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LINEAR ORDER IN HAYA VERBAL MORPHOLOGY:
THEORETICAL IMPLICATIONS

By

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ABSTRACT

LINEAR ORDER OF THE HAYA VERBAL MORPHEMES: THEORETICAL IMPLICATIONS

By

Yunus Ismail Rubanza

This study examined the factors which determine the linear order and the cooccurrence restrictions of the Haya verbal morphemes. Also the study discussed these determining factors in relation to Bybee's (1985) theory, which claims a correlation of a degree of semantic relatedness of the inflectional categories to the verb-stem, and the formal structure of the verb.

The study is divided into four parts: (1) A phonological sketch of the Haya language, (2) identification of the verb morphemes and their functions, (3) an account, where possible, for the cooccurrence restrictions of verbal morphemes, and (4) the relation of the linear order and the cooccurrence restrictions to B's theory of RELEVANCE and GENERALITY.

The data for this study comes from Haya books, newspapers, transcripts of tape recordings and from the author, a first language speaker of Haya.

The major findings of this study are: (1) the Haya language has twenty three verbal morphemes, of which only

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twenty two are examined in this study. However, not all of these morphemes do exhibit the maximum degree of cooccurrence with each other. (2) Four factors are identified as responsible for the cooccurrence restrictions of the verbal morphemes. These factors are: phonological, syntactic, semantic and pragmatic. (3) The linear order of the Haya verbal morphemes, supports B's predictions concerning hierarchy and order and more generally RELEVANCE and GENERALITY.

The findings of this study bring to the fore the observation that a model of the linear order of the verbal morphemes of Haya (and this may be true of other languages) must consider not only the semantic relevance of the morphemes to the verbs but also other aspects of linguistics, for example, phonology, syntax, and pragmatics.

This work is dedicated to my late parents:
Ismail Rubanza and Halima Abdallahmani-Rubanza.

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LIST OF SYMBOLS AND ABBREVIATIONS

Alv.	Alveolar
Alv. Pal.	Alveolar Palatal
ant	Anterior
bk	Back
C	Consonant
cf	Confer 'compare'
cons	Consonant(al)
cont	Continuant
cor	Corona
DA	Doer of Action
DF	Distinctive Features
fn	Foot Note
FRP	Far Remote Past
GC	Glide Consonant
GEN	Generality
H	Human
hi	High
IF	Immediate Future
IFH	Immediate Future Habitual
INFL	Inflectional
IP	Immediate Past
In Vb	Inflected Verb

IVb	Intransitive Verb.
Lab. Dent.	Labio-Dental
lo	Low
MHV	Morphemic Formula of the Haya Verb
nas	Nasal
NC	Nasal Consonant
NH	Non-Human
NF	Near Future
NPH	Near Past Habitual
NPS	Near Past
NP(s)	Noun Phrase(s)
NPSu	Noun Phrase Subject
NPt	Noun Phrase Topic
OSuV	Object Subject Verb
OVSu	Object Verb Subject
PAT	Patient
pl(p)	Plural
PUH	Present Universal Habitual
R1--R13	Rules (1-13)
RLV	Relevance
RMF	Remote Future
RMP	Remote Past
RP	Recent Past
Sg(s)	Singular
son	Sonorant
SuOV	Subject Object Verb

SuVo	Subject Verb Object
STL	Still (tense)
Str	Strudent
Syl	Syllabic
TOP	Topic
UNR	Unreal (immaginary)
V	Verb
Vcd	Voiced
VP	Verb Phrase
VOSu	Verb Object Subject
VSuO	Verb Subject Object
WLT	Weak Lexalist Hypothesis

CHAPTER 1

BACKGROUND INFORMATION

1.1. Goals

In this dissertation we discuss the linear order and co-occurrence restrictions of the Haya verb morphemes. The theoretical basis employed in this study is that of Bybee (henceforth B) (1985), which is discussed in chapter 5.

This study has three related goals. The first is to identify the Haya verb morphemes and their linear ordering and to answer the question "is the linear ordering of the Haya verb morphemes predictable?" This study will attempt to make generalizations that capture the predictions of linear ordering.

If the answer to the question above is yes, which our data seem to suggest, then the second goal is to find out the factors which determine this ordering. In this study we will argue that the linear ordering of the Haya verb morphemes is determined by phonological, syntactic, semantic and pragmatic factors. The third goal which is closely related to the above, is to determine whether these factors follow B's theory, if not, we shall seek how B's theory can be modified to incorporate these factors? Finally, this

work, as far as we know, will be the first detailed study of Haya verb morphology.

The comparison of B's work and the present study reveal both significant similarities and major differences, a point we will further explore in detail in chapter 5. Our procedure is as follows:

- a. outline B's main hypothesis and her arguments.
- b. show the possibility of reinterpreting B's work.
- c. present the Haya data, and how it could be interpreted with regard to B's claims.
- d. Finally, give the discrepancies between the data and B's claims we propose a framework in which to view the data.

In the course of our discussion we show how some of B's arguments are supported by our data. This leads us to our major goal of exploring and developing a theoretical framework in terms of which the linear ordering of the Haya verb morphemes can be understood and in terms of which the Haya verb structure in general can be described.

That there is usually a fixed linear order of morphemes particularly in agglutinating languages, is not an issue, but rather how to comprehend them. There are several proposals, both specific and general which state how such a linear order can be determined. In view of the limitations of these proposals, particularly with regard to Haya this dissertation presents another such proposal, one that differs from previous proposals mainly in that it attempts

to be highly restrictive, and, in particular, it deals specifically with the Haya language.

Unlike many previous studies of languages including that of B, that have been based on a wide variety of languages (50 languages in B's study), our work focuses on a single language. As further argued in chapter 5, this approach has an important advantage of depth over a comparative approach, as Chomsky (1985:6) argues: "A valid observation that has frequently been made (and often, irrationally denied) is that a great deal can be learned about Universal Grammar from a study of a single language, if such study achieves sufficient depth to put forth rules or principles that have explanatory force. . . ." (emphasis mine). Our study undertakes an in-depth study of Haya verb structure in order to uncover sufficient detail about the nature of Haya linear ordering so that we can offer an evaluation, in light of B's work.

1.2. The Language

Haya is a Bantu language spoken in the Northwestern part of Tanzania to the west of Lake Victoria. It is spoken in the Bukoba and Muleba districts in the Kagera region.

1.2.1. Classification

Guthrie (1970:13) classified Haya under zone E.20 Haya-Jita group which includes:

E.21 Nyambo (Karagwe)

E.22 Ziba (erroneously called Haya)

E.23 Dzindza (Jinja)

E.24 Kerebe (ukerewe)

E.25 Jita (Kwaya)

However, scholars including Copes (1971), Meeussen (1976), and Nurse (1969) seem to disagree with him in his separation of some languages in zones D and E.

The more convincing classification of the Haya language is by Meeussen (1976) whose classification is composed of Guthrie's zone D and E. This classification is composed of the languages most closely related to Haya:

Meeussen's classification	Guthrie's Zone	Country
Nyankore	E:13	Uganda
Ciga	E:14	Uganda
Ganda	E:15	Uganda
Nyoro	E:11	Uganda
Nyaruanda	D:61	Ruanda
Rundi	D:62	Burundi
Subi	D:64	Tanzania
Ha	D:66	Tanzania
Vinza	D:67	Tanzania

The classification issue is not settled yet. In a recent study, Nurse (1979:2) quoted Mosha as saying that

"The Ugandan survey indicated that several of the interlacustrine languages (which included Haya) form one large group, which is called Rutara, The languages involved were Nyankore, Kiga, Nyoro, and Tooro."¹ Nurse further quoting Mosha further notes that "From the Tanzanian point of view, Rutara should be expanded to include Haya (with Nyambo), Zinza, and Kerewe." Regarding the relationship between these languages he points out that, "All these languages are almost equally close: a speaker of any of them listening to another on the radio would have little trouble understanding; they all operate variants of the same tone system. . . ." Nurse (1979:2) also notes that "Rutara is also linked to:

- a. Ha, Hangaza, Shubi, Ruanda, Rundi, Vinza;
- b. Jita, Kwaya, Ruri, Regi;
- c. Gusii, Kuria, Ngurumi, etc;
- d. Luhya;
- e. Ganda, Soga, Gwere, etc. . . .

and these together form what is called the Lacustrine group."²

1.2.2. Dialects of Haya

Haya has eight dialects, corresponding to the location of former chiefdoms:

Dialect	Chiefdom
Ziba	Kiziba
Hamba	Kianja
Hangiro	Ihangiro
Nyakisaka	Misenye
Yoza	Kyamtware
Endangabo	Bugabo
Bumbira	Bukara
Mwani	Karagwe

The dialects are mutually intelligible. A speaker of any of these dialects has little trouble understanding any of the others, as the author can testify such as he is a native speaker of the Ziba dialect.

1.3. The People

The speakers of the language known as AbaHaya, 'the Haya people' call their language OluHaya. The Haya speakers mainly inhabit Bukoba and Muleba districts in the Kagera region in Tanzania.³ They are surrounded by speakers of other Bantu languages: Nyaruanda (Ruanda) to the west, Ciga, Ganda (Uganda) in the north; Zinza and Hangaza (Tanzania) to the south. On the eastern side is lake Victoria. However, Hayas are currently scattered all over Tanzania mainly in

the cities of Dar-es-Salaam and Mwanza working in government and private offices, and some engaging in commerce.

The population of the Haya people is estimated at about a million or more. This is merely an estimate because the 1977 Tanzanian census abolished the identification of the population by their ethnic groups.⁴

Haya living in the rural areas are primarily farmers; they grow bananas and plantains which constitute their staple food. Beans, sweet potatoes, yams, millet, corn, tomatoes and cassava are supplements of their diet. The principle cash crops are coffee and tea. Other Haya people who live near lake Victoria and along the banks of river Kagera do some fishing in addition to farming. The Haya also raise cattle, goats and other livestock. They also engage in small commercial activities.

1.4. Publications and data

1.4.1. Published material

As far as literature is concerned, there are few published materials on the Haya language in general and no extensive work on the morphology of the Haya verb. General works on Haya include that of Betbeder and Jones (1949); Rascher (1958) on the grammar of the Haya language; Bona-Baisi (1950), a Haya dictionary; Byarushengo (1975), a phonological sketech of Haya; Byarushengo et al. (1977) Haya grammatical structure; Hyman and Byarushengo, a model

of Haya verb tonology in Clements and Goldsmith (1985).⁵ Other related works on Haya include: Rubanza (1979), the relationship between Kiswahili and other African languages: the case of Haya and Seitel (1980) a collection of Haya stories, proverbs and heroic poetry. There is also literature on the history of Haya such as that of Lwamgira's (1949) "History of Kiziba," one of the former chiefdom of Hayaland, and various Bible, song and religious primers. In addition, there exists a monthly newspaper, RUMULI 'the torch,' published by the Bukoba Roman Catholic Diocese.

Some of the data of this dissertation comes from the above citations and specifically from the following articles: Byarushengo (1977:205-213), a word list; Dalgish (1977) 'Past tense formation in OruHaya' and Seitel's Haya epic collection (1970's-1980's).⁶ The author of this dissertation, a native speaker of the language, also provides a major source of the data.

1.5. Organisation of the dissertation

In chapter 2 we will outline a phonological sketch of Haya. Particular attention is paid to the aspects of phonology that are of relevance to the analysis of the Haya verb in general and the linear order of the Haya verb morphemes in particular. The phonological outline is provided to assist the reader and preclude discussion every time phonology comes up in the course of the morphological analysis. Moreover, the provision of the phonological

outline allows the handling of a particular alternation as morphophonemic if and when it cannot be explained phonologically. These reasons provide the justification for having a chapter on phonology when, as a matter of fact, the present work deals mainly with morphology, a point further taken up in chapter 2.

Chapter 3 contains an inventory and provides a detailed description of the morphemes that constitute the Haya verb. The functions of each of these morphemes is given. The order of the morphemes is not discussed a task which is the basis of chapter 4.

Chapter 4 specifically deals with the linear order of the verbal morphemes and their co-occurrence restrictions. In this chapter two claims are made and substantiated:

- a. that there is an interrelationship between the location of the stem morphemes and the root, depending on the number of arguments a verb can take.
- b. that four related factors determine the order of occurrence and co-occurrence restrictions of the Haya verb morphemes: (i) a phonological factor, (ii) a syntactic factor, (iii) a semantic factor, and (iv) a pragmatic factor.

Chapter 5 lays out the essential points of B's theory. Her two major principles Relevance and Generality are discussed and exemplified especially with respect to the predictions they make concerning ordering, frequency and

degree of fusion. Chapter 5 also discusses the implications of the Haya data to B's theory. This exercise sorts out those claims that are supported by the Haya data and those that are not. In the light of these developments, we offer modified version of B's theory regarding linear ordering.

Chapter 6 summarizes of the main findings of the dissertation, suggestions for future research. These suggestions are drawn from the findings of the Haya data, which have relevance to other Bantu languages in particular and other languages of the world in general.

CHAPTER 1 ENDNOTES

¹ Nurse (1979:146) says in a footnote that Mosha's remarks are from Ladefoged (1972:69).

² Nurse (1979:2) claims that he used what he termed a Lexico-statistical method which is not defined at least in this paper.

³ Bukoba and Muleba have been two separate districts since the mid 1970's. Otherwise it was one district (Bukoba).

⁴ The current population data on Tanzania is that of 1977, in which the population of the residence of Bukoba and Karagwe districts were.

Karagwe	185,016
Bukoba rural	256,349
Muleba	217,493
Bukoba urban	<u>77,419</u>
	738,277

Rate of growth from the 1977 census was + 42.5%. But as it was mentioned elsewhere, Hayas are scattered all over the region and the nation, particularly in big cities (see Bureau of Statistics (1982)).

⁵ Hyman and Byarushengo's (1984) work is the only detailed study on Haya tone we know of. The work is enriched with many examples at the end of the chapter.

⁶ I am deeply grateful to Dr. Peter Seitel who allowed me to use part of the data he collected from Bukoba. (see appendix 1).

CHAPTER 2

PHONOLOGICAL SKETCH OF HAYA

2.1. Introduction

The presence of a chapter on phonology in the present study of morphology is explained in this introductory section.¹ In addition to accurately representing distinctions in information needed to understand the surface morphological representations a phonological study should reveal an interrelationships between the study of phonology and the study of morphology, as well as other parts of grammar. This is especially true of morphology as Selkirk (1982:59) who, when dealing with affixation argues that "Any theory of affixation must allow for grammars that represent explicitly and perspicuously the grammatically relevant information that is idiosyncratically associated with a particular affix morpheme." Selkirk further notes that this information is of three varieties namely: syntactic, semantic and phonological. Regarding the phonological variety, Selkirk (ibid:63) notes that the first property to be represented is information concerning pronunciation of the affix. "This will include; minimally a distinctive feature matrix representing the composition of the affix." Finally, Selkirk mentions what he called the idiosyncratic

phonological property of affixes, which is "their phonologically unpredictable effect on the pronunciation of surrounding morphemes, for example, certain affixes trigger certain types of allomorphy in other morphemes" (Cf Dell and Selkirk (1978), Aronoff (1976)).

In the current study, the description of phonological processes has been limited to those that have impact on the Haya verb morphology. The basic features of phonemes of the language are first given followed by redundancy and phonological rules.

2.2. Phonological Inventory

Haya phonemes are consonants (including true consonants and glides) and vowels distributed segmentally and sequentially in the syllable. Vowel phonemes are syllabic and tone bearing and obligatory in every word.

Haya has:

19 consonant phonemes

10 vowel phonemes

2 tones.

2.2.1. Inventory of Consonant Phonemes.

There are nineteen consonant phonemes in Haya, given in (1) and Illustrated in (2):²

(1)	Bilabial	Lab.Dent	Alv.	Alv.pal.	Pal.	Velar	Glottal
Stops	p,b		t,d			k,g	
Affricate				č,č̣			
Fricative		f	s,z	š			h
Nasal	m		n	ñ			
Lateral			l				
Glide						y	w

The alveopalatal phonemes will henceforth be orthographically written as follows:

/č/ = ch

/č̣/ = j

/š/ = sh

/ñ/ = ny

The phoneme l has two allophones: [l] and [r]. In this work the same symbol l is used for both [l] and [r]. All of the above phonemes have the phonetic value usually associated with these phonemic representations, except for /l/, which has free variants [l] and [r].

(2) /p/

/t/

juguta 'blow'

paikuka 'to be uncontrolled' tiila 'borrow'

e.g. child'

paapala	'to get lost e.g. in unknown land'	kuntila	'foot fall'
empako	'a cave'		
/b/		/d/	
bona	'see'	tonda	'create'
shoba	'go bad'	dindind	'deep inside'
gamba	'say'	dini	'religion'
/k/		/č/	
lekela	'cease'	chumba	'cook'
ziika	'bury'	chuchula	'comb hair'
kuula	'uproot'	okuchwa	'to spit'
/g/		/ʃ/	
gaga	'go bad'	juba	'fish'
yoga	'take a shower'	olubaju	'side'
ngoma	'drum'	janjaba	'help e.g. a sick person'
/f/		/s/	
enfuka	'a hole'	sinda	'moan'
faakala	'make a mistake (sin)'	musigazi	'a youth'
fafalikana	'become unhappy'	lemesa	'cause someone to be tired'
		/z/	
		zimba	'swell'
		gendeleza	'continue, develop'
		nzilo	'dirt'

/š/		/h/	
shashula	'pay back'	hanuula	'give advise'
mushanju	'seven'	bihuka	'insects'
gasha	'be useful'	omuguha	'rope'
/m/		/n/	
manya	'know'	inuka	'go home from work'
omwongu	'pumpkins'	igana	'be equal'
lemala	'become lame'	nigaala	'get anger'
/ñ/		/l/	
nyiikila	'put more effort'	laalika	'invite'
enyenje	'mane'	shaalila	'become bitter'
okumanya	'to know'	ilagula	'become black'
/y/		/w/	
yanika	'put on the sun to dry'	wetole	'steal'
iya	'uproot'	iwe	'you'
hooya	'sing'		

2.2.1.1. Distinctive Features of Consonants Phonemes

The distinctive features for these consonant phonemes are given in table 1.³ All true consonants are [-syllabic] and [+consonantal]. The glides are [-syllabic] and [-consonantal]. Vowels are [+syllabic] and [-consonantal] (see 2.2.2.1).

Table 1. Distinctive Features of Consonant and Glides.

	p	b	t	d	č	ǰ	k	g	f	s	z	š	h	m	n	ɲ	l	y	w
syl.	-	-	-	-	-	-	-	-	-	-	-	-	-			-	-	-	-
son.	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	+	+	+	+
cons.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	-	-
cont.	-	-	-	-	-	-	-	-	+	+	+	+	+	-	-	-	-	+	+
nas.	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	+	-	-	-
ant.	+	+	+	+	-	-	-	-	+	+	+	-	-	+	+	-	+	-	-
cor.	-	-	+	+	+	+	-	-	-	+	+	+	-	-	+	-	+	-	-
vcd.	-	+	-	+	-	+	-	+	-	-	+	-	-	+	+	+	+	+	+
str	-	-	-	-	+	+	-	-	-	+	+	+	-	-	-	-	-	-	-

2.2.1.2. Redundancy Rules for Consonant Phonemes

Important redundancy rules pertaining to consonants and glides are:

$$(3) \text{ R1 } \begin{bmatrix} -\text{syl} \\ -\text{cons} \end{bmatrix} \rightarrow \begin{bmatrix} -\text{nas} \\ -\text{ant} \\ +\text{cont} \\ +\text{son} \end{bmatrix}$$

$$\text{R2 } \begin{bmatrix} +\text{cons} \\ +\text{cont} \\ -\text{cor} \end{bmatrix} \rightarrow [-\text{vcd}]$$

$$\text{R3 } [+son] \rightarrow [+vcd]$$

R4	$\begin{bmatrix} +\text{cons} \\ -\text{son} \end{bmatrix}$	--> [-syl]
R5	[-son]	--> [-nas]
R7	[+nas]	--> $\begin{bmatrix} -\text{cont.} \\ +\text{son} \end{bmatrix}$
R8	$\begin{bmatrix} -\text{cor} \\ +\text{ant} \\ -\text{cont} \end{bmatrix}$	--> [-str]
R9	$\begin{bmatrix} -\text{son} \\ -\text{cont} \\ -\text{ant} \end{bmatrix}$	--> [-cor]
R10	$\begin{bmatrix} -\text{son} \\ +\text{cont} \\ +\text{cor} \end{bmatrix}$	--> [+str]

Table 2 is a repeat of table 1 with some spaces accounted for by redundancy rules in (3). The numbers e.g. 1 . . . 10 refer to redundancy rules.

Table 2. Distinctive Features with Redundancy Rules:
Consonant Phonemes.

	p	b	t	d	č	ǰ	k	g	f	s	z	š	h	m	n	ɲ	l	y	w
syl	4	4	4	4	4	4	4	4	4	4	4	4	4			-	-	-	-
son	-	-	-	-	-	-	-	-	-	-	-	-	-	7	7	7	+	1	1
cons	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	-	-
cont	-	-	-	-	-	-	-	-	+	+	+	+	-	7	7	7		1	1
nas	5	5	5	5	5	5	5	5	5	5	5	5	5	+	+	+	-	1	1
ant	+	+	+	+	-	-	-	-	+	+	+	-	-	+	+	-	+	1	1
cor	-	-	+	+	+	+	9	9	-	+	+	+	-	-	+	+	+	+	-
vcd	-	+	-	+	-	+	-	+	2	10	10	10	2	3	3	3	3	3	3
str	8	8	-	-	+	+	-	-	+	+	+	+	-	8	-	-	-	-	-

2.2.2. Inventory of Vowel Phonemes

Haya has ten phonemic vowels, five short and five long (cf. also Byarushengo 1977: 3-4) as given in (4) and illustrated in (5).

(4) i ii u uu
 e ee o oo

 a
 aa

These have the phonetic values usually associated with their phonemic representations.

(5)

i	sima	'knock something'	ii	siima	'thank (someone)'
i	bika	'announce death'	ii	biika	'keep'
e	tega	'set up a trap'	ee	teega	'curse'
	lega	'trap water'	leega		'stretch'
u	balula	'burst, open'	uu	baluula	'tell'
	chuchula	'comb hair'		chuuchuula	'run fast'
o	kolola	'cough'	oo	kooloola	'bring things improperly'
	yola	'get poor'	yoola		'get things from the ground'
a	laza	'set fire wood extensively'	aa	laaza	'extinguish'
	shalila	'take off leaves of the banana plant'	shaalila		'become bitter'

2.2.2.1. Distinctive Features of Vowel Phonemes

The Haya vowels are categorized in a distinctive feature (DF) matrix in table 3. All vowels share the feature [+syllabic] which distinguishes vowels from consonants. Phonetically, short and long vowels occur, but phonologically the long vowels will be analyzed as sequences of two vowels.

(7) $V\alpha V\alpha \rightarrow [V:]$

Table 3. Distinctive Features of Vowel Phonemes.

	i	e	a	o	u
syllabic	+	+	+	+	+
high	+	-	-	-	+
low	-	-	+	-	-
back	-	-	+	+	+

2.2.2.2. Redundancy Rules for Vowel Phonemes.

Certain redundancy rules allow us to predict some features in the DF matrix. Certain feature values are abstracted from table 3 by redundancy rules R11-R13

(8)

R 11 [+hi] $\rightarrow$ [-lo]

R 12 [+lo] $\rightarrow$ [-hi, +bk]

R 13 [-bk] $\rightarrow$ [-lo]

Table 4 include numbers that correspond to the redundancy rules in (8) above.

Table 4. Distinctive Features with Redundancy Rules: Vowel Phonemes.

	i	e	a	o	u
syllabic	+	+	+	+	+
high	+	-	12	-	+
low	11	13	+	-	11
back	-	-	12	+	+

2.3. The Tones

Two levels of tones are distinguished: High (H) and Low (L) as exemplified below:⁴ Note that debate of whether or not tone is a feature of vowel or syllable is beyond the scope of this study:

(9)

èndà	'pregnancy'
éndà	'louse'
énda	'break'
íba	'her husband'
ìba	'steal'
màlá	'finish'
málà	'intestines'
síkà	'pull'
sìkà	'inherent'

The two functions of tone are of two types:

- (1) Lexical
- (2) Grammatical

2.3.1. Lexical Tone

Lexical tone in Haya as in other Bantu language serves as a feature distinguishing one lexical item from another as shown in (9).

2.3.2. Grammatical Tone

Grammatical tone in Haya distinguishes number, and tense/aspect. For example a high tone pattern in the present universal habitual tense, distinguishes the first person singular from the third person singular:

(10)

n -á -gènd-á
 SM-TNS-go -IND
 'I am going'
 n -á -génd-á?
 SM-TNS-go -IND
 'is he going?'

In what follows, tone will not be marked unless it distinguishes lexical and/or grammatical categories.

2.4. Distribution of Consonant and Vowel Phonemes.

The distribution and frequency of occurrence of consonant and vowel phonemes in Haya words are discussed and exemplified below.

2.4.1. Distribution of Consonants

2.4.1.1 Distribution of Consonants Occurring Singly

All consonants phonemes occur singly word initially, and between vowels.⁵ One example of each occurrence is given for each consonant phoneme. See more examples in appendix B.

(11) Initial Position

/p/	pima	'measure'
/b/	byaala	'plant'
/t/	telela	'slip'
/d/	dura	'to uplift-oneself'
/k/	kinga	'close e.g. door'
/g/	gangabula	'split'
/ɕ/	chunda	'shake'
/ʃ/	juna	'help'
/f/	fuha	'blow nose'
/s/	sindika	'push'
/z/	zana	'play'
/ʒ/	shona	'sew'
/h/	hooya	'sing'

/m/	myama	'sleep'
/n/	nunka	'smell'
/ñ/	nyyama	'sleep'
/l/	lobeka	'soak'
/y/	yoleka	'show'
/w/	wazambuka	'come out of sleep suddenly'

(12) Between Vowels

/p/	paapala	'to run out of fear'
/b/	babiilila	'itch'
/t/	yetonge	'deny'
/k/	ikala	'dwell'
/g/	bugangana	'meet'
/č/	chachalika	'talk nonsense'
/ʃ/	yajula	'crow'
/f/	fufuza	'to go in a wrong direction'
/s/	sisiimuka	'wake up'
/z/	bazangana	'ask each other'
/ʒ/	shashula	'pay back'
/h/	hohahoba	'to be frightened'
/m/	lemala	'become lame'
/n/	nanura	'cure'
/ñ/	monyoka	'break off'
/l/	guluka	'jump'
/y/	gayangana	'despise each other'
/w/	wawalikana	'to be unclear of what one is doing'

The phoneme d does not appear between vowels (see 2.5.1.2.1).

There are no word final consonants.

2.4.1.2. Consonant Clusters

There are two types of consonant clusters: (a) a nasal consonant followed by another consonant (henceforth abbreviated as NC), and (b) a glide followed by another (true) consonant (henceforth GC).

/Np/	-mpako	'cave'
/Nb/	-mbuzi	'goat'
/Nt/	-ntale	'lion'
/Nd/	-ndwana	'I fight'
/Nk/	-nkilabinu	'the middle finger'
	-nkeremeke	'baby'
/Ng/	-ngoma	'drum'
/Nč/	-nchumita	'I spear'
/Nj/	-njoka	'snake'
/Nf/	-mfuzi	'orphan'
/Ns/	-nseiso	'a stone used to grind'
/Nz/	-nzilo	'dirt'
/Nš/	-nshanani	'gap (tooth)'

(13.b) NC: between vowels

/Np/	-mpolampola	'slowly'
/Nb/	-kambula	'tear down'
/Nt/	-muntu	'a person'
/Nd/	-muhanda	'path'
/Nk/	-mukankaburo	'a banana which is not mature'
/Ng/	-omungemu	'in the banana field'
/Nč/	-okuchinja	'to slaughter'
/Nj/	-mwekubanjuro(s)	'tiredness'
/Nf/	-enfuka	'a hole'
/Ns/	-sinsimuko	'dirt'
/Nz/	-enkwanzi	'bead'

The following examples show the GC consonant clusters in medial position which is the only position in which they occur. Although they are orthographically presented as sequence of two vowels, they are phonologically consonant clusters:

(14) a. GC:	geija	--> [geyja]	'become fat'
	boigola	--> [boygola]	'bark'
	chaichiliza	--> [čayčiliza]	'tease'

2.4.2. Distribution of Vowels

2.4.2.1. Short vowels

Short vowel phonemes appear word initially, between consonants and word finally as in (15)-(17).

(15) Initial

/i/	ikiliza	'agree'
	inama	'bend'
	ija	'come'
/e/	eya	'sweep'
	enda	'break'
	ebembela	'lead e.g. way'
/u/	ulila	'listen'
	umuza	'put down'
	uma	'become blind'
/o/	oloola	'answer'
	ondela	'follow'
	oba	'be frightened'
/a/	ababikana	'come out with a torrent of words'
	abya	'demolish e.g. a house'
	ahula	'clean the house'

In dialects of Haya other than the Ziba dialect the vowel phoneme u does not occur in word initial position, instead we find hu in those dialects.

(16) ø --> hu/# --- u.

(17) Between Consonants

/i/	bika	'announce death'
	hika	'arrive'
	lila	'cry'
/e/	leka	'leave (it)'
	lela	'bring up child'
	tema	'cut down'
/u/	juma	'abuse'
	kula	'grow'
	bula	'get lost'
/o/	bona	'see'
	yoga	'bathe'
	shomba	'carry things'
/a/	baza	'ask'
	shaba	'as for'
	kama	'milk cow'

(18) Final

/i/	mulimi	'farmer'
	muzaani	'player'
	mwombeki	'builder'

/e/	a-lagil-e	'he should give message'
	SM-give-SUBJ	.
	ba-kul-e	'they should grow'
	SM-grow-SUBJ	
	tu-jun-e	'We should help'
	SM-help-SUBJ	.
/u/	ichumu	'spear'
	ndimu	'lime'
	bizimu	'ghosts'
/o/	koyo	'a small heart'
	kalimo	'a small job'
	mulalilo	'promise'
/a/	lagila	'give message'
	kula	'grow up (in age)'
	kulima	'farming'

The short vowels i, u, o, and a appear word finally in nouns, a appearing only in infinitival nouns. Verbs always end in a, and only end in e in subjunctive and perfective forms.

2.4.2.2. Long Vowels

Long vowel phonemes appear between true consonants and glides:

(19)	/i/	biiya	'become bad'
		ziika	'bury'
		biika	'keep'
	/e/	leeba	'look'
		teega	'curse'
		teema	'play around'
	/u/	juula	'undress'
		baluula	'tell'
		shuula	'greet'
	/o/	goola	'ashame'
		yoola	'get things from the ground'
		shooba	'go slowly'
	/a/	zaana	'play'
		shaaga	'remain'
		shaabuka	'cross over'

Long vowels appear neither word-initially nor word finally.

2.4.3. Distribution of Consonants Before Vowels.

Table 5 shows the distribution of consonant phonemes before vowel phonemes word initially. It shows that the consonants j, g and the semi-vowels y and w are not followed by the vowel i. The vowel e does not follow the consonants p and d. The consonant phoneme d is also not followed by the phoneme vowel a. Consonants g, z and the semi-vowel w are not followed by the vowel u. These cases are regarded as accidental gaps in the language (except w before u which

Table 5. Distribution of Consonants before Vowels.⁶

	/i/	/e/	/a/	/o/	/u/
/p/	+	-	+	+	+
/b/	+	+	+	+	+
/t/	+	+	+	+	+
/d/	+	-	-	+	+
/k/	+	+	+	+	+
/g/	+	+	+	+	+
/č/	+	+	+	+	+
/j/	-	+	+	+	+
/f/	+	+	+	+	+
/s/	+	+	+	+	-
/z/	+	+	+	+	-
/š/	-	+	+	+	+
/h/	+	+	+	+	+
/m/	+	-	+	+	+
/n/	+	+	+	+	+
/ñ/	+	+	+	+	+
/l/	+	+	+	+	+
/y/	-	+	+	+	+
/w/	-	+	+	-	-

is principled). This needs historical explanation, which is beyond this study.

2.5. Phonological Rules

The following phonological rules affecting vowels and consonants, are observed in Haya:

Consonants: Nasal assimilation and consonant alternation.

Vowels: gliding, vowel deletion, and vowel lengthening.

2.5.1 Phonological Rules Affecting Consonants

The following are phonological rules affecting consonants:

2.5.1.1. Nasal Assimilation

A nasal shares place of articulation with the following consonant.

(20)

$$[+ \text{nas}] \rightarrow \begin{bmatrix} \alpha & \text{ant} \\ \beta & \text{cor} \end{bmatrix} / \text{----} [- \text{syl}]$$

(21)

n-bul -a --> m-bula --> mbula

I-get lost-IND

'I get lost'

n-b -a --> m-ba --> mba

I-be-IND

'I become'

n-f -a --> m-fa --> mfa

I-die-IND

'I die'

The data show that the phoneme n always assimilates to the place of articulation of the following consonant within a word. The n- above represents the first person subject marker in a verb. As mentioned in section 2.3.2. this rule only concerns the only prefix n of the language (the first person).

In addition, the nasal becomes syllabic word initially if followed by a non-nasal consonant.

(22) [+nas] --> [+syl]/# --- $\begin{bmatrix} -\text{syl} \\ -\text{nas} \end{bmatrix}$

(23) n-pa --> [mpa] 'I give'

n-bika --> [mbika] 'I announce death'

n-kunga --> [nkunga] 'I shout'

However, if the nasal consonant is followed by another nasal consonant, the nasal cluster consonant is shortened.

(24) [+nas] [+nas] --> [+nas]/# ---

(25) n-manya	-->	many	'I know'
n-mila	-->	mila	'I swallow'
n-mala	-->	mala	'I finish'

2.5.1.2. Consonant Alternation

The following alternation occur in Haya.'

2.5.1.2.1. Strengthening

The contrast of l and d is neutralized in favor of d after a nasal n.

(26) C

$\begin{bmatrix} +cor \\ +ant \\ -nas \\ -cont \end{bmatrix}$	-->	[-son]/[+nas] ---
---	-----	-------------------

(27) a. o -n -lim -ila --> ondimila

SM-OM-STEM-

you-me-farm-for-BEN-IND

'You farm for me'

b. a -n -lum -a --> anduma

SM-OM-STEM-IND

he-me-bite-IND

'he bites me'

c. n -leet -a --> ndeeta

SM-bring-IND

'I bring'

Another example of strengthening is exhibited in the neutralization of h and p in favor of p after the nasal phoneme n.

