf of somebody

(c) to chew on behalf of somebody

(d) to fold on behalf of somebody

- Neuter / stative extension

(a) to appear / be visible

(b) to be audible

(c) to shine

- Reversive active extension

(a) to unfold / reverse the process of folding

(b) (of seedlings) pull from the ground

(c) to take to pieces

(d) to remove somebody from poverty

(e) to undo the plaited hair

(f) to remove earth from the poles of a hut

- Completive extension

- (a) to become completely mad
- (b) to stop completely
- (c) to dry completely
- (d) to become completely poor
- (e) to fall or fail completely

The participants should be requested to provide equivalents of the English expressions in their language in order for the researcher to establish similarities and differences

- Imperative mood

- (a) bring (addressing one person: not honorific)
- (b) take! (addressing many people)
- (c) enter! (addressing one person: not horrific)
- (d) come! (addressing many people)
- (e) stand up! (addressing many people)
- (f) clap! (addressing many people)

- Subjunctive mood

- (a) I could n't know
- (b) they may not speak
- (c) he would n't refuse
- (d) lock the shop lest they steal

- Indicative mood

- (a) I arrived yesterday
- (b) I didn't arrive yesterday
- (c) he/she arrived yesterday
- (d) he/she didn't arrive yesterday
- (e) we arrived yesterday
- (f) we didn't arrive yesterday
- (g) they arrived yesterday

(h) they didn't arrive yesterday

- Negative verb

(a) I don't eat

(b) I have n't finished yet

(c) I have n't heard

(d) tell him/her not to bring

(e) tell him/ her not to work

(f) they didn't go

(g) it is not in the house

(h) he was not all right

(i) they didn't spread the news

(j) I don't like it

(k) we weren't happy

- Definitisation verb phrase

Positive definitisation verb phrase

(a) this is the fish

(b) these are the fish

(c) this is the game

(d) these are the games

(e) this is the price

Negative definitisation verb phrase

(a) this is not the fish

(b) these are not the fish

(c) this is not the game

(d) these are not the games

(e) this is not the price

Appendix 5: Interview Schedule for the Lexicon

Each interview will be followed by a focus group discussion.

Analysis and interpretation of the data is based on Proto-Bantu radicals. Lexical similarities and differences between the languages under study may manifest in the items under the following semantic fields and miscellaneous terms:

- (i) house hold terms
- (ii) domesticated animals and birds' terms
- (iii) human body parts terms
- (iv) kinship terms
- (v) agricultural terms
- (vi) fishing terms
- (vii) Miscellaneous terms

- Semi-structured questions on the lexicon are used.

Against each of the English words or expression in the six (6) semantic fields and the miscellaneous terms, the participants should be requested to provide in their language the equivalents of the provided English words or expressions in order for the researcher to establish their origin: whether they are from Proto-Bantu or not. This is with a view to ascertaining the similarities and differences between the languages under study.

Appendix 6 : Approval of Study



THE UNIVERSITY OF ZAMBIA

DIRECTORATE OF RESEARCH AND GRADUATE STUDIES

Great East Road | P.O. Box 32379 | Lusaka 10101 | Tel: +260-211-290 258/291 777
Fax: +260-1-290 258/253 952 | Email: director@drgrs.unza.zm | Website: www.unza.zm

APPROVAL OF STUDY

28th January, 2020.

REF NO.HSSREC-2019-DEC-012

Dr. Chibwe Ronald Lumwanga
LUSAKA.

Dear Lumwanga

**RE: "A CONTRASTIVE STUDY OF BEMBA AND MAMBWE AT
PHONOLOGICAL, MORPHOLOGICAL AND LEXICAL LEVELS"**

Reference is made to your protocol dated 13th December, 2019. HSSREC resolved to approve this study and your participation as Principal Investigator for a period of one year.

