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THE CLAUSE STRUCTURE OF  
THE SHIMAORE DIALECT OF COMORIAN (BANTU)

BY

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## **ABSTRACT**

This dissertation examines the clause structure of the Shimaore dialect of Comorian, an under-described Bantu language spoken on the island of Mayotte. One important contribution of the dissertation is a description of Shimaore that includes data of interest to linguists that have never been described for Shimaore.

In my dissertation, I argue that lexical subjects in Shimaore are actually in topic position, and that subject and object markers are markers of agreement, rather than being pronominal in nature. I argue for the relational nature of this agreement, not relying on an agreement phrase in the clause structure of the language, and using an approach to agreement similar to that of Henderson (2006).

In addressing the order of functional projections in Shimaore, I draw on work by Cinque (1999) and Julien (2002), among others. In addition to the affixation that is the focus of these two authors, Shimaore also has two functional projections that are represented by vowel harmony between the vowel in the verb stem and the "final vowel". I demonstrate that when this vowel harmony is blocked, it is because the verb is no longer in a local relation with the head of the projection in question (namely, a retrospective aspect phrase and a habitual phrase), due to the raising of the verb and formation of a complex head that distances the verb from the head involving vowel harmony.

To Stéphane, Paul and Marc

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## ABBREVIATIONS USED

ABIL	ability	OBJ	object
AFF	affirmative	OM	object marker
AGR	agreement	PERF	perfective aspect
ANT	anterior tense	PL	plural
ASP	aspect	PTC	participial
CAUS	causative	RETRO	retrospective aspect
COMP	complementizer	PRES	present
COMPL	completive aspect	PROBAB	probabilitative
DECL	declarative	PROG	progressive
DEF	definite	PST	past
DEM	demonstrative	Q	question
EPISTEM	epistemic modality	REDUP	reduplication
EVALUAT	evaluative	REL	relative marker
EVID	evidential	RETRO	retrospective aspect
FUT	future	SA	subject agreement
FV	final vowel	SG	singular
HAB	habitual aspect	SM	subject marker
INF	infinitival	STAT	stative
MD	mood marker	SUBJ	subject
MOD	modal	SUBJUNCT	subjunctive mood
NEG	negative	T	tense
OA	object agreement	VH	vowel harmony

## CHAPTER 1: INTRODUCTION

### 1.1 Goals of this dissertation

The main goals of this dissertation are to provide more information on the grammar of the Shimaore dialect of Comorian, and to examine the ways in which Shimaore can advance our discussion of theoretical syntax. Shimaore is an underdescribed language in a multilingual society that is under pressure from French and is experiencing rapid change. My hope is that this dissertation will get us closer to a more complete understanding of the grammar of Shimaore.

As a part of the goal of expanding our knowledge of Shimaore, one goal for the dissertation is to establish the clause structure of the Shimaore dialect of Comorian. While Shimaore has been described in Rombi's (1983) descriptive grammar, to my knowledge, no one has ever laid out its clause structure. In chapters 2 and 3, I give a description of Shimaore, with chapter 2 focusing on the phonology of the language and the basic facts of noun phrases in the language, and chapter 3 focusing on the verb phrase and sentence-level structure.

Chapter 4 gives a thorough discussion of verbal functional projections in Shimaore, framed in the context of recent work on universal hierarchies and word formation. Shimaore has some interesting facts that do not fit in easily with, for example, Cinque's (1999) hierarchy of functional projections, and these facts will be explored with



changes to the definitions surrounding agreement. It will also be argued in Chapter 5 that lexical subjects in Shimaore are actually topics, which has been demonstrated for many, but not all, Bantu languages.

Together, the various topics addressed in this dissertation will serve to lay out the clause structure of the language and what types of movements are involved in deriving the surface ordering that we find in Shimaore.

The remainder of this chapter will give information on the Shimaore dialect of Comorian, and the island of Mayotte, where most of its speakers live.

## **1.2 The Shimaore dialect of Comorian**

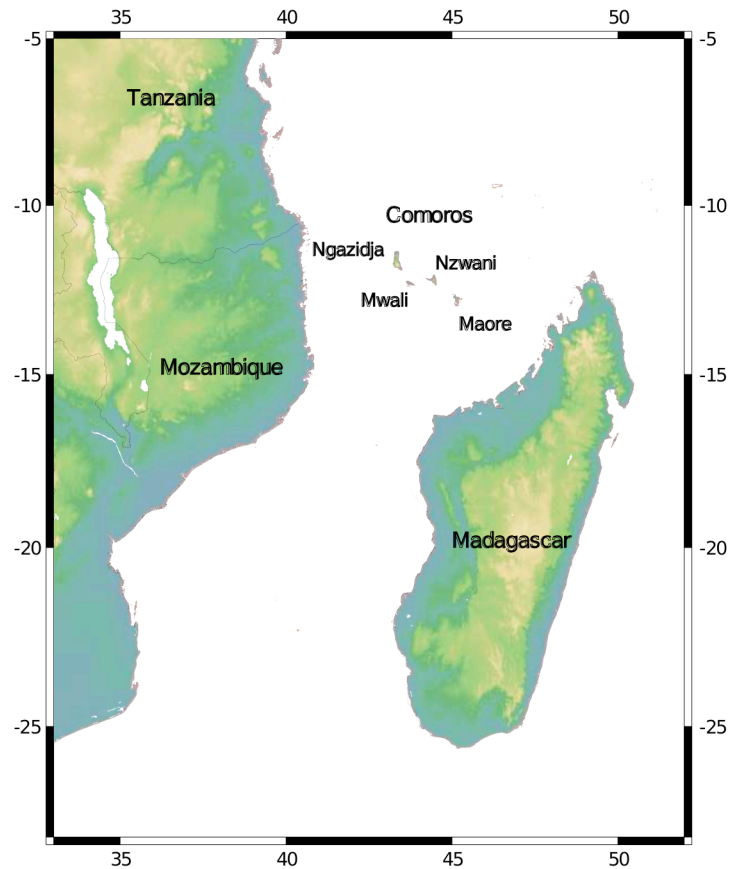
Comorian is an eastern Bantu language spoken in the archipelago of the Comoro Islands, between Mozambique and Madagascar.

It is generally said that each main island of the Comoros has its own dialect of Comorian, with four main forms:

- Shingazidja, spoken in Ngazidja, or Grande Comore;
- Shinzwani, spoken in Nzwani, or Anjouan;
- Shimwali, spoken in Mwali, or Mohéli;
- Shimaore, spoken in Maore, or Mayotte.<sup>1</sup>

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<sup>1</sup> The Comorian language is sometimes referred to in English as Comoran, while in French, it is called "comorien." Occasionally, other terms are used, such as Komoro, Hikomoro, Shikomoro or Kikomoro. The problem is multiplied by the number of dialects. The dialects are normally referred to as Shingazidja, Shimwali, Shinzwani and Shimaore. However, alternate versions are often used. Knowing these alternative spellings and names is very



*Illustration 1: Location of Mayotte (Maore)*

Shimaore and Shinzwani form one subgroup, and Shingazidja and Shimwali form another subgroup. These two subgroups are mutually intelligible, although more effort is

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important when researching Comorian.

The following are equivalents that are sometimes used to refer to the various dialects of Comorian, sometimes in French, sometimes in English, sometimes in both:

- Shingazidja: Hingazidja, Ngazidja, Ngazija, Grand Comorien, Great Comorian
- Shinzwani: Shinzuani, Shindzwani, Shindzuani, Nzwani, Ndzwani, Nzuani, Ndzuani, Anjouanais, Johanna
- Shimwali: Shimuali, Shimoeli, Shimoheli, Moheli, Shimoéli, Shimohéli, Mohéli, Mohelese, Moelese
- Shimaore: Maore, Maorais, Mahorais, Shimahorais, Shimaorais, Maorese, Mahorese

required on the part of Shimaore and Shinzwani speakers in understanding Shingazidja and Shimwali speakers. This is due to the greater morphological complexity of these last two, which leaves Shimaore and Shinzwani speakers faced with additional morphemes that they are not familiar with and cannot immediately interpret.

The various dialects of Comorian were traditionally seen as being dialects of Swahili, although there is not consistent mutual intelligibility between Comorian speakers and Swahili speakers. The differences in the grammars of the two languages, as well as the ways in which the phonetic systems and lexicons of Comorian and Swahili have evolved differently, are significant enough to present comprehension problems, despite a fair amount of shared or similar vocabulary. For example, (3) and (4) are, respectively, the Swahili and Comorian (Shimaore) equivalents of the English sentence *I went to work with my friend*. While a speaker of one language might be able to guess that the sentence had something to do with work (*kazi/hazi*) and something that the speaker possesses (*yangu/wangu*), s/he probably would not be able to understand the meaning of the sentence in its entirety.

(3)	ni-li-enda	kazini	na	rafiki	yangu (Swahili)
	1SG.SM-PST-go	to.work	with	9.friend	9.my
	'I went to work with my friend.'				

(4)	tsi-endr-e	hazini	na	mwanzani	wangu (Shimaore)
	1SG.SM-go-VH.RETRO	to.work	with	1.friend	1.my
	'I went to work with my friend.'				

When Guthrie (1967-71) developed his classification of Bantu languages, he placed Comorian into the class G-40 “Swahili” group, which contains only Swahili, Comorian, and two Mozambican languages, Mwani and Makwe. However, work by linguists working on Comorian dispute this classification, and it is now generally accepted that Comorian should be considered a language on its own, as we will now review.

### **1.2.1 Morphological and lexical differences between Swahili and Shimaore**

Saleh (1971) discusses various dialects of (a wide-ranging definition of) Swahili in East Africa and the Comoros. The section on Comorian treats the similarities and differences between Comorian and the Lamu and Mombasa dialects of Swahili, the dialects to which he says Comorian is the most similar. Saleh seems to base his assessment of the language spoken in the Comoro islands as being Swahili on the fact that many words (and he only looks at a few such words) differ only minimally between the language used in the Comoros and that which is considered standard Swahili (based on the Swahili spoken on the island of Zanzibar, or Unguja). He does not take into account the many phonological, morphological and syntactic differences that make consistent mutual intelligibility between Swahili and Comorian impossible.

Ottenheimer & Ottenheimer (1976) provide a discussion of the place of Comorian among Bantu languages. The contributions of Asian, African and European languages, as well as Malagasy, to the lexicon and grammar of Comorian are acknowledged. A history of Comorian linguistics is given, along with the remark that linguists took a long time to accept that the Comorian dialects are not simply dialects of Swahili, but rather are divergent enough from Swahili to be considered a different language. Other linguists



soon followed suit, beginning with Sibertin-Blanc (1980), who provided a study of the phonological and morphological (noun class) systems of the four dialects of Comorian in comparison to similar dialects of Swahili, with the goal of determining the relationship of Comorian to Swahili. The author posits that the Swahili-Comorian split was one of the more recent Swahili family dialect separations.

Möhlig et al. (1980) argue that Shinzwani has relatively close ties with Lamu on one side and the Mvita-Jomvu group on the other side. Shimaore and Shingazidja are seen to have strong relations with these two groups as well. However, the authors state that Shinzwani is not closely tied to Shingazidja or Shimaore. This is surprising, given the conventional grouping of Shimaore and Shinzwani into one group, and the fact that these two dialects are completely mutually intelligible, as opposed to the relative difficulty that Shimaore and Shinzwani speakers have in understanding Shingazidja speakers. Data are included from these three dialects of Comorian, as well as from Northern Swahili dialects. Rombi & Alexandre (1982) provide a comparison of the phonology and syntax of the Comorian dialects to those of Swahili. A discussion is included of the traditional classification of the different dialects of Comorian as Swahili dialects, along with more recent arguments for a distinction between Comorian and Swahili. Rombi (1983) demonstrates that while the G classification is appropriate for Comorian, its placement in the Swahili group 40 is linguistically unwarranted. Nurse (1989) provides a history of Comorian and various dialects of Swahili, providing extensive data from the Comorian dialects Shingazidja and Shinzwani, as well as several other Bantu languages and dialects.

Brandon (2001) places Shimaore and the other dialects of Comorian within the Sabaki group, which includes the various Swahili dialects and the Mijikenda Bantu languages of coastal Kenya. The Swahili "dialects" (i.e., the members of Guthrie's G-40 group) bear a fair amount of resemblance to the Mijikenda languages, which are in the Guthrie E-40 group (Gordon 2005). Many lexical items in Shimaore are more similar to their equivalents in Mijikenda languages (such as Giriyama) than to those of Swahili, even though Shimaore and Swahili have traditionally been included in the same language classification group, i.e., G-40. In the following table, the Shimaore words in (5a-c) and (5e) are more similar to their Giriyama equivalents because of phonological changes that these two Sabaki languages have undergone that make them different from their Swahili counterparts. (5d) is more similar in Giriyama and Shimaore because the word *mutru* or *mutu* 'person' is used in the construction, rather than the word *mwana* 'child'.<sup>2</sup> To my knowledge, no study exists which does a statistical comparison of lexical items between either Swahili or Giriyama and Shimaore or the other dialects of Comorian. The data in (5) must not be taken to be definitive evidence of a closer relationship between Shimaore and Giriyama than between Shimaore and Swahili, but they do provide support for Shimaore being grouped with the other Sabaki languages.

(5) **Similarity of Giriyama (Mijikenda) to Shimaore<sup>3</sup>**

	<b>Swahili</b>	<b>Giriyama</b>	<b>Shimaore</b>	<b>English</b>
a.	Kupenda	Kuhendza	Uvhendza	'to love'

<sup>2</sup> *Mwana* also exists in Shimaore but is only used to refer to children, as opposed to Swahili, in which it is used in some compound words to refer to people of one type or another (e.g., *mwanaisimu* 'linguist', literally 'child of language'; *mwana sheria* 'lawyer', literally 'child of the law').

<sup>3</sup> Table borrowed from Brandon (2001:36), but adapted slightly based on Deed (1964).

b.	Macho	Matso	Matso	'eyes'
c.	Mchanga	Mutsanga	Mutsanga	'sand'
d.	Mwanamke	Mutu muche	Mutru mushe	'woman'
e.	Nchi	Tsi	Tsi	'country'

The Comorian dialects also seem to have some vocabulary in common with a number of Mozambican languages, including Makua, a Guthrie P-30 language. This is due to a number of Makua people being brought to the Comoro islands during the period of slave trade. Gueunier (2003-04) focuses mainly on the Makua dialect that was spoken in Madagascar until recently, but mentions that Makua was also spoken in the Comoro islands at a time. We can see some remnants of this language in some of the vocabulary of Comorian. It is possible that *kavu*, meaning 'there is no(t)', was borrowed from Makua, rather than being a shortened form of *kavusi*. Gueunier (2003-04:176) gives *khavo* and *khiavo* as the Makua forms for this negative copula. No other noun class in Shimaore allows the second negation marker *-si-* to be dropped.<sup>4</sup>

### 1.2.2 Phonological differences between Swahili and Shimaore

Phonological differences between Comorian and Swahili, including the existence of a number of phonemes in Comorian that do not exist in any Swahili dialect, also played a role in the reversal of the “Comorian as Swahili” viewpoint. In (6) and (7), we can see the differences between the phonemic inventories of Shimaore and Swahili (adapted from Mohammed (2001), Mugane (1999), and Rombi 1983).<sup>5</sup> They are largely the same, but

<sup>4</sup> For example, *k-u-si* 'you are not' and *k-a-si* 's/he is not' require the presence of both the *ka-* negative marker and the *-si-* negative marker. If *khavu* is a shorted form of *ka-vhu-si* it is the only situation in which the dopping of the negative marker *-si-* is allowed.

<sup>5</sup> This table is adapted from the phonetic inventories given for Shimaore by Rombi (1983:22)

there are a few sounds that are present in one language and lacking in the other. For example, Swahili counts *nt* and *nd* among its phonemes, while Shimaore does not, and Shimaore has the post-alveolar consonants t, d, and nd, which are lacking in Swahili. The differences in the phonemic inventories of the two languages are bolded in (6) and (7).

(6) Phoneme inventory of Shimaore

	Bilabial	Labio-dental	Dental	Alveolar	Post-alveolar	Pre-palatal	Palatal	Velar
Plosive +voi	b		d		<b><u>d</u></b>	<b>dz</b>	dʒ	g
-voi	p		t		<b><u>t</u></b>	<b>ts</b>	tʃ	k
Implos. +voi	<b>ɓ</b>		<b>ɗ</b>					
Fricative +voi	<b>β</b>	v		z			<b>ʒ</b>	
-voi		f		s			ʃ	k
Pre-nasalized	mb		nd		<b><u>nd</u></b>	<b>ndz</b>	ndʒ	ŋg
Nasal	m			n			ɲ	
Sonorant				l, r				h
Approximant							j	w

(7) Phoneme Inventory of Swahili

	Bilabial	Labio-dental	Dental	Alveolar	Post-alveolar	Pre-palatal	Palatal	Velar
Plosive +voi	b		d				dʒ	g
-voi	p		t				tʃ	k
Fricative +voi		v	<b>ð</b>	z				<b>ɣ</b>
-voi		f	<b>θ</b>	s			ʃ	k
Pre-nasalized	mb, <b>mw</b>		nd	<b>nz</b>			ndʒ	ŋg
Nasal	m			n			ɲ	<b>ŋ</b>
Sonorant				l, r				h
Approximant							j	w

and for Swahili by Mohammed (2001:6) and Mugane (1999:xvi), with adaptations for purposes of uniformity.

Systematic phoneme equivalencies also exist between the two languages, including *k* in Swahili and *h* in Comorian, *dʒ* in Swahili and *ʒ* in Shimaore, and *t* in Swahili and *r* in Shimaore, as demonstrated in (8).

(8) Examples of Swahili-Shimaore phonological differences

Swahili IPA	Shimaore IPA	English
<u>k</u> ua	<u>h</u> ua	'to grow (up)'
<u>k</u> uu	<u>h</u> uu	'big, important'
<u>k</u> azi	<u>h</u> azi	'work'
- <u>t</u> aka	- <u>t</u> saha	'to want'
ku <u>k</u> u	ku <u>h</u> u	'chicken'
- <u>d</u> ʒa	- <u>ʒ</u> a	'to come'
<u>d</u> ʒana	<u>ʒ</u> ana	'yesterday'
- <u>d</u> ʒua	- <u>ʒ</u> ua	'to know'
<u>d</u> ʒua	<u>ʒ</u> ua	'sun'
- <u>t</u> umia	- <u>r</u> umia	'to use'
m <u>t</u> i	m <u>w</u> iri	'tree'

There are also more recently borrowed words from Swahili that do not respect the phonological evolution that has occurred in Comorian (e.g., *-kosa* 'make a mistake', *-kodza* 'be sick', *karafu* 'clove'). In addition, there are borrowings from Arabic that contain the same consonant in both Swahili and Comorian (e.g., *karibu* 'near/welcome'), suggesting that they were also borrowed after the phonological change that results in *k* surfacing in Swahili while *h* surfaces in Comorian.

For all of these reasons, I choose to designate Comorian as a language separate from

Swahili, and Shimaore as one dialect of the Comorian language. Of course, the distinction between language and dialect is not an uncontroversial one, but the fact that there is no mutual intelligibility between Swahili and Comorian, but that such mutual intelligibility does exist among speakers of the various forms of Comorian, makes the designation of Comorian as a language separate from Swahili a reasonable one.

Of interest in this dissertation will be the Shimaore dialect of Comorian, spoken on the island of Maore, or Mayotte. In the following section, I will discuss how Shimaore fits into the complex linguistic situation of Mayotte, and why it is important for it to be described in its current form.

### **1.3 A brief history of Mayotte**

Mayotte is an island in which people of several cultures have interacted over the past 1,000 to 1,500 years. It is not known exactly when the first people came to Mayotte, but it is likely that people of Bantu origins arrived before the Shirazi Arabs (from the Persian city of Shiraz, in present-day Iran) and Malagasy people (from the island of Madagascar, 300 km to the east of Mayotte) who would come later (Rombi 1983: 15-17). It is generally thought that the first inhabitants arrived in the Comoro islands between the fifth and tenth centuries A.D. (Rombi 1983). It has been suggested that people began arriving in the Comoros in the eighth century A.D., as the earliest archaeological sites in the archipelago date from this period (Liszkowski 2000:45). These arrivals could have been earlier, but probably not before the 4<sup>th</sup> century A.D., as it is generally thought that the Bantu people did not arrive on the East African coast from further inland until the 2<sup>nd</sup> or 3<sup>rd</sup> century B.C. (Blanchy-Daurel 1990:17).

Starting in approximately the 7<sup>th</sup> century A.D., Muslims from the Arabian peninsula, Yemen and Oman traveled down the coast of East Africa, setting up city-states both along the coast and on the neighboring islands. Intermarriage with local populations resulted in a group of people known as the Swahili people, who had both Bantu and Middle Eastern origins and who were Muslim (Blanchy-Daurel 1990:17). The Comoro islands were part of this Swahili area. The first archaeological traces of people in the Comoros date to the 8<sup>th</sup> century (Liszkowski 2000). By the 12<sup>th</sup> century, it is clear that there were well-established commercial relations between the Comoros and at least one Swahili city-state, Kilwa (whose island is referred to as *Kilwa Kisiwani* 'Kilwa on the island', a Tanzanian island off of this country's east coast), and possibly also with Lamu, an island off the coast of Kenya (Blanchy-Daurel 1990:18).

The Comorian archipelago, of which Mayotte is a part, was an important stopping-off point for ships between the East African coast and Madagascar, from approximately the 12<sup>th</sup> century A.D. The population of the islands was built up by migrants, traders and probably slaves brought to the islands during this time. Some prominent Shirazi families established homes in the Comoro islands, perhaps as early as the 13<sup>th</sup> century, but probably not until the 16<sup>th</sup> century. The Shirazis are associated with the spread of Islam in the Comoros, and even today, the ruling families continue to maintain relations with religious leaders in the Islamic world (Newitt 1984:16).

It is somewhat unclear whether it was the Shirazi Arabs or another group of Arabs who replaced the traditional chiefdoms with sultanates in the Comoros, and whether this occurred in the 15<sup>th</sup> or 16<sup>th</sup> century. (Blanchy-Daurel 1990 and Rombi 1983 have

conflicting accounts.) When this happened, Maorese<sup>6</sup> society was divided into fairly rigid classes: 1) *wakabaila*, nobles having power, land, and most of the slaves; 2) *wangwana*, a class of free men: farmers, herders, and fishermen; and 3) *warumwa*, slaves of African origin. These three classes remained intact until approximately the beginning of the 20<sup>th</sup> century, and they apparently continued play a role in certain social interactions, such as the choice of a spouse, through the second half of that century (Blanchy-Daurel 1990:19).