(28) C

$$\begin{bmatrix} -\text{cor} \\ -\text{vcd} \\ -\text{str} \end{bmatrix} \quad \text{-->} \quad [-\text{cont}]/[+\text{nas}] \quad \text{---}$$

(29)

a. n-hango --> m-pango --> mpango

it (e.g. cow) big

'it is big'

b. a -n -hiig -a --> a-m-piiga --> ampiiga

SM-OM-STEM -IND

he-me-look for-IND

'he looks for me'

c. n -hum -a --> m-puma --> mpuma
 SM-STEM -IND
 I -blind-IND
 'I become blind'

2.5.1.2.2. Spirantization

The contrast between the three consonants l, d and y,
 is neutralized in favor of z before the high front vowel i.

$$(30) \begin{bmatrix} +cor \\ +vcd \\ -cont \end{bmatrix} \rightarrow [+cont]/ \text{ ---- } \overset{V}{\begin{bmatrix} +hi \\ -bk \end{bmatrix}}$$

(31) a.

(i) a -kol -a

SM-work-IND

a -kol -ile --> akozile

SM-work-TNS

'he/she has worked'

(ii) ba-laa-shol -a

SM-TNS-pay tax-IND

ba -laa-shol -ile --> balashozile

they-TNS-pay tax-TNS

'they have already paid tax'

b.(i)

mu-lond-a

SM-pick-IND

mu -lond-ile --> mulonzile

you(pl)-pick-TNS

'you(pl) picked'

(ii) ba-lind -a

SM-guard-IND

ba-lind-i --> balinzi

SM-guard

'guards'

c.(i)

ba-enj -a

SM-search-IND

ba-enj-i --> baenzi

'searchers'

(ii) mu-ganj -a

SM-be loved-IND

mu-ganj-i --> muganzi

'lover'

Finally, the contrast of sh and s is neutralized in favor of s before i.

$$(32) \begin{bmatrix} -\text{son} \\ +\text{cont} \\ +\text{cor} \\ -\text{vcd} \end{bmatrix} \rightarrow [+ant]/ \text{----} \overset{V}{\begin{bmatrix} +hi \\ -bk \end{bmatrix}}$$

(33)

a. shash-a

STEM -IND

'get sick'

shash -il -a --> shasila

get sick-APL-IND

'get sick/hurt for . . .'

b. lash -a

throw-IND

lash -il -a --> lasila

throw-APL-IND

'throw at/for . . .'

See also 2.5.1.2.4 (37) on page 42).

2.5.1.2.3. Palatalization

The contrast between the nasal phonemes n and ɲ is neutralized in favor of n before the high vowel i.

$$(34) \begin{bmatrix} +\text{nas} \\ +\text{cor} \end{bmatrix} \rightarrow [-ant]/ \text{----} \overset{V}{\begin{bmatrix} +hi \\ -bk \end{bmatrix}}$$

(35)

a. ni -n-0 -ikiliz-a --> ni-ny-ikiliza --> ninyikiliza

FOC I-TNS-agree -IND

'I am agreeing'

b. n-0 -inam-a --> ny-inama --> nyinama

I-TNS-bend-IND

'I bend'

c. ba -n -0 -iluk-a --> ba-ny-iluka --> banyiluka

they-me-TNS-run -IND

'they run away from me'

2.5.1.2.4. Morphophonemic Rules

Consonant alternations involving t, č, š, and s are phonologically unnatural, and are morphologically conditioned.

$$(36) \left\{ \begin{array}{c} t \\ \check{c} \\ \check{s} \end{array} \right\} \text{ ---> } s/ \text{ ---- -ile} \quad \text{recent past}$$

where -ile is the suffix recent past and the discontinuous morphemes of the near tense, explained fully in chapter 3 page 76.

(37)

a.(i) a -it -a

SM-kill-IND

a -it -ile --> aisile

he-kill-TNS

'he has killed'

(ii) mu-jugut-a

SM-blow -IND

mu -jugut-ile --> mujugusile

you(pl)-blow -TNS

'you have blown'

b.(i) n-chaich -a

I-disturb-IND

(ii) n-chaich -ile --> nchaisile

I-disturb-TNS

'I got disturbed'

c.(i) tu-laa-shash -a

SM-TNS-get sick-IND

'we-will get sick'

(ii) tu-la -shash -ile --> tulashaasile

SM-TNS-get sick-INS

'we have already got sick'

As evidence of the above claim, we cite examples in (38) where no alternations of t/č ʃ occur in the phonological

context -ile. The s s alternations do appear, (38.c) as we explained in (32).

(38)

a.(i) ba-it -a

SM-kill-IND

'they kill'

(ii) ba -it -il -a --> baitila

They kill-APL-IND

'they kill for/at . . . '

b.(i) n-chaich -a

I disturb-IND

'I disturb'

(ii) n-chaich -iliz-a --> nchaichiliza

I-disturb-RPT -IND

'I become disturbed repeatedly'

2.5.2. Phonological Rules Affecting Vowels

The phonological rules affecting vowels in Haya are documented in Byarushengo (1975, 1977). A few examples and illustrations are shown here. The rules are: glide formation, vowel deletion and vowel lengthening.

2.5.2.1. Glide Formation

The contrasts of i and e with y and of u with w are neutralized in favor of glide before vowels.

(39) a.

$$\begin{array}{c} V \\ [-bk] \end{array} \rightarrow \begin{bmatrix} -syl \\ +hi \end{bmatrix} \text{ ---- } V$$

b. V

$$\begin{bmatrix} +bk \\ +hi \end{bmatrix} \rightarrow [-syl] / \text{ --- } V$$

(40) a. i. ku -li -a --> kulya

INF-eat-IND

'to eat/eating'

ii. ba-laa-li-end -a --> balyenda

SM-TNS-OM like-IND

'They will like it'

iii. ba-li -ki-ongel-a --> bakyongela

SM-TNS-OM-add IND

'they will add to it'

iv. tu-0 -bi-umuz -a --> tubyumuza

SM-TNS-OM-put down-IND

'we put them down'

As was pointed out in rule 16, in most of the other Haya dialects, the last example would be realized as tu-bi-umuza --> tubihumuza 'we put them down,' because the phoneme u is realized as hu verb root initially.

(40) b. i. ku -igan -a --> kwigana

INF-be equal-IND

'to be equal'

ii. ku -ey -a --> kweya

INF-sweep-IND

'to sweep'

iii. ku -og -a --> kwoga

INF-swim-IND

'to swim'

iv. ku -at -a --> kwata

INF-break-IND

'to break, to catch'

Rule (7) repeated here as (41), which forms a long vowel from a phonological cluster of like vowels applies before (39) to prevent ii --> yi, uu --> wu etc.

(41) $V_a V_a \rightarrow [V:]$

2.5.2.2. Vowel Deletion

In Haya, there are exceptions to rule (39.a.b.). Byarushengo (1977:5) correctly indicates that although both the negative marker ti- and the present universal habitual marker ni- end in i, this vowel does not undergo glide formation. Instead, it undergoes vowel deletion. However, this process is morphologically conditioned, appearing only after negative (NEG) and the present universal habitual.

$$(42) \quad V \begin{bmatrix} \text{NEG}_1 \\ \text{FOC} \end{bmatrix} \rightarrow \emptyset / \text{----} \begin{bmatrix} - \text{hi} \\ + \text{bk} \end{bmatrix}$$

(43)

a. ti -a -gend-a --> tagenda

NEG SM-go -IND

'he doesn't go'

b. ni -a -gend-a --> nagenda

FOC-SM-go -IND

'he is going'

c. ni -o -shom -a --> noshoma

FOC-SM-study-IND

'you are studying'

2.5.2.3. Vowel Lengthening

Vowels are predictably long in Haya as in Kinyaruanda, a language closely related to Haya (Kimenyi (1979)) in the following environments: (1) when a morpheme ending in a vowel precedes another morpheme that begins with an identical vowel, (2) when a vowel precedes a nasal cluster within stems, and (3) before the morpheme n - 'I/me.'

2.5.2.3.1. Lengthening of Identical Vowel Sequences

When a morpheme ending in a vowel precedes another morpheme that begins with an identical vowel, the sequence of the two identical vowels are realized as long as was shown in rule (7) repeated here as (44).

(44)

$$V_a V_a \rightarrow [V:]$$

(45)

a. ku -li -ik-a --> kuliika

INF-eat-st-IND

'to be edible'

b. ku -ulil -a --> kuulila

INF-listen-IND

'to listen'

c. ba-a -lim -a --> baalima

SM-TNS-cultivate-IND

'they are cultivating'

2.5.2.3.2. Lengthening before Nasal Clusters

Vowels are lengthened if they occur before nasal consonant clusters.

(46)

linda	--> li:nda	'wait'
tunga	--> tu:nga	'get rich'
kenga	--> ke:nga	'suspect'
mu -shondo	--> musho:ndo	'gift'
SM(sg) -gift		
lamba	--> la:mba	'lick'

(47)a.

$$[+syl] \rightarrow \begin{bmatrix} + \text{ syl} \\ + \text{ long} \end{bmatrix} / \text{----- NC, where NC is nasal +}$$

cosonant cluster. But because we have regarded the DF [+long] as redundant in Haya, (47.a) can be formulated as (47.b).

b. V --> V:/ ---- NC

2.4.2.3.3. Lengthening before n

A vowel is lengthened if it occurs preceeding the morpheme n- 'me'

(48)

a. ku -n -mil -a --> ku:mila
 INF-OM-swallow IND
 'to swallow me'

b. ku -n -mal -a --> ku:mala

INF-OM-finish-IND

'to finish me'

c. ku -n -nag -a --> ku:naga

INF-OM-throw-IND

'to throw me' (not take care of me)

Lengthening can also be interpreted as in (49).

(49)

$$[+syll] \rightarrow \begin{bmatrix} + \text{ syl} \\ + \text{ long} \end{bmatrix} / \text{---} [+nas] [+nas]$$

Rule (49), however, is just a special case of (48), with the simultaneous nasal assimilation (rule (20)), and the nasal cluster shortening (rule (24)).

2.6. A Word on Syllable Structure

Haya has two types of syllable structures: Closed and open. The closed syllables, are of two kinds: (a) those ending in glides (see also glide formation page 42) and (b) those ending in nasals (see consonant clusters, section 2.4.1.2). Examples of closed syllables ending in glides are in (14) repeated here as (50).

(50)

geija --> [geɣja] 'become fat'
 boigola --> [boɣgola] 'bark'
 chaichiliza --> [čayčiliza] 'tease'

Examples of closed syllables ending in nasals are in (13) repeated here as (51).

(51)

kambula 'tear down'
 sinsimuko 'dirt'
 mpolampola 'slowly'

Otherwise Haya has open syllables. The syllable final vowels are either short or long. An abstract notion of the syllable structure, containing one obligatory vowel is exemplified in (52), in which G represents glides and N represents nasals and C represents all consonants.

(52) (N)(C)(G)V(:)

The representation in (52) is partially illustrated in (53) immediately followed by two examples for each representation.

(52) (N)(C)(G)V(:)

(a) NCGV:

(b) NGV:

(c) NV:

(d) NV

(e) CGV:

(f) CGV

(g) GV:

(h) GV

(i) V:

(j) V

(53)

a. NCGV: o -mu-mbyaazi --> omumbya:zi

IV-SM-planting field

'in the planting field'

b. NGV: a -myaam-e --> anyaame

SM-sleep-SUBJ

'he should sleep'

c. NV: amaani --> ama:ni

'strength'

d. NV tu-mal -a --> tumala

SM-finish-IND

'we finish'

e. CGV: kyaala --> kya:la

'take a walk'

f. CGV luala --> lwala

'get sick'

g. GV: ba-yool-a --> bayoola

SM-pick-IND

'they pick things from the ground'

h. GV mu-ta -yasham -a --> mutayashama

SM-NEG₂ open mouth-IND

'you should not open your mouth'

i. V: ta -leeb-a --> taleeba

NEG-look-IND

'he/she does not look'

j. V ichumu

'spear'

2.7. General Remarks and Summary

In this chapter selected aspects of phonology applicable to the understanding of the morphology of the Haya word have been discussed and exemplified, namely: the phonological inventory, (including distinctive features and

redundancy rules), the distribution of Haya phonemes, certain phonological and morphophonemic rules, and, briefly Haya syllable structure. These various aspects of phonology will be assumed in later chapters which deal with descriptive and theoretical issues of Haya verb morphology.

CHAPTER 2 ENDNOTES

¹ For a detailed sketch of Haya phonology, see Byarushengo (1975).

² There are few lexical items in Haya beginning with the phonemes /p/, /d/ and /w/. There are for instance 30 entries of #P - in the Haya dictionary, Bona-Baisi (1957), 7 entries of #d-, and 14 entries of #w-.

³ We have selected features that capture the necessary distinctions in this language. Some features are acoustic while others are articulatory. (Jakobson et al. 1951, Jakobson and Hale 1956, Chomsky and Halle 1968). Note that there is not DF specification for phonemes /m/and/n/on syl because they could either be syllabic or non-syllabic (see for example rule (22) page 34).

⁴ Haya appears to be among Bantu Languages which have undergone partial reduction in tonal distinctiveness and tonal morphologization.

⁵ In the examples given a verb is regarded as the simple stem and an indicative marker. Where no such examples exist a noun has been given.

⁶ In the rest of this work tables will be placed at the end of each chapter.

⁷ For a detailed analysis of consonant alternations, see Lee Trithart in Byarushengo et al. (1977).

CHAPTER 3

THE MORPHEMES OF THE VERB: FORMS AND FUNCTIONS

3.1. Introduction

This chapter describes the morphemes of the Haya verb in terms of their meaning and their linear order within the verb. The cooccurrence restrictions which hold among these morphemes are the topic of chapter 4.

The twenty three verbal morphemes to be described are listed in table 6 at the end of this chapter followed by an inventory of all morphemes with their allomorphs in table 7. We represent the twenty three morphemes in a morphemic formula in (1) (henceforth MHV). As will be seen in this chapter, the Haya Verbal morphemes may be divided into two groups: (a) The Root, and (b) The Non-Stem Morphemes.

(1) MORPHEMIC FORMULA OF THE HAYA VERB (MHV).

$$\left\{ \begin{array}{l} \text{IV} \\ \text{COND} \\ \text{NEG} \\ \text{FOC} \end{array} \right\} - (\text{SH}) - (\text{NEG}_2) - (\text{TNS}) - (\text{NEG}_3 (\text{INF} (\text{NEG}_2))) - \left\{ \begin{array}{l} (\text{RFM}) \\ (\text{DO}^1) (\text{IO}^2) \end{array} \right\} - \left\{ \begin{array}{l} \text{CAUS} \\ \text{APL} \end{array} \right\} \left\{ \begin{array}{l} \text{PASS} \\ \text{RCP} \end{array} \right\} - \text{APL} - \text{RPT} \left\{ \begin{array}{l} \text{IND} \\ \text{SUBJ} \end{array} \right\} - \text{LOC} - \text{MNR} - \text{Q} - \text{INT}^1$$

1/2/3/4-5 - 3 - 6 - 3 - 7 3 8/9₂/9₆ 10 11 12/13-14-15/16-13 -17 -18/19 -20 -21 -22-23

Notes.

1. The choice of IV necessitates the choice of SM but not vice versa.
2. The combination of IV and SM results into a relative subject marker (RSM)
3. (DO¹) (IO²) means a multiple occurrences of up to the limit of the number, (i.e., xⁿ: x may occur at most n times).
4. The absence of a superscript implies a maximum of one.
5. Only one NEG may appear at a time.
6. When the subject marker (SH) and the reflexive (RFM) morphemes co-occur there are certain phonological cases which take place as discussed in chapter2.

3.2. The Root

We may begin the description of the verbal morphemes in Haya with a description of the root, which may be considered to be the minimal lexical unit of the verb. In this study, Driever's (1976: 23) definition of root in Swahili, another Bantu language, may be adopted for Haya: "the part of the verbal expression which carries the lexical meaning of the verb and cannot be morphologically analyzed into smaller meaningful units." Examples of such minimal meaningful units are given as follows:

- (2) a. -f-
 root
 'die'
- b. -lum-
 root
 'bite'
- c. -ziik-
 root
 'fury'
- d. -zal-
 root
 'give birth'

The presence of hyphens on either side of root forms indicates the absence of any other morphological material.

A verb root may cooccur with a large number of verbal morphemes, whose description is the purpose of this chapter. First, a root may cooccur with morphemes which modify its lexical meaning or alter its argument structure: the verbal extensions.² One example, which will be discussed in more detail later, is an extension which, among other functions adds a beneficiary argument:³

(3) -zal-il-

ROOT-APL-

'give birth for'

Second, a root may occur with morphemes which encode direct (DO) and indirect objects (IO): the valence morphemes.⁴ The previous example may take a morpheme encoding the beneficiary argument:

(4) a. mu-zal -il-

DO-give birth-for

'give birth for him'

b. mu-ba-jun -il-

• DO-IO-help for

'help him for them'

At this point we define another term: the stem. The term stem will be used to refer to the set of all monomorphemic roots plus the set of all roots with verbal extensions and/or valence morphemes.⁵ It should be noted however that no other source on any other Bantu language includes the valence morphemes as part of the stem.

Third, a root may cooccur with morphemes indicating tense/aspect, mood, finiteness, negation, conditionality, focus, status as a relative clause and agreement for person, gender and number of the subject of the verb. One example, whose details are again to be discussed later, may be given as follows:

(5) a. a -ka -zal-

3Psg-TNS-give birth

'she gave birth'

where 3Psg is the third person singular (future representation will be modified), and TNS refers to tense to the specifics of which will be discussed later.

b. o -li -bon-

2Psg-TNS-see

'you(sg) will see.'

Three examples of apparently maximal verbs generated by the morphemic formula of the Haya verb (MHV) are:

(6) a. ka -ba -ta -li-ku -mu-tel -el -a -ha -ge -kwo.

COND-SM -NEG₂-NF-INF-OM-ROOT-APL-IND-LOC-MNR-INT

if -they-not- -ing-him-hit well-indeed

'If they are not indeed hitting him well here'

b. ti -tu-ka -ba -lim -is -e -ki-

NEG₁-SM-RMP-OM -ROOT-CAUS-SUBJ Q

Not-we- -them-farm- - -what-

'What haven't we caused them to farm?'

c. ka -mu -ta -ba -mu-leb -angan-il -a -ha -ge -kwo

2 -5 -3 -9a -9b-10 -16 -13 -18 -20 -21 -23

COND-SM-NEG -DO -IO-ROOT-RCP -APL-IND LOC-MNR-INT.

'If you are not indeed taking care of him well for
one another here.'

From these examples it becomes apparent that it is impossible to get all the 23 morpheme in one verbal construction. There are certain co-occurrence restrictions on a number of them the details of which are discussed in chapter 4. We will later present criteria to show that these two groups of morphemes, the morphemes constituting the stem as the first group and all the other morphemes as the second group, may be reasonably regarded as constituting separate sets.

The remainder of the chapter is organized as follows. The second group of morphemes (the non-stem morphemes) are presented first. They are described in relation to the stem, which will be referred to simply as "the stem" without reference to its internal structure. Each morpheme will be presented as part of one or more verb forms. Next, the stem morphemes are presented. The reason for this order of presentation is that the stem morphemes are mostly morphemes which affect the argument structure of roots. For this reason, they are best illustrated with sentences rather than isolated verb forms, as in the case of the non-stem morphemes. Prior description of the non-stem morphemes will make these examples easier to understand.

3.3. The Non-Stem Morphemes

3.3.1. The Indicative Morpheme

We may begin the description of the verbal morphemes of Haya with the indicative morpheme -a, sometimes called the imperative. This morpheme occurs directly following the verb stem, schematized as follows:

(7) STEM - IND

The indicative morpheme in combination with the verb stem forms an imperative:

(8) a. abazaile ba-laa-gul-a ebitabo
 parents SM -IF -buy-IND books
 The parents will buy the books.

b. iba ya-leet -a ebilaatwa
 husband-SM-bring-IND shoes
 'her husband brought shoes'

c. nyowe nyw -a amaizi gangi bulikilo
 I drink-IND water plenty every day
 'I drink plenty of water every day.'

The indicative also occurs in other forms of the verb as well, as will be discussed as the dissertation develops.

3.3.2. The Infinitive Morpheme

The infinitive morpheme ku- realized as ku and kw (see chapter 2 page 44), is attached to the stem, with final vowel -a, without tense markers (It may be followed by the (NEG₂) if there is one).

(9) INF - (NEG₂) - STEM -

(10) a. ku -shom-a
 INF-read-IND
 'to study/studying'

b. ku -ib -a --> kwiba

INF-steal-IND

'to steal/stealing'

c. ku -ta -gab -a

INF-NEG₂ give-IND

'not to give/not giving'

The infinitive form of the verb has both nominal and verbal syntactic functions, the description of which is beyond the scope of this study. When the infinitive is nominal, it controls the agreement of class 15.

(11) a. O -ku -shom-a ku-tin -is -a abantu
IV-INF-read-IND 15-be afraid-CAUS-IND people.
'Reading frightens people'

b. O -ku -lim -a ku-jun -a
IV-INF-farm-IND 15-help-IND
'farming helps'

The SM(INF) agrees with the nominal infinitive which in the examples above is preceded by an initial vowel (IV). We will at a later stage discuss and exemplify the noun classes in Haya in section 3.3.3.1.

3.3.3. The Subject Marker

The subject marker is a verbal morpheme which shows agreement with the subject of the verb. It may be exemplified with the present universal/habitual tense (see section (3.3.5.1.1.)), of the verb, in which it is prefixed to the verb stem followed by the indicative morpheme:

(12) a. ba-lim -a

SM-farm-IND

'they farm (usually)'

b. a -guz -a

SM-sell-IND

'he sells (usually)'

The precise linear order of the subject marker with respect to other pre-stem verbal morphemes will become clear below when these morphemes are discussed.

3.3.3.1. The Noun-Class System

More specifically, the subject marker agrees in noun-class with the subject of the verb. In order to understand the degree or variation found in the subject marker, we will briefly discuss the noun-class system in Haya.

Nouns in Haya, as in many other Bantu languages, belong to concordial classes, which are referred to as noun-classes. Nouns which belong to the same noun-class control

the same set of agreement affixes on verbs and modifiers (cf. Bennett 1982). In addition, the nouns belonging to a single noun-class tend to be marked with morphologically identical noun-class prefix, although this generalization is not absolute. There are eighteen noun-classes in Haya. In this dissertation, we will use the numbering system for the noun-class system of Bantu languages referred to as Welmers system (1973). Under this numbering system, the first ten noun classes form singular/plural pairs, as shown in table 8 (page 148). Odd-numbered classes have their plurals in the following even-numbered classes. In addition, Class 11 nouns have their plurals in Class 10.⁶ Class 12 (ka-) is predominantly the class of diminutives (Ashton et al. 1954 in Luganda). The prefix ka- which usually follows prefixed to the initial vowel a- (aka-), may replace any noun in order to indicate the diminutive form sometimes slightly changing the original meaning as exemplified below:

- | | |
|-------------------|-----------------|
| (13) a. O -mu-ntu | a -ka-ntu |
| IV-12-STEM- | IV-12-STEM |
| 'a person' | 'a small thing' |
|
b. O -mu-ti |
a -ka-ti |
| IV-3 -STEM | IV-12-STEM |
| 'a tree' | 'a small stick' |

c. e -li-sho	a -ka-isho
IV-5 -STEM	IV-12-STEM
'an eye'	'a small eye'

whereas example (13.c) shows the diminutive form of an eye, in (13.a) the meaning attached to the diminutive form is not of a person but of a 'small' thing.

Class 13 (tu-) may function as a plural form of class 12.

(14) a. a -ka-ntu	o -tu-ntu
IV-12-STEM	IV-13-STEM
'a small thing'	'small things'
b. a -ka-isho	o -tu-isho
IV-12-STEM	IV-13-STEM
'a small eye'	'small eyes'

Class 14 (bu-) is a class of the augmentative of the plural diminutive class 13 and may as well function as the plural augmentative form of class 12 (ka-).

(15) a. a -ka-ntu	o -bu-ntu
IV-12-STEM	IV-14-STEM
'a small thing'	'little bigger things'

b. o -tu-ntu

IV-13-STEM

'small many things'

o -bu-ntu

IV-14-STEM

'little bigger many
things'

Class 15 consists entirely of infinitive forms and some
body parts:

(16) a. o -ku-andika

IV-15-STEM

'writing/to write'

b. o -ku-gulu

IV-15-STEM

'a leg'

when class 15 is used as a body part, it takes the plural
form of class 6 (ma-).

(17) o -ku-gulu

IV-15-STEM

'a leg'

a -ma-gulu

IV-6 -STEM

'legs'

Noun classes 16-18 are traditionally referred to as locative
classes (Rascher *ibid.*: 65-69).⁷ These classes are
indicated by the morpheme marker ha-(16), ku-(17) and mu-
(18) with the underlying idea of definite place, indefinite

place and withinness (inside) respectively. These noun classes will become more clearer in the course of the discussion.

In classes 1 and 2, the classes of singular and plural human beings, respectively, the verbal subject markers vary for 1st, 2nd and 3rd person as well as for class, as seen in table 8 and exemplified in (18) and (19).

(18) a. n -chumb-a buli kilo

1s-cook -IND every day

'I cook every day'

b. o -lim -a ekilo

2s-farm-IND night

'you(sg) farm at night'

c. a -yombek-e amaju

3s-build -SUBJ houses

'he should build houses'

(19) a. tu-guz -a emotoka

1p-sell-IND cars

'we sell cars'

b. mu-bug -a emotoka eziango

2p-drive-IND cars big

'you drive big cars'

- c. ba-s -e omugusha
 3p-grind-SUBJ millet
 'they should grind the millet'

Since nearly every Haya verb example in this dissertation contains a subject marker, they will not be exemplified further here.

3.3.4. The Subjunctive Morpheme

The subjunctive form of the verb is formed with the subject marker prefixed directly to the verb stem, which is followed by the vowel -e in place of the indicative vowel -a, schematized in (20) and exemplified in (21):⁸

(20) SM - STEM - SUBJ

- (21) a. ni -bend-a ba-lim -e ekibanja
 FOC-STEM-IND 2 -farm-SUBJ garden
 'they want to farm the garden'

- b. a-gend-e Bukoba?
 I-STEM-SUBJ
 'should he go to Bukoba?'

- c. ba-shom-e ebalua ba-many-e agalimu
 2 -STEM-SUBJ letter 2 -STEM-SUBJ content
 'they should read the letter in order to know the
 content'

- d. a-tel -e ente ezi?
 I-STEM-SUBJ cows these
 'should he hit these cows?'

The subjunctive morpheme is used in different ways including but not limited to: following verb like want (21.a), when permission is sought (21.b), when the intention is to express purpose (21.c). Other functions not exemplified above include: serving as a more polite imperative, used in indirect commands; with the question morpheme -ki- it questions the possibility. With the locative morpheme it questions the location. Both of these possibilities are exemplified below:

- (22) a. ba-lim -e -ki
 2 -farm-SUBJ-Q
 'what should they farm?'

- b. a-shuntam-e -ha
 I-sit -SUBJ-LOC
 'where should he sit'

The question and locative morphemes will be discussed in detail in section 3.3.10.

3.3.5. The Tenses

As far as the present author can determine, there are twelve tenses in Haya (see also section 3.3.8), which are listed in table 9 (page 146).⁹ It is not the purpose of this work to provide an exhaustive description of the semantics and usage of each tense. Such a description is probably not possible for the tense system of any Bantu language at the current state of our knowledge. The following descriptions of tenses in Haya are intended to be working definitions only, to facilitate an understanding of tense morphology. They will be based on broad conceptions of 'a present moment,' 'time before the present time' and 'time after the present moment' developed in Moshi (1988) (for Chaga, a Bantu language related to Haya.) Within these three categories, there are further distinctions made, which will be brought up in the course of the discussion of each tense. It will also be apparent that several of the tenses involve elements of meaning which are more properly described as aspectual, but while we will note such elements, we have not attempted to systematize them, again because they fall beyond the scope of this work, which is intended to focus on the organization of verbal morphology.

3.3.5.1. The Present Tense

Moshi's conception of present time probably is used in referring to situations which occupy a much longer period of time than the present moment, that is, those which include the present moment (see Comrie, 1985: 37).¹⁰ If such a conception is true, then Moshi's concept of the present tense fits into the description of the Haya present tense. Present' tense in Haya includes the actions, states and processes which hold at the present moment, but which began before the present moment and which may well continue for a short period of time after the present moment as exemplified below:

(23) a. Omwalimu mukulu n -a -nyegez -a abagenyi
 teacher old Is-IR-welcome-IND visitors
 'the principal is inviting visitors'

b. Abajaji ni -ba-lamul -a omushango guango
 judges FOC 2 judging-IND case big
 'the judges are judging the big case.'

In each of these examples, it is true that the actions of welcoming, and judging hold' at the present moment. However, these actions may have started two or more hours before and may continue for some time. Therefore it is accurate to say that the basic meaning of the present tense in Haya as in many other languages, locates a situation at

the present moment, but the situation may continue beyond the present moment, or may also hold in the past--depending on the event. We may now discuss the formation of the present tenses in Haya beginning with the present universal habitual (PUH).

3.3.5.1.1. Present Universal Habitual

The present universal habitual tense is formed by attaching the subject marker directly to the verb stem, which is followed by the indicative morpheme, schematized as follows:

SM - STEM - IND

This tense refers to habitual, ongoing, repetitive actions, as seen in the following examples:

(24) a. ba-lim -a

3 -farm-IND

'they farm'

b. mu-it -a

2p-kill-IND

'You(pl) kill'

3.3.5.1.2. "Still" Tense

The "still" tense is formed by attaching the morpheme -kya- directly preceding the verb stem. The morpheme -kya- is itself directly preceded by the subject marker, and the indicative morpheme is suffixed to the verb stem, schematized as follows:

SM - STL - STEM - IND

The "still" tense is a present tense which also carries the more aspectual implication that the action or state is still in progress. It is illustrated in the following examples:

(25) a. ba-kya-lim -a
 2 -STL-cultivate-IND
 'they are still cultivating'

b. zi-kya-nyw -a
 10-STL-drink-IND
 'they(e.g. cow) are still drinking'

In example (25.b) the class 10SM refers to ente 'cows,' while in (25.c) the class 14SM refers to obunaku 'poverty'

c. bu-kya-ij -a
 14-STL-come-IND
 'poverty is still coming'

3.3.5.2. The Past Tenses

The past tenses are used to describe a situation holding sometime before the present moment. Moshi (ibid:2) mentions that in Kivunjo the past represents a three way distinction: P1(-a-) within few minutes, P2(-am-) within few hours and P3(-le-) furthest point in the past. In Haya there are separate forms of the verb referring to six periods of the past time, the immediate past (to-day), the near past (very early to-day) the recent past (yesterday), the remote past (day before yesterday), and the far remote past (long ago). These will be described in more detail in the following sections. In addition, the near past has a habitual form. These tenses are listed in table 9 on page 147.

3.3.5.2.1. Immediate Past.

The immediate past tense is formed by attaching the immediate past tense morpheme -a- (IP) directly preceding the verb stem. This tense morpheme is in turn directly preceded by the subject marker. The indicative morpheme is suffixed to the verb stem. The formation of the immediate past is therefore parallel to the formation of the "still" tense, and all tense morphemes to be described in the chapter will be seen to occupy the same prestem position except for the near past (NPS), the far remote past (FRP), and the near past habitual (NPH) all of which, in addition,

have morphemes suffixed to the verb-stem. The recent past (yesterday) only has the morpheme following the stem. This tense may be schematized as in (24):

(24) SM - IP - STEM - IND

This tense is used to refer to an event or state which occurred or was in force at some very immediately previous point on the day of speaking and is now finished. We may now propose that this tense refers to events that have occurred within the past few hours (three to four hours). It may not refer to a time other than to-day.

(27) a. gu-a -gw -a
 3 -IP-fall-IND
 't (tree) fell (to-day)'

b. tu-a -guz -a
 Ip-IP-sell-IND
 'we sold (to-day)'

3.3.5.2.2. Near Past

The near past is marked by prefixing the immediate tense morpheme -a- (NPS) to the verb stem and by suffixing the stem with the morpheme -ile (which replaces the indicative morpheme).¹¹ This tense may be schematized as:

(29) a. tu-a-gul-ile (--> twaguzile) ebitooke bwanka

'we bought bananas this morning'

b. kya-a-endek-ile nyemishana kyashubamu

7- -break- afternoon repeat

kuendeka mbwenu aha

to break to-day now

'It (the chair) broke this afternoon and now it has repeated breaking again'

3.3.5.2.3. Recent Past

The recent past is marked only by the suffix -ile, attached directly to the verb stem, in the place of the indicative morpheme. The verb stem is directly preceded by the subject marker, and there is no present tense marker parallel to the tense marker -a- of the near past. The recent past may be schematized as follows:

(30) SM - STEM - RP

This tense is used to refer to an event or state which occurred or was in force at some point the day before the day of speaking and is now finished. Examples of the recent past tenses are given in (31).

(31) a. a-lim -ile

I-farm-RP

'he/she farmed (yesterday)'

b. li-endek-ile

5 -break-RP

'it (the tooth) broke'

The suggested referent in (31.b) (the tooth) in the gloss belong to noun class 5 (see noun classes 144). The recent past in Haya is cognate to a Kamba recent or previous day's past tense (Farnsworth 1952:26) where the tense morpheme is na with -ie suffixed to the verb-stem. Probably the -ie suffix is cognate to the Haya suffix -ile.