Review Type	Ordinary Review	Approval No. HSSREC-2019- DEC-012
Approval and Expiry Date	Approval Date: 28 th January, 2020	Expiry Date: 27 th January, 2021
Protocol Version and Date	Version - Nil.	27 th January, 2021
Information Sheet, Consent Forms and Dates	• English.	To be provided
Consent form ID and Date	Version - Nil	To be provided
Recruitment Materials	Nil	Nil
Other Study Documents	Questionnaire.	27 th January, 2021
Number of Participants Approved for Study		27 th January, 2021

Specific conditions will apply to this approval. As Principal Investigator it is your responsibility to ensure that the contents of this letter are adhered to. If these are not adhered to, the approval may be suspended. Should the study be suspended, study sponsors and other regulatory authorities will be informed.

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Conditions of Approval

- No participant may be involved in any study procedure prior to the study approval or after the expiration date.
- All unanticipated or Serious Adverse Events (SAEs) must be reported to HSSREC within 5 days.
- All protocol modifications must be approved by HSSREC prior to implementation unless they are intended to reduce risk (but must still be reported for approval). Modifications will include any change of investigator/s or site address.
- All protocol deviations must be reported to HSSREC within 5 working days.
- All recruitment materials must be approved by HSSREC prior to being used.
- Principal investigators are responsible for initiating Continuing Review proceedings. HSSREC will only approve a study for a period of 12 months.
- It is the responsibility of the PI to renew his/her ethics approval through a renewal application to HSSREC.
- Where the PI desires to extend the study after expiry of the study period, documents for study extension must be received by HSSREC at least 30 days before the expiry date. This is for the purpose of facilitating the review process. Documents received within 30 days after expiry will be labelled "late submissions" and will incur a penalty fee of K500.00. No study shall be renewed whose documents are submitted for renewal 30 days after expiry of the certificate.
- Every 6 (six) months a progress report form supplied by The University of Zambia Humanities and Social Sciences Research Ethics Committee as an IRB must be filled in and submitted to us. There is a penalty of K500.00 for failure to submit the report.
- When closing a project, the PI is responsible for notifying, in writing or using the Research Ethics and Management Online (REMO), both HSSREC and the National Health Research Authority (NHRA) when ethics certification is no longer required for a project.
- In order to close an approved study, a Closing Report must be submitted in writing or through the REMO system. A Closing Report should be filed when data collection has ended and the study team will no longer be using human participants or animals or secondary data or have any direct or indirect contact with the research participants or animals for the study.
- Filing a closing report (rather than just letting your approval lapse) is important as it assists HSSREC in efficiently tracking and reporting on projects. Note that some funding agencies and sponsors require a notice of closure from the IRB which had approved the study and can only be generated after the Closing Report has been filed.

- A reprint of this letter shall be done at a fee.
- All protocol modifications must be approved by HSSREC by way of an application for an amendment prior to implementation unless they are intended to reduce risk (but must still be reported for approval). Modifications will include any change of investigator/s or site address or methodology and methods. Many modifications entail minimal risk adjustments to a protocol and/or consent form and can be made on an Expedited basis (via the IRB Chair). Some examples are: format changes, correcting spelling errors, adding key personnel, minor changes to questionnaires, recruiting and changes, and so forth. Other, more substantive changes, especially those that may alter the risk-benefit ratio, may require Full Board review. In all cases, except where noted above regarding subject safety, any changes to any protocol document or procedure must first be approved by HSSREC before they can be implemented.

Should you have any questions regarding anything indicated in this letter, please do not hesitate to get in touch with us at the above indicated address.

On behalf of HSSREC, we would like to wish you all the success as you carry out your study.

Yours faithfully,



Dr. J. L. I. Ziwa

**VICE CHAIRPERSON
THE UNIVERSITY OF ZAMBIA HUMANITIES AND
SOCIAL SCIENCES RESEARCH ETHICS COMMITTEE - IRB**

cc: Director, Directorate of Research and Graduate Studies
Assistant Director (Research), Directorate of Research and Graduate Studies
Assistant Registrar (Research), Directorate of Research and Graduate Studies