The first stone mosque of Mayotte was built in Chingoni (Tsingoni) in 1566. Sunni Islam (Shafii rite) became the dominant religion, although the Islamicization of the island was not complete until the 20<sup>th</sup> century, with traditional religions continuing to play an important role (Blanchy-Daurel 1990). The Union of Comoros joined the Arab League in 1993. Arabic has left important traces in the lexicon of Shimaore and the other dialects of Comorian. It is likely that some of this lexical influence occurred before Mayotte's Bantu people arrived from Africa, given that contact between Arabs and East African coastal Bantu people had begun as early as the 4<sup>th</sup> century A.D. (Blanchy-Daurel 1990), roughly a century before the earliest estimate of when Bantu people are thought to have come to Mayotte. In other words, there was probably contact between Arabs and the Bantu people who eventually came to Mayotte, before they left East Africa. However, Arab-Maorese contacts also continued over the course of several centuries in Mayotte.<sup>7</sup>

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6 *Maorese* is the English adjective for “from Mayotte/Maore”. Its French equivalent is *ma(h)orais*.

7 The Islamicization of the Comoro islands is a relatively recent fact. Muslim groups from North Africa and Palestine had become an important presence by the beginning of the 20<sup>th</sup> century and continued to grow, pulling together the male population of the four islands, and fostering frequent contact between religious leaders in the islands, and also between



In the 16<sup>th</sup> century, important contacts between Madagascar and Mayotte began. At this time, a group of Sakalava Malagasy people from the northwestern part of Madagascar came to inhabit the southern part of the island (Blanchy-Daurel 1990). Malagasy is still the native language of the people in several Maorese villages, home to descendants of immigrants from Madagascar. Approximately one-third of the villages of Mayotte are Malagasy-speaking.

At the end of the 15<sup>th</sup> century, the first Europeans arrived in the Indian Ocean, looking for new trade routes to India. The Portuguese and the Spanish were the first, followed later by the French and the English. By the beginning of the 17<sup>th</sup> century, slave trading was apparently the major area of commerce in the Comoro islands, through which slaves passed on their way to Islamic ports of the northern part of the Indian Ocean (Newitt 1984:17).

Eventually Mayotte fell into the hands of a Madagascar-born sultan named Andriansouli (Andriantsoly, in Malagasy), who sold the island to a French Marine commander named Passot in 1841 (Ibrahim (1997)). In 1847, the French abolished slavery in Mayotte, and half of the 2,730 slaves left the island with their owners, while the other half were set free with compensation paid (Newitt 1984:27). Many workers were brought to Mayotte from Mozambique, more particularly Mozambicans of Makoa origin, as well as from the other islands of the Comoros, which were placed under French protection in 1886.

The beginning of the colonization of Mayotte by the French brought about important

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Comorian religious leaders and those of Zanzibar, Egypt and Palestine.

demographic changes on the island. The abolition of slavery, replaced by a five-year period of indentured servitude in the service of the French crown, caused a massive migration of landowners and their slaves to the other islands of the Comoros. Census figures from 1851 and 1870 refer to people of Makoa, Malagasy, Maorese, Ngazidja and Nzwani origin, but they do not mention any people of Arab descent. Perhaps the people of Arab origin who had settled in Mayotte had been absorbed into the general population through intermarriage over the generations. Starting in 1858, many of the people who had left Mayotte following “emancipation” started returning to the island, and they were joined by a large influx of workers hired on sugar cane plantations, mainly from Nzwani, Ngazidja and the African continent. By the 1870's, there were approximately 3,340 *engagé* laborers (similar to indentured servants) at work in Mayotte, mainly from Mozambique, particularly due to sugar production demands, and few ever returned home (Newitt 1984:27).

The other three islands of the Comoros became French protectorates in 1886. In 1912, Mayotte joined the other Comoro islands in being placed under the protectorate of Madagascar. In 1946, the Comoros became a *territoire d'outre-mer*, an overseas French territory (Ibrahime 1997). Comorian people became French citizens and were able to elect representatives to the National Assembly. In 1958, the Comoros voted by referendum to remain a French *territoire d'outre-mer*, and Mayotte and the other islands were attached to Madagascar administratively (Ibrahime 1997). Madagascar had benefited from various development actions in terms of health, professional training, and education, and a small number of Comorian and Maorese elites were able to take

advantage of these (Blanchy-Daurel 1990). For many years, the Comoros trudged along slowly, seemingly forgotten by the French government.

Between 1962 and 1966, the French administrative seat of the Comoros was transferred from Dzaoudzi, in Mayotte, to Moroni, in Ngazidja (Grande-Comore). The Maorese people were afraid of becoming a marginal island, forgotten by both the French and by their fellow Comorians in Ngazidja. The separatist Maorese Popular Movement (*Mouvement Populaire Mahorais – MPM*), which worked for separating Mayotte from the other three islands and keeping it as a part of France, had been created in 1959 and gained strength after the movement of the administrative seat from Dzaoudzi to Moroni. The dominance of Malagasy and French influence were at the root of Mayotte separatism, and the small but influential Creole population in Mayotte played up the supposed differences between Maorese people and other Comorians in order to encourage Maorese people to vote to keep Mayotte as part of France, when the other three islands were working toward independence from France. One Maorese Creole politician, Marcel Henry, who remains on the political scene in Mayotte even today, used traits of the small Creole population (Catholic, French-speaking, of Malagasy origin) to convince many Maorese that they were sufficiently different from other Comorians to remain French, rather than becoming part of an independent Comorian nation (Newitt (1984)). He developed the idea of departmentalization of all the Comoro islands into departmentalization just for Mayotte. This successful strategy allowed Mayotte to remain a *collectivité territoriale française* in 1975, when the other three islands became an independent state. The vote itself is contested, because originally the election was

intended to be an all-or-none vote, with the majority of the population of the four islands deciding the outcome, but when Mayotte ended up having a majority voting to remain French, it was decided that the outcome would be decided on an island-by-island basis. Until recently, the Union of Comoros continued to claim Mayotte as its own, and the United Nations agrees with this, based on the notions of territorial integrity and self-governance. The Union of Comoros has difficulties as it is with the three islands of Ngazidja (Grande-Comore), Mwali (Moheli) and Nzwani (Anjouan). There is frequent political instability, and in 1997, Nzwani and Mwali tried to break away from the country and return to being French protectorates, accusing government officials in Ngazidja of corruption. There are still Maorese people who would like to remain separate from France, but they are a small minority.

On 2 July 2000, voters in Mayotte voted overwhelmingly (72.94% in favor) to become a French *département*, giving the island equal status with metropolitan France and the other overseas *départements*, La Réunion (Reunion Island), Martinique and Guadeloupe. Mayotte is currently undergoing the transitional process, and this process is to be completed in 2010. This has left Mayotte at a great economic advantage compared to its sister islands, which form one of the ten poorest nations in the world (Ibrahime 1997), with little economic opportunity for its people and frequent political instability, including periodic political assassinations. Mayotte benefits from large investments from France, especially in the areas of health, education, housing and infrastructure. The island is changing very quickly from an agriculture-based society to one in which a diversity of opportunities are available to people. However, this quick change is also resulting in a

rapid evolution of the traditional ways of the people of Mayotte. For example, one of the changes required under the transition to becoming a *département* was the end to polygamy, which was practiced in Mayotte until 1 January 2005, but is now illegal for men and women under a certain age.

#### **1.4 A history of Comorian linguistics**

Comorian has been studied fairly extensively by German and French linguists, the former in the late 19th century and early 20th century, and the latter in the second half of the 20th century. While the earliest works focused on providing lexical equivalents in such European languages as French and German, gradually grammars began to emerge of the various dialects of Comorian. Once this important groundwork had been laid, linguists could begin studying various aspects of Comorian phonology, syntax and morphology in more detail. For some time, there was discussion of whether Comorian should actually be considered a dialect of Swahili, as discussed in the previous section, but lack of consistent mutual intelligibility was a major factor in the generally accepted decision that Comorian should be classified as a separate language. Some linguists have taken a more political approach, for example addressing such issues as language policy, creation of political terms in Comorian, and proposals of written systems to better accommodate the facts of Comorian. Additionally, more Comorian speakers have become involved in the linguistic work on their language, enriching that work with their own expertise as native speakers.

### 1.4.1 Lexicons and descriptive works

The earliest known partial lexicon of a Comorian dialect dates back to 1613, when the Englishman William Payton collected a list of 14 nouns from the Shimwali dialect of Comorian. This list was published in Hair (1981), along with modern Comorian and standard Swahili equivalents for the words. Linguistic work on Comorian appears to have taken on speed during the second half of the 19th century, starting with Steere (1869), which contains a section on Comorian vocabulary, along with two other languages. Hildebrandt (1876) gave a brief lexicon of Shinzwani words and phrases, with German translations. Prior to the publication of these two lexicons, a manuscript had already been written of a brief lexicon (approximately 275 entries) of the Shinzwani dialect. Although the lexicon was not published until Struck (1909), it is thought to have been written around 1856, although there is no precise indication of authorship or date.

Fischer (1949) is the first major lexicon to be published for Comorian, and it also includes a grammar. Another thirty years passed before the publication of Father Sacleux's manuscript dictionary in Ahmed-Chamanga & Gueunier (1979). The dictionary, which was written by Father Sacleux between 1900 and 1914 and published posthumously, contains approximately 5,000 entries in the Comorian-French section and approximately 6,500 entries in the French-Comorian section. It includes a detailed description of the grammar of the Shingazidja dialect of Comorian (75 p.), and the dictionary itself is based on this dialect. "La Chronique swahilie de Said Bakari (1898)" is included as an appendix. Although it was originally written using Arabic script, it has been transposed using Roman characters, with the full text repeated in French following

the original language. Lafon (1989) gives a brief French-Shingazidja lexicon, while Lafon (1991) provides a more thorough one. Ahmed-Chamanga (1992), written by a native Shinzwani speaker with an extensive background in African linguistics, comprises the first half of a bilingual Shinzwani-French, French-Shinzwani dictionary, containing approximately 6,000 entries. It includes a fairly detailed section on the grammar of the Shinzwani dialect, which is very similar to Shimaore, as well as a brief phonological section. Entries of borrowings from Arabic include the written form, in Arabic script, of the borrowed word. The second half of this dictionary appears in Ahmed-Chamanga (1997), which contains approximately 6,000 entries and includes a revised section on the grammar of the Shinzwani dialect, with a brief phonological section.

Blanchy (1987) provides a Shimaore-French, French-Shimaore lexicon, and Blanchy (1996) is the most inclusive French-Shimaore, Shimaore-French dictionary currently available. This dictionary is based on folkloric texts and written by a non-native speaker, so it contains a fair amount of archaic vocabulary, lacks much common, current vocabulary, and contains a fair number of errors. Examples of common lexical items lacking in Blanchy (1996) include *baby*, *brother*, and *sister*. Additionally, some words given in the dictionary are generally recognized by Shimaore speakers as being from Shinzwani, rather than Shimaore, without any indication that this is the case. Words of Kibushi<sup>8</sup> origin are not indicated as being such, whereas etymological origin is given for lexical items of other origins. A general overview of the grammar of the Shimaore dialect

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<sup>8</sup> In Mayotte, Malagasy is referred to as *Kibushi*, or sometimes *Shibushi*, both of which are Bantu terms, and its dialects are similar to Antalaotse, Betsimisaraka or Sakalava, all dialects spoken in Madagascar. Malagasy belongs to the Austronesian language family and differs greatly from Bantu languages like Shimaore.

is included, as well as a brief phonological section; some phonological distinctions are unfortunately overlooked, such as the distinction between implosive **ɓ** and explosive *b*.

As early as 1914, a dissertation was written on two dialects of Comorian. The dissertation by Heepe (1914) includes sections on the phonology, syntax and morphology (including noun classes and verb paradigms) of the Shingazidja and Shinzwani dialects of Comorian. Each of these dialects represents one of the two subgroups of Comorian. This dissertation also includes a Shingazidja text with German translation. Heepe (1920) consisted of roughly the first half of the author's dissertation, along with three texts in Shingazidja, Shinzwani and Shimwali, all with German translation. Following a 25-year gap in Comorian linguistics, Angot (1946) and Fischer (1949) emerged as descriptions of the Shinzwani and Shingazidja dialects of Comorian, respectively.

After another period of roughly 30 years during which no descriptive works of Comorian seem to have been published, Saleh (1979) appeared as the first method available for learning Comorian, though it could be useful to those working on Comorian linguistics. Intended for émigrés of the Comoro Islands who have either returned to the Comoros or continue to live abroad, it includes two parts: 1) the principle rules of Comorian grammar, including descriptions of its spelling, phonological system, and syntax; 2) exercises intended to help the learner to master Comorian grammar.<sup>9</sup>

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<sup>9</sup> This work is not appreciated by all enthusiasts of the Comorian language, including the SHIME (SHImaorais METHodique) association in Mayotte, who accuse Saleh of not accurately describing the language. The book focuses on the Shingazidja variant of Comorian, and glosses over the quite extensive differences between Shingazidja/Shimwali on the one hand and Shimaore/Shinzwani on the other. Additionally, SHIME feels that the grammar is presented with French as a point of departure, rather than being placed in the



Additionally, in the past few years, a few methods for learning the Shimaore dialect have become available. The most useful one for linguists, and particularly syntacticians, is Cornice (1999), which provides a fairly in-depth guide to the grammar of this dialect of Comorian. It is intended as a companion to the method for learning Shimaore published by the SHIME language association the same year.

Rombi (2003) gives an overview of the phonology of Shimaore, as well as the nominal and verbal systems of the language. She points out the phonological impact that heavy Arabic borrowing has had on the foundation of the Bantu phonology of Shimaore. For example, we find both implosive and explosive versions of the bilabial plosive, **ɓ** and **b**, as well as both dental and alveolar plosives, **d** and **ɗ**.

#### **1.4.2 Recent works on Comorian syntax and morphology**

In the area of syntax, several works have been written on the various dialects of Comorian. Lafon (1982) addresses the question “What is an auxiliary?”, while Alexandre & Rombi (1984) provide a discussion of the noun-verb distinction in Bantu languages, with significant amounts of data drawn from the Shimaore dialect of Comorian. The authors cite Guthrie's claim that the difference between verbs and nouns lies in the fact that verbs take grammatical suffixes, whereas nouns take lexical suffixes. It is also claimed that it is necessary to state that, whereas nouns belong to specific classes, verbs do not have this characteristic. Lafon (1990) discusses negation in the Shingazidja dialect of Comorian, as compared to the other dialects.

Picabia (1996) is the only article I am aware of that treats Comorian under Chomsky's  

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Bantuist tradition.

Minimalist Program. The main focus of this article is to give a general overview of how Minimalism can be applied to agglutinative languages such as Comorian and other Bantu languages. The dialect under observation is the Shingazidja dialect. In Picabia (1998), the author posits that in Shingazidja constructions such as *ze-mbwa zi ka ntiti* 'small dogs', only the *z* of *zi* indicates the noun class, and that any vowels in addition to this consonant carry another grammatical function. According to Picabia, any vowels that accompany such a noun class consonant actually function to mark definiteness.

In the area of morphology, several articles and at least one Master's thesis have been written on Comorian in the past 25 years. Lafon (1984) gives an explanation of Shingazidja verbal morphology with respect to verbs of Bantu and Arabic origin, with a focus on vowel harmony between the final vowel and the penultimate vowel of the verb root. Lafon (1988) gives a description of the adjectival system in Shingazidja, as well as other means of expressing quality. Nurse (1983) places the four dialects of Comorian in the context of the Sabaki subgroup of Bantu languages, of which Swahili is a part. The author points out various morphological, phonological and syntactic changes that have occurred in Sabaki. The greatest syntactic changes have occurred in Kiunguja (the Swahili dialect of Zanzibar), and therefore standard Swahili, possibly due to the fact that Swahili has been used as a lingua franca for quite some time. A parallel is drawn between Swahili's role as a lingua franca in East Africa and Shimaore's role as a lingua franca in Mayotte (for Malagasy speakers in particular). Cheikh (1981) is a Master's thesis from the University of Aix-en-Provence that treats the subject of verbal morphology in Comorian, and Philippon (1983) is a critique of this thesis. Picabia (1989) provides a

discussion of demonstrative pronouns and deixis in the Shingazidja dialect of Comorian. The article also presents an overview of how demonstrative pronouns generally function in Bantu languages. Picabia and her students at Université Paris 8 continue to work on the syntax and morphology of Shingazidja.

Full (2001) gives an overview of the two main past tenses used in Comorian, drawing on data from 56 towns and villages on all four islands of the Comorian archipelago. He points out that, while tense and aspect markers are the area in which we find a lot of variation among the various dialects of Comorian, the forms used for the two past tenses are quite homogeneous across the different forms. While the compound form of the past tense, which involves the verb *-ka* 'be' along with a lexical verb,<sup>10</sup> is often translated as the pluperfect, for native Comorian speakers it has a more remote interpretation than the simple past, without implying that one event had taken place before another.

### **1.4.3 Rombi (1983)**

This dissertation focuses on the Shimaore dialect of Comorian and draws largely on work carried out by Marie-Françoise Rombi and published in the 1983 revision of her dissertation, which was the first grammar of the Shimaore dialect of Comorian. Rombi (1983) gives an outline of the phonology of Shimaore, and describes the nominal and verbal systems of the language. The dissertation also includes transcripts and French translations of two oral tales, including notes on interesting structures found in the tales in footnotes. It is based partly on oral tales, and partly on syntactic questionnaires given to native speakers from villages whose inhabitants have the reputation of speaking “pure”

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<sup>10</sup> See chapter 5 for a discussion of subject agreement in compound tense constructions.

Shimaore.<sup>11</sup> It is an invaluable tool to anyone who wishes to work on the Shimaore dialect or compare it to another dialect of Comorian, or to comparative Bantu syntacticians who wish to draw upon Comorian for cross-linguistic comparisons. While Rombi (1983) is a very important source of information for any linguist working on Shimaore, it contains some errors<sup>12</sup> and lacks examples of many types of structures. For example, there is very little description of question formation, double verb constructions are not explored, relative clauses are described only briefly and not for all tenses and negative forms, and word order issues are not often addressed. Few examples containing both a full subject and an object are given. These types of constructions are important to linguists because they can help determine the position of the subject within the clause structure, how tense and negation affect various constructions, etc. Many examples are not broken down

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11 Speakers of Shimaore tend to regard speakers from the villages of Bouéni and Sada, both on the west coast, as speaking *Shimaore swafi* 'pure Shimaore'. There tends to be a fuller pronunciation of words, with less truncation and stronger enunciation, in these villages. Additionally, there are fewer similarities between varieties spoken on the west coast and those spoken on the island of Nzwani (Anjouan), and speakers of western varieties often accuse speakers from the eastern side of the island of being *wanzwani* (Anjouannais), 'from Nzwani (Anjouan)'. There are certain anti-immigrant connotations to such accusations, as people from the other islands of the Comorian archipelago are not French citizens, while those people born in Mayotte and with at least one parent born in Mayotte are citizens of France. Older speakers are also generally believed to speak better Shimaore, by both older and younger speakers.

12 There seems to be a general tendency to use Swahili as a point of departure, and to find the ways in which Shimaore differs from Swahili. This results in some differences not being noted. For example, Shimaore allows far fewer prenasalized consonants than Swahili, and there are several cases in which Rombi gives a word beginning with a prenasalized consonant that is not used in Shimaore. For example, she gives *mpaka* as the word for 'until' (Rombi 1983:192), when in reality, Shimaore speakers say *paka*.

further than the word level, which could make it difficult to analyze the structures in question.<sup>13</sup>

## 1.5 Economy and resources of Mayotte

Mayotte's demography has changed drastically in the past generation or so. As of 2002, there were 55,000 non-French nationals living in Mayotte, and 53,000 of these were of Comorian nationality. Between a high level of immigration and a relatively high birth rate (4.7 children per woman), Mayotte had a population growth rate of 4.1% per year between 1997 and 2002. This was actually down from an annual population growth rate of 5.7% between 1991 and 1997, mainly due to the large number of Maorese French citizens who have left Mayotte for Reunion Island (a French *département d'outre-mer*, overseas department, also in the Indian Ocean) and metropolitan France, where there are more employment opportunities and social benefits for French citizens. In addition, there are large numbers of women who come to Mayotte from the other Comoro islands to give birth, hoping to open up the possibility of French citizenship for their children later on, and then return home. Two-thirds of the babies born in Mayotte in 2002 were born to non-French citizens, according to INSEE (2003). Such large movements of people have had a destabilizing effect on the island.

In addition to these demographic shifts, Mayotte's economy has also undergone very important changes in the past generation. Whereas when Rombi's dissertation, the first

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13 For example, Rombi (p. 138) gives the example *Nisimukutru lia mwananyangu nyama* 'I am cutting meat for my sister'. It would be useful to have at least the first word split up as *ni-si-mu-kutru-li-a* with the morphemes distinguished as 1SG.SA-PRES.PROG-3SG.OM-cut.up-APPL-FV.

grammar of Shimaore, was published in 1983, agriculture was the main source of income for the population, agriculture has continued to lose jobs, according to INSEE (2003).<sup>14</sup> There is still a fair amount of agricultural exportation (especially vanilla, spices, coffee, and ylang ylang flowers for perfume), but the island also imports large amounts of food from France and other places, especially meat and any sort of prepackaged food. Since the advent of universal education, there has been an increased demand for teachers, and this will only persist as the population continues to increase rapidly. (Roughly 40% of the population is under the age of 15, and 53% are under the age of 20, according to INSEE.) There are many opportunities for educated Maorese people to become teachers or work in other government positions, such as in the French infrastructure or hospital. For less educated people, one of the largest sectors of the economy right now is construction, as the island accommodates its ever-increasing population.

Unemployment remains an important problem for Mayotte, particularly for those who have not completed the high school diploma, the *baccalauréat*. Because of high drop-out and failure rates, as well as high levels of immigration, there are many young people who do not have the education they need to be part of the modern economy. There is really a two-tiered economy, consisting of a top tier of French government workers and more prosperous Maorese people and a bottom tier of immigrants, both legal and illegal, trying to make do on either a small monthly salary (generally 150€, or approximately \$200 a month) or on money made in piecemeal, day-to-day jobs without a steady income.

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<sup>14</sup> Most statistics in this section are taken from the 2002 census conducted by INSEE, the *Institut national de la statistique et des études économiques* ('National Institute of Statistics and Economic Studies'). INSEE are responsible for carrying out the census.

Mayotte has a high level of illiteracy and lack of education, as outlined in (9).