3.3.5.2.4. Remote Past

The remote past has a morphological structure which is parallel to the near past rather than the recent past. There is a tense marker -ka- (RMT) which is prefixed

directly to the verb stem and preceded by the subject marker. The indicative morpheme is suffixed to the stem. The remote past may be schematized as follows:

(32) SM - RMT - STEM - IND

This tense is used to refer to an event or state which occurred or was in force at some point before on the day before, usually one year or more, and is now finished. It is not easy to delineate the exact time in the past to which this tense refers, nor is it possible to state how long ago the action took place or the state was in force. The reference made above is only a guiding definition of this tense. The remote past tense in Haya seems to be the same as that in Runyankore, another Bantu language closely related to Haya (Morris and Kirwan 1957). As in Haya, to form this tense in Runyankore -ka- is inserted between the subject prefix and the stem. Examples of the remote past tense in Haya are:

(33) a. n -ka -tel-a

Is-RMT-hit-IND

'I hit (last week)'

b. tu-ka -bandam -a

Ip-RMT-crouch-IND

'we crouched (e.g. last year)'

3.3..5.2.5. Far Remote Past

The far remote past is also a combination of a prefixal tense morpheme and a suffixal one. As in the near past tense, the suffixal morpheme is -ile. attached directly to the verb stem. The prefix, again preceded by the subject marker and attached directly to the verb stem, is the morpheme -la-. The far remote past may be schematized as follows:

(34) SM - la - STEM - ile

This tense is used to refer to an event or state which occurred or was in force at some point a long time previously, usually more than two years. Again this time is not an absolute but simply a relative time. Nurse (1979:12) calls this tense the 'have already' (long ago), while both Rasher (ibid) and Byarunshengo et al. (ibid) fail to make a note of this tense. This tense is exemplified as follows:

(35) a. e-la-gw-ile

4 fell

'they (trees) have already fell (a long time ago)'

where the referent trees belong to noun class 4.

b. ba-la-yombek-ile

2 build

'they have already build (e.g. three years ago)'

3.3.5.2.6. Immediate Past Habitual

The formation of the immediate past habitual is nearly identical to that of the immediate past. The tense morpheme -a- (IPH) directly precedes the verb stem and is in turn directly preceded by the subject marker. The indicative morpheme is suffixed to the verb stem. Unlike the present universal habitual, the immediate past habitual contains a morpheme specifically indicating habitual action: the habitual morpheme -ag-, which is suffixed directly to the verb stem preceding the indicative morpheme.¹² The immediate past habitual may be schematized as follows:

(36) SM - a - STEM - ag - IND

The immediate past habitual indicates actions or situations that hold at all times, or repetitive actions or events.¹³ The immediate past habitual differs from the immediate past in the time slot. Whereas the immediate past refers to events that have taken place on the day of speaking, the immediate past habitual includes both the actions of the immediate past and near past which occur repeatedly. In other contextual situations, the immediate past habitual may

also includes the concept of the possibility of not repeating the action again as shown in examples below:

- (37) tu-a-lim-ag-a (bilebi tu-ka-lekel-a)
 Ip- -farm- IND these days SM- stop IND
 'we were habitually farming (we have in these days stopped)'

Other examples of the near past habitual are:

- (38) a. ba-a-beiy-ag-a
 2- -lie- -IND
 'they were usually lying'
- b. n -a-yeges-ag-a
 Is- -teach- -IND
 'I was usually teaching'

3.3.5.3. The Future Tenses

The future tenses are used to describe an event or state which will occur or hold sometime subsequent to the present moment. In other words, the most typical uses of the future tense involve events or states that are planned to happen or to be implemented sometime subsequent to the present time. However, there are certain future categories which do not involve the prediction of an action or state if

there is no belief or intention of implementing these actions as exemplified below:

(39) n-laa-tem -a ente (ndaatema)

Is-IF-slaughter-IND cow

'I will slaughter the cow'

The prediction of 'slaughtering the cow' cannot be implemented if the speaker believes that the slaughtering will actually not take place. Again as in earlier definitions of tenses, the definition of the future tense is given as a guideline, but the actual meaning is context as well as intentional sensitive. As for the phonological changes shown in example (39), see chapter 2 section (2.5.1). Haya has separate forms of the verb referring to three periods of future time parallel to those we have seen for the past tenses: the immediate future, the near future and the remote future, which will be described in more detail in the following sections. In addition, as in the past tense series, the near future has a habitual form. These tenses are listed in table 9 on page (147).

3.3.5.3.1. Immediate Future

The three future tenses (apart from the habitual) are formed exclusively with prefixal morphemes parallel to those we saw in the formation of the past and perfect tenses. There is no suffixal morpheme involved in the formation of

the future tenses. The immediate future (IF) is formed by attaching the morpheme -laa- directly to the verb stem, in the same position relative to the stem as the past and perfect prefixal morphemes, preceded, as before, by the subject marker. The indicative marker is suffixed to the stem. The immediate future may be schematized as follows:

(40) SM - laa - STEM - IND

This tense is used to refer to an event or state which will take place or be in force sometime today or tomorrow. Again the immediate future tense is relative, "where the reference point for location of a situation is some point in time given by the context, not necessarily the present moment" (Comrie *ibid*:56). Comrie's explanation is made clear by the following Haya examples:

(41) Yesu a-laa-lind -a abakristu bona
 Jesus I-IF -protect-IND Christians all
 aba-laa-ondel -a obugolozi bwe
 who-IF -follow-IND leadership his
 'Jesus will protect all those who will follow his
 leadership'

The interpretation which can be given to example (41) is that the present moment is relative to the time when the statement was uttered. For someone who heard it ten years

ago this statement is not taking place on the day it was spoken (for the first time) or on the day after the day of speaking but it has been taking place for ten years prior to ten years ago and will take place after the present moment for an indefinite time (as long as he/she is alive). Compare example (41) to (42).

(42) ba-laa-gend-a Tanzania omwezi ogulaija

2 -IF -go -IND month next

'they will go to Tanzania next month'

In this example, the month in which this utterance is made is taken as a 'reference point to-day.' If it is uttered in July, then their going to Tanzania is in August, regardless of when in August. Other examples which exhibit the use of the immediate future tenses in Haya are:

(43) a. ga-laa-yatik-a

10-IF -break-IND

'they (eggs) will break' (to-day or to-morrow).

Here again the suggested referents 'eggs' belong to noun class 10.

b. tu-laa-gul-a ebitabo

1p-IF -buy-IND books

'we will buy (to-morrow) books'

3.3.5.3.2. Near Future

The near future (NF) is formed by prefixing the morpheme -li- directly to the verb stem, preceded by the subject marker. The indicative marker is suffixed to the stem. The near future may be schematized as follows:

(44) SM - li - STEM - IND

This tense is used to refer to an event or state which will take place or be in force the day after tomorrow. Again the near future tense is relative depending on context as illustrated in the following Haya examples.

(45) a. Omwana ogu a-li-bug -a endege
 child this-I-NF-drive-IND planes
 'this child will be a pilot (lit:driver of planes)'

The time reference to this sentence, although it is basically sometime in the future, is not clear, because it depends on the age of the child and the laws of countries for one to become a pilot. If the child is four years old and the minimum permit age for a pilot is 25 years, then the so called 'near future' tense is 21 years from the time of the utterance of this statement. Compare example (45.a) to (45.b):

- (45) b. a-li-zal -il-a omuhosbitali ya Sparrow
 I-NF-give birth-at-IND hospital of Sparrow
 'She will give birth at Sparrow hospital'

If this sentence is uttered to-day and the person talked about is due in two weeks, then the 'near future' period from to-day as a reference point is two weeks. Thus, again 'the near future tense' is only realized contextually. Other examples of the near future tense in Haya are as follows:

- (46) a. enjula e-li-lekel-a kugwa kemulitema emiti
 rain 4-NF-stop -IND to rain when you cut trees
 yona
 all
 'the rain will stop raining when you will cut down
 all the trees'
- b. Omuleke, a-li-shwel-a olwo a-li-yend-a
 leave him alone, I-NF-marry-IND when I-NF-like-IND
 'leave him alone he will get married when he will
 like'¹⁴

3.3.5.3.3. Remote Future

The remote future (RMF) is formed by prefixing -lika- directly to the verb stem, preceded by the subject marker.

The indicative marker is suffixed to the stem. The remote future may be schematized as follows:

(47) SM - RMF - STEM - IND

The remote future is used to refer to an event or state which will take place or be in force at a point in time farther in the future than that referred to by the near future. We will not discuss the relativeness of this tense as we did in other tenses, except to point out that as the previous tenses, this tense too depends on the context in which it is uttered. Like other future tenses however, it too refers to future events or states without an absolute time reference.

Examples of the remote future are as follows:

(48) a. O -lika-jum -a

Is-RF -abuse-IND

'You will (in the remote future) abuse'

b. zi-lika-ij -a

4 -RF -come-IND

'they (e.g. Monkeys) will (in the remote future)
come'

The remote future marker is the only bisyllabic prestem tense marker in the past, present and future series of

tenses in the Haya verbal system. This observation raises the question of whether the remote future marker constitutes a unitary morpheme, or whether it is composed of smaller morphemes. It is suggestive that the first syllable of this marker, -li- matches the near future marker -li- segmentally, and the second syllable, -ka-, matches the remote past marker -ka-. It is possible that the remote future marker is composed of the near future marker followed by the remote past marker, with the semantic effect of indicating a future event or state which also holds at the farthest point in the future.

3.3.5.3.4. Immediate Future Habitual

The formation of the near future habitual is patterned on that of the immediate future in the same way that the formation of the near past habitual is patterned on that of the immediate past. In the immediate future habitual, the tense morpheme -laa- (IFH) directly precedes the verb stem and is in turn directly preceded by the subject marker. The indicative morpheme is suffixed to the verb stem. As in the immediate past habitual, the habitual morpheme -ag- is suffixed directly to the verb stem preceding the indicative morpheme. The immediate future habitual may be schematized as follows:

(49) SM - laa - STEM - ag - IND

This tense may be generally described as being used for all actions or states which are to take place repeatedly the next day and also for any future action for which no definite time is specified (see immediate future 3.3.5.3.1). It differs from the immediate future only in frequency. Whereas actions may take place in the immediate future only once and for all, in the immediate future habitual the actions may happen at all future times or be repeated actions. This tense also differs from the present universal habitual in the sense that in the Present habitual the actions are currently taking place repeatedly whereas in the immediate future habitual the actions are to take place habitually in the future time reference relatively speaking. This tense is illustrated in the following examples:

(50) a. tu-laa-gul-ag-a

Ip- -buy- -IND

'We will (habitually) be buying (e.g. in the evenings)'

b. ba-laa-shom -ag-a

2- -study- -IND

'they will (habitually) be studying (e.g. every night)'

3.3.5.4. The "Imaginary" -ku- tense

The "imaginary" -ku- (UNR) tense is a conditional tense formed by inserting the morpheme -ku- directly preceding the verb stem in either the immediate past or the remote past, one of the two subject marker. (Note that it may not appear in the near past -ag-.) The term "imaginary" -ku- is borrowed from Salone (1977). The "imaginary" -ku- tense may be schematized as follows:

(51) SM - a - ku - STEM - IND
-ile

The "imaginary" -ku- tense may be exemplified as follows (note that the tense occurs in both clauses of the conditional):

(52) a. ka -n -a -ku -gul-a e-ndege na-a -ku -gy-a
COND-Is-IP-UNR-buy-IND IV-plane Is-IP-UNR-go-IND
Bulaya
Europe
'If I buy a plane, I would go to Europe'

b. ka -n -a -ku -mu-bon-ile n -a-ku -mu-siim-ile
COND-Is- -UNR-3s-see -Is- -UNR-3s-thank-
(boine)
'If I would have seen him, I would have thanked him'

It also seems likely that the -ku- of this form is to be identified with the infinitive ku- rather than one "imaginary" -ku-, since infinitive ku- is not preceded by a subject marker, parallel to the -ku- of this form, and unlike "imaginary" -ku-. However, it is also possible that Haya has three distinct ku- morphemes. We will leave the matter open here. The "immaginary" -ku- tense is the last tense to be discussed in this work.¹⁵ The discussion of tenses discussed thus far are summarized in table 9 (147).

3.3.6. The Subject relative morpheme

The subject relative morpheme is a morpheme which transforms a non-relative verb into a relative verb. Only verbs which have a prestem tense marker are relativized. The subject relative morpheme takes the form of a vowel prefixed to the subject marker. This vowel will be referred to as the initial vowel, following the usage of Ashton et al. for Luganda (1954), Taylor for Nkore-Kiga (1985) languages of Uganda, Morris and Kirwan for Runyankore 1957, and Rascher, 1958 for Haya.¹⁶ The subject relative verb may be schematized as follows:

(53) IV - SM - TNS - STEM - {IND
-ile}

IND and -ile alternate with each other and either is an option in a relative verb as represented above by curly

brackets. As its name implies, a subject relative verb is used only when a subject is relativized:

- (54) a. omuti o -gu-gw -a
 tree IV-3 -fall-IND
 'the tree which fall.'
- b. eliino e -li-laa-shash-a
 tooth IV-5 -IF -hurt -IND
 'the tooth which will hurt'

(See table 10 subject relative morphemes page 148).

Note that since the head noun of a subject relative is also the subject of the relative verb, the subject marker of the relative verb will agree with it in noun-class.¹⁷ The identity of the initial vowel is determined by the noun class of the subject marker of the verb: each noun class has its own initial vowel. A list of initial vowels for all of the noun-classes is given in table 10. Note that classes 17 and 18 do not relativize because the relativization made in class 16 covers the other two classes (the locative classes as traditionally known-see fn 7). Although in noun classes 1, 4 and 9, we have included both vowels (the IV and SM), vowel coalescence takes place as was discussed in chapter 2 section 2.5.2. This initial vowel may be compared to the initial vowel of nouns not discussed in this dissertation but may briefly be exemplified here:

- (55) a. O -mu-ti o -gu-laa-kul -a tu- laa-gu-tem -a
IV-3 -STEM IV-3 -IF -STEM-IND 2p(pl) IF -3 -STEM-IND

Noun

'The tree (it) which will grow we will cut it'

- b. e -mi-ti e -e-laa-kul -a tu-laa-gi-tem -a
IV-4 -STEM IV-4-IF -grow-IND Ip-IF -4 -STEM-IND

Noun

'the trees (they) which will grow we will cut them'

- (56) a. e -ki-tabo e -ki-li-gul-w -a ba-li-ki-shom-a
IV-7 -STEM IV-7 -NF-buy-PASS-IND 2 -NF-7 -read-IND

Noun

'the book (it) which will be bought they will read
it'

- b. e -bi-tabo e -bi-li-gul-w -a ba-li-bi-shom-a
IV-8 -STEM IV-8 -NF-buy-PASS-IND 2 -NF-8 -read-IND

Noun

'the books (they) which will be bought they will
read them'

As exemplified in (55) and (56), the initial vowel in both nouns and verbs omuti/emiti, 'tree/trees,' ekitabo/ebitabo 'book/books,' are the same, prefixed to the noun class prefix. However, both the nouns and verbs may not have an

IV to which no relativization is realized as in (57) and (58). The passive form (PASS) used in example (54.a) will be discussed in section 3.5.3.

(57) a. mu-ti gu-laa-kul-a tu-laa-gu-tem-a

'a tree (it) will grow we will cut it'

b. miti e-laa-kul-a tu-laa-gi-tem-a

'they are trees they will grow we will cut them'

(58) a. kitabo ki-li-gul-w-a ba-li-ki-shom-a

'it is a book it will be bought they will read it'

b. bitabo bi-li-gul-w-a ba-li-bi-shom-a

'they are books they will be bought they will read them.'

The parallelism between the use of IVs with nouns and that with verbs suggests that the addition of the IV to a verb form has the effect of nominalizing it. In support of this suggestion, note that the subject relative verb may function by itself as a nominal, as in the following headless relative construction.

- (59) a. e -ki-laa-zok -a ki-laa-gul-w -a
 IV-7 -IF -be found-IND 7 -IF -buy-PASS-IND
 '(it) which will be found will be bought 'e.g. a
 book''

3.3.7. The Conditional Morpheme

The conditional morpheme in Haya is the marker ka- which is prefixed directly to the subject marker. When the subject marker has an initial vowel, then coalescence takes place as discussed in chapter 2 section (2.5.2). A verb which contains the conditional morpheme may take a number of meanings, which may be translated using "when," "as," "if" and "let":

- (60) a. ekitoke ka -ki-kul -a ba-ki-tem-a
 banana COND-7 -get ripe-IND 2 -7 -cut-IND
 'when the bananas becomes ripe they cut it'
- b. ka -ba-laa-b -a ba-laa-ij -a
 COND-2 -IF -be-IND 2 -IF -COME-IND
 tu -ba-chumb-il -e
 Ip(pl)-2 -COOK -APL-SUBJ
 'if they are coming let us cook for them'

Note that the APL morpheme -il- which occurs in (60.b) will be discussed fully in section 3.5.2.

c. ka -zi-gend-e ku -nyw -a amaizi
 COND-10-go -SUBJ INF-drink-IND water
 'let them (e.g. cows) go to drink some water'

The conditional morpheme is also used with a special form of the verb, in a construction which Salone (1977:156) calls the "imaginary conditional." Writing on conditions in Haya, Salone argues that there is an imaginary conditional different from other types of conditionals in that the imaginary conditional takes the suffix -ile as well as the marker -ku-. The suffix -ile as discussed earlier is also used with the near past, recent past, and far remote past. The marker -ku- is placed in the tense marker slot directly preceding the verb stem. Salone calls this marker -ku- a marker of "imaginariness" perhaps derived historically from the infinitival marker (see also 3.3.5.4). Its usage is different from its usage as an infinitival marker in several ways. (1) an infinitive morpheme never occurs with a subject prefix (2) an infinitive morpheme never carries a tense morpheme, both of which do occur with this imaginary indicator:

(61) a. n -a -ku -chumb-ile kyonka t -a -li-mu majuta
 Is-IP-UNR-cook -RP but NEG-IP-be-LOC oil
 'I would cook but there is no oil.'

- b. ente y-a -ku -za -ile kyonka
 cow 9-IP-UNR-give birth-RP but
 y-a -bul -w -a obujuni
 9-IP-loose-PASS-IND help
 'the cow would have given birth but it lacked help'
- c. abana ka -ba-ku -many-ile ti -ba-ku -las -ile
 children COND-2 -UNR-know-RP NEG-2 -UNR-throw-RP
 mabale
 stones
 'if the children would have known, they wouldn't
 have throw stones.'

3.3.8. The Focus Morpheme

The focus morpheme in Haya is the marker ni- which is prefixed directly to the subject marker without the initial vowel. We are using the term "focus" to refer to this morpheme because it appears to be cognate to morphemes in other Lacustrine and Thaagicu Bantu languages which have been referred to as a "focus" morphemes, (cf. Clements 1984, Bergvall 1987, Perez (Harford) 1985 for Kikuyu, Dalgish 1978, Moshi 1986 for Kivunjo, Harford 1987 for Kitharaka; cf. also Bennett 1982 for further discussion and comparison to other Bantu groups). However, the use of this morpheme in Haya is much more restricted than the use of the focus morpheme in these other languages. Moreover, its range of meaning and usage is not well understood in any Bantu

language, although the works just cited represent initial attempts to arrive at such an understanding.

In particular, the focus morpheme in Haya is restricted to three verb forms: the present universal habitual, the "still" tense and the Subjunctive:

(62) a. Kato na Kwezi ni -ba-lip-a amabanja omuduuka

Kato and Kwezi FOC-2 -pay-IND debts store

'Kato and Kwezi are paying debts in the store.'

b. Omwisiki ugu n -a-iluk-a kukila abaisiki bona

girl this FOC-I-run -IND more than girls all

'this girl is running faster than all the girls'

c. Omwishulukale ni -ba-kya-mu-pim -a emyenda

the soldier, FOC-2- -OM-measure-IND clothes

'the soldier, they are still measuring him clothes'

In example (62.b) there are phonological changes which take place when the FOC ni- is followed by a vowel subject marker as discussed in chapter 2 section 2.5.2.2.

a. abana ni -ba-iluk-e enjula y-a-ij -a

children FOC-2 -run -SUBJ rain 9-IP-come-IND

ku -gw -a

INF-fall-IND

'let the children run it is almost raining'

Example (62.c) show the use of the FOC ni- with the -kya- 'still' tense. The focus morpheme may be omitted in all of these examples as in (63):

- (63) a. Kato na Kwezi ba-lip-a amabanja omuduka
 Kato and Kwezi 2 -pay-IND debts store
 'Kato na Kwezi pays debts in the store'
- b. Omwisiki ugu a -iluk-a kukila abaisiki bona
 girl this is-run -IND than girls all
 'this girl runs faster than all the girls'
- c. Omwishulukale ba-kya-mu -pim -a emyenda
 soldier 2 -STL-3s(OM)-measure-IND clothes
 'the soldier, they are 'still' measuring him clothes.'
- d. abana bai -luk-e enjula yaija kugya
 children 2-run-SUBJ rain is coming to rain
 'the children should run, it is almost raining'

The contrast in meaning between these examples with and without the focus morpheme provides evidence concerning its meaning in Haya. While example (62.a) indicates that the action of paying is still taking place; i.e., a present progressive meaning, example (63.a) indicates that the

action of paying debts is habitual, as described above in the section (3.3.5.1.1.) on the present universal habitual. The same meaning contrast may be observed between examples (62.b) and (63.b).

Note that our analysis of the role of the focus morpheme differs from that of earlier work on the verbal system of Haya. Previous authors have characterized the present universal habitual with and without the focus morpheme as two separate tenses (Byarushengo 1977, Nurse 1979, Rascher 1958, Betbeder and Jones 1949, Barlow 1951)¹⁸ We suggest that there is in fact only one tense, whose meaning may be altered by the addition of this morpheme as described in this section. There are two further observations that may be made in support of this point. First, the focus morpheme may also be attached to nouns in Haya, not just verbs. Although a complete description of this phenomenon is outside of the scope of this work, the following examples may be cited:

(64) a. e -ki-shusi ki-a-yat -ik-a

IV-7 -guard 7 -break-ST-IND

'the guard broke'

b. n -e -ki-shusi e -ki-a-yat -ik-a

FOC-IV-7 -guard IV-7 -break-ST-IND

'it is a guard which broke'

Example (64.b) indicate that the main function of *ni-* also in nouns is a "focus marker" as correctly observed by Moshi (1986:2) who stated that *ni-* "is relegated to pragmatics by dealing with discourse, intentions and emphasis" (emphasis provided). The use of the focus morpheme with nouns is subject to the same phonological changes noted earlier in its use with verbs. The use of the focus morpheme with both nouns and verbs suggests that it is not a specifically verbal morpheme used in the formation of a single tense. An analysis which posits a separate "present progressive" would be forced to claim that there are two morphemes, one nominal and one verbal.

Second, recall that there are other Lacustrine and Thaagicu Bantu languages in which the focus morpheme is used with a much wider range of tenses than in Haya. If the focus morpheme were analyzed as creating new tenses in these languages as well, the number of tenses which they possess would be nearly doubled, and the description of each of these new tenses would be forced to repeat information about the role of focus.

Returning to the data, the contrast between examples (62.d) and (63.d) may be described in terms of emphasis: whereas (62.d) is a suggestion, (63.d) is more of a command. Similarly the contrast between (62.c) and (63.c) with and without the focus morpheme may also be described in terms of emphasis: whereas (62.c) may be translated as "the soldier, they are indeed still measuring him clothes", (63.c) is

merely stating the facts, that "they as still measuring the soldier clothes."

The meaning of the focus morpheme may also be brought out in more detailed examples which clarify the sorts of contexts in which this morpheme is used. We will cite just one, as follows:

- (65) "Muliba baberwa, K'abantu balibanoba,
 'You will be lucky, when people will avoid you'
 ka balibabinga, ka balibajangura, ka
 'when they will kick you out, when they will harass
 you, when'
 balibashaima eibala lyanyu okw'obona
 'they will throw your name as if'
 oti libi, nibabatura Omwana w'omuntu."
 'it is bad, because of a person's child.'
 (Lanctot 1959: 218 omut. Luka 6 (emphasis mine)).

From the above description and examples we may generalize that the focus morpheme is restricted to those verb forms (apart from the infinitive in its verbal uses) which lack a tense marker directly preceding the stem, apart from the "still" tense, in which the prestem tense marker is arguably aspectual.

3.3.9. The Negative Morphemes

Haya has three morphemes indicating negation, which will be referred to as NEG1, NEG2 and NEG3. These three morphemes take different forms, appear in different positions within the verb and are used in different syntactic contexts.

3.3.9.1. NEG1

NEG1 takes the form ti- (subject to phonological changes; cf. chapter 2, section 2.5.2.2) and directly precedes the subject marker. NEG1 forms are used exclusively in independent clauses; that is, all clauses which are not relative, conditional, temporal or imperative, the domain of NEG2 (cf. the next section). It may be used with any indicative tense apart from the remote future. NEG1 may be exemplified as follows:

(66) a. Omushaija ugu a -nyw -a malwa

man this Is-drink-IND beer

'this man drinks beer'

b. Omushaija ugu t -a -nyw -a malwa

man this NEG1-Is-drink-IND beer

'this man does not drink beer.'

(67) a. Abantu ba Kanyigo ba-laa-yombek-ile eshule
 people of Kanyigo 2 -IF -build -RP school
 'Kanyigo people have already build the school'

b. Abantu ba Kanyigo ti -ba-ka -yombek-ile shule
 People of Kanyigo NEG1-2 -RMP-build -RP school
 'Kanyigo people have not build the school.'

In order to negate the remote future the negative of the near future is used, with an adverbial phrase denoting the appropriate amount of time, as follows:

(68) abantu ti -ba-li-lekel-a kuiga maela neila
 people NEG1-2 -NF-stop -IND to find money forever.
 'people will never stop finding money for ever.'

3.3.9.2. NEG2

NEG2 takes the form -ta- and directly follows the subject marker. As mentioned in the previous section, NEG2 is used to negate verbs occurring in relative, conditional, temporal and imperative clauses. (Cf. Barlow 1951: 88 for the use, in Kikuyu, of a morpheme probably cognate to this one, with a similar if not identical distribution.) Within these limits, it may be used with any verb form, again excepting the remote future (RMF). NEG2 may be exemplified as follows:

(69) Relative

a. a -ba-laa-shom -a ba-laa-sing-a e -mi-tiani
 IV-2 -IF -study-IND 2 -IF -pass-IND IV-4 -exam
 'those who will study will pass the exams'

b. a -ba-ta -a -shom -e ti -ba-a -sing-e mitiani
 IV-2 -NEG2-IP-study-SUBJ NEG1-2 -IP-pass-SUJB exams
 'those who will not study will not pass the exams'

(70) Conditional

a. ka -mu-laa-shom -a mu-laa-sing-a emitiani
 COND-2p-IF -study-IND 2p-IF -pass-IND exams
 'if you study you will pass the exams'

b. ka -mu-ta -a -shom -e ti -mu-sing-e mitiani
 COND-2p-NEG2-IP-study-SUBJ NEG1-2p-pass-SUBJ exams
 'if you don't study you won't pass the exams'

(71) Imperative: (i) indirect

a. mugambile a -it -e embuzi elikwilagula
 tell him Is-slaughter-SUBJ goat black
 'tell him to slaughter the black goat'

b. mugambile a -ta -it -a mbuzi elikwilagula
 tell him Is-NEG2-slaughter-IND goat black
 'tell him not to slaughter the black goat'

(ii) direct

a. kol-a omutiani kileki

do -IND exam to-day

'(you) take the exam to-day'

b. o -ta -kol-a mutiani kileki

25-NEG2-do -IND exam to-day

'you should not take the exam to-day.'

As before, in order to negate the remote future (RMF), the negative of the near future is used, with an adverbial phrase denoting the appropriate amount of time, as follows:

(72) a. ba-lika-ib -a empia za ishebo

2 -RMF -steal-IND money of their father

'they will (in the far future) steal their fathers money.'

b. ba-ta -li-ib -a mpia za ba ishebo neila

2 -NEG2-NF-steal-IND money of their father forever.

'they should never steal their fathers money ever.'

NEG2 is also used to negate a nominal infinitive:

- (73) O -ku -ta -mal -a shule ku-a-ba-koz -a
 IV-INF-NEG2-finish-IND school 15-2-do-CAUS-IND
 emilimo e -yo-mu-ta -li -kwend-a
 work IV-4 -2p-NEG2 -like -IND
 'not finishing school has caused you to do the work you
 did not like'

An infinitive negated in this way may also be used as an imperative:

- (74) o -ta -ly -a!
 2s-NEG2-eat-IND
 '(you) don't eat'

3.3.9.3 NEG3

NEG3 has the form ka-. It appears in only one form, prefixed to -ku-, which in turn is attached to the stem, which is followed by the indicative morpheme. This verb form may be schematized as follows:

NEG3 - ku - STEM - IND

As illustrated in the following sets of examples, this form is used as a negative imperative:

(75) a. chumb-a amajuta galimu

cook -IND oil be there

cook! there is oil

b. Ka -ku -chumb-a (amajuta ti-ga-limu)

NEG3-UNR-cook -IND oil NEG1 be in

'do not cook there is no oil'

(76) a. pim -a abana amaisho

examine-IND children eyes

examine the children's eyes

b. ka -ku -pima abana amaisho

NEG3-UNR-examine children eyes

'do not examine the children's eyes (e.g. when you know for sure you are not a doctor).'

It seems likely that the morpheme ka- is a shortened and cliticized form of the word leka, which may be translated as 'do not' and is also used in negative imperatives. The following sets of examples contrast this negative imperative with the shortened form:

(77) a. leka ku -lim -a alwazi

do not INF-farm-IND rock

'do not farm on the rock.'

b. ka -ku -lim -a alwazi

NEG3-UNR-farm-IND rock

'do not farm on the rock'

(78) a. leka ku -tah -is -a omwana amaizi

do not INF-draw water-CAUSE-IND child water

'do not make the child to draw some water'

b. ka -ku -tah -is -a omwana amaizi

do not-UNR-draw-CAUS-IND child water

'do not cause the child to draw some water.'

3.3.10. The Suffixal Morphemes

In the preceding sections, we have seen that a verb stem in Haya may be inflected for mood, subject agreement, tense/aspect, finiteness, status as a relative, conditionality, focus and negation. The suffixal morphemes to be discussed in the next four sections constitutes a set of morphemes which are suffixed to inflected verb as a unit, without regard to its internal morphological content.

3.3.10.1. The Locative Morphemes

There are three locative morphemes which are suffixed to the inflected verb. The first, -ha, indicates a location which is near, within the context of discourse:

(79) a. abashaija balaabileta-ha ebitebe

men In Vb -LOC chairs

'the men will bring the chairs here (where I am standing).'

b. obagambile baije bashuntama-ha

tell them to come In Vb -LOC

'tell them to come (and) sit here (e.g. where there are empty chairs).'

The second, -ku indicates, within the context of discourse, a location which is far. It is appropriate here too to mention that originally the locative ku is added to the verb from a separate word "oku" here, in which the initial vowel o- is deleted.

(80) a. gambila abana bashuntama-oku (bashutamoku)

tell children In Vb -LOC

'tell the children to sit there'

b. nababona mbagenda-oku (mbagendoku).

I saw them In Vb -LOC

'I saw them going there (lit: this side).'

In both examples there are phonological changes that take place as discussed in chapter 2 section 2.5.2. In order to clarify the qualifier "within the context of discourse," the

following examples may be cited in which, depending on the context, the same location may be referred to using either -ha or -ku:

(81) a. AbaTanzania babili nibashomela-ha Marekani

Tanzanians two In Vb -LOC America

'Two Tanzania are studying here in America.'

b. AbaTanzania babili nibashomela-oku (nibashomeloku)

Tanzanians two In Vb -LOC

Merekani

America

'Two Tanzanians are studying 'here/there' in America.'

The two examples above use two different locative morphemes within the same repeated sentence. The contextual meaning of the two differentiates the use of one form from the other. In example (81.a), the speaker might be somebody who also lives in the United States, whereas example (81.b) may be uttered by a visitor from Tanzania who is presumably contextualizing the student residents in terms of distance of Tanzania to United States. However both the situations show some ambiguity in terms of distance depending on where the sentence was uttered and the location of these students in the U.S. The third locative morpheme, -mu indicates location inside:

- (82) abana bashomele-mu omukiyumba eki
 children In Vb-LOC in the room this
 'the children should study in this room'

These three suffixal locative morphemes are cognate to the noun-class and agreement morphemes of classes 16, 17 and 18 in other Bantu languages.¹⁹ In Haya, only one of these classes, class 16, exists as a noun class (cf table 8). Some other Bantu languages such as Shona (Fortune 1955), Sotho (Doke and Mofokeng 1957) Tswana (Cole 1955) Zulu (Doke 1927) only to mention a few have all three classes. There is no trace of the other two locative noun-classes, apart from these three locative suffixal morphemes. This class is illustrated in the following examples, in which a Class 16 noun occurs.

- (83) a. Ha-elu ha-li-yo Omushana
 16-out 16-be-REL sunshine
 'there is sunshine outside'
- b. ha-nu ha-in -a eibugumo
 16-in-16-have-IND warmth
 'it is warm in here'

3.3.10.2. The Manner Morpheme

The manner morpheme -ge is suffixed to the inflected verb immediately following the locative morpheme, if there is one. In a statement, this morpheme indicates that the action of the verb is performed well, or that the person or thing existing in the state denoted by the verb is also doing well. The manner morpheme is illustrated in the following examples:

(84) a. baabishoma-ge (ebitabo)

In Vb -MNR (the books)

'they have read them well (the books).'

b. twaalimaga-ge

In Vb -MNR

'We used to farm well'

This morpheme might be cognate to the Swahili Manner morpheme -je 'how.' (Ashton 1944, Polome 1957 and Maw 1984).

3.3.10.3. The Intensifier Morpheme

The intensifier morpheme -kwo is suffixed to the inflected verb immediately following the manner morpheme, and hence also the locative morpheme, if these appear. As its name suggests, the intensifier morpheme adds the meaning that the action denoted with the verb is performed with more than usual intensity. It may be translated into English as

"indeed" or "truly." The intensifier morpheme is exemplified as follows:

(85) a. *mushune-kwo*

In Vb -INT

'pinch him/her hard'

b. *tulaalipa-kwo*

In Vb -INT

'we will truly pay'

Note that in example (85.a) *mu* is a direct object morpheme as discussed in (3.4.1). The occurrence of the intensive morpheme is associated particularly with the use of the repetitive verbal extension; (cf. sec 3.5) below.

3.3.10.4. The Question Morphemes

There are two suffixal question morphemes in Haya: *-li* "when" and *-ki* "what." The question morphemes are suffixed to the inflected verb immediately following the intensifier morpheme and the other suffixal morphemes preceding it, if these are present. These morphemes have the effect of transforming a sentence in which the verb they are suffixed to appears into a question, as seen in the following examples:²⁰

(86) a. nibachumba-ki

In Vb -Q

'what are they cooking?'

b. a yegesa-ki

In Vb -Q

'what does he/she teach?'

(87) a. olaazituza-li ente

In Vb -Q cows

'when are you taking out the cows to the pasture?'

b. nashoma-li olufalansa

In Vb -Q French

'when is he/she studying French?'

3.4. The Stem Morphemes

In the next two sections, we will discuss the stem morphemes which are: the object marker (OM) and the reflexive marker. These morphemes do not co-occur. They are immediately attached to the verb-stem.

3.4.1. The Object Marker

The first stem morpheme we will discuss is the object marker. The object marker directly precedes the root and encodes the noun-class of the object of the verb, just as the subject marker discussed earlier encodes the noun-class of the subject. (In spite of this identity of morphological

function, we will argue in chapter 5 that subject and object markers have significantly different syntactic functions.) A list of object markers for all of the noun-classes may be found in table 11. Note that subject and object markers have the same form, except for those in classes 1, 4, and 9. Object markers may be exemplified as follows:²¹

(88) a. Paulo a -gend-e a-mu -ba-twal-il -e omuka
 Paulo Is-go -SUBJ Is-3s-2 -take-APL-SUBJ home
 'Paul should go (and) take him for you (pl) home'

 b. a -ba-Hehe ba-ka -ga-ba-las -il -a amachumu
 IV-2 -Hehe 2 -RMP-6 -2 -throw-APL-IND spears
 'the Hehe threw the spears at them'

(89) a. bonene ba-gu-tem-e b-onka
 they 2 -3 -cut-SUBJ 2-alone
 'they should cut it alone'

 b. Omugulusi a -ta -zi-mil -a a -zi-kanj-e
 the old man Is-NEG2-10-swallow-IND Is-10-chew-SUBJ
 'the old man should not swallow them, he should chew
 them'

Note that the OM -zi- refers to things in class 10, such as coffee beans. In Haya, a particular verb may contain up to three object markers.²² When more than one object marker

appears within the verb, they refer to different objects of the verb. The following examples illustrate two object markers within a single verb, one referring to the direct object of the verb and the other to the indirect object:

(90) a. Omusigazi a-laa-ba-mu -leb -el -a

the youth 1-IF -3s-take-care-APL-IND

'the youth will take care of them'

b. embwa a -ka -gi -ba -lum -is -a

the dog 1s-RMP-OM(9)-OM(2)-bite-CAUS-IND

the dog, he caused it (dog) to bite them (people).