(9) Educational attainment among those aged 15 and above who have been to school (2002)

46%	have not completed primary school
25%	have only completed primary school
16%	have some secondary education
13%	attained <i>baccalauréat</i> high school diploma
5%	have completed some higher education

Out of the 93,000 people aged 15 or higher in 2002, only 50,000 were able to speak and write in French, and 38,000 were not able to speak French (INSEE 2003). Mastery of French is a necessity in order to gain access to most stable employment in Mayotte, and lack of knowledge of French is an important impediment to job seekers. 30,000 people between the ages of 15 and 60 (approximately 50% of this population) are unemployed, and many of them do not actively search for work, probably because they know that it will be nearly impossible to find work without a mastery of French. 13,000 people were actively looking for work in 2002, with an unemployment rate of 29%, and 94% of these job seekers did not have any sort of educational diploma (INSEE 2003). We should also assume that there were many others who had given up looking for work, and most of these people also likely lacked educational credentials. Only 3% of the job seekers had at least the *baccalauréat*, which opens up many employment opportunities. Since there is no governmental safety net at this point, most of these people live at subsistence levels and are not able to participate in the consumer society. However, there are very few people in Mayotte who actually go hungry, because there is still a culture of helping individuals in

need at the personal level. One has to wonder how long this will continue, however, with such large movements of people, families being separated, etc.

When Mayotte becomes a *département* in 2010, French social programs will begin to be implemented on the island. There will be opportunities for unemployment compensation, a minimum monthly income, assistance for single parents (there are many single mothers in Mayotte), housing allocations, etc. However, these programs can also have drawbacks when implemented too quickly. For example, many of the Maorese people who have left Mayotte for Reunion Island are illiterate and do not have a good mastery of French, and are therefore practically unemployable, but they are able to live off of the social programs that are in place in Reunion. We should expect a return of large numbers of Maorese French citizens living in Reunion and metropolitan France once such social programs arrive in Mayotte, as well as large numbers of people living off of these programs, as is the case in Reunion.

In addition to societal changes due to a large repatriation of Maorese people from Reunion Island, we should expect there to be linguistic effects as well. While French is the official language of Reunion, most people speak a form of Réunionnais Creole, or Reunion Creole French. There are two main forms: the urban form, which is closer to French, and rural varieties, which are more similar to Bantu and West African languages (Gordon 2005). Most of the Maorese people who live in Reunion live in the cities, but even the urban forms contain many elements of Bantu and West African languages. If large numbers of Maorese people return home to Mayotte from Reunion Island, there could be implications for Shimaore and Kibushi, the main languages of the island.



## 1.6 Language contact in Mayotte

Shimaore, along with the other dialects of Comorian, is one of three main languages spoken in Mayotte. The other two languages are French and Malagasy. The official language, French,<sup>15</sup> is the native language of less than 1% of the population, but it is widely spoken by younger speakers, who learn it to a near-native level in school. Around 30% of the population has Malagasy as its native language, with about one-third of the villages of Mayotte being Malagasy-speaking. Shimaore and the other dialects of Comorian are the native language of approximately 70% of the population, and Shimaore is widely spoken by native Malagasy speakers. Shimaore has traditionally been the language of communication between Shimaore speakers and Malagasy speakers, although this tendency is under increasing pressure from French.

Given the intense contact that Shimaore has with the other two languages, but particularly with French, it seems to be undergoing rapid change, some of which I will touch on in the next section. This change involves a simplification of the grammar, which could be an early sign of language endangerment.

### 1.6.1 Recent simplification of the grammar

As mentioned above, Shimaore is under pressure from French, due to the status of

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<sup>15</sup> All education is carried out in French, and all official government business is conducted in French. Most radio stations in Mayotte have programming in both French and Shimaore, but there is no Kibushi programming, aside from the occasional public service advertisement. Radio France Outre-mer (RFO), in particular, delivers the news in both French and Shimaore, at different times of the day. RFO television also carries limited programming in Shimaore, mainly news programs and occasional documentaries treating various topics of interest in Mayotte.

French as the official language of Mayotte, its use in the educational system, government business, etc. For this reason, young people are using less and less Shimaore and more and more French in their daily interactions. There is a concern on the part of some people interested in language preservation in Mayotte that within the next generation, Shimaore speakers will actually speak (what they refer to as) a creole, or a mix of French and Shimaore.<sup>16</sup> The exception is in interactions with speakers of other Comorian dialects or older Shimaore speakers who have little or no mastery of French. This is leading to a simplification of the grammar, as younger speakers have less experience with less common constructions. Simplification is one of the early signs of language endangerment. One example can be seen in agreement involving coordinate structures.

In Shimaore sentences involving subject coordination of two subjects from the same noun class, traditionally the subject agreement marker would be that associated with the plural of that class. For example in (10c), we would expect to find a class 4 subject marker, because class 4 is the plural of class 3, and both nouns in the subject are from

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<sup>16</sup> Chamsidine Kordjee, who is in charge of the oral archives of Mayotte, fears that within ten years, young speakers will speak a French-Shimaore creole, and he and others express concern that young speakers no longer master the Shimaore language. These opinions are expressed in a newspaper article in *Mayotte Hebdo*, no. 199, from June 18, 2004 (available at [http://www.malango-mayotte.com/traditions-le\\_shimaore\\_fout\\_le\\_camp.htm](http://www.malango-mayotte.com/traditions-le_shimaore_fout_le_camp.htm)). On the other hand, among those in education, there is much concern over the lack of mastery of French by students in Maorese schools. Many students continue to do poorly in school, due at least in part to a lack of mastery of French and a lack of accommodation of other languages by the school system. Schooling is geared toward children who already speak French as a native language, and little accommodation is made for those for whom French is a second or foreign language.

class 3, as demonstrated in (10a) and (10b).<sup>17</sup>

- (10) a. mhono wangu u-si-ni-hodza  
 3.hand 3.-my 3.SM-PRES.PROG-1SG.OM-hurt  
 'My hand hurts.'
- b. mundru wangu u-si-ni-hodza  
 3.foot 3.my 3.SM-PRES.PROG-1SG.OM-hurt  
 'My foot hurts.'
- c. mhono wa potro wangu na u mundru wa kume  
 3.hand 3.of left 3.my and 3.DEM 3.foot 3.of right  
 wangu i-si-ni-hodza  
 3.my 4.SM-PRES.PROG-1SG.OM-hurt  
 'My left hand and my right foot hurt.'
- (T. 2005-02-28)

This is, in fact, the form that is found among older speakers. However, younger speakers commonly use the class 10 default subject marker in such constructions. For example, (11), which uses the class 10 subject marker *zi-*, is grammatical for younger

<sup>17</sup> A similar example is given here for class 1/2, the "human class". This class does not allow the class 10 *zi-* subject marker, presumably due to the fact that all nouns in this class are human.

- a. Sufa a-s-endra hazini  
 Sufa 3sg.sm-pres.prog-go to.work  
 'Sufa is going to work.'
- b. Sufa na Anfiat wa-s-endra hazini.  
 Sufa and Anfiat 3pl.sa-pres.prog-go to.work  
 'Sufa and Anfiat are going to work.'

speakers, whereas it is ungrammatical for older speakers.

- (11) \*/✓mhono      wa      potro      wangu      na      u      mundru      wa      kume  
3.hand      3.of      left      3.my      and      3.DEM      3.foot      3.of      right  
  
wangu      **zi-si-ni-hodza**  
3.my      **10.SM-PRES.PROG-1SG.OMA-hurt**  
'My left hand and my right foot hurt.'  
(\* R. 2005-03-10: older speaker)  
(✓ T. 2005-02-28: younger speaker)

This trend might have started with the fact that classes 7/8 and 9/10 both use a *zi-* subject marker in the plural (12, 13). Not surprisingly, coordinate structures involving two nouns from either of these classes also results in *zi-* being used for subject marking (14).

- (12) kofu      zangu      **zi-si-ni-hodza**  
8.thumbs      8.my      **8.SM-PRES.PROG-1SG.OM-hurt**  
'My thumbs hurt.'
- (13) tsunzuni      zangu      **zi-si-ni-hodza**  
10.elbows      10.my      **10.SM-PRES.PROG-1SG.OA-hurt**  
'My elbows hurt.'

(14) Kofu            na    i            tsunzuni        ya    kume    yangu  
 7.thumb            and    9.DEM 9.elbow        9.of    right    9.my

zi-si-ni-hodza

10.SM-PRES.PROG-1SG.OM-hurt

'My thumb and my right elbow hurt.'

(R. 2005-03-01)

It might have started to spread to other classes through class 5/6, because even older speakers accept the class 10 *zi-* subject marker for coordinate subjects involving nouns from class 5 (15), although one language consultant felt that none of the subject markers really sounded right for these constructions, including *zi-*.

(15) a.    ?dzitso            na    li            kio    la        potro    langu  
           5.eye                and    5.DEM 5.ear    5.of    left    5.my

zi-si-ni-hodza.

10.SM-PRES.PROG-1SG.OM-hurt

'My eye and my left ear hurt.'

b.        ???dzitso            na    li            kio    la        potro    langu  
           5.eye                and    5. DEM 5.ear    5.of    left    5.my

ya-si-ni-hodza.

6.SM-PRES.PROG-1SG.OM-hurt

When looking at subject coordinates involving a singular and a plural from the same

noun class, we find the same dichotomy, with older speakers preferring the plural subject marker that goes with the class in question (16a) and younger speakers preferring the default *zi-* plural subject marker (16b).<sup>18</sup>

(16) a. mundru      wa      potro      wangu      na      i      mihono  
           3.foot          3.of      left      3.my      and      4.DEF    4.hands

**i-si-ni-hodza.**

**4.SM-PRES.PROG-1SG.OM-hurt**

'My left foot and my hands hurt.'

b.    \*/✓mundru      wa      potro      wangu      na      i      mihono  
           3.foot          3.of      left      3.my      and      4. DEF    4.hands

**zi-si-ni-hodza.**

**10.SM-PRES.PROG-1SG.OM-hurt**

(✓T. 2005-02-28: younger speaker)

(\* R. 2005-03-01: older speaker)

Things are a little more complicated in class 5/6 once again, with older speakers allowing *only* the class 6 subject maker (17a) and younger speakers allowing *only* the default *zi-* subject marker (17b).

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<sup>18</sup> Older speakers appear to be aware that younger speakers are tending more and more to use the default *zi-* marker. The older language consultant that I worked with on this topic said that he was not surprised that the younger speaker used *zi-*, although it still did not sound right to him.

(17) a. \*/√gunguni la kume langu na ya matso  
 5.knee 5.of right 5.my and 6. DEF 6.eyes

ya-si-ni-hodza

**6.SM-PRES.PROG-1SG.OM-hurt**

(\* T. 2005-02-28: younger speaker)

(√ R. 2005-03-01: older speaker)

b. \*/√gunguni la kume langu na ya matso  
 5.knee 5.of right 5.my and 6. DEF 6.eyes

zi-si-ni-hodza

**10.SM-PRES.PROG-1SG.OM-hurt**

'My right knee and my eyes hurt.'

(√ T. 2005-02-28: younger speaker)

(\* R. 2005-03-01: older speaker)

When the second conjunct is from class 7/8 or class 9/10, speakers of all ages use *zi-* for the subject marker (18).

(18) mihono yangu na i shitswa **zi-si-ni-hodza**  
 6.eyes 6.my and 7.DEM 7.head **10.SM-PRES.PROG-1SG.OM-hurt**

'My eyes and head hurt.'

(R. 2005-03-01, T. 2005-02-28)

Recall that such simplification of the grammar is of interest because it is one of the

possible signs of language endangerment. Rombi's (1983) dissertation was written when Mayotte was just beginning its massive shift from Shimaore use to French use, and a whole generation has grown up and started having children since then. If Shimaore is indeed an endangered language, then it must be documented as fully as possible in its current form. That is one of the goals of this dissertation.

### 1.6.2 Borrowings

Another way in which language contact has been influencing Shimaore is through the borrowing of lexical items. Shimaore has borrowed from a variety of languages, including Portuguese, English, Arabic, Swahili, and Makua, but by far, the highest number of recent borrowings has come from French. A sample of French borrowings in Shimaore is given in (19), with their French source word and English translation.

(19) French borrowings into Shimaore

<b>Shimaore word</b>	<b>French source word</b>	<b>English translation</b>
barji	barge	'ferry' (taken between Grande Terre and Petite Terre)
lapitali	<i>hôpital</i>	'hospital'
likoli	école	'school'
bibiro	biberon	'(baby) bottle'
kafe	café	'coffee'
shofera	chauffeur	'driver'
<i>fenyã</i>	faignant (slang)	'lazy'
fursheti	fourchette	'fork'
lapolisi	la police	'police'
kalite	qualité	'type, sort; quality'
robo	robe	'dress'



<b>Shimaore word</b>	<b>French source word</b>	<b>English translation</b>
tamati	tomate	'tomato'
dite	du thé	'tea'
dipe	du pain	'bread'

In the case of monosyllabic French words, such as *thé* 'tea' and *pain* 'bread', the French article has been retained, e.g., in *dite* and *dipe*, in order to respect the preference for disyllabic words over monosyllabic words. Similarly, many words ending in a consonant sound in French contain a final vowel in their borrowed forms in Shimaore, to respect the preference for CV syllables. Examples include *barji*, *lapitali*, *likoli*, *shoferi*, *fursheti*, *lapolisi*, *robo* and *tamati*. Some borrowings have partial phonological adaptations, as is the case for *l'école materneli* 'preschool', which contains a word-final *-i* in *materneli*, but leaves the French word as *l'école*, rather than its Shimaore adaptation *likoli*. This implies that it has entered the lexicon of Shimaore as a single word; otherwise, we would expect there to be an additional *-i* at the end of *l'école* as well.

There are many French administrative terms that simply have no accepted Comorian or Shimaore translation. Unlike countries like Tanzania, in which bilingual speakers regularly use terms such as *Waziri wa Elimu* and its English counterpart, *Minister of Education*, in Mayotte, terms for administrative entities are simply left in French. For example, when *Radio France Outre-mer* (RFO) presents the news in Shimaore, it is often peppered with so many terms in French (e.g., *Conseil Général*, *Président de la République*, *l'Education Nationale*, *Direction de l'Equipement*, *la DASS*) that even monolingual French speakers can understand the gist of a particular story. So far, there

has been little work in trying to establish accepted Shimaore translations for such terms. In the written press, until several years ago, all news was printed in French only.

In addition to borrowings between French and Shimaore, Shimaore and Kibushi have also borrowed words from each other to some extent. Borrowings from Kibushi into Shimaore include *zaza* 'baby' (*mwanazaza* in Shimaore, where *mwana* means 'child'); *sutru* 'spoon'; and *laka* 'dugout canoe' (from *lakana* in Kibushi).

### **1.6.3 Codeswitching**

Codeswitching occurs a great deal among younger speakers who master both Shimaore and French. Shimaore-speaking people under the age of 35 or so who grew up in Mayotte, going to French school, generally do a fair amount of codeswitching in their everyday lives. Codeswitching is very noticeable in radio or television news broadcasts, for example. Generally, aside from the previously mentioned terminology for government entities, there is very little French in the rehearsed portions of these news broadcasts, but whenever people are speaking spontaneously, there is a large amount of French interspersed into their Shimaore. In recordings of Shimaore-language news broadcasts, it is rare to hear an interview conducted in Shimaore in which the interviewee does not codeswitch into French at least a few times. One daily portion of the evening news involves asking people who are waiting for the ferry to cross from Grande Terre to Petite Terre what they think about some topic of the moment (*Les Echos de la Barge*), and this segment is well-known among Shimaore enthusiasts for providing examples of very code-mixed speech. Here are a few examples of codeswitches, with Shimaore in regular text and French in small caps.

- (20) mtihano            wa                    FRANÇAIS  
       5.exam            5.AGR-of            French  
       'French exam'
- (21) DONC, CE QUI VEUT DIRE amba wao watsoja wajasomedze hunu...  
       'WHICH MEANS THAT they will be able to come teach here...'
- (22) ma-PHOTO<sup>19</sup>  
       6.AGR-photo  
       'photographs'
- (23) FORMATION            iyo<sup>20</sup>  
       training            9.DEM  
       'this training'

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19 The stress on the final syllable, matching French stress patterns rather than those of Shimaore, indicates that this is a codeswitch, rather than a borrowing. This example violates the Free Morpheme Constraint, proposed by Poplack (1980), which states that codes may be switched after any constituent in discourse, provided that constituent is not a bound morpheme. The Shimaore class 6 agreement marker *ma-* is a bound morpheme, and the codeswitch occurs just after *ma-*, violating the Free Morpheme Constraint.

20 The Functional Head Constraint proposed by Belazi et al. (1994) states that the language feature of the complement f-selected by a functional head, like all other relevant features, must match the corresponding feature of the functional head. In this example, the determiner *iyo* f-selects the noun phrase complement *formation*, thereby violating the Functional Head Constraint.

(24) CA DÉPEND DES matyeri.  
'THAT DEPENDS ON the material.'

(25) À CONDITION na i examen  
'BASED ON the exam'

While codeswitching can be part of a stable bilingual or multilingual situation (as it is in many parts of India, for example), this codeswitching situation is not stable, in the sense that older people do not codeswitch. There is also a tendency for village dwellers to codeswitch less than people living in Mamoudzou, the largest city, even when they have a good mastery of both languages. Immigrants from the other islands of the Comorian archipelago also do not codeswitch to the same extent as their Shimaore-speaking counterparts, often due to a more limited mastery of French. Most of the time, Shimaore speakers and speakers of Comorian dialects do not codeswitch very much together, unless everyone has a pretty high level of French.

Because of the lack of stability in the codeswitching situation in Mayotte, it could be seen as a sign of linguistic instability. Romaine (1995) argues that it is impossible to predict what will happen in any given case of language contact, pointing to communities where bilingualism and codeswitching have occurred for hundreds of years without language decline, but others have analyzed unstable codeswitching to be one step on the way to language death. The classic pattern of language shift is one in which a monolingual community becomes transitionally bilingual as another language is introduced, as a stage on its way to becoming monolingual in the new language (e.g., see

the overview by Fishman (1964) of the field of language maintenance and language shift). This process is certainly not inevitable, but it is very common, and the situation in Mayotte seems to fit this description. The unstable codeswitching situation is evidence for this language shift.

A more detailed analysis of this codeswitching is outside the scope of this dissertation, but I wanted to give readers an idea of what such codeswitching looks like in this language pair, and point out that this instability might indicate that Shimaore is in danger of being replaced by French at some point.

## **1.7 Data and methodology**

The work presented in this dissertation is based largely on my own field work on the island of Mayotte, mainly in 2004-05, but also during a brief stay in 2000. My primary language consultants were five native speakers of Shimaore, from five different villages in Mayotte. They had spent varying degrees of time thinking about the structure of their language, and one consultant was my Shimaore instructor and the president of the association for indigenous languages of Mayotte, SHIME. All were fluent French speakers as well, and our sessions were held in a mix of Shimaore and French.<sup>21</sup> My knowledge of the language is also informed by informal conversations and many question and answer sessions with the native speakers of both Shimaore and the other dialects of Comorian with whom I had daily contact during my stay in Mayotte.

I have also relied heavily on the past work on Shimaore, including Rombi's (1983)

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<sup>21</sup> I am a fluent speaker of French and acquired an intermediate level of speaking in Shimaore over the months I was in Mayotte.

description of the language, although most of the examples given in my dissertation are from my own field work. I have also gathered supporting examples from various texts available in Shimaore, some of which are included as well. Many of the example types that are of interest to linguists are simply not available in previously published work. In some cases, my language consultants' judgments disagreed with examples given in previously published work, and when this is the case, I have tried to indicate this in a footnote.

Regarding data collection, my methodology was a combination of elicitation and solicitation of grammaticality judgments, in addition to searching through naturally occurring data for spontaneous examples. My naturally occurring data come mainly from stories elicited from two of my informants and from interviews in Shimaore-language news broadcasts recorded while in Mayotte. There were many occasions on which my language consultants' grammaticality judgments varied, but I have tried to use only examples on which there was considerable agreement across informants. In the cases of mixed responses, I have attempted to indicate these discrepancies in the dissertation.

## **1.8 Organization of the dissertation**

The rest of the dissertation is organized into two main sections. Chapters 2 and 3 give an overview of the grammar of Shimaore, and chapters 4 and 5 involve a more theoretically based analysis of the language. Chapter 2 focuses on the phonology of Shimaore and the structure of the noun phrase. In chapter 3, I give a description of the verb phrase of Shimaore as well as basic sentence structure. Chapter 4 is an analysis of the verbal functional projections of Shimaore, particularly with respect to the work of

Cinque (1999) and Julien (2002), giving particular attention to those verbal elements that do not fit in neatly with these two frameworks, e.g., the vowel harmony that marks retrospective aspect. In chapter 5, I analyze the subject and object markers of Shimaore, arguing that they are agreement markers, and placing them in the context of previous work on Bantu languages. Chapter 5 also includes a discussion of whether or not Shimaore is an "asymmetric" Bantu language. Conclusions are given in chapter 6.

## **CHAPTER 2: BASIC PHONOLOGY AND NOMINAL SYSTEM OF SHIMAORE**

In the first part of this chapter, I give the background phonology of Shimaore, including a consonant inventory and discussion of consonant mutation in the language. Also discussed are the vowel system and the processes of gliding, vowel deletion, vowel harmony, and vowel coalescence. Tone and stress are also addressed.

The second part of the chapter relates to the nominal system of Shimaore. I give a description of the noun class system of the language, followed by an explanation of the noun phrase, including modifiers of various sorts, e.g., numerals, quantifiers, demonstratives, and possessives. Word order issues within the noun phrase are also addressed.

### **2.1 Background phonology of Shimaore**

This section will give a brief description of Shimaore phonology. It is based largely on chapter 1 of Rombi's (1983) grammar<sup>22</sup>, and more work is needed on the phonology of the language. Tone and stress, in particular, are areas in which there seem to be counterexamples to Rombi's description, and a more thorough study of these systems is needed.

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<sup>22</sup> Rombi's (1983) chapter 1, "Phonologie", gives several examples of each phoneme, and also contrasts the various phonemes with each other in minimal pairs.



### 2.1.1 Consonants

As mentioned in the introduction, Shimaore has a somewhat different phonemic inventory than Swahili. The main differences are in the consonant system.<sup>23</sup> In (26), I give the consonant inventory.

(26) Consonant inventory of Shimaore<sup>24</sup>

	Bilabial	Labio-dental	Dental	Alveolar	Post-alveolar	Pre-palatal	Palatal	Velar
Plosive +voi	b		d		<u>d</u>	dz	dʒ	g
-voi	p		t		<u>t</u>	ts	tʃ	k
Implos. +voi	ɓ		ɗ					
Fricative +voi	β	v		z			ʒ	
-voi		f		s			ʃ	k
Pre-nasalized	mb		nd		<u>nd</u>	ndz	ndʒ	ŋg
Nasal	m			n			—	
Sonorant				l, r				h
Approximant							j	w

The pairs b/ɓ and d/ɗ are somewhat problematic. According to Rombi (1983:22), there is no longer a phonological distinction between [b] and [ɓ]. Historically, [b] entered the language through Arabic borrowings, although many words borrowed from Arabic are now pronounced with the Bantu ɓ. For example, the nouns *ɓahari* 'sea' and *hisabu*

<sup>23</sup> In my examples, I generally use the orthography agreed upon by the SHIME language association, which has been working on the standardization of written Shimaore. I use *tr* for [t̥], y for [β], **ɓ** for [ɓ], *y* for [j], *j* for [dʒ], and **ɗ** for [ɗ]. The full spelling conventions were presented to the Mahorese public by the *Conseil de la Culture, de l'Education et de l'Environnement de Mayotte* on February 22, 2006, with the support of the SHIME language association.

<sup>24</sup> The information for this table is borrowed mainly from Rombi's (1983) chapter 1, "Phonologie".

'numbers' and the verb *subutu* 'dare' are borrowed from Arabic, but both are pronounced with a Bantu [ɓ]. Inversely, according to Rombi, some words of Bantu origin are now pronounced using the Arabic [b], although I do not have any such examples. I am aware of no minimal pairs involving [b] and [ɓ], but on the other hand, the occurrence of one or the other can not be determined by phonological context.

Shimaore also has both the bilabial [β] and labiodental [v]. These two are clearly individual phonemes, being able to occur in the same phonological environment, and there are even minimal pairs that distinguish them, e.g., *u-βudza* 'to blow' and *u-vudza* 'to burn (trans.)'.

#### 2.1.1.a Consonant mutation

Consonant mutation is a common process in Shimaore. One situation in which consonant mutation is found is in plural formation, particularly in class 5/6, as in (27).

(27) Consonant mutation in Shimaore

	<b>Alternating pair</b>	<b>Singular</b>		<b>Plural</b>	
a.	p/β	paha	'cat'	maβaha	'cats'
b.	ɖ/l	ɖago	'village'	malago	'villages'
c.	tr/r	trundra	'orange'	marundra	'oranges'
d.	k/h	kofu	'fingernail'	mahofu	'fingernails'

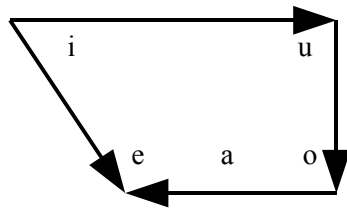
These consonants are all fairly straightforward, with a process of lenition occurring in the plural forms, in which the consonants are found intervocalically. The place of articulation of the consonant is generally maintained in the plural form, with the manner

changing.

### 2.1.1.b Vowel system

The vowel inventory of Shimaore consists of five vowels: [i, e, a, u o].<sup>25</sup> There are also many French borrowings and a few names with [y] (such as *Sufati*), and it is not a phoneme that seems to cause problems for Shimaore speakers or speakers of other variants of Comorian.

(28) Vowel inventory of Shimaore



#### 2.1.1.b.1 Glides

Glide formation involves the replacement of [u] by [w], and of [i] by [j].

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<sup>25</sup> Rombi (1983:57) discusses a central vowel in *msüba* 'grieving', but I have no other examples of this vowel.



(31) Word-initial glides<sup>27</sup>

*u-zina* ⇒ → *wuzina* 'to dance'

*i-mbwa* ⇒ *yimbwa* 'the dog'

#### 2.1.1.b.2 Vowel deletion

Vowels are frequently deleted from full forms, usually to avoid having two vowels side by side (32-33), showing a preference for CV syllables in the language.

(32) Tsi-endr-e. ⇒ Tsendre.

1SG.SM-go-VH.RETRO

'I went.'

(33) mwana *ri-a-mw-ona* ⇒ mwana *ramwona*

1.child 1PL.SM-PST-3SG.OM-see

'the child that we saw'

However, vowels are sometimes deleted even when the result is a closed syllable.

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<sup>27</sup> Word-initial glides are problematic for the SHIME language association, which is trying to standardize the spelling of Shimaore. Some speakers feel that word-initial and context-driven intervocalic glides should be included in spellings, in order to be faithful to the way that speakers pronounce the words, while others feel they should be excluded, as they do not add any information and are simply a phonetic phenomenon. For example, some speakers would prefer to spell the verb 'to see' as *wuwona*, whereas others prefer the spelling *uona*.

- (34) a. **Full form**
- ɓaɓa-ngu      a-ko-ni-rongo-dz-a      Shibushi.
- 1.father-my      3SG.SM-PST.HAB-1SG.OM-speak-CAUS-FV      Shibushi
- 'My father made me speak ('taught me') Shibushi'
- (Sa. 2005-03-23)
- b. **Reduced form**
- ɓaɓa-ngu      a-ko-n-rongo-dz-a      Shibushi

### 2.1.1.b.3 Syllables

Shimaore has a preference for CV syllables, particularly in word-final position. This can be seen in borrowings from French, which often involve vowel insertion to make them match the CV template. (35a-c) involve the addition of a word-final vowel to avoid ending the words in a closed syllable. (35d) shows a noun that was borrowed into Shimaore with its determiner, to avoid a word beginning with a vowel.

### (35) Phonological adaptations of French borrowings

	<b>French source word</b>	<b>French pronunciation</b>	<b>Shimaore borrowing</b>	<b>Shimaore pronunciation</b>	<b>English</b>
a.	barge	baʁʒ	barji	bar.ʒi	'ferry'
b.	chauffeur	ʃo.føʁ	shofera	ʃo.fe.ra	'driver'
c.	robe	Rɔb	robo	ro.bo	'dress'
d.	l'école	le.kɔl	likoli	li.ko.li	'school'

Similarly, there is a preference for disyllabic words. Monosyllabic borrowings from

French tend to be borrowed with the indefinite determiner in order to respect this preference. For example, the French *du thé* '(some) tea' was borrowed into Shimaore as *di.te*, and *du pain* '(some) bread' was borrowed as *di.pe*.<sup>28</sup>

Shimaore also uses an optional strategy of h-insertion in some circumstances which would otherwise result in VV.

- (36) I        kukuyi        li-hi(h)a.        (verb stem = *-hia*)  
          5.DEF    5.rooster        5.SM-CROW.RETRO  
          'The rooster crowed.'  
          (T. 2005-02-16)

- (37) **ba**ba-ngu        a-(h)udz-u        nyumba        yahe.  
          1.father-1.my    3SG.SM-sell-VH.RETRO    9.house        9.his  
          'My father sold his house.'  
          (T. 2005-02-16)

#### 2.1.1.b.4 Vowel harmony

Shimaore uses vowel harmony to realize retrospective aspect in affirmative verbs. The final verb of the verbal complex, which is *-a* by default, harmonizes with the vowel in the

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28 Another contributing factor to the inclusion of definite and indefinite articles in some borrowings might be that these were analyzed as being part of the noun. This would appear to be the case for words such as *lapolisi* 'police', which is rarely heard without *la* in French, and *latabu* 'table'. There is no phonological reason for *la* to have been included, as these words are not monosyllabic and they respect the preference for CV syllables in their borrowed forms, even without *la* being included.

verb stem. Vowel harmony is discussed in detail in chapter 4.

- (38) Tsi-mw-on-o.  
1SG.SM-3SG.OM-see-VH.RETRO  
'I saw him/her.'

#### 2.1.1.b.5 Other phenomena involving vowels

When two vowels are side by side in the underlying structure, sometimes one of the vowels surfaces and the other is deleted (39); sometimes both are realized (40); and sometimes an intermediary vowel surfaces (vowel coalescence) (41), if an intermediary vowel exists.

- (39) mi-ezi ⇒ mezi 'months'

- (40) wa-idzi            wa-ili<sup>29</sup>  
CL2-thief            CL.2.AGR-two  
'two thieves'  
[T. 2005-02-16]

- (41) Wa-k-**ondro**-fua.            (ndra-ufua ⇒ ndrofua)  
  
3PL.SM-PST.PROG-go-wash.up  
'They went to wash up.'  
(Rombi 1983:163)

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29 Rombi (1983:61) gives *wedzi* as the plural for 'thieves', but my consultants used *waidzi*.



This phenomenon needs to be studied more fully. For example, it is not clear across which morpheme boundaries vowel coalescence and vowel deletion occur. There are also many counterexamples.

### 2.1.1.c *Stress*

Shimaore has a strong preference for penultimate stress (42). When an additional morpheme is added to the end of a word, the stress moves to the right in order to remain penultimate (43).

- |      |           |        |                      |
|------|-----------|--------|----------------------|
| (42) | mi.ná.dzi | mé.ngi | 'many coconut trees' |
|      | ɗa.gó.ni  | há.tru | 'our village'        |
|      | ré.ndre   |        | 'we went'            |
|      | wa.ká.ti  | í.o    | 'at that time'       |

- |      |       |           |          |                           |
|------|-------|-----------|----------|---------------------------|
| (43) | ɗá.go | 'village' | ɗa.gó.ni | 'at home, in the village' |
|      | há.zi | 'work'    | ha.zí.ni | 'at work'                 |

However, stress is not *always* penultimate, as is implied in Rombi (1983). There are numerous examples in my recordings in which stress is not penultimate, and I give a few such examples in (44).

- |      |                  |                 |                       |
|------|------------------|-----------------|-----------------------|
| (44) | mi.ná.dzi        | <b>mí.ti.ti</b> | 'small coconut trees' |
|      | <b>wá.na.tsa</b> | <b>wá.ti.ti</b> | 'small children'      |
|      | <b>ɗú.nga.na</b> | na              | 'together with...'    |

Philippson (1988) offers a metrical analysis of stress in three Comorian dialects, Shingazidja, Shimwali and Shinzwani. Ahmed-Chamanga (1986) offers a study on the stress system of Shinzwani. Rey (1988) addresses the issue of stress in Shingazidja, using structural phonology and non-linear phonology to demonstrate that stress is not fixed in this dialect, but rather obeys phonological constraints. A phonetic analysis of some of the problematic data would be helpful in determining if these are cases of long vowels, for example. A study of the interaction between stress and tone in Shimaore is needed.

#### 2.1.1.d *Tone*

Shimaore seems to have very few remnants of tone. Of the four main variants of Comorian, Shimaore is the one with the most degraded tonal system (Rombi 1983:63).<sup>30</sup> We see tone playing a role, for example, in vowel harmony forms in first-person singular, where tone can help interlocutors distinguish between the affirmative form of the retrospective aspect (45) and the negative of the habitual (46).

- (45) tsi-                      sóm-    ó  
       1SG.SM-                read-    VH.RETRO  
       'I (have) read'  
       (Rombi 1983:63)

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<sup>30</sup> Cassimjee & Kisseberth (1989) argue that Shingazidja nominal tone can be explained by using Meeussen's Rule of high tone deletion after a high tone. The same authors use an Optimality Theoretic approach to address the issue of tone in Shingazidja and Isixhosa in Cassimjee & Kisseberth (1998).

- (46) tsi-                      sóm-    o  
1SG.SM.neg-    read-    VH.NEG.HABIT  
'I never read' (or 'I don't know how to read')  
(Rombi 1983:63)

Otherwise, tone does not seem to be an active part of the Shimaore spoken by my correspondents. Rombi (1983) also pointed out that tone no longer played an active role in Shimaore at the time that she wrote her grammar of the language.

## **2.2 The nominal system<sup>31</sup>**

### **2.2.1 The noun class system**

As in other Bantu languages, nouns in Shimaore fall into different genders, or noun classes, as they are typically referred to in Bantu languages. Different Bantu languages have different noun classes, with respect to those laid out in Guthrie (1948). As a general rule, the members of a given noun class share a prefix, or a couple of phonological variants of a prefix. Nouns belonging to a particular noun class select for the same subject agreement, object agreement, agreement on possessives, etc.<sup>32</sup> Agreement with the head noun is a very important aspect of Bantu syntax. (47) demonstrates the agreement shown between a subject noun and its predicate, as well as between a noun and its possessor. (48) is an example of the agreement shown between a head noun and its complements.

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<sup>31</sup> This section borrows heavily from chapter 2 of Rombi (1983).

<sup>32</sup> There are exceptions to this rule, including the fact that diminutives involve different agreement, and that some nouns referring to human beings have some agreement from class 9/10 and some agreement from class 1/2.

(47) **zi-mbuzi**                      **z-angu**                      **z-endr-e**                      **bazari.**  
 CL.10.DEF-goat                      CL.10.AGR-my      CL.10.SM-go-VH.RETRO      market  
 'My goats went to the market.'

(48) **wa-ntru-washe**                      **wa-raru**                      **wa-ngu**  
 CL.2-person-female                      CL.2.AGR -three                      CL.2.AGR-my  
 'my three wives'  
 (Rombi 1983:123)

Following the conventional way of referring to the noun classes, ten of them involve singular/plural pairings, namely classes 1 through 10, in which the odd-numbered class contains singular nouns and the even-numbered classes contain their plural counterparts. The classes above class 10 do not involve such pairings. Historically, these noun classes probably had a semantic basis, but now the noun class that a given noun belongs to cannot necessarily be determined by its semantics, with the exception of human nouns, which generally fall into class 1.

Class 1 and 2 nouns generally contain *m(u)-* or *mw-* in the singular and *wa-* in the plural, e.g. *mwana* 'child' and *wana* 'children'. Human nouns derived from verbs also fall into class 1 and 2. For example, from the verb *uloa* 'to fish', we have the noun *mlozi* 'fisherman' and its plural, *walozi* 'fishermen'. The noun *mtru* 'person' can also be combined with either another noun or an adjective to form a new word. Examples include *mtrumbhole*, literally 'big person', but with the meaning 'adult'; and *mtrubaba*, literally 'father person', with the meaning 'man'.

Class 3 and 4 nouns begin with *m(u)-* (before a consonant) or *mw-* (before a vowel) in the singular and *mi-* (before a consonant) or *m-* (before a vowel) in the plural. Semantic groupings for this class include the names of trees, plants, some body parts, animals and elements of nature. Examples include *mundru* 'foot' / *mindru* 'feet' and *mro* 'river' / *miro* 'rivers'. Nominals derived from verbs fall into this class, e.g. *mviso* 'end' from the verb *uisa* 'to finish'.

Nouns in class 5 and 6 generally have no prefix in the singular and take a *ma-* prefix in the plural, e.g. *ɓawa* 'wing' / *maɓawa* 'wings'. The general semantic classifications for this class are titles for family members, human body parts, animal names, fruits, and various others. As discussed above, there are several phonological alternations that occur in this noun class between the singular and plural forms, mostly in nouns of Bantu origin.

(49) Phonological alternations in class 5 and 6 nouns<sup>33</sup>

Segment in singular	Segment in plural	Singular example	Plural example
[p]	[β]	<i>paha</i> 'cat'	<i>mayaha</i> 'cats'
[ɖ]	[l]	<i>ɖago</i> 'house/village'	<i>malago</i> 'houses/villages'
[t]	[r]	<i>trundra</i> 'orange'	<i>marundra</i> 'oranges'
[k]	[h]	<i>komba</i> 'lemur'	<i>mahomba</i> 'lemurs'
[b]	--	<i>ɓwe</i> 'stone'	<i>mawe</i> 'stones'

There are also some nouns in class 6 that do not have a singular/plural opposition.

<sup>33</sup> The orthography *y* is used in *mayaha* 'cats' to indicate the voiced bilabial fricative [β]. The orthography *tr* in *trundra* 'orange' indicates a voiceless postalveolar affricate, similar to [tʃ] in the English word *cheese*, but more fronted.

Some of these are non-count nouns, e.g., *maji* 'water' and *matra* 'oil'. Others are Arabic borrowings in which the initial syllable has been interpreted as a prefix, e.g., *mahaba* 'love' and *mali* 'wealth'. Still others are nouns derived from verbs, e.g., *malozi* 'fishing' from *uloa* 'to fish'.

Class 7 and 8 nouns typically have a *shi-* prefix in the singular and a *zi-* prefix in the plural, e.g. *shitswa* 'head' / *zitswa* 'heads'. The *-i* of the prefix drops out when the stem begins with a vowel, in order to respect the Shimaore preference for CV syllables, as in *sha* 'finger' / *za* 'fingers' (rather than *shia* and *zia*). The *shi-* prefix is also used for language names, e.g., *shifarantsa* 'French', *shibushi* 'Malagasy', and of course *shimaore* 'Maorese', and to mean 'in the style of', as in *shizungu*<sup>34</sup> 'in the way that Europeans do things'.

In class 9 and 10, singulars and plurals have the same form, e.g. *mbwa* 'dog' / 'dogs' and *nyele* 'strand of hair' / 'hair'. This class includes some fruits, some animals, and many borrowed words, such as *labarji* 'ferry between Grande Terre and Petite Terre' (the two main islands of Mayotte), *dipe* 'bread', *dite* 'tea', and *examen* 'exam', pronounced with a word-final nasal vowel, faithful to its language of origin.<sup>35</sup>

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<sup>34</sup> *Shizungu* can also be used to refer to the French language, as it is the European language that is most commonly heard in Mayotte.

<sup>35</sup> Borrowed nouns that do not go into class 9/10 generally have something at the beginning of the word that causes them to be analyzed as belonging to a different class. For example, some nouns borrowed from Arabic that begin with *ma-* (e.g., *maji* 'water' and *mahaba* 'love') have been assigned to class 6, which is the plural of class 5 and has *ma-* as its prefix. They do not have a singular form without *ma-*, as most words in class 5/6 do, and they take class 6 agreement. However, there are other borrowed words that entered class 5/6 and thus take a plural beginning with *ma-*. Examples include *falasika* 'bottle' and *fulera* 'flower' from French,

Class 7 and 8 and class 9 and 10 differ only with respect to their prefixes, or lack thereof. Singular nouns of both classes take the same agreements, and plural nouns of both classes take the same agreements.

After class 9 and 10, things become a bit more complicated. Class 10a is a very impoverished class, with only a few nouns. It contains a few plurals corresponding to singulars from class 11, e.g., *ngulimi* 'languages' (sg. *ulimi*) and *ngutro* 'roofs' (sg. *utro*).

Class 11 is a concatenation of two Bantu noun classes: class 11 and class 14. Nouns that have their etymological origins in class 11 have a plural in class 10 or class 10a, but younger speakers are now tending to use a plural in class 4 or class 6.

(50) Traditional vs. more recent plurals (Rombi 1983:78-9)

Singular	Traditional Plural	Plural used by younger speakers
utro 'roof' (class 11)	ngutro 'roofs' (class 10a)	mautro 'roofs' (class 6)
upanga 'machette' (class 11)	ngupanga 'machettes' (class 10a)	mipanga 'machettes' (class 4)

Nouns that have their etymological origins in class 14 are typically abstract nouns, without plurals. Examples include *utiti* 'smallness' and *uzuri* 'beauty', derived from the adjectives *-titi* 'small' and *-zuri* 'beautiful'; and *wandzani* 'friendship' and *uana* 'childhood', derived from nouns. There are also some nouns in this class that are derived from verbs and differ from infinitives (class 15) only in their agreements, e.g., *ulala* and *guni* 'rice sack' (presumably from the Hindi *goni*, meaning 'coarse fabric', which is apparently at the origin of the English *gunny sack*), and their respective plurals *mafalasika*, *mafulera* and *maguni*. (See Rombi 1983:70-74.) It is rare for borrowed nouns to enter a class other than 5/6 or 9/10.

'sleep' from the verb *ulala* 'to sleep'. There are some nouns in this class that have a plural in class 6, such as *uku* 'night' / *mauku* 'nights' (class 6) and *wakati* 'moment' / *makati* 'moments' (class 6). This is probably the origin of the change in the plural forms of class 11 nouns from class 10 or 10a to class 4 or 6. There are also some nouns in this class that have a corresponding noun in class 6, without a singular/plural distinction being at play, e.g., *uwadre* 'illness' / *mawadre* 'one of the illnesses' (class 6).

Class 15 contains verbal infinitives, which function similarly to English gerunds, as in (51).

- (51) Ufanya            hazi    njema.  
       Cl.15.do        work    good  
       'Working is good.'  
       (Rombi 1983:80)

Infinitives can also be used in possessive constructions, as in *ulawa yahe* 'his leaving / departure'.

Classes 16, 17 and 18 refer to the location of things. Class 16 contains a single word, *yahali* or *yahanu* 'place', probably borrowed from the Swahili *pahali*, which was itself borrowed from the Arabic *mahal*. *Yahali* refers to a place that is farther away than *yahanu*, which can be explained by the demonstratives *-le*, which refers to something far away, and *-nu*, which refers to something closer.

Rombi includes locatives involving the suffixes *-ni* and *-ju* in her discussion of classes 16, 17 and 18, but it is not clear that this is appropriate, due to the fact that words



involving these suffixes cannot be subjects of sentences in Shimaore. In other words, it is not clear that they are actually nominals. The following are examples of how *-ni* and *-ju* are used in Shimaore.

(52) Use of *-ni* in Shimaore

- a.      latabu-ni      'on the table'
- b.      muro-ni        'in the river' or 'at the river'
- c.      daradja-ni     'on the bridge'

(53) Comparison of *-ni* and *-ju* in Shimaore

- a.      muri-ni         'in the tree'
- b.      muri-ju        'above the tree'
- c.      ata muro-ju    'up to the river' (but not in the water)

Conventionally, words beginning with *mwa-* or *ha-* would be treated as belonging to class 17 or 18. In other Bantu languages, constructions involving similar words can be used as subjects, with the verb agreeing with the word in question, as in Swahili, for example (54b-56b). These constructions are known as locative inversion.

- (54) a.      **wa-nyama**                      **wa-me-lala**                      mwitu-ni.  
                   CL.2-animal                      CL.2-RETRO-SLEEP                      3.FOREST-CL.17

b. Mwitu-**ni**      **m**-me-lala      wa-nyama.      (Swahili)

3.forest-CL.17      Cl.17.SA-RETRO-sleep      CL.2-animal

'Animals are asleep in the woods.'

(Literally, 'In the woods, there are asleep animals...')

(Swahili: Ashton 1948:127)

c. \*Mwituni      **wa**-me-lala      **wa**-nyama.

Cl.17-wood      Cl.2.SA-RETRO-sleep      Cl.2-animal

(55) a. **watu**      wengi      **wa**-me-kufa      kule      mji-ni

CL.2.people      CL.2.AGR-many      cl.2- RETRO-die      that      town- CL.17

b. Kule      mji-ni      **ku**-me-kufa      watu      wengi.

that      town-CL.17      SM-RETRO-die      CL.2.people      CL.2.AGR-many

'Many people have died in the town over there.'