In examples (90.a) and (90.b) we have glossed the applied and causative morphemes which we will discuss in details in section (3.5.2.) and (3.5.1.) respectively. Verb forms with three object markers are not common, but they do exist. In the following example, there are three object markers on the verb, one referring to a direct object (DO), the other two to indirect objects:

(91) tu-lika-gi -mu -ba -chumb-il -il -a -mu

1p-RMP -OM(9)-OM(3s)-OM(2)-cook -APL-APL-IND-LOC

'we will in the (far remote future) cook for him in it on their behalf.'

When a verb has more than one object marker, the relative order of these object markers with respect to the stem depends on a number of features possessed by their references, which may or may not be marked on the object markers themselves. These features are: person and number, thematic roles and animacy. The effect of all of these features in determining the order of object markers has been analyzed in previous studies of those Bantu languages which permit multiple object markers, (including Haya). These studies include: Duranti (1979) for Haya and Shambala, Hyman and Duranti (1982) on Bantu in general, Hawkinson and Hyman (1974) on Shona, Sabimana (1986) on Kirundi and Kidima (1987) on Kiyaka (and a section on Haya).

In all of these studies, values for these features are arranged into hierarchies, and whether or not one object marker occurs closer to the verb stem than another is determined by whether or not it possesses a value for a feature which is higher on the hierarchy than the value for that feature possessed by the other object marker(s). The writers cited in the previous paragraph propose four hierarchies, all of which are applicable to Haya: a person hierarchy, an animacy hierarchy, a case hierarchy, and a number hierarchy. These hierarchies may be schematized as follows, the feature farthest to the right being the closest to the verb stem (Duranti 1979 and Kidima 1987):

Person hierarchy: 3rd > 2nd > 1st

Animacy hierarchy: Non-human > Human

Number hierarchy: Plural > Singular

Case hierarchy: Instrumental/Patient > Goal/Benefactive

The relevance of each of these hierarchies to the order of Haya object markers will be discussed in turn.

The operation of the person hierarchy in Haya may be seen in the following examples. In the (a) example of each pair, the object marker referring to the person hierarchy appears closer to the stem; the (b) example shows that the reverse order is ungrammatical:

(93) a. Ba-ku-m -p -el -a ebitooke.

2 -2s-Is-give-APL-IND bananas

'They give you bananas for me.'

'They give me bananas for you.'

b. *Ba-m-ku-p-el-a ebitooke.

(94) a. Ba-mu-ku-m -p -el -a ebitooke.

2 -3s-2s-Is-give-APL-IND bananas

'They give him bananas for you.'

*'They give you bananas for him.'

b. *Ba-ku-mum-p-el-a ebitooke.

In these examples, the object markers contrast only in person but are constant in terms of animacy, case and number. In this way, only the effects of the person

- hierarchy have been tested. However, it can also be shown
- that when the requirements of the person hierarchy conflict with those of the other hierarchies, the person hierarchy takes precedence. The following two sets of examples indicate that the person hierarchy takes precedence over the number hierarchy, as in (95), and also over the case hierarchy, as in (96) (note some phonological changes):

(95) a. Ba-mu-tu-h -el -a ebitooke.

2 -3s-Ip-give-APL-IND bananas

'They give him bananas for us.'

'They give us bananas for him.'

b. *Ba-tu-mu-h -el -a ebitooke.

2 -Ip-3s-give-APL-IND bananas

(96) a. A-ka -mu-ku-leet -el -a.

I-RMP-3s-2s-bring-APL-IND

'He brought him to you.'

'He brought you to him.'

b. *A-ka -ku-mu-leet -el -a

I-RMP-2s-3s-bring-APL-IND

The conclusion that the person hierarchy takes precedence over the case hierarchy may be drawn from the observation that the order of the object markers in examples (95) and

(96), (the set contrasting person and case) may not be varied to reflect case contrasts. Instead, the single possible order is ambiguous between both case interpretations, so that either object marker may refer to either case.

It would also be desirable to contrast the person and animacy hierarchies in this way. However, this contrast is not testable, because the relevant example would require an object marker referring to an inanimate object which is ranked higher on the person hierarchy than an object marker referring to an animate object: i.e., the inanimate object would also have to be first or second person, and inanimates cannot be referred to in either the first or second person in Haya.

Nevertheless, with some complications, it can also be shown that the animacy hierarchy takes precedence over the number hierarchy in the same way as the person hierarchy does. The following set of examples contrasts the animacy hierarchy with the number hierarchy:

- (97) a. A -ki-ba-gul-il -a
 Is-7 -2 -buy-APL-IND
 'He buys it for them.'
 #'He buys them for it.'

Note that in this example, the second interpretation is ruled out for pragmatic reasons (an inanimate object is

unlikely to have anything bought for it), contrary to in example (96) above. However, reversing the order of the object markers, in violation of the animacy hierarchy, produces an ungrammatical sentence:

b. * A -ba-ki-gul-il -a.

Is-2 -7 -buy-APL-IND

We will say for this example that it is ungrammatical because it violates the animacy hierarchy. However, it could also be ungrammatical because of the case hierarchy, since the object marker referring to the patient is closer to the verb stem than the object marker referring to the applicative (benefactive). The opposite interpretation, which does not violate the case hierarchy is, as we have seen, ruled out on pragmatic grounds. The evidence is indeterminate in this case, and such indeterminacy cannot be eliminated from this discussion. In any case, the example indicates that the number hierarchy may be overridden.

Total indeterminacy is found when the animacy hierarchy is contrasted with the case hierarchy.

(98) a. ba-ka -gi-mu-twal-a -mu

2 -RMP-9 -3s-take-IND-LOC

'They sent him to it (9; i.e., the cave)'

#'They sent it to him.'

As in the above examples, the second interpretation is ruled out for pragmatic reasons (a cave cannot be sent somewhere). However, as before, reversing the order of the object markers, in violation of the animacy hierarchy, produces an ungrammatical sentence:

b. * ba-ka -mu-gi-twal-a -mu

2 -RMP-3s-9 -take-IND-LOC

This example could be ruled out by either the animacy hierarchy or the case hierarchy, since both are violated and this example does not distinguish the two.

The examples we have seen so far indicate one hierarchy taking absolute precedence over another: an ordering of object markers which contradicts the hierarchy is ungrammatical. However, when the number of case hierarchies are compared, the effects of each are relative rather than absolute. The number hierarchy has the effect of placing an object marker (which refers to a singular noun phrase) closer to the verb stem than an object marker referring to a plural noun phrase, as seen in the following example:

(99) a. A -ka -ba-mu-leet -el -a

3s-RMP-2p-3s-bring-APL-IND

'He brought them to him'

'He brought him to them'

In this example, the singular object marker occurs closer to the verb stem than the plural object marker, in accordance with the number hierarchy. Note that these object markers refer to two thematic arguments of the verb: the patient (what is being brought) and the goal (who the patient is being brought to). As shown in the translations, either object marker may refer to either thematic argument.

Now consider the following example, in which the object markers of the previous example appear in the opposite order, in violation of the number hierarchy.

- b. A -ka-mu-ba-leet -el -a
 he-P3-3s-2p-bring-APL-IND
 'He brought him to them'
 *'He brought them to him'

Here only one interpretation is possible, in which the plural object marker closer to the stem is the goal. This example indicates that the number hierarchy may be violated when the results conform to the requirements of the case hierarchy. The interpretation of 'example (99.b) in which both the number and the case hierarchies are violated is not possible.

Note as well that the case hierarchy is violated in (99.a) but this violation is possible only when the number hierarchy has been obeyed.

These examples indicate that both the number and the case hierarchies are relevant to the order of object markers in Haya, but only in a relative sense. If number were completely irrelevant, then (99.a), in which number is obeyed but case violated, should be ungrammatical, but it is not. If case were completely irrelevant then the second interpretation of (99.b) should be possible, but it is not, it is precisely when both number and case are violated that complete unacceptability results.

The data we have presented in this section suggest that, of the four hierarchies, the effects of person and animacy are absolute, whereas the effects of number and case are cumulative. This observation in turn suggests that when the animacy and case hierarchies are in conflict it is in fact the animacy hierarchy that takes precedence, even though this effect is not directly observable.

3.4.2. The Reflexive Marker

The reflexive marker in Haya occupies the same position immediately preceding the verb stem as the object markers. It signifies coreferentiality between the subject and the object of a sentence. Unlike the object markers, the reflexive marker takes the invariant form -e-, subject to phonological changes described in chapter 2 (section 2.5.2). Also, a verb stem may contain only one reflexive marker, and no object markers when the reflexive marker is present. The reflexive marker may be exemplified as follows:

- (100) a. abana ba-e -shal-a
 children 2 -RFM-cut -IND
 'the children have cut themselves'
- b. abojo ba-li -e -mois -a
 boys 2 -RFM-shave-IND
 'the boys will shave themselves.'

3.5. The Verbal Extensions

As mentioned above in section 3.2, a verb stem may consist of a verb root plus one or more morphemes which modify its lexical meaning and/or alter its argument structure. These morphemes are usually referred to as the verbal extensions, and this section will briefly describe and exemplify their use.²³ (See Byarushengo et al. 1977, Scotton 1967, Khamisi 1983, Maw 1984). A single root may contain more than one extension, each of which typically contributes to the total meaning of the stem, with certain cooccurrence restrictions which will be discussed in the next chapter. In this chapter, the meaning of each extension will be illustrated in isolation. In the absence of other extensions, each extension is suffixed to the root, directly preceding the final vowel, schematized as follows:

- (101) ROOT - EXT - $\left\{ \begin{array}{l} \text{IND} \\ \text{SUBJ} \end{array} \right\}$

When more than one extension is present, all are suffixal, but they are ordered with respect to each other in ways that will be described in the next chapter.

3.5.1. The Causative Extension

The causative extension in Haya takes one of the following forms: -is-/-es- or -iz-/-ez- (subject to vowel harmony, described in chapter 2, section 2.5.2.), -z- or -y-.²⁴ In order to describe the meaning which the causative extension contributes to the verb stem, we adopt Ashton's (1944: 232) description for Swahili, which is "to express causation." Nevertheless, as will be seen below, while a definition such as this one may cover most of the uses of the causative, it does not cover all of them. The causative extension may be exemplified in the following pairs of examples, in which the first example contains an unextended verb and the second contains the same verb plus the causative extension:²⁵

(102) a. Abana ba-a -bon-a ente
 children 2 -IP-see-IND cow
 'the children have seen the cow'

b. Abana ba-a -bon-es -a nyina-bo ente
 children 2 -IP-see-CAUS-IND mother their cow
 'the children have shown their mother a cow'
 (lit. caused their mother to see a cow)

(103) a. Omulilo gu-a -yak -a
 fire 3 -IP-blaze-IND
 'the fire has blazed'

b. abana ba-a -yak -y -a omulilo
 children 2 -IP-blaze-CAUS-IND fire
 'the children have set a fire'

(104) a. Abakozi ba-laa-kol-a emilimo mingi
 workers 2 -IF -do -IND work many
 'the workers will do a lot of work'

b. Abebembezi ba-laa-kol -z -a abakozi emilino
 leaders 2 -IF -work-CAUS-IND workers work
 mingi
 many
 'the leaders will make the workers do a lot of
 work'

The following use of the causative has the effect of adding
 an object referring to the instrument of the action:

(105) a. Abafungwa ba-li-lim-a eshamba
 Prisoners 2-NF-cultivate-IND farm
 'the prisoners will cultivate the farm (e.g. to-
 morrow)'

b. Abafungwa ba-li-lim -is -a eshamba
 Prisoners 2 -NF-cultivate-CAUS-IND farm
 etarakita
 tractor
 'the prisoners will cultivate the farm with a
 tractor'

Note that if the causative extension were not present, the instrument could only appear in the sentence as a prepositional phrase:

(106) Abafungwa balilima eshamba na etarakiti
 'prisoners will cultivate the farm with a tractor'

3.5.2. The Applied Extension

The applied extension has also been referred to as benefactive extension (Byarushengo et al. 1977 for Haya) and a prepositional extension (Ashton 1944 for Swahili). In Haya, it takes the form -il-/-el-, depending on vowel harmony. It adds an object to the argument structure of the verb; without the extension, this object would have to be expressed in a prepositional phrase, or else be unexpressable. This object may represent a number of thematic roles, three of which are mentioned here:

(i) An applied verb may denote an action in relation to a person, normally for his/her advantage:

(107) a. abaalimu ba-ka -leet -a amaua
 teachers 2 -RMP-bring-IND flowers
 'the teacher brought flowers'

b. abaalimu ba-ka -leet -el -a abanafunzi babo
 teachers 2 -RMP-bring-APL-IND students their
 amaua
 flowers
 'the teachers brought some flowers for/to their
 students'

Note that there is no example possible in which the verb is unextended and the beneficiary expressed in a propositional phrase. The applied object may also represent an "anti-beneficiary." This can be exemplified by a sentence like.

(108) a. Omushuma owo bakwete a -ka -ba-f -el -a
 the thief whom they caught Is-RMP-2 -die-APL-IND
 omumikono yabo
 hands theirs
 'the thief whom they caught died in their hands'

This sentence may be interpreted as "anti-beneficiary" unless the catchers wanted their thief to die before taking him to court, a proposal which is highly unlikely.

(ii) An applied object may denote a place.

(109) a. ente e-ka -f -a

cow 9-RMP-die-IND

'the cow died'

b. ente e -ka -f -el -a omulweya

cow IV-RMP-die-APL-IND pasture

'the cow died in the pasture'

(iii) An applied object may denote a cause, reason or motive:

(110) a. Richard, ba-lika-mu-fung-a

Richard 2 -RMF -2p-jail-IND

'Richard, they will jail him'

b. Richard ba-lika-mu-fung-il -a obushuma

Richard 2 -RM -2s-jail-APL-IND robbery

'they will jail Richard for robbery'

3.5.3. The Passive Extension

The passive extension in Haya takes the form -w- (with one irregular exception, to be noted below). In a sentence in which the verb contains the passive extension, the object of the unextended verb is the subject, and the subject of the unextended verb appears optionally in a prepositional phrase, exemplified as follows:

- (111) a. embwa y-a -lum -a abashuma
 dog 9-IP-bite-IND robbers
 'the dog bite the robbers'
- b. abashuma ba-a -lum -w -a embwa
 thieves 2 -IP-bite-PASS-IND dog
 'the robbers were bitten by the dog'
- (112) a. Omushaija y -a -mu-tel-a
 man Is-IP-3s-hit-IND
 'the man hit him'
- b. n -a -tel-w -a omushaija
 Is-IP-hit-PASS-IND man
 'I was hit (by) the man'

Note that when an agent is human there is a preference not to have a prepositional phrase even if it is possible as exemplified in 113.

(113) a. abashuma baalumwa na embwa

'the robbers were bitten by the dog'

b. natelwa na omushaija

'I was hit by the man'

The following exemplifies an irregular form of the passive extension:

(114) abana bato ba-h -abw -a ebitoke na

children young 2 -give-PASS-IND bananas by

nyinenkuru bo

grandmothers their

'the children are given bananas by their grandmother'

In addition, there are verbs which are used exclusively in the passive voice with active meanings, as observed by Rascher (1958:39):

(115) a. abalimu ba-yeb -w -a omukutano

teachers 2 -forget-PASS-IND meeting

'the teachers forgot the meeting'

b. omukazi ogu a-tamw-a abagenyi

woman this hate visitors

'this woman hates visitors'

3.5.4. The Reciprocal Extension

The reciprocal extension in Haya takes the form -angan-. This extension changes the meaning of a verb to indicate that the action is reciprocal or mutual; i.e., done to "one another." The reciprocal extension may be exemplified as follows:

(116) a. Halima n -a -chuchul-a Farida eishoke

Halima Is-IP-comb -IND Farida hair

'Halima is combing Farida's hair'

b. Halima na Farida ni -ba-chuchul-angan-a eishoke

FOC-2 -comb -RCP -IND hair

'Halima and Farida are combing one another's hair'

Because of its meaning, a sentence containing a verb with the reciprocal extension is well-formed only if the verb denotes an action which may be performed mutually and has a plural subject. The following pair of examples are ungrammatical because, in (a), the intransitive verb does not denote an action which may be performed mutually and, in (b) the verb has a singular subject:

(117) a. *Abaisiki ba-laa -shabuk-angan-a omwiga

girls 2 -IF -cross -RCP -IND river

'the girls will cross one another the river.'

- b. *Omwisiki n -a -chuchul-angan-a eishoke
 girl Is-IP-comb -RCP -IND hair
 *'The girl is combing one another the hair.'

Even if a verb is transitive, and has a plural subject, its use as a reciprocal may be barred pragmatically.²⁵

- (118) abashaija aba ba-a -chumb-angan-a
 men these 2 -Ip-cook -RCP -IND
 'these men are cooking 'one another''

Example (118) is acceptable only when it is interpreted idiomatically as exemplified in (117).

- (119) Abashaija aba ba-a-chumb-angan-a kukola ebyashala
 men these 2-IP MOTIVATE-RCP-IND to-do business
 'these men have motivated one another to do business.'

3.5.5. The Repetitive Extension

The term "repetitive extension" is used in this work to refer to three extensions which express various forms of intensity, including repeated, frequent, continuous or forceful action. These extensions are: 1) -iliz-/-elez- (subject to vowel harmony), 2) -aij- and 3) -ul-, and may be exemplified as follows:

(120) a. Koku a -shon-a emyenda

Koku Is-sew -IND clothes

'Koku sews clothes'

b. Koku a -shon-elez-a emyenda

Koku Is-sew -RPT -IND clothes

'Koku sews clothes repeatedly'

(121) a. Bojo ba-gamb-ile ba-angu -e tugende

please 2 -tell-RP 2 -quick-SUBJ (so that) we go

'please tell them to be quick so that we go'

b. Bojo bagambile ba-angu -iliz-e tugende

please tell them 2 -quick-RPT -SUBJ (so that) we go

'please tell them to travel fast so that we go'

(122) a. Omwana ogu a-li-nag -a ebyakula omunju

child this I-NF-throw-IND food in the house

'this child will throw the food in the house'

b. Omwana ogu a-li-nag -aij-a ebyakulya omunju

child this I-NF-throw-RPT-IND food in the house

'this child will throw the food continuously/
carelessly in the house'

(123) a. abashuma ba-ka -sik -a ebiliibwa

thieves 2 -RMP-pull-IND cassava

'the thieves pulled the cassava'

b. abashuma ba-ka -sik -ul -a ebiliibwa

thieves 2 -RMP-pull-RPT-IND cassava

'the thieves pulled forcefully/hurriedly the
cassava'

Since these three morphemes have a common strand of meaning, we have decided to treat them as a single extension in this work. In this respect, we follow Rascher (1958:84), who uses the word "intensive" to refer to this set of morphemes for Haya, and Doke (1943:22) who uses the term "extensive" to refer to different forms appearing in various Bantu languages. In Zulu (Doke 1927:148) the form is -isis- suffixed to the verb-stem. However, it is possible that future research will suggest that each of these morphemes is associated most often with a particular aspect of intensity, and such an association would provide justification for assuming that they constitute separate verbal extensions. For example, -iliz-/-elez- may turn out to be the only one of the three which consistently denotes repeated action (as opposed to forceful action). For now, however, we will assume the present analysis.

3.5.6. The Stative Extension

The stative extension in Haya takes the form -ik-/ek-, subject to vowel harmony. Its usage is similar to that of the passive: in a sentence in which the verb contains the stative extension, the object of the unextended verb is the subject of the stative verb. However, there are two significant differences. First, in a sentence containing a stative verb, the subject of the unextended verb may not appear, in a prepositional phrase or in any other form. Second, another nuance of meaning which distinguishes the stative from the passive is that of potentiality: the subject of the stative verb is implied to be capable of undergoing the action denoted by the unextended verb. For this reason, the stative extension is readily translatable using the English adjectival suffix -able. The stative extension may be exemplified as follows:

(124) a. e -nsi e-gi t -a -lim -ik-a (telimika)

IV-land IV-this NEG-IP-cultivate-ST-IND

'this land is uncultivable'

b. e -bi-kombe bi-ona bi-a -yat -ik-a (byatika)

IV-8 cup 8 -all 8 -IP-break-ST-IND

'all cups are breakable'

c. a -ma-banga ti -ga-temb -ek-a bwangu

IV-6 -mountain NEG-6 -climb-ST-IND quick

'the mountains are not quickly climbable'

Other scholars have used the term Neuter (e.g. Doke 1927, 1943, Doke and Mofokeng 1957, Cole 1955 to mention a few) to refer to the stative extension (a term used by both Rascher (1958) and Byarushengo (1977)).

3.6. Conclusion

This chapter has described the meanings and linear order of the 23 morphemes which occur in the various forms of the Haya verb. The next chapter will describe the cooccurrence restrictions holding between these morphemes.

CHAPTER 3. ENDNOTES

¹ The reversive morpheme will not be discussed further. It is in this work treated as unproductive in Haya (see appendix B) and thus regarded as lexical. See also Khamisi (1983:94) on the treatment of reversive (called conversive) as a lexical group in Swahili also a Bantu language.

Also in order to help readers' confusion in the use of terms, compared to other writers, we list the terms we used along with other different terms in different studies on the grammar of African languages. This list contains only the frequently used terms in this work (individual authors will be mentioned as we discuss the concepts).

Reversive: Conversive (Ashton 1954, Khamisi 1983)

Benefective: Applied, Prepositional

Repetitive: Augmentative

Reciprocal: Associative

Stative: Neuter (Rascher 1958)

² Several writers including but not limited to Byarushengo 1977, Maw 1985, Perez (Harford) 1986, have used the term verbal extensions.

³ In Haya society a woman gives birth for the man; that is the society practises the patriarch system.

⁴ This term is not used for these morphemes in Haya or in any other Bantu language in any source that we know of. We have taken the term from Bybee; cf chapter 5 for justification.

⁵ See Ashton et al. (1954:18) quoting the definition from Doke's Bantu Linguistic Terminology in footnote 1.

⁶ From now on, subject morphemes will be indicated by numbers corresponding to their noun classes. As regards noun class 1 and 2, first and second person singular will be indicated by a number e.g. 2s where 2 is for the second person and s for singular while p will be for plural.

⁷ Sabimana 1986 argues convincingly that noun classes 15, 16 and 17 denoting place in Kirundi (locatives), a language closely related to Haya language are not noun classes (class markers) for the following reasons:

- i noun class markers as Sabimana calls them are selected by at least one stem, but not locatives
- ii locatives never trigger agreement as do other markers
- iii Normal class markers attach to stems but locatives can attach to proper names and personal pronouns
- iv They do not show the same alternations in the same environments as other class markers do.

Thus Sabimana suggests they be treated as prepositions, a suggestion which we did not incorporate in this study.

⁸ The indicative and subjunctive morphemes have also been referred to as mood suffixes with reference to Swahili (Vitale 1981:17), and also as final vowel (Perez (Harford) 1985:10)) for Kikuyu and Shond.

⁹ The number of tenses will be modified after discussing the focus morpheme in section (3.3.9).

¹⁰ We were unable to obtain Moshi's full version of her paper presented at the 19th African Linguistics at Boston University April 14-17, 1988. We only had access to her outline distributed at the conference and a personal conversation with the author.

¹¹ In his treatment of Kikuyu, Clements (1984:293) treats -ire as having a final vowel -e, so that the morpheme itself is -ir-. Such an analysis has not been adopted in this work. Note also that [l] and [r] are allophones of the same phoneme /l/ in most Bantu languages. See chapter 2 (14). Kikuyu -ire is cognate to Haya -ile.

¹² The habitual morpheme -ag- in Haya is cognate to -ag- in Kikuyu (Barlow 195) where it is used to form three past imperfect tenses: "immediate past imperfect," "near past imperfect" and "remote past imperfect." Barlow notes (ibid:142) that when used in past time in general, it expresses (like in Haya) an action done habitually, or recurrently . . . Other Bantu languages which use this form as a habitual morpheme are among others Sukuma, Nyanwezi (personal conversation with Kahigi). Furthermore, recently Wilt (1988:58 first draft) notes a very suggestive-looking verbal morpheme -ak- in Bukavu Swahili, which may be a loan from ethnic Bantu languages.

¹³ We also note Polome's 1976:77 suggestion that the -aji nominal agentive suffix in standard Swahili is cognate to -ag- expressing a constantly repeated or a habitual state.

¹⁴ In Haya society a man marries and a woman is married, therefore if example 46.b were to be interpreted in the Haya context, it would have read "leave him alone, he will marry when he will like."

¹⁵ Compound tenses are not discussed in this work. However, they have mostly been covered in the discussion of the simple tenses. For details of these tenses refer to Nurse 1979, Byarushengo 1976, Hyman and Byarushengo 1984 in Clements and Goldsmith (eds) p. 53-104.

¹⁶ The IV has also been called variously a "double prefix" (Guthrie 1974), a "noun augment" (de Blois 1970), and pre-prefix (Masamba 1976).

¹⁷ When an object is relativized, the relative clause is marked with a separate relative marker, and the form of the verb is not changed from its non-relative form except for tonality which is realized as low (L) on the object (See Hyman and Byarushengo 1984:79 in Clements and Goldsmith (eds) 1984).

¹⁸ Barlow 1951:117 calls the focus morpheme the initial marker ni-.

¹⁹ Classes 16, 17 and 18 are numbers assigned to the three locative noun classes in the Welmers (1973) numbering system. See also section (3.3.10.1).

²⁰ The question morpheme -ki constitutes an exception to the generalization mentioned in the introduction to section 3.3.10, that suffixal morphemes are attached to the inflected verb as a unit, without regard to its internal

morphological content. This morpheme can, in fact, only be suffixed to transitive verbs, an observation that will be taken up in the next chapter (section 4.6). Therefore, in order to attach this morpheme correctly, it is necessary to know the argument structure of the root and how this argument structure has been affected by verbal extensions.)

²¹ Note that object markers may co-occur with post verbal object NPS in Haya:

- a. a -laa-gi-mu-gul-il -a ishe emotoka
Is-IF -4 -3s-hit-APL-IND father car
'he will buy it for him the father a car'
- b. embwa zi-lika-ba-lum -a Amina na Fatuma
dogs 10-RMF -2 -bite-IND Amina and Fatuma
'the dogs will (in the far future) bite them Amina and Fatuma.'

The co-occurrence of the OM and object NPs is unusual but when it happens, the object NP(s) function as a topic, a point further discussed in chapter 5.

²² Bantu languages vary as to how many object markers are permitted within a single form. Swahili for instance permits only one OM as is the case of Kikuyu (Barlow 1951). Other Bantu languages such as Nkore and Kiga (Taylor 1985) languages of Uganda permit more than one OMs.

²³ Only productive extensions are considered: writers on Bantu languages tend to take anything that appears on a couple of verbs with roughly the same meaning and elevate it to the rank of extensions, but we will not do this here.

²⁴ This is not meant to be the maximal forms of causatives in Haya, nor are all uses discussed.

²⁵ Literal translations may be acceptable in folktales, like the Haya folktale where the Hare and the Tortoise are supposed to cook each other. This suggests that verbs with ridiculous meanings may nonetheless exist under exceptional contexts of usage.

Table 6. The Internal Structure of Conjugated Verb in Haya

1	Initial Vowel	IV
2	Conditional	COND
3	Negative	NEG
4	Focus	FOC
5	Subject Marker	SM
6	Tense	TNS
7	Infinitive	INF
8	Reflexive	RFM
9a	Direct Object (Accusative)	DO
9b	Indirect Object (Dative)	IO
10	VERB ROOT	ROOT
11	Reversive	RV
12	Causative	CAUS
13	Applied	APL
14	Stative	ST
15	Passive	PASS
16	Reciprocal	RCP
17	Repetitive	RPT
18	Indicative	IND
19	Subjunctive	SUBJ
20	Locative	LOC
21	Manner particle	MNR
22	Interrogative (Question)	Q
23	Intensifier	INT

Table 7: Inventory of Morphemes and Allomorphs.

Morpheme	Allomorphs
1. IV	a/-cl2, cl6, cl12, cl16 e/-cl4, cl5, cl7, cl8, cl9, cl10 o/-cl1, cl3, cl11, cl13, cl14, cl15, cl18
2. COND	ka-
3. NEG	ti/-c(main clause) ta/-{other} ka/-INF
4. FOC	ni-
5. SM	a/-cl1, ba/-cl2, gu/-cl3, e/-cl4, cl9, li/-cl5, ga/-cl16, ki/-cl7, bi/-cl8, zi/-cl10, lu/-cl11, ka/-cl12, tu/-cl13, bu/-cl14, ku/-cl15, 17, ha/-cl16, mu/-cl18. Numbers correspond to noun-class numbering system.
6. TNS	puH/-, STL/-kya-, IP/-a, NPS/-a--ile, RP/-ile, RMP/-ka-, FRP/-la--ile, IPH/-a--ag-, IF/-laa-, NF/-li-, RMF/-lika-.
7. INF	ku-
8. RFM	-e-
9. DO/IO (OM):	m/-cl1:1, ku/-cl1:2,15,17, mu/-cl1:3, 2:2, 18, tu/-2:1,13, ba/-cl2:3, gu/-cl3, gi/-cl4,9, li/-cl5, ga/-cl6, ki/-cl7, bi/-cl8, zi/-cl10, lu/-cl11, ka/-cl12, bu/-cl14, ha/-cl16.
10. ROOT (STEM)	varies
11. RV	-ulul/-olol-
12. CAUS	-is/-es, -y-, -z-, -s-.
13. APL	-il/-el
14. ST	-ik/-ek
15. PASS	-w-
16. RCP	-angan-
17. RPT	-iliz/-elez, -aij-, -ul-
18. IND	-a-
19. SUBJ	- -e
20. LOC	-ha-/-ku-/-mu-
21. MNR	-ge
22. Q	-ki-/-li-
23. INT	-kwo

This list includes vowel harmony as discussed in chapter 2.

Table 8: List of Noun Classes and Subject Morpheme Markers.

Class	Noun prefix	Person	Number	Subject Marker
1	Mu-	1	SG	n-
		2	SG	o-
		3	SG	a-
2	BA-	1	PL	tu-
		2	PL	mu-
		3	PL	ba-
3	Mu-		SG	gu-
4	Mi-		PL	e-
5	i-/Li		SG	li-
6	MA-		PL	ga-
7	KI-		SG	ki-
8	BI-		PL	bi-
9	N-		SG	e-
10	Lu-		SG	lu-
11	N-		PL	zi
12	KA-		SG	ka-
13	Tu-		SG/PL	tu-
14	Bu-		PL	bu-
15	Ku-		SG	ku-
16	HA-		-	ha-
17	-		-	-
18	-		-	-

Table 9: Haya Affirmative and Negative Tenses

Affirmative			
Tense	Marker	Example	Gloss
Present Universal Habitual (PUH)	-	ba-lum-a	'they usually bite'
Still Tense	(STL) -kya-	zi-kya-nyw-a	'they (cows) are still drinking'
Immediate Past	(IP) -a-	ba-a-ching-a	'they have closed'
Near Past	(NPS) -a- -ile	tu-a-zin-ile	'we have sung'
Recent Past	(RP) - -ile	gu-gw-ile	'it (tree) fell'
Remote Past	(RMP) -ka-	ba-ka-ib-a	'they stole'
Far Remote Past	(FRP) -la- -ile	e-la-gw-ile	'they (trees) have already fell (long ago)'
Immediate Past Habitual	(IPH) -a- -ag-	ba-a-tem-ag-a	'they were habitually cutting'
Immediate Future	(IF) -laa-	ga-laa-yatik-a	'they (eggs) will break'
Near Future	(NF) -li-	a-li-lum-a	'he will bite'
Remote Future	(RMF) -lika-	o-lika-jum-a	'You will in the remote future abuse.'
Negative			
Tense	Marker	Example	Gloss
Present Universal Habitual (PUH)	-	ti-ba-lum-a	'they do not usually bite.'
Still Tense	(STL) -kya-	ti-zi-ki-nyw-a	'they (cows) are no longer drinking'
Immediate Past	(IP) -a-	ti-ba-a-ching-a	'they have not closed'
Near Past	(NPS) -a- -ile	ti-tu-ka-zin-ile	'we have not sung'
Recent Past	(RP) - -ile	ti-gu-gw-ile	'it (tree) did not fall'
Remote Past	(RMP) -ka-	ti-ba-ka-ib-ag-a	'they have never stole'
Far Remote Past	(FRP) -la- -ile	te-ka-gw-ag-a	'they trees have never fell'
Immediate Past Habitual	(IPH) -a- -ag-	ti-ba-a-tem-ag-a	'they were habitually not cutting'
Immediate Future	(IF) -laa-	ti-ga-yatik-e	'they (eggs) will not break'
Near Future	(NF) -li-	t-a-li-lum-a	'he will never bite'
Remote Future	(RMF) -lika-	t-o-li-jum-a neila	'you will never ever abuse'

Table 10: Subject Relative Morphemes

Class	IV	SM	Example	Gloss	
1	a-	a	a-a-gend-a	(he) who does	e.g. man
2	a-	-ba	aba-gend-a	(they) who go	e.g. men
3	o-	-gu	o-gu-laa-gw-a	(it) which will fall	e.g. tree
4	e-	-e	e-e-laa-gw-a	(they) which will fall	e.g. trees
5	e-	-li	e-li-kya-lil-a	(it) which is still crying	e.g. eye
6	a-	-ga	a-ga-kya-lil-a	(they) which are still crying	e.g. eyes
7	e-	-ki	e-ki-a-bul-a	(it) which got lost	e.g. book
8	e-	-bi	e-bi-a-bul-a	(they) which got lost	e.g. books
9	e-	-e	e-e-li-bul-a	(it) which will grow	e.g. cow
10	e-	-zi	ezi-li-kul-a	(they) which will grow	e.g. cows
11	o-	-lu	o-lu-laa-ij-a	(it) which will come	e.g. death
12	a-	-ka	a-ka-li-chumb-w-a	(it) which will be cooked	e.g. little banana
13	o-	-tu	o-tu-laa-gul-w-a	(they) which will be bought	e.g. little things
14	o-	-bu	o-bu-a-sheshek-a	which has poured	e.g. flour
15	o-	-ku	o-ku-laa-gum-a	(it) which will become hard	e.g. cooking
16	a-	-ha	a-ha-laa-shemel-a	(it) which will be good	e.g. place
17	-	ku	-		
18	-	mu	-		

Table 11: Direct/Indirect Objects.