(Swahili: Ashton 1948:128)

c. \*Kule      mjini      **wa**-me-kufa      **wa**-tu      wengi.

that      town-in      CL.2.SM-RETRO-die      CL.2.people      CL.2.AGR-many

(56) a. Simba      **a**-me-kufa      hapa.<sup>36</sup>

9.lion      CL.1.SA-retro-die      here

'A lion died here.'

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<sup>36</sup> Normally, in Swahili, animals take class 1 subject agreement, no matter what class they belong to. So in Swahili, *A lion died* would involve the class 1 subject agreement marker *a-* rather than the class 9 subject agreement marker *i-*.

b. Ha-pa **pa**-me-kufa simba.  
 here SM-RETRO-die 9.lion  
 'A lion has died here.'  
 (Swahili: Ashton 1948:128)

c. \*Hapa **a**-me-kufa simba.  
 here CL.1.SA-RETRO-die 9.lion

However, Shimaore does not allow such constructions. Nonetheless, Rombi (1983) includes such words in her section on class 16, 17 and 18 nouns, with words beginning with *y-* being in class 16, words beginning with *ha-* being in class 17, and those beginning with *mwa-* being in class 18. She demonstrates the contrast between examples that involve one of these prefixes (57, 58a) and those that don't (57, 58b).

(57) a. nyumba-ni y-anu  
 9.house-in CL.16.AGR-this  
 'in this house'

b. nyumbai-nu  
 9.house CL.9.AGR-this  
 'this house'  
 (Rombi 1983:82)

(58) a. **ɗ**ago-ni ha-nyu  
 village-in CL.17.AGR-our  
 'in our village'

- b.      *ɗ ago*            *l-anyu*  
           5.village            CL.5.AGR-our  
           'our village'  
           (Rombi 1983:82)

The class 18 marker *mwa-* is only used in certain constructions indicating placement.

- (59)    *moni mwa*            'inside'  
           *usoni mwa*            'across from'  
           (Rombi 1983: 84)

In (60), a general outline of Shimaore noun classes is given, following Guthrie's (1948) study of Bantu noun classes.

- (60)    General outline of Shimaore noun classes, following Guthrie's (1948)  
           study of Bantu languages

<b>Class</b>	<b>Prefixes</b>	<b>Example</b>	<b>Gloss</b>	<b>Description</b>
1	m(u)- + C mw- + V	mtru mwana	person child	Singular of 2
2	wa-	watru wana	people, persons children	Plural of 1
3	m(u)- + C mw- + V	mundru mwaha	foot year	Singular of 4
4	mi- + C M- + V	mindru maha	feet years	Plural of 3
5	∅ dzi- ma-	baribari dzinyo mabaribari	sheep tooth sheep (pl.)	Singular of 6 Plural of 5, sometimes
6		manyo	teeth	11
7	shi- + C	shitandra	bed	Singular of 8

Class	Prefixes	Example	Gloss	Description
8	sh- + V	sha	finger	Plural of 7
	zi- + C	zitandra	beds	
	z- + V	za	fingers	
9	pre-nasal	mbwa	dog	Singular of 10
10	∅	ndzi	fly	Plural of 9 and 11
		ngoma	drum	
		hazi	work/job	
	∅	mbwa	dogs	
10a	∅	ndzi	flies	Plural of 9 and 11
		ngoma	drums	
		hazi	jobs	
10a	ngu-	ngulimi	languages	Plural of 11
11	u- + C	ulimi	language	Singular of 10 and 10a
	u- + V	uana	childhood	
	w- + V	wandzani	friendship	
15	u-	ulawa	leaving, departure	Mainly infinitives
16		vhahali		locative (non-nominal)
		vhahanu		
17		ha-		locative (non-nominal)
18		mo-		locative (non-nominal)

## 2.3 The noun phrase

Modifiers always follow the head noun and generally show agreement with the noun that they are modifying.

### 2.3.1.a Numerals

The numbers 2 through 5 and 8 (all of Bantu origin) agree with the nouns that they modify. 1, 9 and 10, although of Bantu origin, do not agree with the nouns that they modify. 6 and 7, borrowed from Arabic, also do not display agreement. All numerals

follow the noun they modify.<sup>37</sup>

(61) Numerals in Shimaore

mutru moja	'one person'
watru wa-ili (agr)	'two people'
watru wa-raru (agr)	'three people'
watru wa-nne (agr)	'four people'
watru wa-tsano (agr)	'five people'
watru sita	'six people'
watru saba	'seven people'
watru wa-nane (agr)	'eight people'
watru shendra	'nine people'
watru kumi	'ten people'

2.3.1.b *Quantifiers*

Quantifiers agree with their head noun and follow it, with the exception of *pia*, which can either precede or follow the noun and which displays no agreement.

(62) Quantifiers

-engi	watru wengi	'many people'
-otsi	watru wotsi	'all the people'
pia	pia watru, watru pia	'all the people'
-shashi	watru washashi	'few people'

(63) *-engi* 'many'

<b>Class</b>	<b>Form of <i>-engi</i></b>	<b>Example</b>
2	wengi	watru wengi 'many people'
4	mengi	miba mengi 'many thorns'

---

<sup>37</sup> See Johansen (2003) for a discussion of the borrowing of number words from Arabic into several Bantu languages, including Comorian and Swahili.

6	mengi	magari mengi 'many cars'
8	nyengi	zizio nyengi 'many books'
10	nyengi	mbwa nyengi 'many dogs'

(64) *-otsi* 'all'

Class	Form of <i>-otsi</i>	Example
1	wotsi	mtru wotsi 'whole person'
2	wotsi	watru wotsi 'all the people'
3	wotsi	mundru wotsi 'whole foot'
4	yotsi	mindru yotsi 'all the feet'
5	lotsi	gari lotsi 'whole car'
6	yotsi	magari yotsi 'all the cars'
7	yotsi	shio yotsi 'whole book'
8	zotsi	zizio zotsi 'all the books'
9	yotsi	mbwa yotsi 'whole dog'
10	zotsi	mbwa zotsi 'all the dogs'

(65) *shashi* 'few'

Class	Form of <i>-shashi</i>	Example
2	washashi	watru washashi 'few people'
4	mishashi	miBa mishashi 'few thorns'
6	mashashi	magari mashashi 'few cars'
8	shashi	zizio shashi 'few books'
10	shashi	mbwa shashi 'few dogs'

2.3.1.c *Demonstratives*

There is a three-way distinction in demonstratives, with two forms relating to the proximate (66a) or non-proximate (66b) placement of the thing in question, and the third referring to something that has already been mentioned in the discourse (66c).

- (66) a. *mwana u-nu* 'this child'  
 b. *mwana u-le* 'that child (over there)'  
 c. *mwana uwo* 'that child (we were discussing)'

(67) Demonstrative pronouns

Class	Prefix	Definiteness marker	<b>this</b> <sub>PROX</sub>	<b>that</b> <sub>NON-PROX</sub>	<b>that</b> <sub>REF</sub>	
1	1sg					
	2sg					
	3sg	m-/mu-/mw-	u-	u-nu	u-le	u-wo
2	1pl					
	2pl					
	3pl	wa-/w-	u-	wa-nu	wa-le	wa-wo
3		m-/mu-/mw-	u-	u-nu	u-le	u-wo
4		mi-/m-	i-	i-nu	i-le	i-yo
5		0-/dzi-	li-	li-ni	li-le	li-lo
6		ma-/	ya-	ya-nu	ya-le	ya-yo
7		shi-/sh-	i-	i-ni / i-nu	i-le	i-yo
8		zi-/z-	zi-	zi-ni	zi-le	zi-zo (i-zo)
9		N-/0-	i-	i-ni / i-nu	i-le	i-yo
10		N-/0-	zi-	zi-ni	zi-le	zi-zo (i-zo)
10a		Ngu-	zi-			
11		u-/w-		u-nu	u-le	u-wo

2.3.1.d Possessives

The possessive element *-a* displays agreement with the possessed item (68). The full possessive pronouns (69, 70) also agree with the noun that they modify.

(68) Possessive *-a*

Cl. 1 *mwana w-a* Sufa 'Sufa's child'



Cl. 2	wana <b>w-a</b> Sufa	'Sufa's children'
Cl. 3	mundru <b>w-a</b> Sufa	'Sufa's foot'
Cl. 4	mindru <b>y-a</b> Sufa	'Sufa's feet'
Cl. 5	gari <b>l-a</b> Sufa	'Sufa's car'
Cl. 6	magari <b>y-a</b> Sufa	'Sufa's cars'
Cl. 7	shio <b>y-a</b> Sufa	'Sufa's book'
Cl. 8	zizio <b>z-a</b> Sufa	'Sufa's books'
Cl. 9	nyumba <b>y-a</b> Sufa	'Sufa's house'
Cl. 10	nyumba <b>z-a</b> Sufa	'Sufa's houses'

(69) Possessive pronouns

Cl. 1	mwana <b>w-angu</b>	'my child'
Cl. 2	wana <b>w-angu</b>	'my children'
Cl. 3	mundru <b>w-angu</b>	'my foot'
Cl. 4	mindru <b>y-angu</b>	'my feet'
Cl. 5	gari <b>l-angu</b>	'my car'
Cl. 6	magari <b>y-angu</b>	'my cars'
Cl. 7	shio <b>y-angu</b>	'my book'
Cl. 8	zizio <b>z-angu</b>	'my books'
Cl. 9	nyumba <b>y-angu</b>	'my house'
Cl. 10	nyumba <b>z-angu</b>	'my houses'

(70) Possessive pronouns for human possessors

wana wangu	'my children'
wana watru	'our children'
wana waho	'your (sg.) children'
wana wahe	'his/her children'
wana wanyu	'your (pl.) children'
wano wawo	'their children'

### 2.3.1.e Multiple modifiers

When more than one modifier is present, a certain order is respected. If it is not, then the last item is interpreted as being copular in nature. I have included several of these interpretations in the appropriate sections.

#### 2.3.1.e.1 Noun plus possessive plus demonstrative

- (71) mwana            wangu            unu  
      1.child            1.my            1.this  
      'this child of mine'  
(Rombi 1983:123)

The reverse order, *mwana unu wangu*, gives the meaning 'this child is mine'.

#### 2.3.1.e.2 Noun plus adjective plus possessive

- (72) shiri            shikundru        yangu  
      7.chair            7.red            7.my  
      'my red chair'  
(Rombi 1983:124)

The reverse order, *shiri yangu shikundru*, gives the meaning 'my chair is red.'

2.3.1.e.3 *Noun plus adjective plus demonstrative*

- (73) mutrumushe            m**ɔ**le            ule  
1.woman                1.tall            1.that  
'that tall woman'  
(Rombi 1983:124)

The reverse order, *mutrumushe ule m**ɔ**le*, gives the meaning 'that woman is tall.'

2.3.1.e.4 *Noun plus adjective plus numeral plus possessive*

- (74) nyumba            **ɔ**le            mbili            zangu  
10.house            10.big            10.two            10.my  
'my two big houses'  
(Rombi 1983:124)

2.3.1.e.5 *Noun plus adjective plus numeral plus demonstrative*

- (75) nyumba            **ɔ**le            mbili            zile  
10.house            10.big            10.two            10.those  
'those two big houses'  
(Rombi 1983:124)

The order *nyumba mbili zile **ɔ**le* would have the meaning 'those two houses are big'.

### 2.3.1.e.6 Noun plus adjective plus adjective plus possessive

- (76) nyumba        ɓole        ndzuzuri        yangu  
9.house        9.big        9.pretty        9.my  
'my big, beautiful house'  
(Rombi 1983:124)

The order *nyumba ndzuzuri yangu ɓole* (NOM + ADJ + POSS + ADJ) gives the meaning 'my beautiful house is big.' The order *nyumba ɓole yangu ndzuzuri* (NOM + ADJ + POSS + ADJ) gives the meaning 'my big house is beautiful.' It looks like the possessive marks the end of the nominal phrase.

Rombi (1983:124) says that there cannot be more than three elements following the nominal. However, the two languages consultants that I consulted felt that (77), which has four elements modifying the head noun, was grammatical.

- (77) nyumba        mbili        ɓole        ndzuzuri        zile  
10.houses        10.two        10.big        10.beautiful        10.those  
'those two big beautiful houses'

## 2.4 Conclusions

In this chapter, I have given an overview of the phonology of Shimaore, focusing on the consonant and vowel inventories of the language, consonant mutation, and various processes involving vowels. I have demonstrated the nominal system of Shimaore, including a description of the noun class system, the various types of modifiers available

to modify head nouns (e.g., numerals, quantifiers, demonstratives, and possessives) and the ordering of these modifiers within the noun phrase.

The next chapter will be a continuation of the grammar overview of Shimaore, focusing on the verbal system of the language.

## CHAPTER 3: SHIMAORE VERBAL SYSTEM

The Shimaore verbal system shares some important similarities with its closest relative, Swahili, but there are many important differences as well. The way that the verbal complex is formed is laid out in section 3.1. One of the most interesting areas in the Shimaore verbal system is the tense-aspect-modality (TAM) system, which I describe in section 3.2. Beginning with a look at verbal negation (section 3.2.1), and then exploring compound tenses involving both an auxiliary and a lexical verb (section 3.2.2), I then move on to which affixes I analyze as tense (3.2.3), which as aspect (3.2.4), and which as mood or modality (3.2.5). An overview of the Shimaore TAM system is given section 3.2.7. Copular constructions are discussed in section 3.2.10. The description of the Shimaore sentence in section 3.3 begins with a discussion of word order, moving on to simple declaratives, then fronting and post-posing, passives, imperatives, complex sentences, negation, focus/clefting, and finally, interrogatives.

### 3.1 The Shimaore verb

As is typical of Bantu languages, the verbal complex in Shimaore generally involves the following elements: a subject agreement marker, whether or not there is a full subject in the sentence; then possibly a tense or aspect marker; the verb stem; then possibly an aspect marker. (78) is an example of an inflected verb with a tense marker. (79) shows an inflected verb with an aspect marker.

(78) Ni- tso- soma shio.  
1SG.SM- FUT- read book  
'I will read a book.'

(79) Tsi- som- o shio.  
1SG.SM- read- VH.RETRO book  
'I (have) read a book.'

A variety of tense/aspect/modality markers are available in the verbal complex, and these will now be described.

### **3.2 Tense/Aspect/Modality system**

The tense/aspect/modality system of Shimaore seems to differ quite a bit from that of Swahili, its closest neighbor. Whereas Swahili has several tense/aspect markers that each have restrictions regarding their co-occurrence with negation, Shimaore may have only two real tense markers, and the tense/aspect system seems to be somewhat complex.

To my knowledge, the Shimaore Tense/Aspect/Modality (TAM) system has not been fully explored in previous work. Elements relating to tense or aspect are often referred to in passing as being either temporal, aspectual or modal in nature (e.g., in Rombi 1983, Picabia 1996, and Lafon 1990), but to my knowledge, there has not been a thorough study of the TAM system of Shimaore or the other dialects of Comorian. Of course, an entire dissertation could be written about the TAM system of a language (see Beaudoin-Lietz 1999 for Swahili, Basha 1989 for Shambala, for example), but I will address the major issues within the TAM system of Shimaore in the following sections. I begin with a

discussion of verbs in the affirmative vs. negative forms in Shimaore.

### 3.2.1 Verbal negation in Shimaore

In most matrix verbs, negation is a question of simply adding the negative marker *ka-* at the beginning of the verbal complex, with a straightforward negative interpretation. This is the case with the present progressive *-su-/-si-* form (80),<sup>38</sup> the future tense *-tso-* (81), and the conditional *-a-tso* (82), which appears to be a combination of the past tense marker *-a-* and the future marker *-tso-*.

(80) Present Progressive: Affirmative (a) and Negative (b)

a.        *ri-            si-            som-        a*  
              IPL.SM-    PRES.PROG-    read-        FV  
              'We are reading.'

b.        ***ka-***        *ri-            si-            som-        a*  
              NEG-        IPL.SM-    PRES.PROG-    read-        FV  
              'We are not reading.'

---

<sup>38</sup> *-su-/-si-* might be derived from *-saa*, which is an unused verb related to the verb *-salia* 'stay'.

The two forms *-si-* and *-su-* are identical in meaning. Historically, *-su-* was more common on the western coast of Mayotte, with *-si-* being more common on the eastern coast. However, the two are now more commonly interchanged, as speakers from various parts of the island come to Mamoudzou daily for work and other business and are in contact with speakers from other parts of the island. *-si-* is the form used in the Shinzwani dialect of Comorian, spoken on the neighboring island of Nzwani, or Anjouan.



(81) Future: Affirmative (a) and Negative (b)

a. ri- tso- som- a

1PL.SM- FUT- read- FV

'We will read.'

b. **ka-** ri- tso- som- a

NEG- 1PL.SM- FUT- read- FV

'We will not read.'

(82) Conditional: Affirmative (a) and Negative (b)

a. r(i)- a- tso- som- a

1PL.SM- PST- FUT- read- FV

'We would read.'

b. **ka-** r(i)- a- tso- som- a

NEG- 1PL.SM- PST- FUT- read- FV

'We would not read.'

However, for other verb forms, Shimaore has the same lack of "correspondences" between affirmative and negative forms that has been described for Swahili by Contini-Morava (1989) and Beaudoin-Lietz (1999), among others. In other words, the tense/aspect/mood markers in affirmative forms and those in negative forms do not always correspond one to one, in that negation is not restricted to expressing the logical parameters of truth value  $p$  vs  $\sim p$ . Example (83) demonstrates that the interpretation of the negative example (83b) involving vowel harmony is not simply the negation of the

affirmative example (83a), also involving vowel harmony.

- (83) a. ri- dy- i nyama  
 1PL.SM- eat- VH.RETRO meat  
 'We ate meat.'
- b. **ka-** ri- dy- i nyama  
 NEG- 1PL.SM- eat- VH.PRES.HAB.NEG meat  
 'We don't eat meat' (i.e., 'We are vegetarians.')

Additionally, there are certain co-occurrence restrictions, which interact with the above-mentioned phenomenon of lack of correspondences. For example, vowel harmony is used in regular retrospective aspect verbs, generally for a past tense interpretation (84a).<sup>39</sup> It is necessary to use the *-a-* past tense morpheme, rather than vowel harmony, to get a negative interpretation (84b) of the affirmative form (84a). Otherwise, the interpretation is one of a negative habitual (84c), like in (83b).

- (84) a. ri- dy- i nyama  
 1PL.SM- eat- VH.RETRO meat  
 'We ate meat.'
- b. k(a)- r(i)- **a-** dy- a nyama  
 NEG- 1PL.SM- PST- eat- FV meat  
 'We didn't eat meat.'

---

<sup>39</sup> In past tense verbs occurring in relative clauses, we do find the past tense *-a-* morpheme, rather than vowel harmony, as in *nyama r(i)-a-dy-a* 'the meat that we ate'.

- c. \*ka- ri- dy- i nyama  
(Ungrammatical for interpretation 'We didn't eat meat.')

The negative marker *ka-* is not able to occur with various verb forms (85b-88b).

- (85) a. zina!  
dance (bare infinitival form)  
'Dance!' (2sg.)
- b. \*ka- zina!  
NEG- dance  
'Don't dance!'
- c. u- si- zin- e!  
2SG.SM- NEG- dance- IRREAL  
'Don't dance!'
- (86) a. isilazimu r(i)- endr- e likoli  
it.is.necessary 1PL.SM- go- IRREAL school  
'We must go to school.'
- b. \*isilazimu ka- r(i)- endr- e likoli  
it.is.necessary NEG- 1PL.SM- go- IRREAL school  
'We must not go to school.'

- c.    isilazimu      ri-    si-    endr-   e      likoli  
       it.is.necessary 1PL.SM- NEG-    go-    IRREAL school  
       'We mustn't go to school.'
- d.    ri-      si-      endr-   e      likoli  
       1PL.SM- NEG-    go-    IRREAL school  
       'Let's not go to school.'
- (87) a.    wasi    u-      zina  
       we      HAB-    dance  
       'We dance.'
- b.    \*ka-    u-      zina  
       NEG-    HAB-    dance  
       'We don't dance.'
- c.    wasi    ka-    ri-      zin-    i  
       we      NEG-    1PL.SM- dance- VH.NEG.PRES.HAB  
       'We don't dance.'

Rombi (1983) points out some of these issues in her seminal description of Shimaore, while still describing the various tenses and aspects largely with respect to what she and her language consultants saw as the French equivalents of the various forms. In the following sections, I give my analysis of the different markers as tense, aspect or mood/modality. But first, I begin with a discussion of Contini-Morava's (1989) and Beaudoin-Lietz's (1999) work on the TAM system of Swahili, particularly with respect to

compound tenses, because this will be used as a diagnostic in deciding on the temporal or aspectual nature of various Shimaore verbal affixes.

### 3.2.2 Compound tenses

Swahili compound tenses involve an auxiliary verb *kuwa* 'be', followed by a lexical verb. Examples are given in (88-92), from Ashton (1944:249), with the compound tense verbs in italics and the tense/aspect/mood formatives in bold. These examples are simply intended to show that various combinations of tense/aspect/mood formatives are possible between the first (auxiliary) and second (lexical) verbs. For example, in (88- 90), the formative *-li-* occurs on the auxiliary verb, but the formatives used on the lexical verb combine with *-likuwa* to form three distinct temporal/aspectual meanings. (91) and (92) show that other combinations are possible.

(88) *A-li-kuwa a-me-lala.*  
 3SG.SM-PST-be 3SG.SM-RETRO-sleep  
 'He was asleep.'

(89) *A-li-kuwa a-ki-soma sana.*  
 3SG.SM-PST-be 3SG.SM-CONT-read a.lot  
 'He used to read a great deal.'

(90) Wakati huo *a-li-kuwa a-na-soma.*  
 time that 3SG.SM-PST-be 3SG.SM-PRES-read  
 'At that time he was reading.'

- (91) Mwaka            ujao    *tu-ta-kuwa*    *tu-ki-kaa*            katika   nyumba  
 year                next    1PL.SM-FUT-be    1PL.SM-CONT-live            in        house  
  
 yetu    mpya.  
 our     new

'Next year we shall be living in our new house.'

- (92) A-li-kimbia    hata    *a-ka-wa*                    *a-me-choka*.  
 3SG.SM-PST-run    until    3SG.SM-SERIAT-be                    3SG.SM-RETRO-be.tired

'He ran on until at length he became tired.'

According to Beaudoin-Lietz, in Swahili compound tenses, the affix that is found in the first verb can be either tense or aspect, and affixes found in the second, lexical verb are aspectual in nature.

"When forms of aspectual nature are considered applicable to several tenses, since these forms represent an expression of the event's internal temporal constituency, they appear to be the ones that can occur in the lexical verb of compound forms. The co-occurrence patterns of formatives in the auxiliary and the lexical verb provide some indicators of tense vs. aspect." (Beaudoin-Lietz 1999:68-9)

In Swahili compound tenses, we find the distribution of tense/aspect/mood morphemes<sup>40</sup> given in (93). Examples of each of the types is given in (94), with the

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<sup>40</sup> I am borrowing the distributional information from Beaudoin-Lietz's (1999) dissertation, but some of the labels for them are my own or are taken from Ashton (1944) or elsewhere. In the

example letters matching those in (93). (Examples are borrowed from Ashton (1944:249) unless otherwise noted.)

(93) Distribution of Swahili tense/aspect/mood formatives

Formative	Possible on auxiliary verb?	Possible on lexical verb?
a. -li- (Past tense <sub>ASH, B-L</sub> )	Y	N
b. -ta- (Future tense <sub>ASH, B-L</sub> )	Y	N
c. -na-(present <sub>ASH</sub> )	Y	Y
d. -ki- (continuous aspect <sub>ALN</sub> )	Y	Y
e. hu- (habitual aspect <sub>ASH</sub> )	Y	N
f. -me- (retrospective aspect <sub>B-L</sub> )	Y	Y
g. -nge- (hypothetical mood <sub>ALN</sub> )	Y	N
h. -ngali- (hypothetical mood <sub>ALN</sub> )	Y	N
i. -ka- (seriation <sub>ALN</sub> )	Y	N

- (94) a. *A-li-kuwa a-me-lala.*  
 3SG.SM-PST-be 3SG.SM-RETRO-sleep  
 'He was asleep.'
- b. Mwaka ujao *tu-ta-kuwa tu-ki-kaa* katika nyumba  
 year next 1PL.SM-FUT-be 1PL.SM-CONT-live in house  
 yetu mpya.  
 our new  
 'Next year we shall be living in our new house.'

---

table, I have indicated the source for the label I assign to each formative. Those marked with <sub>ASH</sub> are from Ashton (1944); those marked <sub>B-L</sub> are from Beaudoin-Lietz (1999), and those marked <sub>ALN</sub> are my own.

- c.     *A-na-kuwa*                    *a-me-lala.*  
3SG.SM-PRES-be                    3SG.SM-RETRO-sleep  
'He is sleeping right now.'  
(Loogman 1965:209)
- c'.     Wakati huo     *a-li-kuwa*                    *a-na-soma.*  
time     that     3SG.SM-PST-be                    3SG.SM-PRES-read  
'At that time he was reading.'
- d.     *A-ki-wa*                    *a-na-kuja,*                    fustana                    naye.  
3sg.sm-cont-be 3sg.sm-pres-come                    go.along                    with.him  
'If he is coming, go along with him.'  
(Beaudoin-Lietz 1999:157)
- d'.     *A-li-kuwa*                    *akisoma*                    sana.  
3SG.SM-PST-be     3SG.SM-CONT-read                    a.lot  
'He used to read a great deal.'
- e.     *Hu-wa a-ki-ja*                    hapa     baadhi ya                    siku.  
HAB-be 3SG.SM-CONT-COME                    here     certain of                    days  
'He generally comes here on certain days.'  
(Beaudoin-Lietz 1999:156)
- f.     Tangu siku     hiyo     watu     wengi     *wa-me-kuwa*  
since     day     that     people     many     3pl.sm-retro-be



*wa-ki-li-tafuta* shimo hilo, ...

3pl.sm-cont-5.om-see pit this...

'From that day onwards many people have been seeking for this pit, ...'

(Ashton 1944:254)

f. A-li-kimbia hata *a-ka-wa* *a-me-choka*.

3SG.SM-PST-run until 3SG.SM-SERIAT-be 3SG.SM-RETRO-be.tired

'He ran on until at length he became tired.'

g. A-nge-kuwa mwivu, *a-si-nge-kuwa* *a-ki-soma*.

3SG.SM-MD.HYPO-be lazy 3SG.SM-NEG-MD.HYPO-be 3SG.SM-CONT-read

'If he were an idle fellow, he would not be continuing with his studies.'

(Beaudoin-Lietz 1999:167, originally from Schadeberg 1992:35)

h. *Si-ngali-kuwa* *ni-me-choka*, ni-ngali-tembea

1SG.SM-NEG-MD.HYPO-be 1SG.SM-RETRO-be.tired 1SG.SM-MD.HYPO-stroll

mjini.

in.town

'If I had not been tired, I would have taken a stroll in town.'

(Beaudoin-Lietz 1999:167, originally from Polomé 1967:152)

i. A-li-kimbia hata *a-ka-wa* *a-me-choka*.

3SG.SM-PST-run until 3SG.SM-SERIAT-be 3SG.SM-RETRO-be.tired

'He ran on until at length he became tired.'

Shimaore also has compound tenses involving the copula *-ka* in the auxiliary, followed

by a main verb, but the system is quite reduced compared to that of Swahili. The most common form involves both the auxiliary *-ka* and the main verb both being in the so-called 'vowel harmony' form, in which the final vowel of the verb *-a* changes to harmonize with the vowel in the verb stem (95). (A more thorough discussion is given in section 3.2.4.a.) Both verbs are in the retrospective aspect, and the interpretation is one of past tense, or sometimes pluperfect.<sup>41</sup>

(95)	djeli	<b>u-</b>	<b>ka</b>	<b>u-</b>	<b>no</b>	Dalao
	if	2SG.SM-	be.RETRO	2SG.SM-	drink.RETRO	5.medicine
	linu,	i-	tso-	ka	u-	fu
	5.DEM	9.SM-	FUT-	be	2SG.SM-	die.RETRO

'If you had drunk this medicine, you would have died.'

(Rombi 1983:171)

It is not immediately apparent that the auxiliary verb form *uka* in (95) is in fact in the 'vowel harmony' retrospective form, because there is no vowel in the verb root for the final vowel *-a* to harmonize with. We know that this is the retrospective aspect form, however, by the fact that *uka* is the form used to mean 'you were' (96).

(96)	u-ka	ɖ agoni
	2SG.SM-be.RETRO	at.home
	'you were home'	

---

<sup>41</sup> See Full (2001) for a cross-dialectal study of the interpretation of this compound tense in Comorian.

(97) demonstrates that the auxiliary verb can also occur in the future tense, with the main verb being in the retrospective aspect, with a conditional interpretation. The example is repeated here, with the pertinent parts in bold.

(97) djeli u- ka u- no d' alao  
 if 2SG.SM- be.RETRO 2SG.SM- drink.RETRO 5.medicine  
 linu, **i- tso- ka u- fu**  
 5.DEM 9.SM- FUT- be 2SG.SM- die.RETRO

'If you had drunk this medicine, you would have died.'

(Rombi 1983:171)

Note that the subject marker on the auxiliary is the 'default' class 9 subject marker, rather than the second-person singular marker. This makes a biclausal analysis appealing. With a single clause, it is difficult to see how we could account for the two different subject markings that we see demonstrated.

There are also examples in which both the auxiliary and the main verb show the same subject marking. This is the case in (98), where we see third-person singular (human) *a-* subject marking on both the auxiliary and main verbs in the second clause.

(98) djeli u-ka u-mw-ambi-a,  
 if 2SG.SM-be.RETRO 2SG.SM-3SG.OM-tell-FV  
**a- a- tso- ka (atsoka) a- ja**  
 3SG.SM PST FUT BE 3SG.SM come.RETRO

'If you had told him/her, s/he would have come.'

(Rombi 1983:171)

I will be using distribution facts from Shimaore compound tenses, as well as from tenses involving a single verb, to analyze various morphemes and processes as being either tense, aspect, or mood/modality. In the sections that follow, I give my analysis of the TAM markers of Shimaore.

### 3.2.3 Affixes analyzed as tense

#### 3.2.3.a *-tso-*

The element *-tso-*<sup>42</sup> occurs in affirmative sentences and will be considered to be a realization of tense, specifically T(Future). (99) illustrates the formative *-tso-*.

(99) Future

a. Affirmative

Ni-tso-soma 'I will read'

U-tso-soma 'You will read'

A-tso-soma 'S/he will read'

Ri-tso-soma 'We will read'

Mu-tso-soma 'You (pl.) will read'

Wa-tso-soma 'They will read'

b. Negative

Tsi-tso-soma 'I will not read'

K-u-tso-soma 'You will not read'

K-a-tso-soma 'S/he will not read'

Ka-ri-tso-soma 'We will not read'

Ka-mu-tso-soma 'You (pl.) will not read'

Ka-wa-tso-soma 'They will not read'

---

<sup>42</sup> The element *-tso* is a grammaticalized form of *-tsaha* 'want'. *-tsaha-* also exists as a lexeme, namely a full verb that can host inflection, as in *ni-si-tsaha* 'I want'. Shimaore speakers are not generally aware of the relationship between *-tso-* and *-tsaha*.

As a future, the event is not yet actualized. Chung & Timberlake (1985:243) observe that "Situations in the future are inherently uncertain as to actuality...". Nevertheless, when a speaker uses the future marker *-tso-*, s/he is expressing a high degree of probability that the event will actually occur.

In compound forms, *-tso-* can only occur in the first, non-lexical, verb (100). In this way, *-tso-* patterns with the Swahili future tense marker *-ta-*<sup>43</sup>, which has been analyzed by Ashton (1944), Contini-Morava (1989), Beaudoin-Lietz (1999) and others as being a future tense marker.

- (100) lera iyo i- **tso-** ka madza u- balihi...  
 9.time 9.DEM 9.SM- FUT- be already 2SG.SM- reach.puberty.RETRO  
 'when you (will) have reached puberty...'  
 (Blanchy et al. 1993:18)

*-tso-* can also co-occur with the negative marker *ka-* (101), like the Swahili *-ta-* which is the only TAM marker in Swahili that can co-occur with the negation marker *ha-*. The affirmative and negative form of the verb are thus identical, with the exception of the added negative marker.

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43 The system of compound tenses in Swahili is much more extensive than that of Shimaore, which only appears to allow vowel harmony in the second, lexical verb, and either vowel harmony or future tense *-tso-* in the first verb. The Swahili marker *-ta-*, is derived from the verb *-taka* 'want', while the Shimaore *-tso-* is derived from *-tsaha* 'want'.

(101) ka- li- tso- mu- dya  
 NEG- 5.SM- FUT- 3SG.OM eat  
 'It (the genie - cl. 5) won't eat him/her.'  
 (Blanchy et al. 1993:29)

The marker *-tso-* also combines with the past tense marker *-a-* to create a conditional interpretation (102, 103).

(102) neka watru waḃole wa-ka wa-ri-para,  
 if people big 3PL.SM-be.RETRO 3PL.SM-1PL.OM-get.RETRO  
 w- a- tso- ri- rema  
 3PL.SM- PST- FUT- 2PL.OM- hit  
 'If the adults found us, they would beat us.'  
 (R. 2005-03-23)

(103) Mayahea-su-on-a amba unu isilamu  
 her.mother 3SG.SM-PRES.PROG-see-FV that 1.DEM Muslim  
 k- a- tso- dya zitru zini  
 NEG-3SG.SM PST- FUT- eat things these  
 'Her mother saw that she was Muslim and would not eat these things.'  
 (Blanchy et al. 1993:23)

Other languages, such as Turkish (104) and Guyanese Creole (105), also allow the future tense morpheme to combine with a past tense morpheme to create a conditional

reading, so examples such as (102) and (103) will be considered as evidence that *-tso-* is in fact a future tense morpheme in Shimaore.<sup>44</sup>

(104) Oku- y- abil- ecek- ti- m.  
read- y- MOD- FUT- PST- 1SG

'I was going to be able to read / I **would be able** to read.'

(Turkish: Cinque 1999:54, originally from Jaklin Cornflit, p.c. with Cinque)

(105) Jaan bin gu riid.  
John PST FUT read

'John would have read.'

(Guyanese Creole: Cinque 1999:59; Originally from Gibson 1986:585)

### 3.2.3.b *-a*<sup>45</sup>

The element *-a-* is used in several constructions with past tense interpretations (106-110).

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<sup>44</sup> See chapter 5 for a discussion of why analyzing both *-a-* and *-tso-* as tense morphemes in the conditional form might be problematic.

<sup>45</sup> The *-a-* morpheme discussed in this section is found in related languages as a past or present tense marker. It is probably related to the copula *-a*, which is paralleled by the Swahili *-li-*, which is also derived from a copula, and which has been analyzed as a past tense marker (Beaudoin-Lietz 1999, Contini-Morava 1989). There is a phonetically identical morpheme *-a-* that will be discussed in section 3.2.5.a.2, along with a morpheme indicating movement, which will not be discussed here. There is also an *irrealis* marker *-a-* that I discuss more thoroughly in chapter 4.

(106) Negative Past

Ts- <u>a</u> -som-a 'I didn't read'	Ka-r- <u>a</u> -som-a 'We didn't read'
K-w- <u>a</u> -som-a 'You didn't read'	Ka-mw- <u>a</u> -som-a 'You didn't read'
K-(a)- <u>a</u> -soma 'S/he didn't read'	Ka-wa-( <u>a</u> )-som-a 'They didn't read'

(107) Past Continuous/Habitual

a. Affirmative

N- <u>a</u> -ko-soma 'I was reading'	R- <u>a</u> -ko-soma 'We were reading'
W- <u>a</u> -ko-soma 'You were reading'	Mw- <u>a</u> -ko-soma 'You were reading'
A-( <u>a</u> )-ko-soma 'S/he was reading'	Wa-( <u>a</u> )-ko-soma 'They were reading'

b. Imperfect negative

Ts- <u>a</u> -ko-soma 'I was not reading'	Ka-r- <u>a</u> -ko-soma 'We were not reading'
K-w- <u>a</u> -ko-soma 'You were not reading'	Ka-mw- <u>a</u> -ko-soma 'You were not reading'
K-a-( <u>a</u> )-ko-soma 'S/he was not reading'	Ka-wa-( <u>a</u> )-ko-soma 'They were not reading'

(108) a. Affirmative Absolute completive

Tsi-ka ts- <u>endr</u> -e 'I had gone'	Ri-ka r- <u>endr</u> -e 'We had gone'
U-ka w- <u>endr</u> -e 'You had gone'	Mu-ka mw- <u>endr</u> -e 'You (pl) had gone'
A-ka a- <u>ndr</u> -e 'S/he had gone'	Wa-ka wa- <u>ndr</u> -e 'They had gone'

b. Negative Absolute completive

Ts- <u>a</u> -ka n- <u>a</u> - <u>ndr</u> -a 'I hadn't gone'	Ka-r- <u>a</u> -ka r- <u>a</u> - <u>ndr</u> -a 'We hadn't gone'
Kw- <u>a</u> -ka w- <u>a</u> - <u>ndr</u> -a 'You hadn't gone'	Ka-mw- <u>a</u> -ka mw- <u>a</u> - <u>ndr</u> -a 'You (pl) hadn't gone'
K- <u>a</u> -ka a-( <u>a</u> )- <u>ndr</u> -a 'S/he hadn't gone'	Ka-w- <u>a</u> -ka w- <u>a</u> - <u>ndr</u> -a 'They hadn't gone'



Rombi (1983) refers to *-a-* as a past tense morpheme, without going into details, but she appears to be correct in this assumption. *-a-* also appears in conditional forms, before the future tense marker, *-tso-* (109, 110). Recall from above (section ) that other languages are known to combine past tense markers with future tense markers to form conditionals, so this will be considered evidence that *-a-* in Shimaore is a past tense morpheme.

(109) neka                      watru    wa**hole**                      wakaripara,  
       if                            people big                      found.us

w-        **a-**        **tso-**    ri-        rema  
 3PL.SM- PST-    FUT-    2PL.OM- hit

'If the adults found us, they would beat us.'

(R. 2005-03-23)

(110) Mayahe                      a-su-on-a                      amba    unu    isilamu  
       her.mother                      3SG.SM-PRES.PROG-see-FV    that    1.DEM    Muslim

ka-        a-        **a-**        **tso-**    dya (katsodya)    zitru    zini  
 NEG-    3SG.SM    PST-    FUT-    eat                      things    these

'Her mother saw that she was Muslim and would not eat these things.'

(Blanchy et al. 1993:23)

*-a-* is found in the affirmative form of the past tense that is used in relative clauses (106).<sup>46</sup> It is also found in the negative (111b) of what is generally referred to as the "past tense" (111a), whose affirmative form is realized through vowel harmony of the final vowel with the vowel in the verbal stem. (See section 3.2.4.a for a description of vowel harmony in Shimaore.) I place these two forms side by side in (112) to show the parallels between them.

- (111) a.    tsi-    som-            o            shio    ile  
               1SG.SM- read-            VH.RETRO        7.book 7.DEM  
               'I read that book.'
- b.    ts-                    a-        soma    shio    ile  
               1SG.SM.NEG-    PST-    read    7.book 7.DEM  
               'I have not read that book.'

(112) Parallels between "relative past" and negative past tense

<b>Affirmative past tense used in relative clauses</b>	<b>Negative past tense (used in matrix or relative clauses)</b>
wakati wa handra <b>r-a-hu-on-a</b>	ka-r-a-hu-on-a
time of first 1PL.SM-PST-2SG.OM-see-FV	NEG-1PL.SM-PST-2SG.OM-see-FV
'the first time we saw you'	'we didn't see you, we haven't seen you'

Like the future tense marker *-tso-*, *-a-* can be used in both affirmative and negative

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<sup>46</sup> There is an interaction between tense, negation and relative clauses in many Bantu languages, including Shimaore. (See Henderson 2006, for a comparative work of relative clauses in 23 Bantu languages.) This interaction is not directly addressed in this dissertation, and is left for further work.

constructions. (See section 3.2.7 for a historical explanation as to why *-a-* does not occur in past tense verbs in matrix clauses.) This is a characteristic that *-a-* has in common with the Swahili future tense marker *-ta-*, which is generally analyzed as being temporal in nature. This is additional evidence that *-a-* is an instantiation of tense, rather than of aspect or something else.

Contini-Morava (1989) analyzes the Swahili past tense marker *-li-* as the only absolute tense in that language, because it is the only one that cannot "be oriented with respect to any contextually determined point". Unlike the other TAM (Tense, Aspect, Mood) markers of Swahili, *-li-* must have a past tense interpretation. Shimaore *-a-* shares this trait with Swahili *-li-*.<sup>47</sup> The fact that *-a-* cannot be used (by itself) to refer to something hypothetical or in a non-past time frame is evidence that it is a true past tense marker.

*-a-* can also be found in the first verb of compound tenses, in the negative (113). In this way, *-a-* patterns with the Swahili formatives *-li-* and *-ta-*, which have been analyzed as past and future tense markers, respectively (Beaudoin-Lietz 1999, Contini-Morava 1989, and Ashton 1944 *inter alia*).

- (113) ka-     r-     a-     ka     r-     a-     wa-     ona  
           NEG-    1PL.SM- PST-    COP    1PL.SM- PST-    3PL.OM- see  
           'We did not see them' (human object)  
           (Full 2001:53)

On the other hand, we also find *-a-* in the lexical verb of compound tenses, where

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<sup>47</sup> The combination of *-a-* and the future tense marker *-tso-* creates a conditional interpretation, as mentioned previously.

Swahili only allows formatives that have been analyzed as aspect markers. I repeat the example here, with the *-a-* in question in bold.

- (114) ka-     r-     a-     ka     r-     **a-**     wa-     ona  
           NEG-    1PL.SM- PST-    COP    1PL.SM- PST-    3PL.OM- see  
           'We did not see them' (human object)  
           (Full 2001:53)

It is possible that the *-a-* that is found in the second verb is not the same *-a-*, but rather the irrealis marker discussed in 3.2.5.a.2. Full (2001) analyzes the two *-a-* morphemes as being the same, but simply refers to *-a-* as a TAM marker and does not go into detail as to what it is, exactly. Rombi (1983) analyzes the second verb in constructions such as (113, 114) as being the past tense that is used in relative clauses, as in the left column of (112). I agree with this analysis in the sense that this is the form that has a relative interpretation, but I do not categorize *-a-* as being an actual relative marker. It is simply a past tense marker that has been relegated to certain verb forms, as an accident of history. (See section 3.2.7 for a discussion of this historical development.)

### 3.2.3.c *-paro-*

The affix *-paro-*<sup>48</sup> will be analyzed as an instantiation of T(Anterior). This affix gives a reading of 'already' to the verb in the affirmative. It can be used in either the affirmative (115, 116) (with an optional *-a-* past tense marker) or the negative (117) (with a *required -a-* past tense marker), with a reading of 'not yet' or 'never'.

<sup>48</sup> The affix *-paro-* derives from the verb *-para* 'get, find, obtain'. Rombi (1983:162-3) treats *-paro-* as a 'frozen verb', rather than as a tense morpheme.

(115) Ri- (a)- **paro-** som- a i-shio.  
 1PL.SM- (PST)- ANT- read- FV 7.def-7.book  
 'We (have) already read the book.'

(116) -paro- affix

**-paro- without -a-**

Tsi-paro-soma 'I have already read'  
 U-paro-soma 'You have already read'  
 A-paro-soma 'S/he has already read'  
 Ri-paro-soma 'We have already read'  
 Mu-paro-soma 'You (pl) have already read'  
 Wa-paro-soma 'They have already read'

**-paro- with -a-**

N-a-paro-soma 'I have already read'  
 W-a-paro-soma 'You have already read'  
 A-(a)-paro-soma 'S/he has already read'  
 R-a-paro-soma 'We have already read'  
 Mw-a-paro-soma 'You (pl) have already read'  
 Wa-(a)-paro-soma 'They have already read'

(117) **k(a)-** a- a- **paro-** dzaa (kaparodzaa)  
 NEG- 3SG.SM PST- ANT- give.birth  
 'She has never had children.'  
 (Blanchy et al. 1993:71)

In the first-person singular, we find either (118a), in which first-person subject agreement is realized by *ni-* and the past tense morpheme *-a-* is present, or (118b), in which the first-person singular agreement marker *tSi-<sub>PST</sub>* is present and *-a-* is absent<sup>49</sup>. In the negative, we find the first-person singular negative marker *tSi-<sub>NEG</sub>*, as expected (119). I believe that the two possibilities for 1sg. agreement in the affirmative show that *-paro-* is

<sup>49</sup> See chapter 5 for a discussion of first-person singular agreement in Shimaore.

toward the end of the process of grammaticalization.<sup>50</sup> The form in (118a) matches with other verb forms (e.g., *n-a-tso-nunua* 'I would buy', *n-a-ko-nunua* 'I was buying, I used to buy'). I think it is likely that the *tsi-* form attested in (118b) will be completely replaced by the *n-a-* form in (118a), leaving the *tsi-*<sub>PST</sub> subject marker to forms involving vowel harmony.