Noun Class	Person	Number	Objects: (DO/IO)
1	1	SG	-m-
	2	SG	-ku-
	3	SG	-mu-
2	1	PL	-tu-
	2	PL	-mu-
	3	PL	-ba-
3		SG	-gu-
4		PL	-gi-
5		SG	-li-
6		PL	-ga-
7		SG	-ki-
8		PL	-bi-
9		SG	-gi-
10		SG	-lu-
11		PL	-zi-
12		SG	-ka-
13		SG	-tu-
14		PL	-bu-
15		SG	-ku-
16		-	-ha-
17		-	-ku-
18		-	-mu-

CHAPTER 4

THE MORPHEMES OF THE VERB: COOCCURRENCE RESTRICTIONS

4.1. Introduction

Chapter 3 described the linear order of the verbal morphemes with little comment on cooccurrence restrictions which hold between these morphemes. This chapter will focus on two topics: 1) what cooccurrence restrictions there are, and 2) what, if any, reasons (syntactic, semantic, pragmatic, phonological or arbitrary) can be given for these restrictions.

As observed at the end of chapter 3, the total number of morphemes which constitute the various forms of the Haya verb come to 23. If all of these morphemes were freely combinable with each other, the total number of forms in the Haya verbal paradigm would come to (1,334,832). However, as was apparent in the previous chapter, the number of actually occurring forms is a small fraction of the possible forms. (This ratio of possible to actual forms will be discussed in the next chapter, section 5.4.)

This observation raises the problem of determining which of the possible forms are actual, and thereby determining the cooccurrence restrictions which hold among the verbal morphemes. Two methods were used to derive the

generalizations cited in this chapter. First, some of these generalizations were discovered by introspection by the author, a first-language speaker of Haya. Others were discovered by application of the following method: the morphemes of the Haya verb were numbered sequentially, from left to right. Then, random sets of these numbers were selected and verb forms composed using just the morphemes corresponding to these numbers in the appropriate order. The resulting forms were then evaluated to uncover generalizations about cooccurrence restrictions that may have escaped introspection.

The presentation in the remainder of the chapter is organized as follows. First, the verbal morphemes are divided into three groups, based on their position within the verb: 1) prestem: preceding the stem; 2) poststem: following the stem; and 3) stem: stem-internal. Second, the cooccurrence restrictions for the prestem morphemes are discussed, then, the cooccurrence restrictions for the poststem morphemes, then, the cooccurrence restrictions for the stem morphemes. The discussion of the non-stem morphemes presupposes that they may cooccur with an unanalyzed stem, and the discussion of the stem morphemes presupposes that the occurrence of non-stem morphemes is irrelevant to the internal structure of the stem. The few exceptions to these generalizations will be discussed last, and commented on further in chapter 5.

4.2. Cooccurrence Restrictions of Prestem Morphemes

4.2.1. The Subject Marker

The subject marker is required in every verb form of the Haya verbal paradigm except the indicative imperative (cf. section 3.3.1.) and the infinitive. The following examples indicate that it may not appear in the two latter forms:

- (1) * tu-ku -shun -a
 Ip-INF-pinch-IND
 * 'We to pinch you'

The infinitive morpheme ku in example (1) has the same shape and occupies the same slot as the object morpheme -ku- second person singular as discussed earlier. When ku in (1) is regarded as the OM second person singular then the form in (1) repeated here as (2) is well formed.

- (2) tu-ku-shun -a
 Ip-2s-pinch-IND
 'We pinch you'

Similarly example (3) is ungrammatical as an imperative; otherwise possible as a present universal habitual (24).

(3) * ba-shom-a

2 -read-IND (imperative)

(4) ba-shom-a

2 -read-IND

'they (habitually) study'

Example (3) is well formed only as an imperative without the subject morpheme (2) as shown in (5)

(5) shom-a

read-IND

'study'

Furthermore example (3) is also well-formed only when used with the subjunctive morpheme to be discussed in detail in section (4.3.2.). We however give an example here:

(6) ba-shom-e

2 -read-SUBJ

'let them study'

We now, discuss the cooccurrence restrictions of the infinitive (INF) with other prestem morphemes.

4.2.2. The Infinitive Morpheme

The infinitive morpheme may cooccur only with the poststem indicative marker and NEG2. It may not cooccur with the subject marker:

(7) a. ku -zin -a

INF-sing-IND

'to sing'

b. * a -ku -zin -a

Is-INF-sing-IND

'he to sing.'

Example (7.a) indicates the use of the INF without the subject marker and (7.b) shows that the two may not cooccur. As was the case with the subject marker above in section 4.2.1, the same reason applies here. That is, the marker -ku- occupies the same slot and has the same shape as the object marker (OM) second person singular. This might be regarded as a phonological identity restriction, a term we are using here to mean the cooccurrence restrictions of two or more morphemes which have similar phonological values.

The infinitive morpheme may not occur with any tense marker:

(8) a. * e -li-ka -ku -gw -a

IV-9 -RMP-INF-fall-IND

b. * mu-laa-ku -tobol -ag-a
 2p- -INF pierce- -IND

c. * zi-ku -li-gomok -a
 IO-INF-NF-become fat-IND

d. * ba-ka -ku -ib -a
 2 -RMP-INF-steal-IND

Examples (8.a) and (8.b) indicate that no tense marker precede the INF morpheme and examples (8.c) and (8.d) indicate that no tense marker may follow the INF morpheme. However, in other Bantu languages such as Shona (9.a) and Kikuyu (9.b) (Harford (Perez) 1986: 68) infinitives have "overt future markers as illustrated in the following examples from Shona and Kikuyu:

(9) a. Ku -cha-ziva
 INF-fut-know
 'to know still' (Fortune 1980: 3.60) (Shona)

b. Menya u -gok -a gu -ka negenia.
 know 2s fut. come ind. inf. fut. Is obj unbraid
 (kikuyu) (Barlow 1951: 127).
 'Mind you do not come to upbraid me (i.e., at some future time).'

The infinitive morpheme cannot co-occur with the subjunctive morpheme as shown below:

(10) a. * ku -gend-e

INF-go -SUBJ

b. * ku -lis -e ente

INF-graze-IND cattle

c. * ku -ly -e omuchele

INF-eat-SUBJ rice

The cooccurrence restriction holding between the INF and SUBJ is because of the cooccurrence requirement of the SUBJ morpheme with the SM (see 4.3.2 for details). We have also seen that SM and INF do not co-occur. Thus there is a clash of the occurrence requirements of SUBJ with SM and cooccurrence restrictions of INF with SM.

The infinitive morpheme ku cannot co-occur with NEG1 and NEG3. As for NEG1, (as discussed in chapter 3 (3.3.9.1)), it is prefixed to the SM which is at the same time ruled out by the cooccurrence restrictions between SM and INF as discussed in (4.2.1):

(11) a. * ti -ku -gul-a

NEG1-INF-buy-IND

'not to buy'

b. * ti -ku -fumol -a

NEG1-INF-converse-IND

'not to converse'

c. * ti -ku -lind-a

NEG1-INF-wait-IND

'not to wait'

However, as noted in chapter 3 (3.3.2), when examples (11.a-c) are regarded as nominal infinitives they are acceptable as shown in (12).

(12) a. o -ku -lwan -a ku-abo ti -ku-li-ba-gu(1)-z -a

IV-INF-fight-IND 15-their NEG1-15-NF-2 -buy-CAUS-IND

bi-ntu

8 -thing

'their fighting won't make them buy things'

b. o -ku -boigok-a

IV-INF-shout -IND

ti -ku-li-ba-fumo(1) -z -a -ge

NEG1-15-NF-2 -converce-CAUS-IND-MNR

'shouting won't make them converge well'

c. o -ku -lind-a ku-ngi ku-a -mu-laa(l)-z -a
 IV-INF-wait-IND 15-much 15-IP-3s-sleep -CAUS-IND
 omwilungu
 on the way
 'his waiting too much has caused him to spend a
 night on the way (in the wood).'

Note that consonant l is neutralized in favor of z in the causative form.

On the other hand, NEG3 seems as if it co-occurs with an INF morpheme. However, as we discussed in chapter 3 (3.3.9.3), the morpheme -ku- which co-occur with NEG3 is what we have referred to as an imaginary marker (UNR). Thus NEG3 and INF do not co-occur as exemplified below:

- (13) a. * ka -ku -shom -a e -bi-o o -ta -bas-e
 NEG3-INF-study-IND IV 2 -REL 2s NEG2 be able SUBJ
 * 'do not to study that which you wont be able
 to understand'
- b. * ka -ku -sig -a a -b-ana -b-onka
 NEG3-INF-leave-IND IV-2-child 2-alone
 'do not to leave the children alone'

- c. * ka -ku -imuk -a bwanka muno
 NEG3-INF-wake up-IND morning very
 'do not to wake up early (in the) morning'

When in examples (13.a-c), the imaginary marker -ku- is substituted for the INF marker, then all the examples are well formed, as shown in (14.a-c).

- (14) a. ka -ku -shom -a ebyo otabase
 NEG3-UNR-study IND which you won't be able
 'do not study (things) which you cannot understand'
- b. ka -ku -sig -a abana bonka
 NEG3-UNR-leave-IND children alone
 'do not leave the children alone'
- c. ka -ku -imuk -a bwanka muno
 NEG3-UNR-wake up-IND morning very
 'do not to wake up early in the morning'

Examples (13) and (14) therefore, indicate that in Haya you cant get a negative infinitive, instead it would be a negative imperative as in (14). Note that there are phonological realizations that take place in the surface realizations of forms in the examples above as discussed in chapter 3. For example, the vowels i and o are neutralized

in favor of the glide y. Therefore ebio in (14.a) is realized as ebyo.

4.2.3. The Tense Morphemes

Tense must co-occur with the SM and IND, except for the near past tense, the remote past and the future remote past which have the past-stem marker -ile: The morphemes -ile and IND may not co-occur:

(15) a. ba-lika-gamb-a a -maano.

2 -RFM -tell-IND IV-forbidden

'they will in the far future tell the forbidden'

b. tu-la-mu-tang -ile ku -zan -a na kato

Ip- 3s refuse INF-play-IND and Kato

'we have refused him to play with Kato.'

c. * mu-a-sig -ile-a busha

2p- leave -IND empty

Example (15.c) is ill formed because the remote past (RP) has a post stem marker ile and therefore cannot co-occur with IND.

Moreover, all tense morphemes co-occur with NEG1 and NEG2 as exemplified partially in (16). However, NEG2 cannot follow the infinitive morpheme (as shown in 17), it only co-

occurs with only one tense: the present universal habitual (PUH) in a nominal infinitive form as shown in (18):

(16) a. ti -zi-l -ile bunyasi bungi

NEG1 10-eat-RP grass many

'they (e.g. cows) did not eat a lot of grass'

b. ba-ta -li-gend-a ki-lo

2 -NEG2-NF-go -IND night

'they should not go at night'

(17) a. * ku-ta -kya-hiig-a ente

INF-NEG2-STL-find-IND cows

'to not still find the cows'

b. * ku-ta -ka -yombek-a enju

INF-NEG2-RMP-build -IND house

Examples (17.a, b) show the co-occurrence restrictions of NEG2 with other tenses when preceded by the infinitive ('still' tense and remote past). As pointed out above NEG2 only cooccurs with the present universal habitual (PUH) as shown below.

(18) a. o -ku -ta -ly -a ku-teb -es -a ente

IV-INF-NEG2-eat-IND 15-become thin-CAUS-IND cow

'not eating causes cows to be thin'

- b. o -ku -ta -lim -a ku-lum -is -a enjala
 IV-INF-NEG2-farm-IND 15-bite-CAUS-IND hunger
 'not farming causes hunger'

Furthermore, the tense morphemes cannot cooccur with the imaginary -ku- except the recent past (19.b).

- (19) a. * ka -ku -laa -jum -a a -ba-alimu
 NEG3-UNR-IF -abuse-IND IV 2 -teacher
 'do not abuse the teachers'

- b. ba-ku -shuntam-ile ba-ly -a
 2 -UNR-sit 2 -eat-IND
 'they could sit and eat'

4.2.4. The Subject Relative Morpheme

The subject relative morpheme takes the form of an initial vowel. The initial vowel (IV) occurs in relative verbs; which always contain a subject morpheme marker. It may not cooccur with COND, NEG1, NEG3, or FOC. Otherwise, it may co-occur with any other prestem, poststem or stem morphemes. Furthermore, the subject relative morpheme may cooccur with any tense. The following are some examples to illustrate these cooccurrence restrictions:

(20) a. * e-ki-ka-many-a

IV-7-COND-know-IND

'which when know'

b. * e-li-ti -shash-a

IV 5-NEG1-hurt -IND

'which not hurt'

c. * a -ba-ka -shom-a

IV-2 -NEG3-read-IND

'who not read'

d. * e -bi-ni -lum -a

IV-8 -FOC-bite-IND

Examples (20.a-d) show the co-occurrence restrictions of IV with COND (20.a), NEG1 (20.b), NEG3 (20.c) and FOC (20.d). We would attribute the ill-formed form of (20.a) as being a clash of two morpheme the class 12 (diminutive class) and the condition morpheme both of which have the same shape and may be interpreted as occurring in the same slot unless other morphemes intervene. The ill-formed form of (20.b) may be explained as due to the position of NEG1, which only appears verb initially, and only negates independent clauses. Dependent clauses like the relative are negated by NEG2 as shown in (21.b) below:

(21) a. e -li-shash-a

IV 5 -hurt

'which (e.g. eye) hurts'

b. e -li-ta -shash-a

IV 5 NEG2-hurt IND

'which (e.g. eye) do not hurt'

Example (20.c) is ill-formed because NEG3 only cooccurs with the imaginary -ku- (UNR), or the INF ku- in nominal forms initially. Similarly (21.d) is ill-formed because FOC only appears verb initially and not in any other position. Therefore it cannot cooccur with the IV. (relative) form. This may hypothetically be called 'positional clash.' Example (20.a), however, may be interpreted as acceptable only when the marker -ka- (COND) is regarded as that of noun class 12, sometimes called the diminutive class (e.g. Doke and Mofokeng for the Sotho language, Byarushengo 1977 for Haya). COND and class 12 share the marker which has the same shape as exemplified below:

(22) a -ba-ka-many-a

IV-2 -12-know-IND

'who knows it (e.g. a small dog).'

Although we have attributed the ill formed forms to the position they occupy in the verbal paradigm (which is

plausible), the major reason is the function these morphemes perform in the verb. As discussed in detail in the next section, IV. (subject relative morpheme), NEG1, NEG3 and FOC introduce dependent clauses, such that the cooccurrence of any two of these morphemes are restricted because of what we might call "identical functional clash." Furthermore, IV. is followed by SM, but not vice versa, a point we have discussed at length when discussing the linear order in chapter 3.

(23) a. e -zi-li-gul-w -a

IV 10-NF-buy-Pass-IND

'which (e.g. cows) will be bought'

b. * zi-e -li-gul-w -a

10-IV-NF-buy-PASS-IND

4.2.5. The Conditional Morpheme

The COND morpheme may not co-occur with IV, NEG1, NEG3 or FOC; it may co-occur with any tense except the remote past (RMP) and the remote future (RMF).

(24) a. * a -ba-ka -li-shutul-a

IV 2 COND NF carry IND

'who if will carry'

b. * ka -a -ba-li-shutul-a
COND-IV-2 -NF-carry -IND

(25) a. * ka -ti -ba-shek -a
COND-NEG1-2 -laugh-IND
'if not they laugh'

b. * ti -ka -ba-shek -a
NEG1-COND-2 -laugh-IND

(26) a. * ka -ni -ba-many-a
COND-FOC-2 -know-IND
'if they'

b. * ni -ba-ka -many-a
FOC-2 -COND know-IND
'they (indeed) if know'

(27) a. * ka -ka -ku -zin -a
COND-NEG3-UNR-sing-IND
'if not sing'

* ka -ku -ka -zin -a
NEG3-UNR-COND-sing-IND
'not if sing'

In examples (24-27) various cooccurrence restrictions of COND with other morphemes are shown in pairs following and preceding the COND. The cooccurrence restrictions of COND with IV (example 24), NEG1 (example 25) and FOC (example 26) may be explained again as 'similar functional clash.' All the three morphemes introduce the dependent clause and therefore they cannot cooccur. Similarly, although NEG3 does not occur in the same position as the other morphemes (IV, NEG, and FOC), its function is similar to them, as exemplified below:

- (28) ka -ku -ly -a o -ta -nab -ile mi-kono
 NEG3-UNR-eat-IND 2s-NEG2-wash-RP 4 -hand
 'do not eat without washing hands (your)'

Moreover, COND does not cooccur with the remote past (RMP) and remote future (RMF) tenses.

- (29) * ka -ba-ka -it -a
 COND-2 -RMP-kill-IND

Example (29) is ill-formed because COND does not co-occur with (RMP) tense. The RMP -ka- has the same shape as the OM (ka) which agrees with class 12. Thus example (29) may be regarded as well formed when the ka of the RMP tense is substituted for the ka of OM (class 12) as illustrated:

(30) ka-ba-ka-it-a

COND-2-12-kill-IND

'when they kill it (e.g. a small goat).'

The same reasons apply in the co-occurrence restrictions of COND and the remote future (RMF) where the marker -li- clashes with the marker -li- of near past tense and the marker -ka- clashes with the -ka- of the OM (class 12) (see also chapter 5 (5.3.3.2)).

(31) * ka -ba-lika-gul-a

COND-2 -RMF -buy-IND

'? if they (in the remote future) buy'

However, example (31) is regarded as well formed when the marker -lika- is split into two markers: -li- with the role of the near future tense marker (NF) and -ka- with the role of the OM (class 12), as discussed in chapter 3 (3.3.5.3.3.).

(32) ka -ba-li-ka-gul-a

COND 2 -NF-12-buy-IND

'when they will buy it'

4.2.6. The Focus Morpheme

FOC occurs only in the present universal habitual (PUH) and the "still" tense (-kya-). It may only co-occur with

the SM, the IND and the SUBJ and the 'still' (-kya-) tense morphemes as exemplified:

(33) a. ni -ba-kya-lil-a
 FOC-2 -STL-cry-IND
 'they are still crying'

 b. ni -ba-lil-e
 FOC-2 -cry-SUBJ
 'let them cry'

(34) a. * ni -mu-laa-lil-a
 FOC-2p-IF -cry-IND

 b. * ni -ba-a-lil-ag-a
 FOC-2- -cry- -IND

Examples (34.a) and (34.b) indicate that the FOC morpheme marker may not cooccur with the immediate future morpheme nor with the immediate past habitual morpheme. These are examples of certain tenses which do not cooccur with FOC; otherwise all except the (PUH) and STL do not cooccur. The FOC morpheme also does not co-occur with any NEG morpheme, IV, or COND. We will only show NEG morpheme examples here. Other examples have been covered in the previous sections.

(35) a. * ni -tu-ta -jum -a
FOC-Ip-NEG2-abuse-IND

b. * ni -ka -ku -log -a
FOC-NEG3-UNR-witch-IND

c. * ti -ni -ba-hend -a
NEG1-FOC-2 -break-IND

Again (35.b) can only be interpreted as well formed when the NEG3 marker is regarded as the SM (class 12) and the -ku- of UNR is realized as the OM.

(36) ni -ka-ku-log -a
FOC-12-2s-witch-IND
'it is bewitching you'

Example (35.a) whose affirmative form is:

(37) ni -tu-jum -a
FOC-1s-abuse-IND
'we are abusing'

can only be negated by deleting the FOC marker and prefixing the NEG1 to the SM as indicated below:

- (38) ti--tu-li-ku-jum-a
 NEG1-IP-NF-INF-abuse-IND
 'we are not abusing'

This restriction is also observed in Kikuyu (Bergvall 1987). On the other hand Tharaka permits FOC and NEG to co-occur (Perez (Harford) 1987).

4.2.7. The Negative Morphemes

NEG1 may co-occur with any tense of the verb, therefore, (cf. discussion of tense markers for more detail) since it only negates main verbs (cf. chapter 3), it may not cooccur with IV, COND, or FOC as we mentioned in the previous sections.

- (39) a. e -bi-kol-w -a
 IV-8 -do -PASS-IND
 'which (things) are done'

- b. ti -e -bi-kol-w -a
 NEG1-IV-8 -do -PASS-IND

- (40) a. ka -ba-laa-kul -a
 COND-2 -IF -grow-IND
 'when they grow'

- b. * ti -ka -ba-laa-kul -a
 NEG1-COND-2 -IF -grow-IND
 'not when they grow'

- (41) a. ni -tu-shom -a
 FOC-IP-study-IND
 'we are studying'

- b. * ti-ni-tu-shom-a
 NEG1-FOC-IP-study-IND
 'not we are studying'

In examples (39) to (41) the second pair of each example is ill-formed, illustrating the cooccurrence restrictions of NEG1 with IV, COND and FOC, respectively. These morphemes introduce dependent clauses, so that they cannot co-occur with NEG1, which, as stated above, negates only main verbs (independent clauses).

NEG2 co-occurs with the SM, all tenses except remote future and the infinitive morpheme. When NEG2 follows the infinitive morpheme it only cooccur with the present universal habitual (PUH) as discussed above in section (4.1.3). NEG2 may cooccur with (IV), and (COND) only when following them.

(42) ba-ta -li-galuk -a hanu lundi
 2 -NEG2 IF-return-IND here again
 'they should not return here again'

(43) a. ku -ta -mu-jun -a kiki
 INF NEG2 3s-help-IND why
 'what is restricting you from helping him'

b. * ku -ta -lika-mu-jun -a kiki
 INF-NEG2 RMF 3s help-IND why

NEG3 only co-occurs with the 'imaginary' morpheme marker (see 4.2.2 above).

(44) ka -ku -it -a amani gawe busha
 NEG3-UNR-'kill'-IND energy yours for nothing
 'don't waste your time' (lit. don't kill your energy for nothing).

Finally, the NEG morphemes may not co-occur with each other as exemplified in (45.a-c).

(45) a. * ti -ba-ta -li -shom-a
 NEG1-SM-NEG2-TNS-read-IND

b. * ba-ta -ka -ku -songok -a
 SM-NEG2-NEG3-INF-descend-IND

c. * ti -ya-ta -ka -ku -yet -a

NEG1 SM-NEG2-NEG3-INF-call-IND

The three examples in (45.a-c) indicate that Haya does not allow "double" or "triple" negatives in a verbal construction. This is semantically plausible because Haya verbs usually carry one assertion and this one assertion is negated by one negative morpheme.

Thus far, the co-occurrence restrictions of the prestem morphemes have been discussed. These restrictions are summarized in a table form as in table 12 at the end of the chapter on (page 214).

4.3. Co-occurrence Restrictions of Poststem Morphemes:

4.3.1. The Indicative Morpheme

The only significant cooccurrence restrictions in this group hold for IND and SUBJ, which may not cooccur with each other. IND must occur with all tenses, in infinitives and certain imperatives.

(46) a. yanguh-a

'hurry-IND'

'hurry'

b. * yanguh-a-e

hurry-IND-SUBJ

c. * yanguh-e-a

hurry-SUBJ-IND

As illustrated in examples (46.b-c), the IND morpheme cannot cooccur with the SUBJ morpheme whether the SUBJ morpheme follows (46.b) or precedes the IND (46.c). The indicative morpheme is obligatory, used when no other is called for. However, the subjunctive and -ile suffix may be used as described in the next sections.

4.3.2. The subjunctive Morpheme

SUBJ must occur with SM and cannot occur with any tense marker, except the present universal habitual (PUH). When the SUBJ occurs in an imperative form with an OM, the SM may be optionally omitted.

(47) a. 0 -ba-tang -e

2s-2 -forbid-SUBJ

'You should forbid them'

b. ba-tang -e

2 forbid-SUBJ

'forbid them'

(48) a. * a -li-ba-tang -e

3s-NF-2 -forbid-SUBJ

b. * a -kya-ba-tang -e

3s-STL-2 -forbid-SUBJ

Examples (47.a) and (47.b) show the optionality of (SM). Examples (48.a) and (48.b) show the cooccurrence restrictions of the near future tense and 'still' tense, the illustration of the remaining tenses being omitted.

4.3.3. The Tense Suffix -ile

The tense suffix -ile occurs in three tenses: the near past (NPS), the recent past (RP), and the far remote past (FRP). As was pointed out in chapter 3 (77), the near past and the far remote past tenses appear as a combination of a prefixal tense morpheme and a suffixal one. We are, however, concerned with the suffix marker -ile. The suffix ile must cooccur with the SM, and may cooccur with COND.

(49) a. ba-a-zin-ile

2- -sing- (NPS)

'they have sung'

b. gu-gw -ile

3 -fall-RP

'it (e.g. tree) fall'

c. e-la-gw -ile

4- fall (FRP)

'they (e.g. trees) have fell (a long time ago)'

d. ka -a-zin -ile ba-mu-shua -ile

COND-1-sing- 2 -3s-give a tip-

'when he sung, did they give him a tip'

e. ka -ba-mu-kwas -ile ba-ka -mu-fung-a (kabamukwete)

COND-2 -3S-catch RP 2 -RMP-3s-jail-IND

'when they caught him did they put him into custody'

Examples (49.a-c) show the cooccurrence requirement of -ile with the subject morpheme marker. Those in (49.d-e) show the cooccurrence of -ile with the conditional morpheme ka- while examples (50.a-b) show the cooccurrence of -ile without the conditional morpheme.

(50) a. a -zin -ile, ba-mu-shua-ile

Is-sing-RP 2 -3s-give a tip-RP

'he sung, did they give him a tip'

b. ba-mu-kwas -ile, ba-ka -mu-fung-a (bamukwete)

2 -3s-catch-RP 2 -RMP-3s-jail-IND

'they caught him, did they put him into custody'

4.3.4. The Locative, Manner, Intensifier and Question Morphemes.

There are no cooccurrence restrictions on LOC/MNR/INT/Q (except those mentioned in the following two sections): they may all cooccur with each other and with any verb form including the infinitives and subjunctives:

(51) a. ba-ta -li-ij -a -ho -li

2 -NEG3 IF-come-IND-LOC-Q

'when shouldn't they come here'

b. ti -ba-mu-chumb-il -il -al -ha -ge -kwo-ki

NEG1-2 -3s-cook -APL-APL-IND-LOC-MNR-INT-Q

'what don't they indeed cook well for him here?'

c. ku -ta -ba-mu-leb -el -a -ha -ge -kwo

INF-NEG2-2 -3S-'look' APL-IND-LOC-MNR-INT

'not indeed well taking care of him for them here'

d. ba-shom -e -ge -kwo-ki

2 -study-SUBJ-MNR-INT-Q

'what should they indeed study well'

4.3.4.1. Additional Restrictions on the Question Morphemes

Q may not appear in a sentence which does not contain a verb with an argument position which Q corresponds to (see also chapter 5 (5.3.3.2))

(52) a. mu-a -ly -a -ki
 2p-IP-eat-IND-Q
 'what did you eat'

b. * mu-a -f -a -ki
 2p-IP-die-IND-Q
 'what did you die'

Example (52.b) is ill-formed because the verb -f- 'die' has no argument (intransitive verb), thus the question is blocked by non-correspondence of an argument.

4.3.4.2. Additional Restrictions on the Manner Morpheme.

MNR may not be attached to a verb that does not denote an action (or is not transitive).

(53) a. ba-laa-andik-a -ge
 2 -IF -write-IND-MNR
 'they will write well'

b. * mu-a -f -a -ge
 2p-IP-die-IND-MNR
 'did you(pl) die well'

(53.b) is ill-formed because the verb -f- is intransitive. Compare (53.b) with (53.c) which has a transitive verb; and therefore well-formed.

c. mu-a -chumb-a -ge

2p-IP-cook -IND-MNR

'you have cooked well'

4.4. The Cooccurrence Restrictions of Stem Morphemes

4.4.1. The Object Marker

The linear ordering of the OM's has been fully discussed in chapter 3 (3.4.1). In this section we discuss the cooccurrence restrictions of the OM with the other stem morphemes. As mentioned in the introductory section at the beginning of this chapter, we will ignore the non-stem morphemes here.

The OM cannot cooccur with the reflexive morpheme (RFM). It may cooccur with verbal extensions, except the passive, stative and reciprocal morphemes.

(54) a. ba-ka -mu-tem-a

2 -RMP-3s-cut-IND

'they cut him/her'

b. * ba-ka -mu-e -tem-a

2 -RMP-3s-RFM-cut-IND

'they cut him themselves'

Examples (54.b) indicate that OM cannot cooccur with RFM. The cooccurrence restriction of the OM with the (RFM) is because of the internal contradiction resulting from the dual specification of the object. Whereas RFM claims an identical reference of the agent, that is, that the actor and the patient are the same individual, OM also refers to the patient. Thus there is a double reference to the same patient which is not permitted. In other words RFM and OM have the same function. The presence of one makes the other redundant.

There is also a cooccurrence restriction between the OM and the passive morpheme, exemplified as follows:

(55) a. mu -holol-a

OM(3s)-reply-IND

'(I) reply him'

b. * mu -holol-w -a

OM(3s) reply-PASS-IND

OM and PASS work in an opposite way. Whereas the OM implies an object, the passive removes it. This means that when an object is present in the verb (that is the OM) then the passive morpheme -w- cannot be attached to the verb-stem. If the agent is absent in the verb then the passive morpheme -w- applies as shown in (56).

(56) holol-w -a
 reply-PASS-IND

Moreover, OM cannot cooccur with the stative morpheme, again because of the 'internal contradiction.' Whereas the OM morpheme represents an object argument of the verb the ST morpheme like the passive, removes an object. That is it does not imply agentivity (Perez 1986:11). Thus, the ill-formed forms of the (b) examples in (57) and (58) are due to the cooccurrence of an object (OM) and an extension entailing objectlessness (ST) which are contradictory and therefore do not cooccur.

(57) a. bi-li -ik-a
 8 -eat-ST-IND
 'they (the bananas) are edible'

b. * bi-ba-li -ik-a
 8 -2 -eat-ST-IND

(58) a. e-kom-ek-a
 4-tie-ST-IND
 'they (loads) are tiable'

b. * e-ku-kom-ek-a
 4-2s-tie-ST-IND

Finally, the OM cannot cooccur with the reciprocal morpheme; they are mutually exclusive.

(59) a. * ba-laa-mu-kom-angan-a

2 -IF -3s-tie-RCP -IND

'they will tie him one another'

b. * o -lika-ba-tel-angan-a

2s-RMF -2 -hit-RCP -IND

'you will in the far future hit them one another'

Examples (59.a) and (59.b) show that the OM cannot cooccur with the RCP because the RCP morpheme refers to reciprocity of actions of the subject and NP object. Thus, examples (60.a-b) are well formed without an OM:

(60) a. ba-laa-kom-angan-a

2 IF -tie-RCP -IND

'they will tie each other'

b. o -lika-tel-angan-a

2s-RMF -hit-RCP -IND

'you will in the far future hit one another'

4.4.2. The Reflexive Marker

The Reflexive morpheme cooccurs with all the stem morphemes except the OM (see 4.3.1), stative, passive and

reciprocal. The discussion of these restrictions follow. However, we will not discuss the cooccurrence restriction of RFM and OM a task we have done in the previous section (4.3.1)

The cooccurrence restrictions of RFM with the stative morpheme is again due to the function of RFM which indicates the coreferentiality of the actor or director (agent) as a subject and the patient as an object, and the stative morpheme which indicates the absence of an object. Thus reference to objecthood shown by RFM and non-reference to objecthood shown by stative causes an internal contradiction which prohibits the cooccurrence of the two.

(61) a. y-e -shal-a

I RFM cut IND

'he/she cut himself/herself'

b. * y-e -shal-ik-a

I RFM cut ST-IND

RFM and Passive do not cooccur for the same reason. RFM indicates coreference of the agent subject and NP object while at the same time passive extension entails the absence of an object. This contradiction does not cooccur in Haya as exemplified below:

(62) a. a-li-e -tel-a

I-NF-RFM-hit-IND

'he will hit himself'

b. * a-li-e -tel-w -a

I-NF-RFM-hit-PASS-IND

'he will hit himself by (x)'

Moreover RFM does not cooccur with the RCP morpheme. Although these two morphemes occupy different slots of the verb, that is, RFM occupies the slot of an OM, whereas RCM is formed by suffixing the verb with the RCM morpheme -angan-, they both involve some identities between the subject and the object. Thus the two morphemes cannot cooccur because of the incompatible reference to the object.

(63) a. ba-lika-e -chumit-a

2 -RMF -RFM-spear -IND

'they will spear themselves'

b. * ba-lika-e -chumit-angan-a

2 -RMF -RFM-spear -RCP -IND

'they will spear themselves one another.'

(63.b) indicates that in the presence of RFM, RCP is redundant, and vice versa.

4.4.3. Verbal Extensions

In the present section we present the various cooccurrence restrictions holding between verbal extensions. As we did in the previous sections we will discuss the morphemes that must cooccur, those that may cooccur, and those that cannot cooccur. We first begin with the causative.

4.4.3.1. The Causative

The causative morpheme may cooccur with the OM, RFM, passive, reciprocal and repetitive morphemes exemplified by one example for each:

(64) a. a-mu-shun -is -a e -bi-aly -a

I-3s-pinch-CAUS-IND IV-2 -finger-IND

'he pinches him with fingers'

b. y-e -tem-es -a e -ki-so

I-RFM-cut-CAUS-IND IV-7 -knife

'he cut himself with a knife'

c. baag -is -angan-a e -nte

slaughter-CAUS-RCP -IND IV cow

'cause to slaughter a cow for one another'

d. shun -is -ibw -a e- bi-oma
 pinch-CAUS-PASS-IND IV 2 iron
 'be pinched by (use of) iron'

e. kom -es -iliz-a
 tie CAUS-RPT IND
 'cause to tie repeatedly'

Examples (64.c-d) indicate that the CAUS may be followed by the RCP, PASS and RPT. The CAUS morpheme seems as if it cooccur with the APL morpheme only when preceding the (CAUS), but not with the stative or repetitive morphemes.

(65) a. ?sindik-il -iz -a
 send -APL-CAUS-IND
 'cause to send for someone'

b. * sindik-ik-is -a
 send -ST-CAUS-IND

c. * sindik-iliz-is-a
 send-RPT-CAUS-IND

However, a close observation of example (65.a) indicates that the applicative and causative form together is as a matter of fact the repetitive form which is split into two as shown in (65.d) see also 4.4.3.5.

d. sindik-iliz-a

send -RPT -IND

'send frequently'

An attempt will be made to discuss the reasons for the cooccurrence restrictions of the morphemes as we discuss each of them individually.

4.4.3.2. The Applied

The applied morpheme usually cooccurs with the OM or RFM. It may also cooccur with all other extensions except, the CAUS and the stative morphemes, exemplified as follows:

(66) a. mu-shuntam-il -a

3s-sit -APL-IND

'(I) sat on him (for his benefit?)'

b. ba-e -baag -il -a

2 -RFM-slaughter-APL-IND

'they slaughter for themselves'

Note that in (66.b) RFM must cooccur with the subject morpheme SM(2), a point we will turn to later.

(67) a. shuntam-il -w -a

sit -APL-PASS-IND

'be sat on'

b. * shuntam-w -il -a

sit -PASS-APL-IND

(68) a. lamul-il -angan-a

judge-APL-RCP -IND

'judge the case for one another'

b. lamul-angan-il -a (owo omukama)

judge-RCP -APL-IND at chief's place

'judge one another (at the chief's place)'

(69) a. kol -el -elez-a

work-APL-RPT -IND

'work frequently for someone'

b. * kol-elez-el-a

work-RPT-APL-IND

In the above paired examples, it is noted that the applied may cooccur with the passive and repetitive only in the proper sequence. That is, the applied may not be preceded by the passive or repetitive. On the other hand APL may be both followed and preceded by the RCP, although the forms

that result have a slightly different meaning as shown in example (68.a) and (68.b). We will discuss the cooccurrence restrictions of PASS and APL and RPT with APL in sections (4.4.3.3) and (4.4.3.5) respectively. Example (70-71) show the cooccurrence restrictions of APL with CAUS and ST morphemes.

(70) a. * many-il -is -a
 know-APL-CAUS-IND

 b. * many-is -il -a
 know-CAUS-APL-IND

(71) a. * shuntam-il -ik-a
 sit -APL-ST-IND

 b. * shuntam-ik-il -a
 sit -ST-APL-IND

Examples (70) and (71) indicate that not only is there a cooccurrence restriction holdings between APL followed by CAUS or ST, but also between APL preceded by these morphemes. APL and ST cannot cooccur, again because the applied morpheme requires an agent whereas the stative does not require an agent. Thus, the cooccurrence of the two morphemes APL and ST is due to the internal contradiction of their argument requirements.

Note also that the applied morpheme may be reduplicated as exemplified below:

(72) a. shom-a

study-IND

b. shom-el-a

study-APL-IND

'study for/at'

c. shom-el-el-a

study APL-APL-IND

study for x for y

e.g. 'read for Juma for his son'

4.4.3.3. The Passive

The passive morpheme may not cooccur with any other stem morphemes, that is, the passive followed by other extensions. The following examples illustrate the cooccurrence restrictions holding between the passive morpheme and the other extensions:

(73) a. * lim -ik-w -a

farm-ST-PASS-IND

b. * tel-angan-w -a

hit-RCP -PASS-IND

c. * yombek-elez-w -a
 build -RPT -PASS-IND

However, APL and CAUS, where the meaning allows may cooccur with the PASS following them:

(74) a. chumb-is -ibw -a
 cook -CAUS-PASS-IND
 'be caused to cook by (someone)'

b. kwat -il -w -a
 catch-APL-PASS-IND
 'be caught at a certain place'

4.4.3.4. The Reciprocal

The reciprocal morpheme cooccurs with all the extensional morphemes except the passive and stative morphemes. The following examples illustrate the cooccurrence possibilities of some of these extensions:

(75) a. hiig -angan-is -a
 search-RCP -CAUS-IND
 'search for one another'

b. hiig -is -angan-a

search-CAUS-RCP -IND

'cause to search for one another another'

(76) a. lamul-angan-il -a

judge-RCP -APL-IND

'judge one another (for one another's benefit)'

b. lamul-il -angan-a

judge-APL-RCP -IND

'judge for one another'

(77) a. tel-angan-iliz-a

hit-RCP -RPT -IND

'hit one another frequently/repeatedly'

b. tel-elez-angan-a

hit-RPT -RCP -IND

'hit repeatedly for one another'

The paired examples in (75-77) show the possibilities of RCP with CAUS, APL and RPT following RCP in examples (a) and preceding the RCP in examples (b). The following examples show the cooccurrence possibilities of RCP with OM and RFM:

(78) a. b-e -kom-angan-a

2-RFM-tie-RCP -IND

'they tie one another'

b. tu-e -hanuul-angan-a

Ip-RFM-advise RCP -IND

'we advise one another'

However as mentioned above, the RCP does not cooccur with the passive and stative morphemes, as shown below:

(80) a. * tel-angan-w -a

hit-RCP -PASS-IND

b. * tel-w -angan-a

hit-PASS-RCP -IND

(81) a. * shal-angan-ik-a

cut -RCP -ST-IND

b. * shal-ik-angan-a

cut -ST-RCP -IND

Examples (81.a) and (81.b) indicate the cooccurrence restrictions holding between the RCP morphemes and the stative (ST) morpheme, both preceding and following RCP. We

discuss the reasons for this cooccurrence restriction in section (4.4.3.6).

4.4.3.5. The Repetitive

The repetitive morpheme cooccurs with all the stem morphemes except, again, the passive and stative morphemes. We only show these two impossible combinations with tensed verbs for clarity. These combinations will be shown in pairs with the passive and stative morphemes following and preceding the RPT morpheme:

(82) a. * a-li-chumb-iliz-w -a

I-NF-cook -RPT -PASS-IND

'he will repeatedly cook by (someone)

b. * ba-laa-chumb-w -iliz-a

2 -IF -cook -PASS-RPT -IND

(83) a. * tu-lika-shom-elez-ek-a

Ip-RMF-read-RPT-ST-IND

b. * mu-ka-shom-ek-elez-a

2p-RMP-read-ST-RPT-IND

4.4.3.6. The Stative

The stative morpheme (ST) does not cooccur with any other stem morpheme as shown in the examples below. The

examples also indicate that the reverse order of other extensions with the stative is not permissible either. At this point, we cannot account for these restrictions.

(84) a. * a-lika-many-ik-w -a
I-RMF -know-ST-PASS-IND

b. * a-lika-many-w -ik-a
I-RMF -know-PASS-ST-IND

(85) a. * mu-ka -jum -ik-angan-a
2p-RMP-abuse-ST-RCP -IND

b. * mu-ka -jum -angan-ik-a
2p-RMP-abuse-RCP -ST-IND

(86) a. * ba-kya-shon-ek-elez-a
2 STL-sew -ST-RPT -IND

b. * ba-kya-shon-elez-ek-a
2 STL-sew -RPT -ST-IND

Different reasons account for the cooccurrence restrictions of ST with other extensions as discussed in the previous sections. For example, passive and stative don't cooccur because they perform the same function, that is, removing the agentivity.

The cooccurrence restrictions of the stem morphemes discussed thus far are summarized in Table 13 at the end of the chapter (212).

4.5. Cooccurrence Restrictions between Stem and Non-stem Morphemes

There are certain cooccurrence restrictions between the stem morphemes and non-stem morphemes which we will now discuss, one at a time.

4.5.1. The Subjunctive Marker

The subjunctive must cooccur with either SM or OM. But when it occurs with OM, there is always the option of an SM as examples (87.b) and (88.b) show.

(87) a. ba-mu-jun -e

2 3s help-SUBJ

'they should help him'

b. mu-jun -e

3s help SUBJ

'help him'

(88) a. tu-ba-kom-e

Ip-2 -tie-SUBJ

'we should tie them'

b. ba-kom-e

2 tie SUBJ

'tie them'

4.5.2. The Subject Marker

The cooccurrence of RCP with RFM requires the cooccurrence of SM. This is because RCP essentially requires the coreferentiality of SM and the NP object, as seen in the following examples:

(89) a. * ki-kol-angan-a

7 -do -RCP -IND

b. ba-ki-kol-angan-a

2 -7 -do -RCP -IND

'they do it for one another'

(90) a. * gi-guz -angan-a

10-sell-RCP -IND

b. tu-gi-guz -angan-a

Ip-9 -sell-RCP -IND

'we sell it (e.g. cow) to one another'

Note that (a) examples do not contain SMs.

4.5.3. The Question Marker

The question marker must cooccur with a transitive verb; or may represent the demoted subject of a passive verb. Further discussion will be made in the next section on verb types.

(91) a. ba-a -gul-a -ki

2 -IP-buy-IND-Q

'what did they buy'

b. * ba-a -gob -a -ki

2 -IP-arrive-IND Q

'what did they arrive'

c. mu-a -ly -a -li

2p-IP-eat-IND-Q

'when did you eat'

(91.b) is ill formed because the verb -gob- 'arrive' is an intransitive verb.

4.5.4. The Manner Marker

The manner morpheme marker must cooccur with an action verb as shown:

(92) a. lim -a -ge

farm-IND-MNR

'farm well'

b. * b -a -ge

be-IND-MNR

'be well/good'

Example (92.b) is ill-formed because the verb b- 'be' is not an action verb. Compare (92.b) and (92.a). The (a) form is well formed because the verb lim- 'farm' is an action verb.

4.6. Cooccurrence Restrictions and Verb Types

Certain verb stem types resist the suffixation of stem morphemes, that is, there are verb stem cooccurrence restrictions with certain stem morphemes. This is a discussion we now turn to. We will divide Haya verbs into three groups (see also Khamisi 1983 for Swahili): intransitive, fossilized intransitive, and transitive verbs.² Our rationale in dividing these verbs into three categories is not based only on morphology but also on their syntactic behavior, the details of which are beyond the scope of this study.

Gardner (1985:89), for example, has used feature arguments to categorize verbs; he determined that verbs are classified "on the basis of the number of the arguments and of the semantic category to which these arguments belong."

For English, for example, Gardner gives the following sentences with their arguments:

- (93) a. with three arguments: The teacher teaches grammar to the pupils.
 b. with two arguments: The teacher teaches grammar
 c. with two arguments: The teacher teaches the pupils
 d. with one argument: The teacher teaches.

In the examples above it is safe to say that the sentence subject and direct and indirect objects are regarded as arguments. Thus

- (93) a. contains the teacher, grammar, and pupils as three arguments
 b. The teacher and grammar, as two arguments
 c. The teacher and pupil, as two arguments
 d. The teacher, as one argument.

4.6.1. Intransitive Verbs (IVb)

There are cooccurrence restrictions which affect the suffixation of the PASS, RCP and RPT morphemes to intransitive verbs, while the CAUS, APL morphemes may cooccur with IVb as indicated below:

(94) a. -f -a

die-IND

'die'

b. -f -is -a

die-CAUS-IND

'cause to die'

c. -f -el -a

die-APL-IND

'die for/at'

d. * -f -w -a

die-APL-IND

e. * -f -angan-a

die-RCP -IND

f. * -f -elez-a

die-RPT -IND

Again, as discussed in the previous sections, the cooccurrence restriction holding between IVb -f- and the passive morpheme is because intransitive verbs cannot be passivized due to their lack of any objects. Moreover, intransitive verbs do not cooccur with the RCP as in (94.e) because the RCP morpheme implies an object, whereas IVb lack

objects. The same reasons apply to the cooccurrence restrictions holding between IVb and RPT. Repetitive cooccur with transitive verbs.

4.6.2. Fossilized Intransitive Verbs

Fossilized intransitive verbs refer to verbs "which no longer maintain independent productive verb roots" (Khamisi 1983:103 for Swahili). That is, the root is no longer used. Fossilized intransitive verbs are illustrated below:

(95) Free Base

a. ly -a
eat-IND
'eat'

b. li-ik-a
eat-ST-IND
'edible'

(96) Fossilized Base

a. * kond-a
- IND

b. kond-ek-a
ST IND
'bend'

Whereas /ly-a/ 'eat' in (95.a) has a meaning and a separate entry in the Haya dictionary (Bona-Baisi 1957), /kond-/ does not have a meaning of its own and does not have an entry in the above dictionary. It can only be used with the ST suffix as shown above. These fossilized intransitive verbs not only cooccur with ST but also other stem morphemes such as the applied morpheme:

(97) a. * hond-a

- IND

b. hond-el-a

APL

follow IND

Let us now test the fossilized intransitive verbs with the stem morphemes:

(98) a. kondek-es -a

bend -CAUS-IND

'cause to bend'

b. kondek-el -a

bend -APL-IND

'bend for (someone)'

c. kondek-w -a
 bend -PASS-IND
 'be bend by (someone)'

d. ?kondek-angan-a³
 bend -RCP -IND
 'bend one another'

e. * yombek-ek-a
 build -ST-IND

f. yombek-elez-a
 build -RPT -IND
 'build repeatedly'

The examples in (98) show that the fossilized intransitive verbs do not co-occur with the stative morpheme. This pattern suggests that even though the form -ek- is not used statively when attached to the fossilized IVb -kond-, a productively attached stative morphemes is interpreted as redundant. A similar observation may be made for other fossilized intransitive verbs such as example (99.b) which is in the causative form and therefore does not cooccur with the CAUS morpheme.

(99) a. lam-y -a
 - caus-IND

- b. * lamy -is -a
 salute-CAUS-IND
 'salute/greet'

4.6.3. Transitive Verbs.

There are also certain transitive verbs that do not cooccur with a number of stem morphemes. The verbs chumb 'cook,' -h- 'give,' and gul- 'buy' are examples of such verbs:

- (100) a. chumb-a

cook -IND

'cook'

- b. * chumb-angan-a

cook -RCP -IND

'cook one another'

- (101) a. h -a

give-IND

- b. * h -w -a

give-PASS-IND

(102) a. gul-a

buy-IND

b. * gul-is-a

We would like to attribute the ill-formedness of examples (100.b), (101.b) and (102.b) to the following reasons. a) As was clearly explained in chapter 3 (section 3.5.4) the ill-formedness of (100.b) is basically semantic/pragmatic. No one cooks another in this society and also it is impractical to be cooked. b) Example (102.b) is ill-formed because Haya, like Swahili for example, has two different lexical items for 'buy' and 'cause to buy,' guz- 'sell,' which blocks the occurrence of *gul-is-. We are unable to account for the ungrammaticality of (b) beyond the possibility that it presents an accidental lexicography, or that the form itself is phonologically impossible.

4.7. Summary and Conclusion

This chapter has discussed a number of factors which determine the co-occurrence restrictions of the Haya verbal morphemes. These factors are (1) phonological; (2) semantic; (3) syntactic; and (4) pragmatic factors. Phonologically we have observed that some morphemes do not cooccur because they are phonologically identical. One of the examples which we came across frequently was the ka- which was identified as COND, NEG3, RMP, and the class 12

OM. The case was also seen of the infinitive ku- which is phonologically identical to ku- which we referred to as an 'imaginary marker.' Semantically, the cooccurrence of the verb morphemes is restricted if the meaning resulting from these combinations is not acceptable in Haya society. On the other hand, certain meaningful combinations are impossible because these particular meanings have already been assigned to other morphemes. The other observation of the cooccurrence restriction were observed among the extensions which had "functional clash" (thematic role clash). For example an extensional morpheme which removes an object, such as passive -w-, cannot cooccur with one which also removes an object, such as stative -ik-. Other cooccurrence restrictions are based on pragmatics. Certain morphemes cannot cooccur because their combinations resulted in a meaning that was not pragmatically acceptable. Finally, it was also pointed out in this chapter that the argument structure of the verb root is a controlling factor of what morphemes may precede or follow it.

The factors discussed above support Halle's (1973:24) observation (Scalise 1984:24) that "if a grammar is a formal representation of a native speaker's knowledge of his language, then there must be a component some place in the grammar that accounts for the speaker's lexical knowledge." A speaker knows (a) what the words of his language are (for example, nibalima 'they are farming' is a word in Haya, but

banimali is not), (b) that words have internal structure, that is a Haya verb for example is composed of morphemes:

bi-a -shaalil-a --> byashaalila

8 -IP -ROOT -IND

'they (e.g. cassava) have become bitter'

(c) that the internal structure respects a specific order of morphemes involved. For example

(110) ba-laa-lu -ba-ching-ul-il -a

2 -IF -IONH-2H close-RV-APL-IND

'they will open (unclose) it for them (e.g. door)'

is a possible word but

(111) * a -laa-ba-ching -ba -ul -lu -il-

IND-IF-2-close-2H-RV-IONH-APL

is not possible.

Furthermore, the discussion made in this chapter strongly supports the hypothesis by morphologists such as Aronoff (1981), Scalise (1986), Bybee (1985) and others, that morphology interacts with other parts of grammar, namely: syntax, semantics, phonology (as shown in chapter 2) to mention a few. In the next chapter (chapter 5) we take up one such theory, by B (1985) whose theory is semantically

based and apply her theory to the linear order of the Haya verbal morphemes.

CHAPTER 4 ENDNOTES

¹ Khamisi (1983:94) calls what we have named stem morphemes as syntactic lexical suffixes.

² Fossilized intransitive is a term we have borrowed from Khamisi (ibid:103).

³ Kondek-angan- 'bend one another' sounds a little odd because usually, for bending human beings another lexical item is preferred, which is:

inam-y -angan-a

bend-CAUS-RCP -IND

'cause one another to bend'

where there is a causative morpheme involved.

Table 12. Summary of Cooccurrence Restrictions of Prestem and Poststem Morphemes

	(IV)	(COND)	(NEG1)	(FOC)	(SM)	(NEG2)	(TNS)	(NEG3 (INF UNR)	(IND)/(SUBJ)	
(IV)		-	-	-		+	+	-	-	+
(COND)	-		-	-	+	+	+	-	-	+
(NEG1)	-	-		-	+	-	+	-	-	+
(FOC)	-	-	-		+	-	+	-	-	+
(SM)	+	+	+	+		+	+	-	-	+
(NEG2)	+	+	-	-	+		+	-	+	-
(TNS)	+	+	+	+	+	+		-	-	+
(NEG3)	-	-	-	-	-	-	-		+	+
(INF/UNR)	-	-	-	-	-	-	-	+		+
(IND)	+	+	+	+	+	+	+	+	+	-
(SUBJ)	+	+	-	+	+	+	+	+	+	-

1. As for tense (+) means that only certain tenses may cooccur with that particular morpheme. Refer to specifics in the text.

2. +/+ means either indicative or subjunctive may be applied

Table 13. Cooccurrence Restrictions of the Stem Morphemes.

	OM	RFM	CAUS	APL	PASS	RCP	ST	RPT
OM	+	-	+	+	-	-	-	+
RFM	-		+	+	-	-	-	+
CAUS	+	+		-	+	+	-	+
APL	+	+	-	+	+	+	-	+
PASS	-	-	+	+		-	-	-
RCP	+	+	+	+	-		-	+
ST	-	-	-	-	-	-		-
RPT	+	+	+	+	-	+	-	

1. The '-' marker indicate the cooccurrence restriction of the morpheme involved.
2. '+' marker indicate the possibility of cooccurrence.

CHAPTER 5

PRINCIPLES OF VERBAL MORPHOLOGY

5.1. Introduction

In this chapter we lay out the essential points of B's theory to account for the recurrent properties of morphological systems including fusion and allomorphy.¹ We also discuss the application of the Haya data to B's theory.

The chapter is presented as follows: in the second section we discuss B's theory, followed by a discussion of why we chose Haya as a target of study in section three. In section four we discuss the application of B's theory to Haya. Note that we do not intend to discuss all of the verbal morphemes, but will discuss a few of them and will make some general observations about linear order. Two sets of morphemes are discussed at length; the subject, and object morphemes. We conclude this chapter in section five by commenting on a theory of Paradigm Economy presented by Carstairs (1983) and its relevance to the present study, followed by the summary and conclusion of this chapter.

5.2. B's theory

The major assumption behind B's theory is that the formal properties of morphological expressions correlate

directly with aspects of the meaning expressed; the relation between meaning and form is not entirely arbitrary (4) (Note that numbers in brackets are page numbers). By "form," B refers specifically to the ways in which meaning elements may be related to each other formally (11). She gives three such ways:²

1. Two meaning elements may be combined in a single nondecomposable lexical item, which she refers to as a "lexical expression." An example is the English verb "kill," which combines the meaning elements "die" and "cause" (11).

2. Two meaning elements may be seen to be expressed by separate units, but these units are combined into a single word. B refers to a combination such as this as an "inflectional expression." An example is the English word "walked," which combines the meaning element "go on foot by taking steps" (13), which is expressed by the unit "walk" and the meaning element "past tense," which is expressed by the unit "-ed" (11).

3. Two meaning elements are expressed by separate words, referred to by B as a "syntactic expression." An example is the English expression "come to know," which combines syntactically the meaning elements of "inchoative" and "know" (11). B points out that the same meaning elements also find lexical expression as the verb "realize" (12).

B proposes two principles predicting what kind of formal relation will hold between two meaning elements and,

in particular, which meaning elements are most likely to be expressed as inflectional categories: i.e., falling under (2) above. These principles are called Relevance and Generality. B defines Relevance as follows: "A meaning element is relevant to another meaning element if the semantic content of the first directly affects or modifies the semantic content of the second" (13; italics omitted). B makes the prediction that two meaning elements which are relevant to each other may find expression lexically or inflectionally, whereas elements which are irrelevant to each other will only combine syntactically.

B gives an example of the predictive power of Relevance from lexicalization in English (13). There is an English verb walk, which encodes the semantic notion "to go on foot by taking steps." She considers the Relevance of two additional semantic notions to this one: that of doing something "through water" and that of doing something "on a cloudy day." According to her intuitions, "through water" is highly relevant to "go on foot by taking steps," and hence we find the two combined in the English verb wade. On the other hand, "on a cloudy day" is not particularly relevant to "go on foot by taking steps," and hence we find no verb which means "go on foot on a cloudy day" (14).

B defines Generality as follows: "(For) an inflectional category (to be general, it) must be applicable to all stems of the appropriate semantic and syntactic category and must obligatorily occur in the appropriate syntactic context"

(17; material in parentheses added). She then suggests that a morphological process must have relatively low semantic content to be general. As an example of high semantic content restricting Generality, she cites motion verbs in Latin, which take a number of prefixes indicating direction: Since these prefixes have high semantic content, they are restricted to a subclass of verbs, namely motion verbs, and consequently lack Generality, since they are not applicable to all verbs. These prefixes therefore cannot be considered to be an inflectional category (17).³ From these two principles, B make a number of predictions which are now discussed next.

5.2.1. Predictions arising from Relevance and Generality

Before we discuss the predictions, note that based on a survey of 50 of the world's languages, B came up with a list of categories which she regards as most likely to be inflectional, which we reproduce below without details or examples (20). We will give and discuss examples when we discuss the application of the Haya data. These categories are:

(a) Valence refers to differences in number or roles of arguments that the verb stem can take. (B:20) Examples are tritransitive (four arguments), ditransitive (three arguments), transitive (two arguments) and intransitive (one argument), and causative forms for which the number of arguments varies.

(b) Voice distinctions change the relation that the surface subject bears to the verb (B:20, citing Barber 1975). Examples include active, passive, reflexive, reciprocal.

(c) Aspect refers to the way in which the internal temporal constituency of the situation is viewed. Examples include perfective and imperfect. Imperfective verb forms indicate that the action has not been completed while perfective verb forms indicate the completion of the action.

(d) Tense locates the situation with respect to an established point in time, either the moment of speech, or some other point in time (B:22).

(e) Mood refers to the way the speaker presents the truth of the proposition in the context of discourse and the real world, including probability, possibility and certainty (22) B points out that this category includes, but is not limited to, expressions of assertion (indicative), non-assertion (subjunctive), command (imperative) and warning (admonitive).

(f) Agreement as a verbal inflectional category formally encodes the relationship between a verb and its arguments in terms of features such as person, number, gender and other characteristics of participants in the situation.

These categories will be mentioned frequently in the discussion of B's theory and its application to Haya. We next turn to the predictions.

5.2.1.1. Relevance

The principle of Relevance makes three major predictions: order, frequency, and fusion of the verbal forms to the stem, the details of which we will get into momentarily. At the moment it is in order to mention that B discussed other independent predictions which we were unable to apply to Haya.⁴ Moreover, it is appropriate to mention here that this study will test the predictions which B draws from her principle, but will not evaluate the degree to which the predictions actually follow from the principles.

5.2.1.1.1. Order

This prediction, which will now be referred to as linear order, has to do with the order of categories with respect to a stem. B claims that the categories that are more relevant to the verb stem will occur closer to the stem than those that are less relevant (24). By this she means a greater effect on the semantic content of the stem. Conversely, the less relevant the category is to the stem, the further away it is located from the verb stem. B argues that this principle applies because it affects elements before they are bound and are still movable in the clause. This argument implies that the more a concept has to do with the content of the verb, the closer it will occur to the verb stem (211). Therefore when these elements become bound (affixes) to the verb stem, their order will be the same.

That is, the more relevant affixes are closer to the verb-stem, and therefore the less relevant affixes are further away from the stem.⁵ B's argument can be illustrated using the following schema:

(1) x-y-z-stem-a-b-c

According to B's hypothesis, relevance increases from x to z and from c to a. More specifically B proposes that the following inflectional categories common on verbs (20ff) may be arranged on the following scale of relevance (24) where (+) indicates the most relevant end of the scale, and (-) the least relevant.

(2) Valence-Voice-Aspect-Tense-Mood-Agreement

(+)-----(-)

Let us assume that the verb stem may be arranged in two ways: (a) left of the stem and (b) right of the stem as in (3.a) and (3.b) (using B's categories).

(3) a. AGREEMENT-MOOD-TENSE-ASPECT-VOICE-VALENCE-VERB
STEM

(3) b. VERB-VALENCE-VOICE-ASPECT-TENSE-MOOD-AGREEMENT
STEM

As shown in (3) B's theory predicts a mirror-image order of morphemes on the left of the verb-stem and on the right of the verb-stem, given that "the most relevant inflectional categories occur closest to the verb-stem, and the least relevant occur at the greatest distance from the verb-stem." An important point which B makes is that these categories form a continuum. The continuum hypotheses is a very important point, for unlike the traditional approach (Chomsky and Halle 1968, Siegel 1974, Aronoff 1976 . . .) B does not make a sharp division between categories that fall under derivational or inflectional categories as has been the case within the traditional approach but they are relevant to the concepts of Relevance and Generality, as will be discussed shortly.

Thus, B's approach may be summarized as follows:

(1) the more relevant the categories are, the more interior they appear with respect to the verb stem.

(2) the less relevant the categories are, the more exterior they appear with respect to the verb stem.

Let us now discuss the second prediction: frequency.

5.2.1.1.2. Frequency

B tested the frequency of morphological categories for verbs in 50 languages. She made two predictions: that there were (1) few inflections among the most highly relevant categories (29) and (2) more inflections among the least relevant categories. These statements can be schematized as

in (4) where (+) refers to a more of a category and (-) less of a category and INFL means inflectional and RLV means relevance.

(4) a. [-INFL]-[+RLV]

b. [+INFL]-[-RLV]

However, frequency predictions can only be tested comparatively across languages. Nevertheless, as noted above, Haya has all of the verbal inflectional categories (see chapter 3). Haya can be added as another sample language to B's data.

5.2.1.1.3. Degree of fusion

B's third prediction concerns fusion. She predicts that the more relevant the morphemes are to the stem, the more likely there is to be fusion; the less relevant the morphemes the less likely there is to be fusion. She claims there are two reasons for this: (1) that relevant categories occur closer to the verb in the syntactic string (2) the psychological restructuring of two words into one depends on the relatedness of the semantic elements being joined, and their ability to form a coherent semantic whole (38). These predictions are hierarchically represented in this order.

(5) Lexical-derivational-inflectional-free grammatical-syntactic
(+) <-----(-)

Again, B states that these expressions form a continuum that ranges "from the most highly fused means of expression, lexical expression, to the most loosely joined means of expression, syntactic or periphrastic expression" (12). In (5) the (+) marker indicates the most highly fused and (-) indicates the most loosely joined. Again, in order to have a clear discussion of these categories their meanings are briefly given without getting into details.

(a) lexical expression. In a lexical expression, two or more semantic elements are expressed in a monomorphemic lexical item. B mentions some examples from various languages including English. In English as mentioned earlier, the lexical items:

(6) a. kill combines the semantic elements 'die' and 'cause' (to die).

b. drop combines the semantic elements 'fall' and 'cause' (to fall).

(b) Derivational Expression. B points out that a "derivational expression resembles lexical expression in that derivational morphemes are often restricted in applicability and idiosyncratic in formation or meaning. It resembles inflectional expression in that two distinct morphemes are combined in a single word" (B:12). Three of

B's verbal categories falls under derivational expression. These categories are valence, voice and aspect (99). As an example, B discusses the category of aspect as a lexical, derivational and inflectional category (100). Let us review what she says about the aspectual derivational categories. "Inceptive and iterative tend to be restricted to stative verbs, so in languages with a morphological inceptive (or inchoative) marker, this marker is derivational." She also points out that iterative markers are derivational because they are applicable only to some verbs which describe events that take place in a very short period of time, such as cough and blink, but not to stative verbs (100). The example given is the morpheme wado in the Kiwai language (Ray 1933) which indicates "the repetition of an action or its frequent or regular performance"; such a morpheme resembles the Haya repetitive (RPT) morpheme discussed in chapter 3 (3.5.5).

(c) Inflectional expression. In an inflectional expression, each semantic element is expressed in an individual unit, but these units are bound into a single word. Examples are affixes added to a stem or a change of stem, such as the English regular past tense, walked vs irregular brought. Inflectional morphemes obligatorily accompany the verb-stem. They are generally unrestricted in applicability.

(d) Free grammatical. Free grammatical morphemes belong to a closed class and occur in a fixed position.

They "resemble inflections in that they make up contrast sets that are obligatory in certain environments and they have positional restrictions" (12). B adds that they "resemble periphrastic expressions in that they are not bound to lexical stems." Unfortunately B does not give an example of these morphemes, but simply states that they are not studied in her work, "although their existence is recognized by the theory to be proposed" (12).

(e) Syntactic expression. By syntactic expression B means that semantic elements are expressed in separate words. For example 'come to know' contains the semantic notions 'inchoative' and 'know.' These notions are also expressed by a single word 'realize.' The syntactic expression is sometimes called a "periphrastic" expression (ibid:12).

We now turn to the second principle Generality and discuss how the predictions which follow from this principle.

5.2.1.2. Generality

According to the determinant of generality "an inflectional category must be applicable to all stems of the appropriate semantic and syntactic category and must obligatorily occur in the appropriate syntactic context" (17). Simply stated, generality "involves the degree to which a particular process is applicable within a particular domain" (Walker 1986:494).

As was the case with Relevance, Generality is proposed to express the same three major predictions: order, frequency and fusion. These predictions are the reverse of those predicted by the Relevance principle. We briefly discuss these predictions based on Generality.

5.2.1.2.1. Order

This prediction concerns the proximity of verbal categories to the verb-stem. Unlike Relevance, the most general categories occur at the greatest distance from the verb-stem. Using the linear order of the verbal morphemes as proposed by B,

(7) VERB STEM-VALENCÉ-VOICE-ASPECT-TENSE-MOOD-AGREEMENT
 (-)-----(+)

Generality increases from valence to agreement, where (+) indicates more general and (-) less general. In other words agreement is more general to the verb-stem than valence. As also was the case with Relevance, Generality forms a continuum from the less general to the more general categories. In this case, valence is less general than voice, voice is less general than aspect . . . and mood is less general than agreement. This ordering may be represented as in (8) where > indicates is more general than . . .

(8) AGREEMENT>MOOD>TENSE>ASPECT>VOICE>VALENCE-VERB
STEM

B's argument may be summarized as follows: the more general the category is the more exterior it appears with respect to the verb-stem and conversely the less general the category is the more interior it is located with respect to the verb stem. This generalization is the reverse of that of the Relevance principle with respect to linear order.⁶ Let us now discuss the second prediction in relation to Generality, which is frequency.

5.2.1.2.2. Frequency

B's test of 50 languages indicates that there are larger numbers of inflections among the least relevant categories than there are among the most highly relevant categories. In Haya (see chapter 3) there are thirteen least relevant categories and ten highly relevant categories, which support B's prediction.⁷ Again, as earlier mentioned, frequency and order coincide. The further away the categories are from the verb-stem, the more likely they are to be highly General and the higher the frequency. The closer the categories are to the verb-stem they more likely they are least General and the lower the frequency. Thus, the frequency prediction is summarized as follows: (a) there are many inflectional categories among the most highly General categories and conversely (b) there are few inflectional categories among the least General

categories. These statements can be schematized as in (9) where (+) indicates more of a category and (-) indicates less of a category and GEN means General, and INF means Inflectional.

(9) a. [+GEN] - [+INFL]

b. [-GEN] - [-INFL]

Now let us move on to the third prediction, which is the degree of fusion.

5.2.1.2.3 Degree of Fusion

Again, as was the case with frequency, the degree of fusion also coincides with the order of categories. B, as mentioned earlier, predicts that the more relevant the morphemes are to the verb-stem the closer they are to the verb-stem and the more likely it is that fusion will take place. Conversely, therefore, the less relevant the morphemes are to the verb-stem the further away they are to the verb-stem and the less likely there is to be fusion. As discussed above, it is predicted that Relevant categories are more likely to fuse than General categories.

As was the case with other predictions, B represents the fusion hierarchy as follows:

(10) Lexical-derivational-inflectional-free grammatical-syntactic.

A syntactic expression is the most loosely joined expression and therefore more General, while the lexical expression is the most highly fused expression and therefore less General (more relevant). These predictions can be represented in a continuum hierarchy as shown in (11) where > indicates more General than and (+) a more fused category and (-) a less fused category.

(11) syntactic > free grammatical > inflectional > derivational > lexical
 (-)-----(+)

5.2.2. Synthesis

The discussion thus far has shown the intertwining of B's two major principles, Relevance and Generality, and the predictions that are derived from these principles, which are: order, frequency and fusion. The two principles and their predictions coincide in the sense that while Relevance predicts closeness of the category or categories to the stem, fewer categories which are closer to the stem, and more likelihood of categories which are closer to the stem to fuse, Generality predicts the opposite of Relevance. It predicts that categories which are General are farther away from the stem, that more of these categories are inflectional and that they are less likely to fuse.

This analysis may be schematized into a redundancy feature matrix as suggested in (12.a) and (12.b)

- (12) a. $\left[\begin{array}{l} + \text{ CLOSE TO STEM} \\ - \text{ INFL} \\ + \text{ FUSION} \end{array} \right] \text{ ---- [RELEVANCE]}$
- b. $\left[\begin{array}{l} - \text{ CLOSE TO STEM} \\ + \text{ INFL} \\ - \text{ FUSION} \end{array} \right] \text{ ---- [GENERALITY]}$

5.2.3. Comments on B's theory

It is not the purpose of this dissertation to review B's work (see Aronoff 1987, and Walker 1986). However, a few comments are in order here. B mentions three predictions based on the two principles Relevance and Generality: Order, frequency, fusion. Of the three predictions, order received more emphasis throughout her work than any of the others. From this order, the degree of fusion is also predictable - with those categories near the stem most likely to fuse with it than those further away from the stem. While such a claim might be appropriate with fusional languages, it might be a problem with agglutinative languages like Haya. Also, the hierarchy of order of inflectional categories has been questioned. For example, Aronoff (1987) questions "why should voice, which relates argument structure to syntactic subject, be more relevant than aspect, which is confined semantically to the verb itself? (118). We shall not attempt to answer this sort of question; but rather, attempt to apply B's theory as she

gives it to the Haya data. Interestingly, this application sheds light on the analysis of two problematic morphological categories, inflectional and derivational (see her chapter 4: 81-110).