(118) a.     **ni-**     **a-**     paro- (naparo) nunua nyama  
                   1SG.SM- PST-     already-           buy     meat  
                   'I have already bought meat.'

b.     **tsi-**     paro-     nunua nyama  
                   1SG.SM- ANT-     buy     meat  
                   'I have already bought meat.'

(119) **ts-**                    **a-**     paro-     nunua nyama  
                   1SG.SM.NEG-     PST-     ANT-     buy     meat  
                   'I haven't yet bought meat.'

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<sup>50</sup> I use the term *grammaticalization* to refer to the process by which, in Shimaore, various verbs (e.g., *para* 'get', *-ka* 'be', *-tsaha* 'want') have changed into grammatical affixes. Several verbs are at various stages of grammaticalization, with some having been fully grammaticalized and others being toward the beginning of the process or somewhere in between. Rombi (1983:163-7) discusses several of these "in between" verbs as being *auxiliaires figés* 'frozen auxiliaries' and gives examples of their use. She also gives the origins of several of the fully grammaticalized affixes in her description of the tense/aspect system of Shimaore.

### 3.2.4 Affixes and processes analyzed as aspect

#### 3.2.4.a Vowel harmony

There is one indicator of tense/aspect/mood in the Shimaore TAM system that does not involve affixation. Vowel harmony involves the matching of the final vowel<sup>51</sup> to the vowel in the verb stem (120).

(120) Examples of vowel harmony in Shimaore

Verb stem		Vowel harmony	
-som-a	'read'	a-som-o	's/he read'
-him-a	'get up'	a-him-i	's/he got up'
-pih-a	'cook'	a-pih-i	's/he cooked'
-udz-a	'sell'	a-udz-u	's/he sold'
-endr-a	'go'	a-ndr-e	's/he went'
-katr-a	'cut'	a-katr-a	's/he cut'

Vowel harmony only occurs in verbs of Bantu origin,<sup>52</sup> and it is limited by such things as the number of syllables in the verb stem and the presence or absence of derivational

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51 The "final vowel" refers to the vowel that appears after the verb stem in verbs of Bantu origin (e.g., -som-a). It is generally -a, but appears as -e in subjunctive forms and matches the vowel in the verb stem in the vowel harmony forms. Bantuists have generally grouped the various final vowel possibilities together under "Mood". See chapter 4 for my views on the final vowel.

52 For example, verbs from French or Arabic generally have another vowel at the end of the verb, and this vowel is retained in the vowel harmony form. For example, the French verb *barger* 'take the ferry' remains *barje* in Shimaore in the vowel harmony form (e.g., *jana ri-barje* 'yesterday we took the ferry'). The verb *hasiḡu*, of Arabic origin, similarly retains *u* as its final vowel (e.g., *tsi-hasiḡu* 'I counted'), rather than having vowel harmony between the final vowel and the previous *i*.

affixes. Verbs whose stems only consist of a consonant have irregular vowel harmony forms (see (130)).<sup>53</sup> Vowel harmony can occur in the affirmative or in the negative, although the interpretation of the negative is not a straightforward negation of the affirmative.

### 3.2.4.a.1 In the Affirmative

When vowel harmony is present,<sup>54</sup> in the affirmative, the interpretation is that of retrospective aspect (121-125).<sup>55</sup>

(121) ri-      on-      o                      mwana              mnadzi              m-titi  
           1PL.SM- see-      VH.RETRO            1.child              3.coconut.tree      3.AGR-small

'We saw a small coconut tree.'

(R. 2005-03-23)

(122) mutru              a-                      hiḃ-      i                      mbuzi              za-tru  
           1.person              3SG.SM-              steal-      VH.RETRO              10.goat              10.AGR-our

'Someone stole (has stolen) our goats.'

(adapted from Rombi 1983:150)

<sup>53</sup> For more examples of vowel harmony in Shimaore, see Rombi (1983:148-55).

<sup>54</sup> Vowel harmony does not occur when the verb in question contains a postverbal suffix, as in the following example, which contains the causative affix *-s-*. See chapter 4.

Tsi-mu-no-s-a                      mwanamtsa      ule      maji.  
           1SG.SMA-3SG.OA-drink-CAUS-FV      1.child              1.this      water

'I made this child drink water.'

(Cornice 1999:73)

<sup>55</sup> See Beaudoin-Lietz (1999:76) for a description of why the term *retrospective* is preferable to *perfect* in making aspectual distinctions.



(123) a- ndr- e<sup>56</sup> a- lo- **bua** i-nyumba  
 3SG.SM- go- VH.RETRO 3SG.SM- then- open 9.def-9.house  
 'She went to open the house.'  
 (Blanchy et al. 1993:39)

(124) yi-mbuzi y- endr- e **bazari**  
 9.DEF-9.goat 9.SM- go- VH.RETRO market  
 'The goat went to the market.'  
 (Sa. 2005-03-23)

(125) kima zi- shuk- **u**  
 10.prices 10.SM- go.down- VH.RETRO  
 'Prices have gone down.'  
 (Score grocery store advertisement)

With verbs of movement or volition in the vowel harmony form, it is common to find a second verb in the same form, with full inflection (126, 127).

(126) ri- tsah- a r- endr- e  
 1PL.SM- want- VH.RETRO 1PL.SM- go- VH.RETRO  
 'We wanted to go.'

<sup>56</sup> With the verb *-endra* 'go' with third-person human subjects, the initial vowel of the verb drops out in order to maintain the preference for only one vowel per syllable. The final vowel harmonizes with the *e-* of *-endra*, however, rather than with the vowel in the subject agreement that precedes the verb stem. Other subject prefixes simply lose their vowel, as in (126) and (127), presumably because the subject agreement information is still available in the consonant *r-*.

- (127) r-            endr-    e                            ri-        ketsi<sup>57</sup>  
 1PL.SM- go-        VH.RETRO                    1PL.SM- sit.down.RETRO  
 'We went to sit down.'  
 (R. 2005-03-23)

Verb stems that only contain a consonant, and thus no vowel for the final vowel to harmonize with, have their own special forms. (128) demonstrates a few common verbs of this type, along with their vowel harmony forms.

- (128) Short verb stems and their vowel harmony (VH) forms

Verb stem		VH form	Example	
-f-	'die'	-f-u	Mbuzi i-f-u	'The goat died'
-j-	'come'	-j-a	Tsi-j-a	'I came'
-dy-	'eat'	-dy-i	A-dy-i	'S/he ate'
-w-	'fall'	-w-u	Mwana a-w-u	'The child fell'
-nw-	'drink'	-n-o	Ri-n-o	'We drank'

Some support for vowel harmony being analyzed as aspect, rather than tense, comes from the analysis of compound tenses in Swahili given in Beaudoin-Lietz (1999).

In Shimaore compound tenses, it is possible to find vowel harmony on the second, lexical verb (129). This is more evidence that vowel harmony is an instantiation of aspect, rather than tense, as T can only be found on the the auxiliary verb.

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<sup>57</sup> The verb *-ketsi* is atypical, in that it is a Bantu verb, but does not have an *-a* in final vowel position. It is historically derived from *-ka* 'be' and *tsi* 'ground, earth, country'. For this reason, it does not display vowel harmony in the final vowel.

(129)	djeli	u-	ka	u-	no	ɗ	alao
	if	2SG.SM-	be.RETRO	2SG.SM-	drink.RETRO	5.	medicine
	linu,	i-	tso-	ka	u-	f-	u
	5.DEM	9.SM-	FUT-	be.	2SG.SM-	die-	RETRO

'If you had drunk this medicine, you would have died.'

(Rombi 1983:171)

The vowel harmony form can have either a meaning of 'completed action', or one of a 'state entered upon', to use Ashton's terminology for Swahili *-me-*, which is generally analyzed as being aspectual in nature.

(130) Completed action

Tsi- <u>som-o</u>	'I (have) read'	Ri- <u>som-o</u>	'We (have) read'
U- <u>som-o</u>	'You (have) read'	Mu- <u>som-o</u>	'You (pl.) (have) read'
A- <u>som-o</u>	'S/he (has) read'	Wa- <u>som-o</u>	'They (have) read'

(131) State entered upon

A- <u>lal-a</u> .	'S/he is asleep/sleeping'
Wa- <u>f-ū</u> .	'They are dead' ('They have died') (exceptional monosyllabic verb)
Moro u- <u>f-ū</u> .	'The fire is out.' (Literally, 'the fire has died') (Rombi 1983:151)
Tsi- <u>law-a</u> Farantsa.	'I am from France' (literally 'I have left France')
Tsohole i- <u>kom-o</u> .	'There is no more rice' (Literally, 'the rice is finished') (Rombi 1983:151)

The first usage of this tense seems to correspond to the *-li-* past tense in Swahili (132), while the second seems to correspond to the *-me-* retrospective aspect marker in Swahili (133, 134).

(132) Ni- li- soma kitabu. (Swahili)

1SG.SM- PST- read 7book

'I read the book.'

(133) Ni- me- soma kitabu (Swahili)

1SG.SM- RETRO- read book

'I have read the book.'

(134) Ni- me- choka. (Swahili)

1SG.SM- RETRO- be.tired

'I am tired.'

Additionally, there are cases where vowel harmony is used to indicate something that does not occur in the past (135), unlike the Swahili past tense morpheme *-li-*, which always refers to something in the past. In this sense, vowel harmony seems to pattern more with the Swahili *-me-*, which has been analyzed as an aspectual category (e.g., Polomé 1967), and more specifically a perfect aspect (Droic 1992) or retrospective aspect (Beaudoin-Lietz 1999).

(135) neka u- tso- himba ata **u-** **on-** **o** watru

if 2SG.SM- FUT- sing until 2SG.SM- see- VH.RETRO people

'quand tu auras fini de chanter, si tu vois des gens...'

['when you have finished singing, if you see people', but a more literal translation would be 'if you (will) sing until **you have seen** people']

(Blanchy et al. 1993:53)

A more thorough examination of the facts of vowel harmony in Shimaore (especially in constructions involving more than one verb) will be necessary to give a more precise description of this phenomenon. I will undertake this in chapter 4. For the time being, I will give a tentative analysis of vowel harmony as an instantiation of retrospective aspect in Shimaore.

#### 3.2.4.a.2 *In the negative*

When a negative marker *ka-* is present with vowel harmony, the interpretation is that the person never carries out the action of the verb (136).

- (136) **ka-**    **ri-**    **som-**    **o**  
           NEG-    1PL.SM- read-    VH.NEG.PRES.HAB  
           'We never read' (or 'We don't know how to read')

As discussed above, for verb stems that do not contain a vowel, the vowel harmony forms are simply a question of exceptions to be learned by speakers.

- (137) **ka-**    **ri-**    **ji**<sup>58</sup>  
           NEG-    1PL.SM- know.VH.NEG.PRES.HAB  
           'We don't know.'  
           (Blanchy et al. 1993:34)

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<sup>58</sup> The verb *-jua* 'know' appears to be exceptional in the negative habitual aspect. If it matched other verbs, the retrospective form would be *-jua*, rather than *-ji*.

(138) Basi wawe k(a)- u- ji u-hadithi  
 so you.SG NEG- 2SG.SM- know.VH.NEG.PRES.HAB INF-discuss  
 na mshe waho?  
 with 1.wife 1.your.SG

'So you don't know how to talk to your wife?'

(Blanchy et al. 1993:36)

Whereas the negative form is used as a general negative present habitual form, the affirmative is used only in matrix clauses, with the *-a-* past tense occurring in relative clauses.<sup>59</sup>

#### 3.2.4.a.3 *Vowel harmony and first-person singular agreement*

In the first-person singular, we find *tsi-* with vowel harmony. In (139), we see *tsi-*<sub>PST</sub>, and in (140), we see the portmanteau morpheme *tsi-*<sub>NEG</sub>, which expresses both agreement and negation. There is a tonal difference between the two forms, one of the few remnants of the tonal system that used to be present in Shimaore and is still present to varying extents in the other dialects of Comorian. In (139), there is a high tone on the two final syllables, and in (140), there is only a high tone on the penultimate syllable.

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<sup>59</sup> It appears that the forms involving vowel harmony are a relatively recent innovation. Only one other Sabaki language uses vowel harmony for tense or aspect, and Nurse & Hinnebusch (1993:402) theorize that these two languages developed this use of vowel harmony independently. In Shimaore and the other dialects of Comorian, it would seem that the vowel harmony form replaced the *-a-* past tense marker in matrix clauses, relegating *-a-* to use in relative clauses. See section 3.2.7 for a more thorough discussion.

(139) tsi-      sóm-      ó  
 1SG.SM- read-    VH.RETRO

'I (have) read'

(Rombi 1983:63)

(140) tsi-                      sóm-      o  
 1SG.SM.NEG-      read-    VH.RETRO

'I never read' (or 'I don't know how to read')

(Rombi 1983:63)

First-person singular agreement in Shimaore will be discussed more thoroughly in chapter 5.

### 3.2.4.b -ko-

The morpheme *-ko-*<sup>60</sup> combines, optionally, with the past tense marker *-a-* to create verb forms with an interpretation of past habitual (141, 142) or past progressive (143). The interpretation in (141, 142) is the past equivalent of the present habitual realized by *u-*<sup>61</sup>. Like *-paro-*, discussed above in section 3.2.3.c, *-ko-* seems close to being fully grammaticalized, due to its use of *ni-a-* ('*na*') to mark first-person singular and past tense, as opposed to *tsi-*.

(141) watru                      wa-bole              wa      ɗagoni              pia  
 2.people                      2.AGR-big              2.of      the.village              all

<sup>60</sup> The affix *-ko-* derives from the copula *-ka*.

<sup>61</sup> See section for a description of the use of the *u-* morpheme.

w- a- **ko-** shapih-a na wanatsa watiti  
 3PL.SM- PST- PST.PROG- care.for with 2.children 2.small

'All the adults of the village used to take care of the small children.'

(R. 2005-03-23)

(142) Wakati n- a- ka mwanamtsa,  
 time 1SG.SM- PST- be child

n- a- **ko-** lagua Shimaore na mayangu...  
 1SG.SM- PST- PST.PROG- speak Shimaore with my.mother

'When I was a child, I spoke Shimaore with my mother...'

(S. 2005-03-23)

(143) r- a- **ko-** ndro- jem- a  
 1PL.SM- PST- PST.PROG- go- pick- FV

'We were going (coconut) picking'

(R. 2005-03-23)

This affix is also found in hypothetical constructions, with *nadjeli* or *djeli* 'if (ever)'.

(144) djeli wa- (a)- **ko-** hu- vendza  
 if 3PL.SM- (PST)- PST.PROG- 2SG.OM- love

'if they loved you'

(Blanchy et al. 1993:82)



The negative form is identical in form, with the exception of the presence of the negative marker, *ka-*.

- (145) mwana            ule    k(a)-    a-    **ko-**            la    trovi  
          1.child            1.DEM    NEG-    3SG.SM-    PST.PROG-            eat    green.bananas  
 'That child didn't eat (wasn't in the habit of eating) green bananas.'  
 (Blanchy et al. 1993:45)

### 3.2.4.c *-si-/-su-*

The affix *-si-/-su-* is found without an overt tense marker, and provides an interpretation of present progressive (146-147).

- (146) mwanamtsa    ule    a-    **su-**            dzama  
          1.child            1.DEM    3SG.SM-    PRES.PROG-            hide  
 'That child is hiding.'  
 (Blanchy et al. 1993:19)

- (147) roho    yangu    **ka-**    i-    **su-**            fikiri  
          9.heart 9.my    NEG-    9.SM-    PRES.PROG-            believe  
  
          uwo    tsi                            mwanadamu  
          1.DEM    COP.NEG                            human.being

'I can't believe that this (person) is a human being.'  
 (Blanchy et al. 1993:26)

In stories, it is often used to refer to something that would be expressed using a past progressive in natural speech (148, 149).<sup>62</sup>

(148) Suku, a-lawa            amba    waye    *a-sw-endo-tembea*            raha.  
 day    3SG.SM-go.out    that    he    3SG.SM-PRES.CONT-go-stroll            already

Un jour il sortit en disant qu'il *allait se promener*.

['One day he went out, saying that *he was going to go for a walk*.']

(Soilihi & Blanchy 1991:46)

(149) na        roho                zatru    zi-s-endra                ɔ a ɔ a ɔ a ɔ a ɔ a  
 and    10.hearts            10.our    10.SM-PRES.PROG-go        da da da da da

'and our hearts were going "boom, boom, boom, boom, boom"

(R. 2005-03-23)

Its negative form is identical, except for the presence of the negative marker, *ka-*.

Similar to what might be considered its Swahili counterpart *-na-*, *-su-* also results in different interpretations (150), and not just present.

(150) neka madza    w-        endr-    e  
       if    already    2SG.SM- go-        VH.RETRO  
  
       u-                **su-**                par-    a        na        mahondo...  
       2SG.SM-        PRES.PROG-        get-    FV        and        problem

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<sup>62</sup> In (148), we see *-sw-* rather than *-su-*, because the *u* becomes a glide before the vowel of the verb stem.



All of these examples are evidence that *-su-/-si-* are instantiations of aspect, rather than tense. Cinque's (1999) hierarchy of functional heads does not include a projection for present tense, and the notion of present tense has been under debate for some time, even in well-studied languages such as English. For these reasons, an analysis of *-su-/-si-* as aspectual in nature is less problematic. A discussion of the problematic nature of *-su-/-si-* is given in section .

### 3.2.5 Morphemes analyzed as Mood or Modality

#### 3.2.5.a *Irrealis mood*

##### 3.2.5.a.1 *-e*

The final vowel in verbs in Bantu languages is generally *-a*, and Shimaore is no exception. The final vowel is *-e* in the subjunctive (153), shows vowel harmony in the retrospective aspect (154), and otherwise surfaces as *-a* (155a-c).

- (153) na- r(i)- he- e vhanu ri- jem- e  
 and- 1PL.SM- go.up- IRREAL there 1PL.SM- pick.coconut- IRREAL  
 'Let's go up there and pick coconuts.'  
 (R. 2005-03-23)

- (154) ri- on- o mwana mnadzi mtiti  
 1PL.SM- see- VH.RETRO 1.child 3.coconut.tree 1.AGR.SMALL  
 'We saw a little coconut tree.'  
 (R. 2005-03-23)

- (155) a.    ni-    su-    endra                   'I am going'  
           b.    n-    a-    ko-    endra               'I was going'  
           c.    n-    a-    mo-    endra               'When I went'

The final vowel is generally taken to be an instantiation of mood by Bantuists. I analyze the default final vowel *-a* as being part of the verb stem (or simply required by the phonology of the language, which prefers CV syllables over other syllable forms), with a final *-e* indicating that the verb has raised to the irrealis mood head. This will be discussed further in section .

### 3.2.5.a.2 *-a-*

In addition to the past tense morpheme *-a-* discussed above in section 3.2.3.b, there is a phonetically identical *-a-* morpheme that appears to be an irrealis mood marker. This *-a-* morpheme also occurs in two-verb constructions involving negation on the first verb. For example, in (156a) we see the regular subjunctive form on the second verb *n-endr-e*, but in (156b), where negation is present on the first verb, we find *n-a-ndr-a*. Given that we have analyzed *-e* as being an irrealis marker, it seems logical to extend this analysis to *-a-*, which occurs in a similar environment. It is somewhat common in other languages (e.g., Romance) for mood to be expressed differently in negative forms<sup>63</sup>, so this is not necessarily a surprising fact.

- (156) a.    ni-si-tсах-a                   n-    endr- e    likoli  
   1SG.SM-PRES-want-FV    1SG.SM- go-    IRREAL. school  
   'I want to go to school.'

<sup>63</sup> Thank you to Karlos Arregi for pointing this out.



'When we went there, we found that child.'

(R. 2005-03-23)

Rombi (1983:166) analyzes *-mo-* as having derived from a locative class 18 relative marker, etymologically. Swahili has a marker *-po-* in the same position, and it can refer to a place in time (160) or space (161).<sup>64</sup>

(160) a-li-**po**-kuwa                      a-ki-sema  
3SG.SM-PST-PO-be                      3SG.SM-PROG-speak

'while he was speaking'

(Ashton 1944:169)

(161) Tu-me-**pa**-ona                      **pale**    a-li-**po**-pigana                      na            simba  
1PL.SM-RETRO-**pa**-see                      there    3SG.SM-PST-PO-fight                      with       lion

'We have seen the spot where he fought with a lion.'

(Ashton 1944:168)

In Swahili, these affixes are considered to be examples of the so-called *-o of reference* demonstrating agreement with an empty NP referring to *pahali* 'place', and indeed (161) gives us two more examples of such agreement, in the *-pa-* of the first and second words of the sentence. Swahili allows relative clauses to have the *-o of reference* to the left of

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<sup>64</sup> Swahili also has a *-mo-* that occurs in the same position within the verbal complex, but it is much more limited and seems to only refer to a place in space, rather than a place in time.

hamna                      kitanda                      chumbani                      a-na-**mo**-lala  
there.is.no                      bed                      in.the.room                      3SG.SM-PRES-**mo**-sleep

'There is no bed in the room **in which** he is sleeping.'

the verb stem in the verbal complex in some tenses, and the -po examples are simply considered to involve relative clauses in Swahili. However, Shimaore does not allow relative clauses to have the *-o of reference* and its agreement to the left of the verb in the verbal complex, so it is not clear that the Shimaore examples can be analyzed in such a way. On the other hand, the link between Swahili *-po-* (and indeed Swahili *-mo-*) and Shimaore *-mo-* seems fairly convincing, given the similarity in meaning and placement. Perhaps we will simply have to say that *-mo-* is a historical remnant of a structure that might have previously been allowed in Shimaore.

Rombi's examples also indicate that the marker *-a-* that occurs before *-mo-* is optional, but almost all of her examples involve third-person singular human subjects, which have the subject marker *a-*, making it impossible to see whether the irrealis marker *-a-* is truly optional. Indeed, there is one example (162) that is translated somewhat oddly as having a third-person plural subject *wa-*, when it appears that the subject is actually the second-person *u-* with the irrealis marker *-a-*, which conflate as *wa-*.