In her work B reviewed a number of linguistic definitions offered thus far (Greenberg 1954, Mathews 1974, Anderson 1982, Kurytowicz 1964, Bloomfield 1933, Nida 1946 . . .) and pointed out some major problems, with each of them (which are not of immediate relevance here). She then proposed to treating Inflection and derivation as single category constituting a continuum from inflection to derivation. Such an approach, she claims fits her general principles of Relevance and Generality as has been discussed above. This is a claim that forms the discussion of the applicability of Haya data to her theory in the next section. But before that it is pointed out why Haya was chosen as target of study.

5.3. Haya as target of study

As seen in the previous section, B's theory is intended to cover a wide, if not the entire, range of morphological phenomena found in human language and has been tested on a diverse sample of 50 languages. However, it is by no means obvious that B's specific predictions necessarily follow from her very generally formulated principles, given the potential for wide interpretation of such terms as "directly affects" or "modifies" in the definition of Relevance.

Aronoff (1987:117) notes the problem of circularity of B's definitions. For example, he questions how we know what is relevant. Even the justification provided by B for relative ranking of individual cases leaves a lot to be desired. Such cases as 'walking through water' is lexicalized as wade because 'whether one has one's feet on dry land in water is quite relevant to the act of walking' (13), however, does not seem to suggest that B has developed any specifically or generally applicable criteria for Relevance.

We will apply the predictions B makes concerning the ordering of specific categories to some of the data we have assembled on Haya verbal morphology in chapters 3 and 4, and confine our attention to those morphological issues that this theory touches upon.

The discussion will focus on inflectional expression to the exclusion of the other two types of formal expression, lexical expression and syntactic expression, because this work has focussed on the verbal morphemes of Haya, which are inflectional according to B's definitions. Also, the discussion will concentrate on linear order, with a few comments on frequency and no mention of fusion.

This approach may be justified by first considering the position of Haya within a morphological typology of the world's languages.

5.3.1. Typological position of Haya

Languages are classified into structural types, three of which are relatively common: isolating, agglutinating and fusional (Lyons 1968, Comrie 1981, Bybee 1985).⁸ An isolating language is defined as "one in which all words are invariable" (Lyons (1968:189)). This means that all words are without internal morphological structure. Examples of such languages include Chinese and Vietnamese, as can be illustrated below in a Vietnamese sentence (Comrie 1981:40).

- (14) Khi toi den nha ban toi, chung toi bat
 when I come house friend I PLURAL I begin
 dau lam bai.
 do lesson.
 'When I came to my friends' house, we began to
 do lessons.'

This sentence shows that each "of the words in this sentence is invariable, there being no morphological variation. . ." (ibid:40). For example the word den indicates both the tense 'come/came,' and bat dau indicate the tense begin/began. This language also has toi for both "I" and "my," and "plurality is indicated, in the case of pronouns, by the addition of a separate word rather than by morphological means, so that the plural of toi "I" is chung toi 'we'" (ibid:40).

Agglutinating languages are languages in which words are composed of a sequence of morphemes with each morpheme representing more or less one strand of meaning. B cites Garo as an example of an agglutinating language; and gives the following sentence as an example (1985:45).⁹

- (14) Garo /sok -ba -ku -ja -ma/=sokbakujama/
 arrive-toward-yet-neg-int
 'has he not yet arrived?'

Example (14) shows that the word /sokbakujama/ is made of morphemes each with a particular meaning. Haya is also a highly agglutinating language, the details of which we will come to momentarily.

Fusional languages (sometimes called inflecting e.g. Lyons 1977:72) display no clear cut boundary between morphemes. Expression of different categories within the same word is fused together. That is unlike AGGLUTINATIVE languages, there is no one-to-one correspondence between these morphemes and the linear sequence of MORPHS (Comrie 1981). In other words, a single morpheme typically represents several strands of meaning. Examples of fusional languages include Latin, Greek, Hebrew and Arabic, to mention a few. The following is an example from classical Latin (Bybee 1985) and Hebrew, respectively (ibid:45).

- (15) Latin: amo 'I love'

The morpheme -o simultaneously represents the following:

- i present tense
- ii active voice
- iii 1st person singular agreement
- iv indicative mood.

(16) Hebrew (the verb 'to write')

Past 3s masc:	katav
Present, 3s masc:	kotev
Future, 3s masc:	yixtov
Imperative, masc. sg:	ktov

"the consonants of the stem interdigitate with the vowels that signal the inflectional categories, so that no clear segmentation is possible" (45).

The three terms 'isolating,' 'agglutinating' and 'fusional' refer to idealized language types. In reality, languages can rarely be characterized as being exclusively of one of these types. For example, Haya, as well as other Bantu languages is highly agglutinating:

(17) Haya ba-laa-mu-jun -a

SM-TNS-OM-STEM-IND

'they will help him'

Example (17) shows that, the morphemes occur sequentially, one per syllable. However, it also shows a sign of fusion:

- (18) tu-ka -mu-taigy -a
 SM-TNS-DO-say good bye-IND
 'we said good-bye to him/her'

the morpheme tu- 'we' simultaneously represents

- (19) i gender - first person
 ii number - plural
 iii agreement - agrees with noun
 class 2 abantu "people"

And Haya also shows signs of isolation, such as in the following morphemes:

kyonka 'but,' olwekyo 'therefore,' buli 'daily' as contextualized in (20.a-c).

- (20) a. Nyakato ya-a -chumb-a kyonka
 Nyakato SM-TNS cook -IND but
 ti -ya-a -yogy -a byombo
 NEG1-SM-TNS-wash -IND dishes
 'Nyakato cooked but she didn't wash the dishes'

b. Kamuzora a -la-yombek-ile olwekyo na iwe

Kamuzora SM- -build - -therefore and

o -yombek-e

you farm -SUBJ

'Kamuzora has already built (a house), you should
also build (a house).'

c. Nyamwiza a -shom-a buli

Nyamwiza SM-read-IND daily

'Nyamwiza reads daily'

The words kyonka 'but,' olwekyo 'therefore,' buli 'daily' have no internal morphological structure, unlike many other words in Haya as shown in the above sentences. But in general Haya shows overwhelmingly agglutinative morphology.

5.3.2. Appropriateness of Haya as test of B's theory

The highly agglutinating nature of Haya makes it particularly appropriate to evaluating a theory concerning the linear order of inflectional categories:

a. First of all, Haya has a lot of inflectional categories: most, if not all of the categories on B's hierarchy are expressed inflectionally in Haya as verbal affixes. In addition, there are also verbal inflections which do not fit any of her categories particularly well. Before we get into the details of these discussions, it is in order here to mention that, in evaluating B's predictions

using the Haya data, a number of problems were encountered, similar to those encountered by B in her analysis. Three problems are discussed here:

(1) determining relative order, (2) distinguishing in the light of current knowledge, categories like Tense and Aspect, and (3) identifying Haya morphemes which represent B's categories. Concerning Relative Order, there are a number of categories which cannot cooccur in a verb and which occur in the same position, for example, the focus marker (FOC), the initial vowel (IV), which signifies the relative morpheme, the conditional morpheme (COND) and the negative morpheme (NEG1). We have represented such mutually exclusive categories with bracket notation:

$$(21) \quad \left\{ \begin{array}{l} \text{FOC} \\ \text{IV} \\ \text{COND} \\ \text{NEG} \end{array} \right\}$$

(cf. chapter 3:53). Second is the problem of indeterminacy of categories such as tense and aspect. In Haya as far as we know, there has been relatively little work on tense and aspect and as of now it is impossible to state for sure whether a particular morpheme belongs to the category TNS or ASP. The relevant morphemes have therefore been categorized as occurring in a single TNS/ASP slot (27). Third, is the problem that, certain Haya morphemes do not readily fit B's categories.¹⁰ These morphemes occupy the slots in the model (22) labelled x_1 - x_3 .

Thus far the Haya model can be represented as:

STEM

$$(22) \ x_1 - \text{AGR-TNS/ASP} - x_2 \left\{ \begin{array}{l} \text{RFM} \\ \text{OM} \end{array} \right\} - \text{ROOT} \quad \text{Extensions} \left\{ \begin{array}{l} \text{IND} \\ \text{SUBJ} \end{array} \right\} - x_3 \text{LOC-MNR-Q-INT}$$

x_1 slot includes the mutually exclusive morphemes $\left\{ \begin{array}{l} \text{FOC} \\ \text{IV} \\ \text{COND} \\ \text{NEG} \end{array} \right\}$,

and x_2 is an $\left\{ \begin{array}{l} \text{INF} \\ \text{UNR} \end{array} \right\}$ morpheme.

As we have mentioned in chapter 3 section (3.2) the root occurs in the middle of the verb so that morphemes that are more relevant appear closer on both sides of the root as shown in (22). Again looking at the Haya data, B's predictions are borne out, the most relevant categories, are closer to the root on both sides, and the least relevant morphemes are further away from the root, which indicates they are most general. This order of the Haya verbal morphemes based on the order of morphemes predicted by B raises a number of questions: (1) do all the morphemes as they appear in the Haya verb follow B's predictions? (2) if not how do we modify B's theory or account for the 'misfit' of these morphemes with respect to B's model. These are some of the questions we raised in chapter 1 (1.1). An attempt to answer these questions, leads us into the theoretical part of this study. We will shortly discuss the status of the object morpheme marker in respect to B's linear order prediction in (5.3.3.4) below.

b. Secondly, the more agglutinating and less fusional nature of the inflectional morphemes of Haya make linear order much easier to evaluate. What fusion there is (cf. chapter 2) does not obscure the relative order of the morphemes which undergo it.

c. Thirdly, we would also like to point out that B's original 50 language survey did not include any Bantu languages, although at one point in the text she discusses causativization in Luganda (18).

5.3.3. Application of the theory to Haya

We begin the discussion with a classification of the Haya verbal morphemes (apart from the SM and OM, which are discussed in the next section) according to B's verbal inflectional categories, with comments on the extent to which their position in the Haya verb matches B's predictions.

5.3.3.1. The Pres-stem Morphemes (non-stem)

a. Initial Vowel

As we discussed in section (3.3.6) and (4.2.4) IV is prefixed to the subject marker to form the subject relative morpheme. This kind of morpheme is not discussed in B's work. Maybe B would have categorized it under agreement, if anything, because its form varies according to the noun class of the subject of its verb (see table 4). If so, the

IV occurs in precisely the position predicted for it, at the periphery of the remaining verbal morphemes.

b. Conditional

In Haya the conditional morpheme ka-, which may be translated as the English if, states the condition to be met in order for a certain event to take place. B (ibid:1985) suggests that COND should be categorized under MOOD following agreement. Such a suggestion fit into B's order of morphemes according to Relevance and Generality, with only the change of position between the agreement and COND morphemes in Haya. Whereas agreement is the farthest category in B's hierarchy and MOOD the last but one, the Haya agreement and conditional morphemes exhibit the reverse order.

c. Negative and Focus

B (ibid:176) admits that negation does not quite fit in any of the proposed categories but in some of its "uses negation can resemble (what she is calling) mood, in that it can have the whole proposition in its scope" (words in brackets mine).

On the other hand, the category focus is not mentioned by B. This would possibly be categorized under mood also. B defines mood as "how the speaker chooses to put the proposition in the discourse context" (165). As we discussed in section 3.3.8 one of the functions (known thus

far) of focus in Haya is emphasis. Such a function of focus fits B's categorization of mood. If the proposal that negative and focus go under mood go through, then it is appropriate to claim that both NEG and FOC fit B's prediction. They are located farther away from the stem than most of the non-mood categories in Haya.

d. Tense

Tense is one of B's categories. Tense in Haya follow B's prediction that a tense morpheme will occur approximately in the middle of the other verbal morphemes.

e. Infinitive

The infinitive is not discussed at all in B's work. We do not know where B would have placed it. Probably INF would have been categorized as MOOD, but we do not know for sure.

5.3.3.2. The Stem Morphemes

a. The Reflexive, Passive and Reciprocal

These morphemes fit B's categorization of voice. B (ibid:20) defines voice as a category "that changes the relation that the surface subject has to the verb." For example, in the reflexive the subject both performs the action and is affected by the action. These morphemes occurs closer to the stem as predicted by B.

b. Causative and Applicative

These two morphemes are categorized under valence. According to B such morphemes are highly relevant to "the situation described in the verb stem, since the situation expressed changes according to the number and role of participants in the situation" (20). Such a description fits the two morphemes in Haya, as described in chapter 3. Moreover these morphemes occur immediately following the verb-root as discussed in (4.4), which fits the prediction that valence morphemes will occur close to the stem.

c. The Reversive and Repetitive

Reversive and Repetitive morphemes have no apparent classification in B's list of categories.

5.3.3.3. The Poststem Morphemes (non-stem)

a. The indicative/subjunctive morphemes

The indicative and subjunctive morphemes are included in B's mood category. These two morphemes are described as the expression of assertion and non assertion, respectively. Their position in Haya fits B's prediction in so far as they are further away from the stem.

b. Locative, Manner, Question and Intensifier

These morphemes have no apparent counterparts in any of B's categories, although the manner morphemes may possibly be regarded as mood.

5.3.3.4 The Subject Marker and Object Marker

In chapter 3 section (3.4.1), we proposed, without justification, that the subject markers and object markers in Haya have significantly different syntactic functions. We will discuss this proposal further in this section.

Both the SM and the OM encode noun-class features, of the subject and the object in a sentence, respectively. Both of them are, in this sense, agreement markers. However, when we look at their position with respect to the root, it can be seen that the OM is close to the root, at the periphery of the stem, whereas the SM is farther from the root, at the periphery of the other inflectional morphemes. If both the SM and the OM are agreement markers, then their different positions constitute a counterexample to B's theory. Is there any evidence that the SM and OM in Haya represent different categories, and thus that their different positions might be predicted by B's theory?

In order to answer this question, we will apply ideas developed for the analysis of object markers in Chichewa, a Bantu language related to Haya, by Bresnan & Mchombo (1987; henceforth referred to as B & M).¹¹ Although B & M develop their analysis within the framework of Lexical-Functional

Grammar (Bresnan 1982; this is given in B & M's references as Bresnan 1982d), we believe that the arguments they give may stand on their own without extensive discussion of the assumptions underlying this theory.

B & M distinguish between grammatical and anaphoric agreement. According to B & M, morphemes marking grammatical agreement redundantly express agreement features of arguments of the verb. Morphemes marking anaphoric agreement are incorporated pronominals, and the NPs with which they agree are non-arguments.

B & M give two criteria for distinguishing the two, one involving evidence from sentence grammar, the other involving evidence from discourse. We will describe and apply these two to Haya, to argue that the OM in Haya shows syntactic behavior parallel to that of the OM in Chichewa, which constitutes our argument that the OM in Haya is a marker of anaphoric agreement, in B & M's terms.

The first criterion is that of word order. B & M show that in simple transitive sentences, where the verb has no OM, the NP object must immediately follow the verb, whereas the subject may be reordered. Simply stated, when there is no OM, word order is restricted as shown in (744) examples, repeated here as (23):

(23) "a. SuVO: Njûchi zi-ná -lúm -a alenje

bees SM-PAST-bite-INDIC hunters

'The bees bit the hunters.'

- b. VOSu: Zínálúma alenje njûchi.
- c. OVsu: * Alenje zínálúma njûchi.
- d. VSuO: * Zínálúma njûchi alenje.
- e. SuOV: * Njûchi alenje zínálúma
- f. OSuV: * Alenje njûchi zínálúma

But when the OM is present, word order is free; that is, all the above orders are possible as shown in their examples, repeated here as (24):

- (24) "a. SuVO: Njûchi zi-ná -wá-lum -a alenje
 bees SM-PAST-OM-bite-INDIC hunters
 'The bees bit them, the hunters.'

- b. VOSu: Zínáwáluma alenje njûchi.
- c. OVsu: Alenje zínáwáluma njûchi.
- d. VSuO: Zínáwáluma njûchi alenje.

e. SuOV: Njûchi alenje zináwáluma

f. OSuV: Alenje njûchi zináwáluma" (745).

The relevant question at this point is: how may these data be accounted for? B & M (745) give five explanations.

(a) SM plays two roles: those of grammatical and anaphoric agreement. The pronominal interpretation arises when the subject NP is omitted. As a matter of fact, when the subject NP is omitted in the above examples in (23) and (24) the pronominal interpretation holds (that is, agreement).

(b) The OM is used as an incorporated object pronoun and not an object marker.

(c) All object NPs in Chichewa appear in post verbal position. Therefore the appearance of a post verbal object in a VP is only possible when there is no OM on the verb.

(d) Sentences in Chichewa consist of an optional subject NP, a VP, and an optional topic NP, which are all unordered. Such combinations allows six different orders as schematized below:

(25) a. NPsu VP NPt

b. NPsu NPt VP

c. VP NPsu NPt

d. VP NPt NPsu

e. NPt VP NPsu

f. NPt VP NPsu

where NPsu means noun phrase subject, NPt means noun phrase topic.

(e). Finally, B & M argue that the cooccurrence of OM with an object NP is explained as the "anaphoric binding of an object pronoun, incorporated in the verb, to a topic NP in S. (746)."

The five explanations above help to explain the differences between examples (23) and (24). The SM is both a grammatical agreement marker and an incorporated pronoun, whereas the OM is only an incorporated pronoun. The SM is a grammatical agreement marker when it cooccurs with the NP which controls its agreement features; in the absence of this NP it is an incorporated pronoun. The OM is an incorporated pronoun whether or not its controlling NP is present or absent. This controlling NP of the OM is not an object but a topic. The data on reordering constitutes the evidence for this difference between the SM and the OM. If the SM were an incorporated pronoun when cooccurring with its controlling NP, then this NP would be a topic and could be reordered within the VP, even in the absence of an OM.

However, it can only be reordered to a position outside of the VP, as indicated in the examples in (23). Therefore, in this case, the SM is purely a grammatical agreement marker. On the other hand, when the OM cooccurs with its controlling NP, this NP can be reordered anywhere, within the VP or outside of it, as in the examples in (24). The OM in this case is an incorporated pronoun.

B & M replace the examples (24) with examples (26) below:

- (26) a. Su[vp V] TOP: Njûchi zi-ná-wá-lum-a alenje
 bees SM-PAST-OM-bite-INDIC hunters
 'The bees bit them, the hunters.'

- b. [vp V] TOP Su: Zináwáluma alenje njûchi.
 'they bite them, the hunters, the
 bees.'

- c. TOP[vp V] Su: Alenje zináwáluma njûchi.
 'the hunters, they bite them the
 bees'

- d. [vp V] Su TOP: Zináwáluma njûchi alenje.
 'they bite them the bees, the
 hunters'

e. Su TOP[vp V]: Njûchi alenje zináwáluma

'the bees, the hunters, they bite
them'

f. TOP Su[vp V]: Alenje njuchi zinawaluma" (745).

'the hunters, the bees bite them'

B & M's analysis raises two questions: (747).

(1) "Why is gender class agreement required between the topic NP and the incorporated object pronoun?"

(2) "Why must the topic NP be anaphorically linked to an INCORPORATED pronoun, which suspiciously resembles an agreement marker, rather than to an independent pronoun in the object NP position (as in English example I love him dearly, my father)?" (italics omitted).

The answer to question 1 above is that person, number, and gender are pronominal categories which universally show agreement in anaphoric relations.¹³ Several examples are given to support this point. We show two of those examples here (10) and (11) repeated here as:

(27) (Pointing to a lion lying on the ground)

UWU

this (class 3)

(28) (Pointing to a lion on the ground)*

* Ichi

this (class 7).

In Chichewa the word lion, mkango, belongs to gender class 3. Indicating deixis to a lion, as shown in (27) above, requires the class 3 deictic pronominal form; the class 7 form (28) shown would be used for other class 7 things. These examples indicate that the choice of agreement features of person, number and gender in the anaphoric use of pronominals is independently motivated, and not motivated exclusively by the sentence internal mechanism of agreement.

As to the explanation of the use of incorporated pronouns to anaphorically link the topic NP's to the predicate argument structure, the answer lies in the internal structure of the language. In Chichewa, "independent object pronouns are used only for introducing new topics or for contrast" (748) (see B & M's examples (12)-(15) 748-749).

As the examples in (29) show, the pattern in Haya is identical to that in Chichewa. Simple transitive sentences in Haya, in which there is no OM on the verb, show fixed word order (the object must immediately follow the verb):

(29) a. SuVO: E-njoki zi-ka -lum -a A -ba-hiigi
 IV-bee IO-RMP-bite-IND IV-2 -hunter
 'The bees bit the hunters'

- b. VOSu: Zikaluma Enjoki Abahiigi
- c. OVSu: * Abahiigi zikaluma Enjoki
- d. VSuO: * Zikaluma Enjoki Abahiigi
- e. SuOV: * Enjoki Abahiigi zikaluma
- f. OSuV: * Abahiigi Enjoki zikaluma

But when the OM is present, all the above orders are possible in Haya as well:

- (30) a. SuVO: E-njoki zi-ka- ba -lum -a A -ba-hiigi
 IV-bee IO-RMP OM(2) bite-IND IV-2 -hunter
 'The bees bit them, the hunters'

- b. VOSu: Zikabaluma Enjoki Abahiigi
- c. OVSu: Abahiigi zikabaluma Enjoki
- d. VSuO: Zikabaluma Enjoki Abahiigi
- e. SuOV: Enjoki Abahiigi zikabaluma
- f. OSuV: Abahiigi Enjoki zikabaluma

In Haya too, as was the case in Chichewa, independent Object pronouns are also used only in introducing new topics or as also is the case in Chichewa, for contrast.

- (31) a. Omwana akalya ekiliibwa. Olwo yamazile
 child ate cassava(7). When he finished
 Ku -ki -ly -a yagya omushule
 INF-it(7)-eat-IND he went to school
 'The child ate the cassava. Having eaten it (the
 cassava) he went to school.'

- ? b. Omwana akalya ekiliibwa. Olwo yamazile
 child ate cassava(7). When he finished
 Kulya ebyo yagya omushule
 eating them(7) he went to school.
 'The child ate the cassavas. Having eaten them
 (something other than cassava) he went to school.'

While example (31.a) is natural in Haya, (31.b) is odd. The independent pronouns as in Chichewa are interpreted as referring to topics not mentioned in the previous sentence even though they agree with objects of the previous sentence in person, number and gender class. That is, example (31.b) is interpreted as meaning that the child ate several things including cassava.

We turn now to the second criterion, that of locality. Locality is defined with respect to the proximity of agreeing elements within the clause structure; local agreement holds between elements of the same simple clause, while non-local agreement may hold between elements of different clauses. In accordance with the assumptions developed in the discussion of word order, locality constitutes another difference between arguments of the verb and topics and focuses linked to the verb by anaphoric agreement. Only non-arguments may be separated from the clauses to which they are linked.

B & M illustrate locality in Chichewa with the following examples:

- (32) Chigawéngá ichi asilikáli á gânyu
terrorist (7) this soldiers of temporary work
a -na -úz -á mtsogoleri wâthu kuti
SM-REC.PAST-tell-INDIC leader our that
s -a -ngath-é ku -chí -gwír -a
not-SM-can -SUBJN INF-OM(7)-catch-INDIC
'This terrorist, the mercenaries told our leader they
cannot catch him.'

- (33) * Chigawéngá ichi asilikáli a gânyu
terrorist (7) this mercenaries
a -na -úz -á mtsogoleri wâthu kutí
SM-REC.PAST-tell-INDIC leader our that
s -a -ngath-é ku -gwîr -a
not-SM-can -SUBJN INF-catch-INDIC
'This terrorist the mercenaries told our leader they
cannot catch.'

These examples indicate that an object marker in Chichewa may be used to bind a topic which is outside of the clause in which the object marker appears, and that such binding is obligatory in Chichewa.

Additional evidence that this NP is a topic is seen in the following examples, which indicate that it may be reordered within the topmost clause in the same manner as in the examples above (34.a-c) given earlier to illustrate the reordarability of topics.

- (34) a. Asilikáli á gânyu a -na -úz -á mtsogoleri
mercenaries SM-REC.PAST-tell-INDIC leader
wâthu kutí s -a -ngath-e ku -chi -gwir -a
our that not-SM-can -SUBJN INF-OM(7)-catch-INDIC
chigawéngá ichi
terrorist(7) this
'The mercenaries told our leader that they
cannot catch him, this terrorist.'

b. Asilikáíí á gânyu chigáwengá ichi
 mercenaries terrorist(7) this
 a -na -úú -á mtsogoleri wathu
 SM-REC.PAST-tell-INDIC leader our
 s -a -ngath-é ku -chi -gwir -a
 not-SM-can -SUBJN INF-OM(7)-catch-INDIC

c.* ? Asilikáíí á gânyu a -na -úú -á
 mercenaries SM-REC.PAST-tell-INDIC
 chigawéngá ichi mtsogoleri wathu
 terrorist(7) this leader our
 kuti s -a -ngath-é ku -chí -gwír -a
 that not-SM-can -SUBJN INF-OM(7)-catch-INDIC

As seen in examples (34.a) and (34.b) the topic may be placed at the end of the sentence, or may follow the highest subject. Example (34.c) shows that it may not occur within the VP, following the main verb. This is because only arguments, not non-arguments, may reappear within the VP.

With respect to the locality criterion, again the pattern in Haya is identical to that in Chichewa. As in Chichewa, the floating topic NP can be non-local from the OM to which it is linked and the non-local topic shows the same ordering possibilities within its higher clause, as examined in examples (35) and (36), respectively.

- (35) Omwisi ogu abai shelukali bo okulipwa
 terrorist (1) this soldiers of temporary work
 (mercenaries)
 ba-a -gambil-a omubembezi waitu bati
 SM-TNs-tell INDIC leader our that
 ti -ya-shoboil-e ku -mu -kwat -a
 not-SM-can SUBJN INF-OM(1) catch-INDIC
 'This terrorist, the mercenaries told our leader they
 cannot catch him.'

In (35), the class noun (1) omwisi 'terrorist' is a floating topic NP. There are three levels of level embedding above class (1) OM which agrees with it. If it is also removed, as was the case in (12), the sentence becomes ungrammatical as shown in (36).

- (36) * Omwisi ogu abaishelukali bokulipwa
 terrorist (1) this mercenaries
 ba-a -gambil-a omubembezi waitu bati
 SM-TNs-tell INDIC leader our that
 ti -ya-shoboil-e ku' -mu -kwat -a
 not-SM-can SUBJN INF-OM(1) catch-INDIC

The ungrammaticality of (36) as was the case in Chichewa, follows from the fact that in Haya too, topicalizations are constructed by anaphoric binding.

Concerning the ordering possibilities within the higher clause, in Haya too, the topic NP can appear sentence-finally as in (37.a), and after the highest subject, as in (37.b) but NOT after the main verb inside the VP, as in (37.c):

(37) a. Abaishelukale bo okulipwa ba-a -gambil-a
 mercenaries SM-TNs-tell -INDIC
 omubembezi waitu bati ti -ya-shoboil-e
 leader our that not-SM-can -SUBJN
 ku -mu -kwat -a omwisi ugu
 INF-OM(7) catch-INDIC terrorist (1) this
 'This mercenaries told our leader that they
 cannot catch him, this terrorist.'

b. Abaishelukale bo okulipwa omwisi ugu
 mercenaries terrorist (1) this
 ba-a -gambil-a omubembezi waitu
 SM-TNs-tell -INDIC leader our
 ti -ya-shoboil-e ku -mu -kwat -a
 not-SM-can -SUBJN INF-OM(7) catch-INDIC

c.* ? Abaishulukale bo okulipwa ba-a -gambil-a
 mercenaries SM-TNs-tell -INDIC
 omwisi ogu omubembezi waitu
 terrorist this leader our
 bati ti -ya-shoboil-e ku -mu -kwat -a
 that not-SM-can -SUBJ INF-OM(1) catch-INDIC

The application of the Haya data to the criteria established by B & M, shows identical results for Chichewa and Haya. The word order criterion shows that both Chichewa and Haya follow a fixed word order: the object immediately following the verb. The locality criterion shows that the floating NP can be non-local from the OM to which it is linked and that non-local topics show the same ordering possibilities within their higher clauses. These results indicates that the OM in Haya (as well as Chichewa) is not an agreement marker but something else.

Let us now turn to the SM. It has been suggested that the OM is always an incorporated pronoun and never a non-referential marker of grammatical agreement (B & M: ibid:755). The relevant question at the moment is what about the SM? It was pointed out earlier that SM is indeed such a marker and it also has a referential use, under appropriate conditions, as an incorporated pronoun. That is, when the SM is used as a grammatical agreement marker, it also agrees with the subject NP, and when the SM is used for anaphoric binding, it functions as a subject topic as

shown in B & M's work as example (32) repeated here as (38). The topic mkango uwu 'this lion' appears three levels of embedding above its verb- initial sentence position in (38.a), following the highest subject in (38.b), and in sentence final position in (38.c).

(38) a. Mkángó uwu, alenje a -ku -gáníza kutí
 lion(3) this hunters SM-PRES-think that
 ú -ma -fúná ku -gúmúla nyumbá yá mfûmu
 SM(3)-HAB-want INF pull.down house of chief
 'This lion, the hunters think that it wants to pull
 down the chief's house.'

b. Alenje mkángó uwu a -ka -ganiza kuti
 hunters lion(3) this SM-PRES-think that
 ú -ma -fúná ku -gúmúla nyumba ya mfumu
 SM(3)-HAB-want INF pull.down house of chief

c. Alenje a -ka -ganiza kutí ú -ma -fúná
 hunters SM-PRES-think that SM(3)-HAB-want
 ku -gúmúla nyumba ya mfûmu mkángó uwu
 INF pull.down house of chief lion(3) this

These examples, show that SM(3) is used as an incorporated pronominal for non-local anaphora to the topic and the other SM is used as a true grammatical agreement marker, a pattern which is also evidenced in Haya.

(39) a. Entale egi, abahiigi ni -ba -tekeleza bati
 lion(9) this, hunters FOC-SM(2)-think that
 NP SUBJ(2)
 e -yenda ku -teneka enju yo omukama
 SM(9)-want INF pull down house of chief
 'This lion, the hunters think that it wants to pull
 down the chief's house.'

b. abahiigi entale egi ni -ba -tekeleza bati
 hunters lion(9) this FOC-SM(2)-think that
 NP SUBJ(2)
 e -yenda ku -teneka enju yo omukama
 SM(3)-want INF pull down house of chief

c. Abahiigi ni -ba -tekeleza bati
 hunters FOC-SM(2)-think that
 NP SUBJ(2)
 e -yenda ku -teneka enju yo omukama
 SM(3)-want INF pull down house of chief
 entale egi
 lion(9) this

As was shown in the Chichewa examples, in Haya too, SM(9) is used as an incorporated pronominal for non-local anaphora to the topic while the other SM (SM(2) underlined) is used as a

true grammatical agreement marker agreeing in class and number with the NP subject.

The SM is also used referentially when it does not co-occur with a nominal to which it has to agree in class and number as exemplified in both Chichewa (40) and Haya (41).

(40) Chichewa

- a. zi-na -lum -a alenje
SM-PAST-bite-INDIC hunters
- b. zi-na -wa-lum -a
SM-PAST-OM-bite-INDIC
- c. zi-na -wa-lum -a alenje
SM-TNs-OM-bite-INDIC hunters

(41) Haya

- a. Zi-ka -lum -a abahiigi
SM-TNs-bite-IND hunters
- b. Zi-ka -ba-lum -a
SM-TNs-OM-bite-IND
- c. Zi-ka -ba-lum -a abahiigi
SM-TNs-OM-bite-IND hunters

In such cases the SM is itself the subject in the absence of the overt NP subject. As nicely summarized by Moshi (1985:139) the "subject has neither something to control nor something by which it is controlled." This adds evidence to B & M's treatment of SM as both used for grammatical agreement and anaphoric binding.

Bresnan and Mchombo present evidence that in Chichewa the SM is both a grammatical agreement marker and an incorporated pronoun, whereas the OM is exclusively an incorporated pronoun. This evidence also exists in Haya. (Similar conclusions have been reached by Byarushengo, et al., (1976) in their study of tone in Haya; cf. B & M (1987: 751, fn.13).) The difference between the two suggests an account of their different positions with respect to the root within B's theory. The SM functions partially as an agreement role in determining its position. If the SM is regarded primarily as an agreement marker, then it may be seen that it occupies the position predicted by B's theory. What about the OM? The evidence suggests that it is exclusively an incorporated pronoun, a category which is not included in B's list of inflectional categories whose linear order is predicted by Relevance and Generality. However, a pronoun represents an argument of the verb and this observation may indicate a connection between a pronominal inflectional category and valence, even though valence, in B's account, refers to morphemes which alter argument structure, not just represent it. (29) Insofar as this

connection may be made, the position of the OM with respect to the root fits B's prediction concerning the position of a valence morpheme. This explanation is problematic, since the SM may also function as an incorporated pronoun under Bresnan & Mchombo's analysis, but B's theory may be considered to offer a tentative account of the connection (if any) between the different functions of the SM and the OM and their different positions in the verb.

Thus far, a distinction has been made between the OM and SM. It has been established that the SM functions as a grammatical marker as well as an anaphoric binder. Such an analysis based on the Haya data supports B's prediction and B & M's analysis. We have examined the SM and OM in Haya and concluded that they show different syntactic behavior. What about the reflexive marker, RFM? As seen in chapter 3, the RFM resembles the OM in that it immediately precedes the verb root and refers to an object of the verb. It differs in that it does not encode the noun-class of the object it refers to. The question now is: does the RFM behave like an incorporated pronominal (in B & M's terms), like the OM?

The RFM, unlike the OM, cannot occur with the NP that it refers to:

- (42) * A -ba-hiigi ba-ka -e -tem-a a -ba-hiigi
 IV 2 hunter 2 RMP-RFM-cut-IND IV 2 hunter
 'hunters cut themselves hunters'

Therefore, neither the criterion of word order nor the criterion of locality used earlier to argue that an OM which cooccurs with the object it refers to is an incorporated pronominal can be used with the RFM, since both of these criteria rely crucially on the OM cooccurring with the object it refers to.

In the next section we raise an issue which we have not discussed so far, concerning our earlier analysis of stems and non-stem morphemes? How may we further justify this analysis? How about the traditional approach of derivational and inflectional morphemes. Does this approach concur with B's approach. These are some of the questions we try to answer next.

5.3.3.5. Split between sets of morphemes

In chapter 4 we split the Haya verb morphemes into two groups: the stem morphemes and non-stem morphemes, both occurring before and after the verb root. The non-stem morphemes may be further divided into prestem morphemes (43.a) and poststem morphemes (43.b):

(43) non-stem morphemes

a. $\left\{ \begin{array}{l} \text{IV} \\ \text{COND} \\ \text{NEG1} \\ \text{FOC} \end{array} \right\} - \text{SM} - \text{NEG2} - \text{TNS} - (\text{NEG3} - (\text{INF} (\text{NEG2}))) - \text{X-}$

b. $\text{X} - \left\{ \begin{array}{l} \text{IND} \\ \text{SUBJ} \end{array} \right\} - \text{LOC} - \text{MNR} - \text{Q} - \text{INT}$

These two schemata may be shown according to their relation to the Root, (marked x in 43) as shown in (44). Since the Root is obligatory, we will show its cooccurrence with the prestem and proststem morphemes.

$$(44) \left\{ \begin{array}{l} \text{IV} \\ \text{COND} \\ \text{NEG1} \\ \text{FOC} \end{array} \right\} - \text{SM} - \text{NEG2} - \text{TNS} - \text{NEG3} - (\text{INF} (\text{NEG2})) - \text{ROOT} - \left\{ \begin{array}{l} \text{IND} \\ \text{SUBJ} \end{array} \right\} - \text{LOC} - \text{MNR} - \text{Q} - \text{INT}$$

The stem morphemes are arranged as follows:

$$(45) \left\{ \begin{array}{l} \text{RFM} \\ (\text{DO}^1) (\text{IO}^2) \end{array} \right\} - \text{ROOT} - \left\{ \begin{array}{l} \text{CAUS} \\ \text{APL} \end{array} \right\} - \left\{ \begin{array}{l} \text{PASS} \\ \text{RCP} \end{array} \right\} - \text{APL} - \text{RPT}$$

Each set of morphemes really constitutes a separate set as exemplified in (46):

(46) a. a -ba-laa-shal-a -ha

IV-2 -IF -cut-IND-LOC

'who will cut here'

b. ku -gul-a -ki-kwo

INF-buy-IND-Q -INT

'to indeed buy what'

c. ti -mu-chumb-ile
 NEG1-2p-cook -RP
 'you haven't cooked'

Examples (46.a-c) indicate that non-stem morphemes may cooccur on their own without stem morphemes. This supports our discussion in chapter 2 of the non-stem morphemes in terms of their relationship to the stem, without reference to the internal structure of the stem. In addition, the stem morphemes were described without reference to non-stem morphemes.

In chapter 4, the claim was made that, with very few exceptions, the cooccurrence restrictions on morphemes hold between morphemes belonging exclusively to one group or the other, the non-stem morphemes or the stem morphemes. We again show some examples to clarify this point. We begin with examples which show the cooccurrence restrictions of the non-stem morphemes:

(47) a. * ka -ti -ba-li-bon-a
 COND-NEG1-2 -NF-see-IND

b. * ba-ta -li-ku -lum -a
 2 -NEG2-NF-INF-bite-IND

Examples (47.a-b) are ill-formed because in (47.a) COND and NEG1 are mutually exclusive and therefore cannot cooccur.

In (47.b) it is shown that INF cannot cooccur with the SM, NF or NEG2. The examples above are repeated here with necessary modified requirements and they are well-formed.

(48) a. ka -ba-li-bon-a
COND-2 -NF-see-IND
'when they see'

b. ti -ba-li-bon-a
NEG1-2 -NF-see-IND
'they wont see'

(49) a. ba-ta -li-lum -a
2 -NEG2-NF-bite-IND
'they should not bit (in the near future)'

b. ku -lum -a
INF-bite-IND
'biting/to bite'

Furthermore, the stem morphemes by themselves may have noun formation morphology attached rather than the verbal morphology discussed in chapter 3. Noun formation morphology is exemplified as follows:

(50) a. ku -kol -a

INF-work-IND

'to work'

b. o -mu-koz -i

IV-1 -work-DA

'worker'

(51) a. ku -eelez-a

INF-serve-IND

'to serve'

b. a-ba-eelez-i

N-2 -serve-DA

'servants/helpers'

(52) a. ku -lwal -a

INF-be ill-IND

'to be ill'

b. o-mu-lwail-e

IV-I-sick-PAT

'sick person (patient)'

Note that examples (50.b) and (52.b) are subject to phonological changes as described in chapter 2. Note also that the vowels following the verb stem in these examples

imply broadly the doer of the action (DA) in example (50.b), (51.b), and patient or sufferer of action (PAT) in example (52.b). The following examples show various stem morphemes which may appear with this noun-formation morphology:

(53) a. o -mu-e -yeg -es -elez-o --> (omwegeshelezo)

IV-3 -RFM-learn-CAUS-RPT -RST

'teachings (i.e. religious teachings)'

b. o -mu-sig -il -w -a

IV-3 -trust-APL-PASS-IND

'steward/trustee'

c. a -ba-shab-iliz-i

IV-2 -beg -RPT -DA

'beggars'

The above discussion of the order of the Haya verb morphemes fits B's prediction of the "mirror-image' order. In Haya where the ROOT is located in the middle of the Haya verb morphemes, we suggest that the most relevant morphemes occur closest to the root and the least relevant occur at the greatest distance from the root. Therefore the stem morphemes are more relevant to the root than the prestem or poststem morphemes (cf. the schemata of the verbal morphemes of Haya in chapter 3 (53). These two groups of morphemes are reminiscent of the more familiar division made between

inflectional and derivational morphology.¹⁴ We may tentatively propose that the non-stem morphemes are inflectional morphemes, whereas the stem morphemes are derivational.

As we pointed out in (5.2.1.1), B's idea is that the inflectional/derivational distinction is a continuum rather than a sharp division. Note that support for this idea comes from the cooccurrence restrictions which hold between the groups. They appear to be restrictions which hold between morphemes which are at the border of the continuum between inflectional and derivational. This is where you expect to find morphemes which behave somewhat like inflectional morphemes and somewhat like derivational morphemes. We will here discuss one such morpheme, the subjunctive.

The SUBJ morpheme must cooccur with SM or OM. (cf. examples (56.a,b)). (Note that when it cooccurs with OM, there is always an option of SM). This, therefore, is an instance of a cooccurrence restriction holding between a non-stem morpheme (SUBJ) and a stem morpheme (OM). Note that the SUBJ morpheme occurs immediately after the stem morphemes of the root.

- (54) a. mu -ba -twal-e o -mu-shule
 SM(2p)-OM(2)-take-SUBJ IV-9 -school
 'you (pl) should take them to school'

b. ba -twal-e omushule
 OM(2)-take-SUBJ school
 'take them to school'

5.4. Carstairs theory

We would like to conclude this chapter by briefly discussing Carstairs' (1983) theory of the Paradigm Economy Principle (PEP) which poses an interesting observation that is relevant to this study. Carstairs investigated the distribution of the inflexional resources available in some word-classes or part of speech among the languages of world class (16); and found out that the 'inflexional resources' as he calls them, do not approach the upper limit, but rather the minimum. In other words, languages which have a large number of inflectional morphemes, and therefore a large number of potential combinations of these morphemes, do not exhibit the maximum number of combinations but rather the minimum. These inflexional resources includes for example nominal and verbal morphemes, among others. With evidence from five languages-Latin, Hungarian, Zulu (a Bantu language), Dyirbal and German, and by applying what he called the "traditional notion of paradigm" he found out that those languages do not approach the "logical maximum" but are at or close to the minimum possible inflexional resources. As an example, suffix combinations of classical Latin were worked out, totalling 1,371,686,400 possibilities but only 5 actually occur (119). With these results,

Carstairs hypothesizes that "there exists a real tendency towards 'paradigm economy' - towards keeping the total paradigms for any word class close to the logical minimum" (127). The question is, is this prediction borne out in Haya?

With 23 morphemes in the Haya verb (see chapter 3 (7)), it is logically possible to have a maximum of 1,334,832 morpheme combinations, reached by multiplying the 22 morphemes with the two or more possibilities of appearance or non-appearance of each category, for those which are optional. These logical possibilities extend from two obligatory morphemes within a single stem - . . .

(55) STEM + $\begin{Bmatrix} \text{IND} \\ \text{SUB} \end{Bmatrix}$

- to the maximum. The maximum possible number of morphemes in a verb stem is approximately 12,960. (see rule 71 chapter 4). This number is approximately 9.7% of the total logical maximum combination. Haya therefore confirms Carstairs theory, as does B's work (see chapter 3 of her book), that there exists a real tendency of keeping the total paradigms for any word class to the minimum.

5.6. Summary and conclusion

Testing B's hypothesis with Haya data tends to confirm her work, with minor modifications. Although it is not very clear whether B groups the 'voice and valence categories with

derivational morphemes, we have done so on the basis of evidence internal to Haya. Given this conclusion, this study supports B's prediction concerning hierarchy and order and more generally RELEVANCE and GENERALITY in so far as the hierarchy and order predictions follow from the two principles. We have also discussed the observation that the OM in Haya fits the prediction in B's model only when it is regarded as an incorporated object pronoun, considered as a valence marker, following the evidence derived from B & M's (1987) study. These conclusions support our earlier general conclusions reached in chapter 4, that semantic, syntactic and pragmatic factors determine the linear order of morphemes. Syntactic factors have not only been discussed in chapter 4 but also in this chapter when discussing among, other things, B & M's proposals of the analysis and order of the OM and SM. Finally, we mentioned in chapter 4, that the linear order of morphemes can be barred by the meaning derived through combinations of morphemes well formed syntactically but not accepted culturally (pragmatic factors).

CHAPTER 5 ENDNOTES

¹ B's theory has been reviewed by Aronoff (1987) and Walker (1986), but has not (as far we know) been applied to any Bantu language.

² These ways are not discrete, but fall along a continuum, whose intermediate points are not discussed here. Cf. B: Chap.2.1, in particular 12.)

³ This example illustrates the problematic character of Generality, since a particular category can be made more or less general depending on how the "appropriate semantic and syntactic category" is defined. In the Latin motion verb example, if the "appropriate . . . category" is defined as all verbs, as she defines it, then motion prefixes are not general; however, if the category is defined as all motion verbs, then it is. It seems to us that Generality is most useful as a relative notion: one morpheme is more or less general than another with respect to a particular syntactic category.)

⁴ B mentions three other independent predictions: language acquisition, language change and word order. As for language acquisition, B notes that children acquire categories that are closer to the stem before those further away from the stem. For example, according to the child language literature, aspectual distinctions on verbs are made long before person/number and agreement distinctions. (Antinucci and Miller 1976, Stephany 1981, Simoes and Stoel Gammon 1979, Bloom et al 1980).

Evidence cited for language change indicates that changes occur in the exterior positions vs the interior positions with respect to the stem (Bybee and Brewer 1980). Finally, a comment is also made that the order of morphemes within a word reflect an earlier ordering of words within a sentence (Givon 1971, Vennemann 1973). We did not get into details of these predictions for Haya.

⁵ See Aronoff's (1987:117) reservations on these principles.

⁶ We will return to this point during the discussion of the application of B's theory to Haya data (Section 5.3.3).

⁷ The thirteen least Relevant categories are IV, COND, NEG, FOC, SM, TNS, INF, IND, SUBJ, LOC, MNR, Q, and INT. The ten highly Relevant categories are: RFM, DO, IO, CAUS, BEN, PASS, RCP, ST, RPT and RV.

⁸ A fourth type not discussed by B is what Comrie (1981:39) has called polysynthetic (or incorporating). In a polysynthetic language it is possible to combine a large number of morphemes, lexical or grammatical, into a single word, often corresponding to a whole sentence of English e.g. Eskimo etc. (Ibid:42) (see details).

⁹ Garo is one of Perkins sample languages (see B ibid:215). It is a Sino-Tibetan type of languages (Burlington 1961).

¹⁰ However, note that B acknowledges that an exhaustive survey of derivational morphology was not undertaken . . .

that "there are many more possible derivational categories than the ones mentioned . . ." (29).

¹¹ Chichewa is a Bantu language spoken in East Central Africa - particularly in Malawi and its neighboring countries of Mozambique, Zambia, and Zimbabwe, where it is also known as Chinyanja. See B & M (1987:743) fn3.

¹² B & M cite one other piece of evidence for the pronominal use of object markers, that they may be used as resumptive pronouns in the repair of island violations (752-764); we will not discuss this use of the object marker here.

¹³ Givon (1976) proposed that, "in the historical development of Bantu, subject and object pronouns used for reference to topics ('The man, he came') became cliticized, and then morphologically bound to the verbs ('The man he-came'); B & M (1987:741).

¹⁴ There is a current debate going on as to whether derivation and inflection must be separated or not. Scalise (1986:102) lists all those who regard inflection in grammar as operating in the syntactic component (the so-called 'Weak Lexalist Hypothesis' (WLH)) as morphologists who assume that Derivation and inflection are different in nature. These morphologists include Chomsky and Halle (1968), Chomsky (1970), Siegel (1974) Aronoff (1976), Allen (1978.a), Anderson (1982) and others. A list of those who maintain that they are not different and therefore must not be

separated is long. the reader is referred to Scalise (ibid:102).

Scalise (ibid:103-115) lists 8 reasons in favor of the division of the two blocks of rules.

CHAPTER 6

CONCLUSION

6.1. Summary

In this chapter we summarize the major findings of this study and state some suggestions for future research. We also state the contribution this study has made in the field of linguistics.

In chapter 1, we provided a brief overview of the Haya language, including its classification and dialects. We stated the major goals of this study, which are:

(1) to identify the Haya verb morphemes and their linear order by answering the question: is the linear ordering of the Haya verb morphemes predictable?

(2) to discover the factors which determine the ordering of the Haya verb morphemes, and

(3) to determine whether the factors in (2) above, follow B's theory.

In the last section of chapter 1 we discussed the sources of the data and the organization of this dissertation.

In chapter 2 we provided a phonological sketch of Haya, which includes the phonological inventory, a word on tones, the distribution of consonant and vowels, the phonological

rules and finally a word on syllable structure. Only those phonological aspects which are relevant to the Haya verb morphology are discussed.

In chapter 3, we identified 23 Haya verb morphemes and we discussed the functions of these morphemes.

In chapter 4 we discussed four factors which determine the cooccurrence restrictions of the verb morphemes. These factors are (1) phonological, (2) syntactic, (3) semantic, and (4) pragmatic. For example, certain morphemes cannot cooccur because they are phonologically identical also, some morphemes have cooccurrence restrictions because they clash semantically. Such extensions includes the passive (-w-) and stative (-ik-).

In identifying the four factors above, we have taken a broader perspective on the interaction of the various language components. Our work as we have mentioned earlier supports other linguists (for example, Aronoff 1981, Anderson 1982, 1986, Scalise 1986, Selkirk 1982) in arguing that morphology interacts with other parts of grammar, namely, phonology, syntax, semantics and pragmatics.

In chapter 5 we tested B's theory with Haya data. We found out that Haya data tends to support B's work, with minor modifications. For example, by grouping voice and valence categories with the stem morphemes in Haya B's prediction concerning hierarchy and order (of her 50 language sample) and more generally, RELEVANCE and GENERALITY, is supported.

6.2. Suggestions for further research.

As we mentioned in chapter 1 and chapter 5, our work is a single language approach, but this study may be expanded and modified to include ten or more Bantu languages. Such expansion of the data base would ensure that all the morphemes that are most common in Bantu languages are covered and the linear order and or co-occurrence restrictions is determined. Such a large data base could then be used to test B's theory such as her theory about the frequency of occurrence of inflectional categories as verbal morphemes. Such a prediction, as we pointed out could not be evaluated in a study of one language.

In addition to that, a huge data base gathered from ten or more Bantu languages could be compared to another ten or more non-Bantu languages and the results could be related to B's theory.

6.3. Contribution

Despite the limited nature of this work, it has made several contributions.

1. This study as far as we know is the first to put B's theory to the test. In so doing we have fulfilled B's invitation which she made to readers, to test her predictions: "no systematic test of these predictions has been carried out, but the reader is invited to apply his or

her knowledge of the languages of the world to test these predictions" (page 20).

2. Although this study used B's (ibid) general principles of: RELEVANCE and GENERALITY, it differs in the method applied. Whereas B examined the inflectional morphology of verbs in 50 languages, our methodology was to investigate one Bantu language (Haya) in detail, a language which was not represented in her sample (a modified version of Parkins (1980)). It was shown that Haya has all of B's categories along with additional categories that did not fit into B's categorization. Moreover, because Haya is a highly agglutinating language, it was easier to see the order of morphemes relative to the stem. This study has therefore added to B's data.

3. In addition, because this work is embodied in a recent theory of the linear order of morphemes, it will (hopefully) be of interest to morphologists in general and African morphologists in particular. That is, this work has added on to the growing literature on morphology, particularly on African languages.

APPENDICES

APPENDIX A

A FEW EXAMPLES OF
PRESTEM MORPHEMES IN USE

A FEW EXAMPLES OF
PRESTEM MORPHEMES IN USE

RELATIVES

Eibala kalikwenda lwa Bunyana

Her name is Beloved-one

Enkuku eyonakateka omumutwe!

What knuckles which I tapped her head with!

Akati k'engoma ilikwekonya

Little scourge of fearful rulers

Aina enkoni y'Omukoma-mpango

His quarter-staff wraps up the matter

Manti leba nibo balikumweteza

Certainly they bring it on themselves

Mwenda-ngabo atumilwemu Nkwele

A shield-breaker sent by King Nkwele

Omwibobo elya wakakya

At the iron bars that chime a warning

Ekyalabile mbele ekya Kalemela

First to bear fruit of Kalemela

Eyayoky' engoma yomukama ali mulenzi

He who burned a royal drum while still a youth

Olunyana lwawe olwo wagisize

Your favorite calf which you gave the special pasture to

Waitu olwo wagisize Kijongo

My lord the one you pastured specially nat Kijongo

Ndiwa Bushalita na Muchwampaka#Ekyakukwata

I am of bushalita and the Decider-of-cases#The -matter-that-holds-you-in-its-grasp

Alikubandama kegy' eigulu

One who knealt to give his arrow flight

CONDITIONAL

Kabatamu zeleba zaikiliza

When they consulted there the oracle saw and favorably spoke

Nkahulila kayagobile nyalulembo nyalulembo nyalulembo

I heard the king as he reached his palace forecourt
forecourt forecourt

Kayagobile omwilembo ly'Abakulwa bonene Kayanga Kayanga

When he entered the Bakulwa forecourt at Kayanga (?)

Kayachwile kuleba ati Omumuti omumushasha

Suddenly he glanced up in a mushasha tree

Kabashabukile Kyenyabasa

When they had crossed the ford at Kyenyabasa

Kayaleba ati Kamachumu yaija yabona omuli Lwanda n'omuli
Busingo

He looked thus at Kamachumu he came and saw into Lwanda and
Busingo

Mh Kayatukula yayema ahali Lutenge yakokoloma

When it ran red he stood up at Lutenge and crowed like a
rooster

Emihambi kelikulaba omubishansha

When the arrows began to fly among the leaves of the banana
plants

Kayahikile omukashekela mwonene

When he arrived at laugh-at village

Kabalengile bwankya

When they judged it to be daybreak

Komubembe Tibagiteile

Since they did not beat the Leper

Kabagaba omumugamba

When they piled them in the back pantry

Kabaganywa gabakwata

When they drank the beer it took hold of them

Kayayetengya bati Atem' ente niwe

When he'd draw attention to himself with kingly gestures
they'd say The slasher of cattle herds is you

Mwakutengya olubingo tulutema bwoli bwoli

Draw our attention to a bamboo grove and we'll slash it
truly truly

Kayayetengya bati Atem'ente niwe

When he'd draw attention to himself with kingly gestures
they'd say The slasher of cattle gerds is you

NEGATIVES

Nka naba ntakujumile

Never have I said an angry word to you

Mbali obwile bwakyela

Nor since the dawn last lightened have we fought

Ati Omuloto naba ntamanyile

I did not see a dream she said

Waitu tinabaliz' ekindi

My lord I did not ask another word

Tiyabaliz' ekindi

He did not ask other word on that account

Kolaba otamanya okwo agolala

If you really don't know how he sets things straight

Tiyabaliz' ekindi

He did not need to ask another word

Endulu tiyalek' endulu

The cry did not leave off the cry

TENSES

Present Universal Habitual.

Ninye omu Kishenye ekya minazi

I was there at Sandy-spot of the munazi trees

Ati Obuso inye nitongana ekilamyo

I beg to tender my respect in his presence

Omushaija ntukuganyila

Fellow we pity you (?)

Nagolol'ata omukama?

How does the king set things straight?

Abantu natema nemiholo angili nasiga omubazi?

Does he cut people up with machetes or does he administer medicines?

Angili leba nanyuka omubili

Or does he massage the body?

Lwamanumi nagoloza ebintu

The owner-of-bulls straightens things with wealth

Twasiga nayesha obulaza

We left him playing stockpile strategy in makala

Omukama nayesh' ekigumba

The king plays the strategy of cattle herd

Emboni nazihanga Lutwiga

But his pupils point to the slavegirl long-necked Lutwiga

Ati Waitu nintongana

My lord I beg a favor

Waitu obuso nintongana ekilamyo

My lord I beg to tender my respect in his presence

Obuso ninyija kuitayo omwiyo

I'm coming soon to order that the court be cleared

Ninkulamya ekyobutini

I tender my respect in words of fearfulness

Ninshuba ninkutaho ekyobwegula moyo

As well I set before you words to buy my life

Immediate Past

Nakutawe ekitebe oli w'enketo

I place before you a throne to sit

Kisa-nshone navesig' eiganzi

She-who-can-make-a-man-feel-shame is certain that she's
loved

Akakazi kangutuz' omuloto gwange

Well this little one stopped my dream for me

Kati Baba wantulaki?

She says Why chastize me love?

Kuba wangutuz' omuloto gwange

Because you broke my dream for me

Buti Walotaki mbandwa?

What was your dream spirit-medium?

Waitu walotaki embandwa?

What was your dream our lord spirit medium?

Omunaga bwateka ahakyoto

The placed an earthenware pot among the flames

Akashumu omungemu bwandagaza

With the pith of a banana plant they wipe my hands

Eichumu bwateka ahakilindi

My spear they placed on the sharpening block

Ekilele bwatamu amabale

My calabash they cleaned inside with stones

Otwalw' otwo kulangaiza

Banana beer to sip relax and thind with

Amajuta bwanteka ahamulundo

With butterfat they rubbed my shins

Near Past

Obukazi tibwakeile kilekyo

The ladies did not delay that day

Tibabaliz' ekindi

They did not ask another word

Nilwo nasokile omuly'entale

And then I descended into the wilderness of lions

Omu Kamezile-nfuka

At Hoe-swallower field

Ah Muhimbile-ngundu

Ah Protector Bull

Bati Omushaija anyoile amalwa obukyakya

The man's drunk beer at dawn they said

Omushaija anyoile amalwa olukyakya

The man's drunk beer at dawn

Nkome kaisho kaigaile

The One-eyed Binding -rope

Ati Wenene asingile njuki?

He said In which house is he now?

Asingile njuki?

In which house is he now?

Ayegekeile Njwanga

He's leaned against his wife Njwanga

Lwa Mugimbile-ngundu

Oh Protector Bull

Tuhulil' endulu Kalabagaine

We heard a cry from Kalabagaine village

Bahi Ikilakulya kihigile bwankya

They said the What-will-chew-you-up troop went to hunt at dawn

Olwo yakasingile akyaija

When he had come

Olwo yakamutaileho amaisho

When he set eyes on him

Remote Past

Nkabanduka omwibanga ly'empumi

I climbed the mountain of hyenas

Nkataho omutana gw'etaba

And then a roll of tobacco

Nkahulila ati Telikunda ya Byabato

I heard him call Never-gives-in child of children's-matters

Nkakuba omuti

I climbed a tree

Nkagya Buganda

I went to Uganda

Nkatabala Buzinja Nagya natabala Bunyoro

I raided in Buzinza and then raided in Bunyolo

Nkaitamu omuntu

I killed a man there

Akabikila Makuba Ngimbwa

He summoned Causer-of-retreats Obligated-one

Nkahulila Omuhamba

I heard a Muhamba

Nkabona ati Yoi yoi yoi yoi

I heard someone say Yo yo yo yo He's speared you

Omuli Ikunyu mwonene nkabona

In Ikunyu village I saw

Obulwano bweila bukankwasa enkoju ahalisho

A longstanding feud has fixed a scar upon my eye

Nkahulila wenene Omunyihangilo

I heard the Munyaihangilo

Akataishula abashaija tukalwana

And free his men to fight

Infinitive/ "Immaginary" Marker

Kusisimuka kitwe yampinda

Awake I started with a big head roaring

Waitu bwatamu otwo kulangaiza

My lord they poured in just enough to sip relax and think
with

Nikyo kwija kundagila omutambi

Which is why I came to be directed to a healer

Nikwo kwija

Which is why I came

Kutola mugambwage yange

To catch my Well-spoken-of-thing

Ahi tata kugya kushwela mawe

He said When my father went to court my mother

Okugyeta mashayaye

Calling it a broken-mouthed vessel

Nakuba nimpulila Nyamunyalila Ishanga

I would be hearing the Urinataor-in-the-marsh

Nakuba nimpulila Nyamwitwa ababi

I would have heard Ruined-by-the-ugly

Ati Bakwitayo enjobe

They must have killed a bushbuck (?) there he said

Bakwitayo eikombo

They must have killed a mongoose there

Nakuba nimpulila lwa magabe

I would be hearing the Apportioner-of-trails

Nakuba nimpulila bilimu lw' enanga

I would be hearing the Sound-of-an-enanga

Bakwitayo omunyima

They must have killed an 'omunyima' there

Nakuba nimpulila ebijumilo nkenzaile

I would be hearing groaning like a calving cow

APPENDIX B

SOME STEM MORPHEMES: RESTRICTION OF
OCCURRENCE BASED ON VERB TYPES

Some stem morphemes: restriction of occurrence
based on verb types.

STEM		RV	CAUS	BEN	ST	PASS	RCP	RPT
1 jum-	'abuse'	*	+	+	*	+	+	+
2 shagal-	'accompany'	*	+	+	*	+	+	+
3 yongel-	'add to'	*	**	*	*	+	+	+
4 igan-	'be equal'	*	+	+	*	+	+	+
5 kul-	'grow'	*	+	**	*	*	*	+
6 ikiliz-	'agree'	*	*	+	+	+	+	+
7 laga-	'promise'	*	+	+	+	+	+	+
8 gendelel-	'progress'	*	+	+	*	+	*	*
9 bon-	'see'	+	+	+	+	+	+	+
10 lek-	'leave'	*	+	+	*	+	+	+
11 hindul-	'alter'	*	+	+	+	+	+	+
12 hulul-	'prune (coffee)'	*	+	+	+	+	+	+
13 nigaal-	'get anger'	*	+	+	*	*	*	+
14 bik-	'announce death'	+	+	+	+	+	*	+
15 olool-	'answer'	*	+	+	+	+	+	+
16 yetab-	'answer (call)'	*	+	+	+	*	+	+
17 hakan-	'argue'	+	+	+	*	+	*	+
18 hik-	'arrive'	*	+	+	+	*	+	+
19 baz-	'ask'	*	+	+	+	+	+	+
20 shab-	'ask for'	*	+	+	+	+	+	+

STEM		RV	CAUS	BEN	ST	PASS	RCP	RPT
21 sisiimuk-	'wake up'	*	+	+	+	+	+	+
22 gag-	'go bad'	*	+	*	*	*	*	*
23 shob-	'go bad'	+	+	+	*	*	*	*
24 gamb-	'say'	*	+	+	+	+	+	+
25 jumbik-	'bake in ashes'	+	+	+	*	+	+	+
26 shaabul-	'bail out of water'	*	+	+	*	+	+	+
27 boigol-	'bark'	*	+	+	+	*	*	+
28 gumb-	'barren'	+	+	+	**	*	*	*
29 yog-	'bathe'	*	+	+	*	+	+	+
30 b-	'be'	*	*	+	*	*	*	*
31 zaal-	'bear children'	*	+	+	*	+	+	+
32 banz-	'begin'	*	*	*	+	+	**	+
33 jugut-	'blow'	*	+	+	+	*	*	+
34 hend-	'break'	*	+	+	+	+	+	+
35 shomb-	'carry things'	*	+	+	+	+	+	+
36 inam-	'bend'	*	+	+	+	*	*	+
37 log-	'witch'	+	+	+	+	+	+	+
38 hangu-	'big, become'	*	+	*	*	*	*	+
39 lum-	'bite'	*	+	+	+	+	+	+
40 shaalil-	'become bitter'	*	+	+	*	*	*	+
41 ilagul-	'become black'	*	+	*	*	*	*	*
42 hum-	'become blind'	+	+	+	**	*	*	*
43 huut-	'blow'	*	+	+	+	+	+	+
44 fuu-	'blow noise'	*	+	+	+	*	*	+
45 yatan-	'border on'	+	+	+	*	+	*	+

STEM		RV	CAUS	BEN	ST	PASS	RCP	RPT
46	tiil-	'borrow'	*	+	+	+	+	+
47	yat-	'break'	*	+	+	+	*	+
48	gutul-	'break'	*	+	+	+	*	+
49	iky-	'breathe'	*	+	*	+	+	+
50	leet-	'bring'	*	+	+	+	*	+
51	lel-	'bring up (child)'	*	+	+	+	+	*
52	monyok-	'break off'	*	+	+	*	*	+
53	ey-	'sweep'	*	+	+	+	*	+
54	yombek-	'build'	*	+	+	*	+	+
55	yoky-	'burn'	*	+	+	*	+	+
56	yak-	'take away'	*	+	+	*	+	+
57	hy-	'become cooked'	*	+	*	*	*	*
58	balul-	'burst open'	*	+	+	+	**	*
59	tond-	'boast of'	+	+	+	+	+	+
60	baluk-	'burst'	*	+	+	*	+	*
61	baluul-	'retell'	*	+	+	+	*	+
62	ziik-	'bury'	+	+	+	+	+	+
63	tem-	'butch, cut down'	*	+	+	+	+	+
64	gul-	'buy'	*	*	+	*	+	+
65	yet-	'call'	*	+	+	*	+	+
66	zing-	'fold'	+	+	+	+	**	+
67	heek-	'carry on back (child)'	+	+	+	*	+	+
68	shutul-	'carry in arms (child)'	*	+	+	**	+	+
69	tweek-	'carry on head (child)'	*	+	+	*	+	+
70	twaal-	'take'	*	+	+	*	+	+

STEM		RV	CAUS	BEN	ST	PASS	RCP	RPT
71 shumul-	'castrate'	*	+	+	+	+	+	+
72 lekel-	'cease'	*	+	+	*	+	+	+
73 ky-	'*cease of rain'	*	*	+	*	*	*	**
74 bing-	'chase'	*	+	+	+	+	+	+
75 kanj-	'chew'	*	+	+	+	+	*	+
76 nokel-	'choke'	*	+	+	*	+	**	+
77 lond-	'choose'	*	+	+	*	+	+	+
78 jwal-	'clothe'	*	+	+	*	+	**	+
79 juul-	'take off (clothes)'	*	+	+	*	+	*	+
80 chuchul-	'comb hair'	*	+	+	+	+	+	+
81 ij-	'come'	*	+	+	*	+	*	*
82 lug-	'come from'	*	+	+	*	+	*	+
83 chumb-	'cook'	*	+	+	+	+	**	+
84 kolol-	'caugh'	*	+	+	+	+	**	+
85 bal-	'count'	*	+	+	+	+	*	+
86 shweek-	'cover'	+	+	+	*	+	+	+
87 yatik-	'crack'	*	+	+	*	+	*	*
88 yajul-	'crawl (of child)'	*	+	+	*	+	*	+
89 shaabuk-	'cross over'	*	+	+	*	+	+	+
90 bandam-	'crouch'	*	+	+	*	*	*	+
91 lil-	'cry'	*	+	+	*	*	*	+
92 lim-	'cultivate'	*	+	+	+	+	+	+
93 lumik-	'cupp'	*	+	+	*	+	+	+
94 tamb-	'cure'	*	+	+	*	+	*	+
95 log-	'curse'	+	+	+	+	+	+	+

STEM		RV	CAUS	BEN	ST	PASS	RCP	RPT
96	shal-	'cut up'	*	+	+	*	+	+
97	zin-	'sing'	*	+	+	*	+	**
98	ilagul-	'get black/dark'	*	+	+	+	*	*
99	gw-	'fall'	*	+	+	*	*	*
100	f-	'die'	*	**	*	*	*	*
101	beiy-	'deceive'	*	+	+	*	+	+
102	sing-	'defeat'	*	+	+	*	+	+
103	nyy-	'defecate'	*	+	+	*	*	*
104	yetong-	'deny'	*	+	+	*	+	+
105	kelelelw-	'delay'	*	+	*	*	*	*
106	imuky-	'depart'	*	+	+	*	*	+
107	shuuk-	'descend'	*	+	+	+	*	*
108	shush-	'look like'	*	+	*	*	*	+
109	end-	'desire'	*	+	+	+	+	+
110	songok-	'descend'	*	+	+	*	*	*
111	lem-	'be difficult for'	*	+	*	*	+	+
112	iy-	'dig (farms) uproot'	*	+	+	+	+	*
113	bul-	'get lost, disappear'	*	+	*	*	+	**
114	ihul-	'dish up food'	*	+	+	*	+	*
115	fundul-	'open'	*	+	+	+	+	*
116	tamw-	'dislike'	*	+	*	*	*	+
117	gab-	'give, sacrifice, divide'	*	+	+	+	+	**
118	kol-	'do'	*	+	+	*	+	**
119	hanantuk-	'get down'	*	+	+	+	**	*
120	t-	'go home/draw wather'	*	+	+	+	+	*

STEM		RV	CAUS	BEN	ST	PASS	RCP	RPT
121	loot-	'dream'	+	+	+	*	*	+
122	nyw-	'drink'	*	+	+	+	*	*
123	toony-	'drip'	*	+	+	+	*	+
124	tamiil-	'get drunk'	+	+	+	*	*	+
125	ikal-	'dwell'	*	+	+	+	*	+
126	ly-	'eat'	*	+	+	+	**	*
127	laal-	'go without food'	*	+	**	**	*	**
128	gool-	'embarass'	*	+	+	*	*	+
129	hing-	'exchange'	*	+	+	*	+	*
130	shoboolol-	'explain'	*	+	+	+	+	+
131	laaz-	'extinguish'	*	+	+	+	+	+
132	lemw-	'get fired/fail'	+	+	*	*	*	+
133	kom-	'wrat, fasten'	+	+	+	+	+	+
134	gomok-	'become fat'	*	+	+	*	*	+
135	mal-	'finish'	*	+	+	*	+	+
136	honder-	'follow'	*	+	+	*	+	+
137	kuntil-	'foot fall'	*	+	+	+	*	+
138	lagul-	'foretell'	+	+	+	+	+	+
139	tang-	'forbid'	*	+	+	+	+	+
140	nywan-	'become friends'	*	+	+	+	+	+
141	yeb-	'forget'	*	+	+	+	+	*
142	tiin-	'frighten'	*	+	+	*	+	+
143	kalang-	'fry'	*	+	+	+	+	+
144	ijul-	'become full'	*	+	+	*	*	+
145	igut-	'become full' (with food)	*	+	+	+	+	*

STEM		RV	CAUS	BEN	ST	PASS	RCP	RPT
146 sheeny-	'gather firewood'	*	+	+	+	+	*	+
147 h-	'give'	*	+	*	*	*	+	*
148 lagil-	'give a message'	*	+	+	+	+	+	+
149 gend-	'go'	*	+	+	+	+	*	+
150 ebembel-	'go ahead'	*	+	+	*	+	+	+

Key:

* ill-formed

** ill-formed but becomes a different lexical item

+ well formed (blank space)

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