- (162) a.    mutrumshe    uwo    **w-a-mo-mu-on-a**    kavhu  
               1.woman      1.this    2SG.SM-IRREAL-MOD.POSS-3SG.OM-see-FV    there.is.no
- mutrumshe    mzuri            azidi            mwana mutrumshe  
               uwo...
- 1.woman      1.beautiful    more.than      1.woman  
               1.this (*my gloss*)

(Rombi 1983:166, with gloss added)



- b. Rombi's translation:  
'cette femme **quand tu la vois** il n'y en a pas de plus belle'
- c. Rombi's literal translation:  
'femme cette **quand-ils-la-voient** il-n'y-a-pas femme belle plus-que enfant  
femme cette...'
- d. English version of Rombi's translation (b):  
'this woman, **when you see her** there is none who is more beautiful'
- e. English version of Rombi's literal translation (c):  
'woman this **when-they-see-her** there-is-no women beautiful more-than  
child woman this')
- f. My translation:  
'this woman, **when you (2sg.) see her** there is none who is more beautiful'

Rombi provides no morpheme-by-morpheme gloss, but her literal translation (162d) does not seem to capture the presence of the irrealis *-a-* marker. Her initial translation (162b), however, seems to show that she understands the meaning to involve a second-person singular subject, with an assumption of the *-a-* as being the irrealis marker. All of the examples I have seen in texts have either contained *-a-* following the subject marker, or have involved a third-person subject (third-person singular *a-* or third-person plural *wa-*), which do not allow us to see whether or not an *-a-* follows the subject or not.

### 3.2.6 Morphemes requiring further research

#### 3.2.6.a (w)u-

The word-initial marker *u-* (generally written as *u-* but pronounced as *wu-*) indicates that the subject does something habitually (163), or has a certain quality (164). No tense marker is present when *u-* is used, presumably because the action is understood to take place in all tenses. No subject agreement is present with the *u-* marker, and either a full subject (163) or a pronominal subject (164) is required.

(163) watru            **u-**        lala     uku  
         2.people        HAB?-    sleep   night  
         'People sleep at night.'  
         (Rombi 1983:153)

(164) waye   **u-**        hir-     iw-     a        Anfiat  
         she     HAB-    call-    PASS-   FV       Anfiat  
         'Her name is Anfiat.'

Infinitives/habituals can also be used as nouns, as in (165 - 167).

(165) u-fanya            hazi     ndjema  
         15-do                work    good  
         'Work(ing) is good.'  
         (Rombi 1983:80)

(166) u-lawa            y-ahe  
           15-leave        9.AGR-POSS  
           'his/her departure'  
           (Rombi 1983:80)

(167) u-tsimu            yahe  
           15-reach.puberty    9.AGR-POSS  
           'at her puberty...'  
           (Blanchy et al. 1993:19)

The agreement marker *y-* shown on the possessive in (166, 167) is somewhat surprising, as it would be more expected to find *w-*, which would match the sonority of the vowel at the beginning of the infinitive. The fact that these forms can be used in possessive constructions shows that they can be nominal in nature. It is likely that the *(w)u-* form in Shimaore is derived from the same proto-form as the Swahili *hu-* aspect marker, which is used for marking habitual aspect, rather than from the infinitival form, however. It is common for *k* to evolve into *h* and eventually to drop out of the language, and we indeed have evidence for this in other comparisons between Swahili and Shimaore. The *w* in the Shimaore forms would simply be a question of anticipatory lip rounding, as the following vowel is *u*.

The Swahili formative *hu-*, which also occurs at the beginning of the verbal complex, appears to pose problems for a straightforward analysis as habitual aspect, due to its ability to be used in two different positions in compound tenses, as well as non-habitual interpretations that sometimes result from its use. I do not yet have enough data involving

Shimaore (*w*)*u-* in varying contexts (e.g., in compound tense constructions) to have a concrete analysis of it. It is possible that a more extensive examination of (*w*)*u-* in Shimaore would pose similar problems.

### 3.2.7 Overview of Shimaore TAM system

While Rombi (1983) raises some issues in her description of the TAM system of Shimaore, she tends to view it in light of the tense system of French. She uses as point of departure the tense or aspect that she perceives to be occurring in the affirmative, and then gives the form that gives roughly the semantic negative of this form. (168) gives a summary of her description of the basic tenses and aspects of Shimaore.

(168) Summary of Rombi's (1983) description of tense/aspect in Shimaore

<b>Tense/Aspect</b>	<b>Affirmative</b>	<b>Negative</b>
Present	SM- <b>su</b> -V-a	ka-SM- <b>su</b> -V-a
Future	SM- <b>tso</b> -V-a	<b>ka</b> -SM- <b>tso</b> -V-a
Past	SM-V- <b>VH</b> <sup>65</sup>	<b>ka</b> -SM- <b>a</b> -V-a
"Habitual"	<b>u</b> -V (INF)	<b>ka</b> -SM-V-VH
"Imperative"	INF (minus u-)	(No equivalent form)
	OA-V- <b>e</b>	(No equivalent form)
	<b>ka-u</b> (SM)-V- <b>VH</b>	(No equivalent form)
Subjunctive	na-SM-V- <b>e</b>	SM-( <b>a</b> )- <b>si</b> -V- <b>e</b>
Conditional	SM- <b>a-tso</b> -V-a	<b>ka</b> -SM- <b>a-tso</b> -V-a

However, when we use as our point of departure the elements and processes that are

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<sup>65</sup> VH refers to vowel harmony of the final vowel with the vowel of the verb stem. For example, in the verb *tsi-som-o* 'I have read', the final vowel is realized as [o] to match the vowel in the verb root. I analyze this vowel harmony as retrospective aspect.

involved, and then looking at the meanings associated with the affirmative and negative forms, a different pattern emerges. This pattern is demonstrated in (169), with examples following in (170a-f), with the letters matching those in (169).

(169) Shimaore tense/aspect/mood affixes/processes in affirmative and negative forms<sup>66</sup>

	<b>Formative / Process</b>	<b>Affirmative form</b>	<b>Meaning</b>	<b>Negative form</b>	<b>Meaning</b>
a.	-su-	SA- <i>su</i> -V-a	be doing	ka-SA- <i>su</i> -V-a	not be doing
b.	-tso-	SA- <i>tso</i> -V-a	will do	ka-SA- <i>tso</i> -V-a	will not do
c.	vowel harmony	SA-V- <i>VH</i>	did/has done	ka-SA-V- <i>VH</i>	never does
d.	-a-	SA- <i>a</i> -V-a	relative "past"	ka-SA- <i>a</i> -V-a	did not do / has not done
e.	-a-tso-	SA- <i>a-tso</i> -V-a	would do	ka-SA- <i>a-tso</i> -V-a	would not do
f.	-(a)-ko-	SA-( <i>a</i> )- <i>ko</i> -V-a	was doing, used to do	ka-SA- <i>a-ko</i> -V-a	wasn't doing, didn't used to do

(170) a.	ri- <b>su</b> -ruk-a	ka-ri- <b>su</b> -ruk-a
	1PL.SM-PRES-jump-FV	NEG-1PL.SM-PRES-jump-FV
	'We are jumping.'	'We are not jumping.'
b.	ri- <b>tso</b> -ruk-a	ka-ri- <b>tso</b> -ruk-a
	1PL.SM-FUT-jump-FV	NEG-1PL.SM-FUT-jump-FV
	'We will jump.'	'We will not jump.'

<sup>66</sup> I have excluded a couple of forms, including what Rombi refers to as the *aoristique* form, which she says has neither temporal nor aspectual reference. It seems to be related to the *-a-* form of Swahili, as in *n-a-taka chumvi* 'I want salt', but more research is needed on this form, which doesn't appear to occur in the negative.

c.	ri-ruk-u	ka-ri-ruk-u
	1PL.SM-jump-VH.RETRO	NEG-1PL.SM-jump- VH.RETRO
	'We jumped.'	'We never jump.'
d.	i shio r-a(i)-som-a	
	9. DEF 9.book 1PL.SM-PST-(9.om)-read-FV	
	'the book that we read'	
	ka-r-a(i)-som-a i shio	
	NEG-1PL.SM-PST-(9.OM)-READ-FV 9.DEF 9.BOOK	
	'We didn't read the book'	
e.	r-a-tso-ruk-a	ka-r-a-tso-ruk-a
	1PL.SM-PST-FUT-jump-FV	NEG-1PL.SM-PST-FUT-jump-FV
	'We would jump.'	'We wouldn't jump.'
f.	ri-(a)-ko-ruk-a	ka-r-a-ko-ruk-a
	1PL.SM-PST-PST.PROG-jump-FV	NEG-1PL.SM-PST-PST.PROG-jump-FV
	'We were jumping.'	'We were not jumping.'

The affixes in (170a), (170b) and (170e) all involve forms and meanings that are identical in the affirmative and negative, with the exception that there is a negative marker *ka-* in the negative and it has a negative interpretation. These forms provide no challenge to Rombi's way of addressing tense and aspect in Shimaore. In the other forms, however, there are other differences between the affirmative and negative forms besides the presence or absence of the negative marker *ka-*, including meaning differences. For

example, while in (170c), we find only the *ka-* negative marker distinguishing affirmative from negative, the meaning of (170b) is not the simple negative of the meaning of (170a).

In the case of (170d), we also have only the presence of *ka-* distinguishing the negative from the affirmative. However, we only find the affirmative form in the case of relative clauses, whereas the negative form can be found in either regular or relative clauses. This appears to be an accident of the history of the language. Nurse & Hinnebusch (1993) propose that the older form of the past tense, involving the ProtoBantu past tense marker *\*-á*, was replaced by the vowel harmony form in Shimaore and the other variants of Comorian, along with a few other Bantu languages. They argue that the vowel harmony suffix evolved not from the *\*-ile* 'perfect' marker, but rather from an older and distinct *\*-e* marker (per Grégoire (1979):169). In a later form, they believe there existed an *\*-á-* past, referring to the far past, and a vowel harmony/zero past, which probably referred to a more recent past. In Comorian the *\*-á-* past was replaced, and the vowel harmony past was extended to cover all the pasts. In the negative, however, the *-a-* past remained, as it did in the form used in affirmative relative clauses. So what initially seems to be a quirk of the language (i.e., the fact that vowel harmony is used in the affirmative, whereas the *-a-* past tense marker occurs in the negative and in relative clauses) appears to have a historical explanation.

### **3.2.8 Verb types in Shimaore**

As is common in Bantu languages, Shimaore allows a high degree of what has traditionally been referred to as derivational morphology in the verbal complex. Many affixes are available for affixation to verbs, resulting in a variety of meaning changes. In

this section, I describe several of these affixes and the meaning changes that follow when they occur on the base verb. A more detailed description of a few of these constructions is given in chapter 5, particularly with respect to how vowel harmony is blocked in the presence of these affixes, but here I simply lay out the affixes that are available to effect meaning change on the verb. But let's begin with a discussion of how "non-derived" verbs look in Shimaore.

Base verbs<sup>67</sup> in Shimaore generally are of the form C(C)VC, followed by the final vowel *-a*, as exemplified by the verbs given in (171). This reflects the language's preference for CV syllables, as the final pronounced verb almost always involves CV syllables.

(171) Examples of base verbs in Shimaore

<b>Verb stem</b>	<b>Translation</b>	<b>Example</b>
-som-	'read'	<i>a-si-som-a</i> 'S/he is reading'
-rem-	'hit, beat'	<i>a-si-m-rem-a</i> 'S/he is hitting/beating him/her'
-tsah-	'want'	<i>a-si-tsah-a</i> 'S/he wants'
-hir-	'call'	<i>a-si-m-hira</i> 'S/he is calling him/her'

There are, of course, many exceptions to this general pattern, some of which are given in (172). See also chapter 4 for monosyllabic verbs.

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<sup>67</sup> I use the term "base verb" to refer to verbs that do not appear with one of the so-called "derivational" affixes.



(172) Common verbs not matching the CVC pattern

Verb stem	Translation	Example
-endr-	'go'	<i>a-s(i)-endr-a</i> 'S/he is going'
-ju-	'know'	<i>a-si-jua</i> 'S/he knows'
-ki-	'hear'	<i>a-si-ki-a</i> 'S/he hears'
-nunu-	'buy'	<i>a-si-nunu-a</i> 'S/he is buying'

The final vowel of verbs is *-a* for (almost all) verbs of Bantu origin, with verbs borrowed from other languages, mainly Arabic and French, retaining the vowel from their language of origin, as discussed above.

(173) Verbs borrowed from French and Arabic retain their final vowel

barger (or <i>barje</i> )	'take the ferry between Grande Terre and Petite Terre'	<i>a-tso-barje</i> 'S/he will take the ferry'
-fikiri	'think, believe'	<i>a-si-fikiri</i> 'S/he thinks'
-hasibu	'count'	<i>a-si-hasibu</i> 'S/he is counting'

The language has several affixes that can be used to increase (or in one case, decrease) the number of arguments that the verb can take. Some base verbs are intransitive, and the presence of a suffix adds an internal argument. Other base verbs are transitive, and the presence of a suffix adds another internal argument. A single verb might have several possible affixes (174).

(174) Derivational affixes applied to the verb *-som-a* 'read'

<i>som-a</i>	'read'
<i>som-e-a</i>	'read for'



b. u-mwana a- si- ham- w- a  
 1.DEF-1.child 3SG.SM- PRES.PROG nurse PASS FV  
 'The child is nursing (literally, 'being nursed')

(176) a. a- dzaa d̥ agoni  
 3SG.SM- give.birth at.home  
 'She gave birth at home.'

b. a- dza- lw- a d̥ agoni  
 3SG.SM- give.birth PASS FV at.home  
 'S/he was born at home.'

(177) a. mwana a-b̥ala mlango  
 1.child 3SG.SM-close.RETRO 3.door  
 'The child closed the door.'

b. mlango u-b̥al-w-a na mwana  
 3.door 3.SM-close-PASS-FV by 1.child  
 'The door was closed by the child.'

(Rombi 1983:136)

Vowel harmony indicating retrospective aspect (178a) is blocked in the presence of the passive morpheme (178b, c). See chapter 4 for further discussion of this blocking, which also occurs with all of the affixes discussed in this section.

(178) a.    tsi-lish-i                    i-        shahula            latabuni  
                  1SG.SM-leave-VH.RETRO    9.DEF    9.food                on.the.table  
                  'I left the food on the table.'

b.        i            shahula            i-lish-w-a  
                  7.DEF    7.food                7.SM-leave-PASS-FV  
                  'The food was left.'

(Rombi 1983:136)

c.        \*i            shahula            i-lish-w-i  
                  7.DEF    7.food                7.SM-leave-PASS-VH.RETRO

### 3.2.8.a.2 *Applicative*

The applicative construction allows the addition of another argument, to show that an action has been carried out on someone's behalf (i.e., benefactive) or to their detriment (i.e., malefactive). The applicative is formed with either *-e-* or *-i-*, depending on the height of the vowel in the verb stem. Verb stems containing *o* or *e* (mid-vowels) take *-e-* in the applicative (179), and verb stems containing *u*, *a* or *i* (high and low vowels) take *-i-* in the applicative (180).<sup>69</sup> In (179) I give the regular and applicative versions of the verb *-soma* 'read'.

(179) a.    Tsi-                    som-    o                    shio.  
                  1SG.SM-                read    VH.RETRO            book  
                  'I read a book.'

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<sup>69</sup> (180) contains the consonant *l* in the applicative affix because the bare verb ends in a vowel.

b. Tsi- m- som- e- a mwanangu shio.  
 1SG.SM- 3SG.OM read APPL FV my.child book  
 'I (have) read a book to my child.'  
 (R. 2005-03-10)

(180) Tsi- m- kutru- li- a mwananyangu mutrumshe nyama.  
 1SG.SM-3SG.OM cut APPL FV my sister meat  
 'I cut meat for my sister.'<sup>70</sup>  
 (R. 2005-03-10)

### 3.2.8.a.3 Causative

The causative construction introduces another argument, showing that someone was made to do something. It demonstrates the same sort of vowel matching as the applicative, in that verb stems containing the high or low vowels *u*, *a* and *i* take the affix *-(i)dz-* or *-(i)s-* (181), while the affixes surfaces as *-(e)dz-* or *-(e)s-* with verb stems containing the mid vowels *o* or *e*. There is no vowel in the causative affix in (182) because the vowel stem ends in a vowel. In causative constructions, the object of the verb is the patient of the causative predicate (Alsina 1992). In (181), I show the default and causative versions of the verb *-lila* 'cry'.

(181) a. u-mwanazaza a- lil- i  
 1.DEF-1.baby 3SG.SM- cry VH.RETRO  
 'The baby cried.'

<sup>70</sup> This sentence means that the meat was cut into two, and that half was given to the sister. A different verb is used for 'cut up'.

b. u-mwanamtsa a- lil- is- a umwanazaza  
 1.DEF-1.child 3SG.SM- cry CAUS FV 1.baby  
 'The child made the baby cry.'  
 (T. 2005-03-02)

(182) bab-a-ngu a-ko-ni-rongo-dz-a Shibushi.  
 1.father-my 3SG.SM-PST.HAB-1SG.OM-speak-CAUS-FV Shibushi  
 'My father made me speak ('taught me') Shibushi'  
 (Sa. 2005-03-23)

#### 3.2.8.a.4 *Stative or Neutral*<sup>71</sup>

This affix, *-ih-* or *-eh-*, again involving the same vowels in the verb stems, prevents the derived verb from taking an object. The result is that the object (e.g., patient) becomes subject (e.g., experiencer), as in (183).

(183) i-nyumba i- on- eh- a rangu vhanu  
 9.DEF-9.house 9.SM- see STAT FV since here  
 'The house is visible from here.'

#### 3.2.8.a.5 *Reversive*

The reversive form is relatively rare, and involves either an *-u-* or *-o-*, which apparently are sometimes incorporated directly into the verb stem, and sometimes appear after the verb stem, as in (184). The reversive affix does not have any effect on thematic

<sup>71</sup> Rombi (1983:141) refers to this form as the *moyen-neutre*.

relations.

- (184) a. ri- fung- u  
1PL.SM- tie- VH.RETRO  
'We tied.'
- b. ri- fung- u- a  
1PL.SM- tie REV FV  
'We broke the fast (at the end of the day during Ramadan).'

Certain combinations of derivational morphemes are possible. Here I give an example of the causative and the passive being used together, and one of the applicative and the passive being used together. Other combinations of affixes are possible, but a more thorough discussion of the possible combinations of derivational affixes is outside the scope of this dissertation.

### 3.2.8.a.6 *Causative + Passive*

The causative and passive affixes can be included together, as demonstrated in (185).

- (185) ri- ho- s- w- a ha nguvu na miḃa<sup>72</sup>  
1PL.SM- stick CAUS PASS FV hard with thorns  
'We were stuck hard with thorns.'  
(R. 2005-03-23)

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<sup>72</sup> Rombi (1983) has no attested cases of the passive and the causative being used together.

### 3.2.8.a.7 *Applicative + Passive*

The applicative affix and the passive affix can be used together, as in (186).

- (186) a- fany- i- w- a shahula.  
3SG.SM- make- APPL- PASS- FV food  
'He was made food.' (Food was made for him.)  
(Rombi 1983:143)

Let us now move on to a discussion of "infixable" verbs in Shimaore.

### 3.2.9 "Frozen" verbs

Shimaore allows a variety of verbs to be used in reduced form, as 'frozen verbs' in the verbal complex. These forms end in *-o*, which derives from the final vowel of the verb, *-a*, followed by the infinitival marker *-u* (or *wu-*), through a process of vowel coalescence. Some of these imply movement in carrying out the action, e.g., *-ondro-* (from *-endra* 'go') (187), *-jo-* (from *-ja* 'come') (188); *-heo-* (from *-hea* 'go up')<sup>73</sup>; *-ingio-* (from *-ingia* 'enter'); *-lawo-* (from *-lawa* 'go out').

- (187) Wa- k- **ondro-** fua.  
3PL.SM- PST.PROG- go-wash.up  
'They went to wash up.'  
(Rombi 1983:163)

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<sup>73</sup> It is not possible to use *\*-shuko-*, from the verb *-shuka* 'go down', as an infixed form. This might be because of the u-o vowel pattern, which, I have been told by two language consultants, 'doesn't feel very Shimaore'. This verb must be used in its full form.



- (188) Ni- si- jo- mw- ambi- a- ni...  
 1SG.SM- PRES.PROG- come- 2PL.OM- tell- FV- 2PL.OM  
 'I am coming to tell you (pl.)...'  
 (Rombi 1983:164)

Others imply a time connection, such as *-homo-* (from *-homa* 'be late') (189) or *-duburio-* (from *-duburia* 'be in a hurry') (190).

- (189) U- homo- koma hazi yaho.  
 2SG.SM- be.late- finish work your  
 'You were late finishing your work.'  
 (T. 2004-08-20)

- (190) Tsi- **duburio-** malidza hazi yangu  
 1SG.SM- hurry- finish work my  
 'I hurried to finish my work.'  
 (T. 2004-08-20)

It is always possible to use these in their full forms, so they are really just contracted forms. Certain combinations are also possible (191).

- (191) Ts-a-ka n-a-**ngia-ondro**-nunua karti ya SFR.  
 1SG.SM.NEG-PST-be 1SG.SM-PST-enter-go-buy 9.card 9.ASSOC SFR  
 'I didn't come in to buy an SFR card.'  
 (T. 2004-08-20)

This seems to be a step in the grammaticalization process of passing from a full verb to a tense marker. For example, the tense marker *-tso-* is derived from the verb *-tsaha* and also involves the vowel coalescence of the final vowel *-a* of the verb *-tsaha* coalescing with the initial *u-* of the infinitival form. Similarly, the past progressive marker *-ko-* is derived from the infinitive of the copula *uka*.

### 3.2.10 Copula constructions

There are three copulas in Shimaore, *-a*, *De* and *-ka*, which I will now introduce.

#### 3.2.10.a *-a*

The copula *-a* displays agreement with the subject and can be used only in the present, without any overt tense marking. It often has a meaning of "becoming" (Rombi 1983:179). In (192-195), I give a few examples of the *-a* copula, which occurs with subject agreement to its left.<sup>74</sup> In the first-person singular, it takes the *tʃi-<sub>PST</sub>* subject marker (194).

(192)	ʃaʃangu	a-a (a)	Dagoni
	my.father	3SG.SM-be	home
	'My father is home.'		

(193)	z-a	havhi	kaʃwa	zangu?
	10.SM-be	where	10.shoes	10-my
	'Where are my shoes?'			

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<sup>74</sup> (192-194) come from Rombi (1983:179-80).

(194) ts-a                    vanu  
 1SG.SM-be                here  
 'I am from here.'

(195) yw-a                mi-nadzi                    me-ngi                    tu  
 16.SM-be                4-coconut.tree            4.AGR-many            just  
 'there are many coconut trees'  
 (R. 2005-03-23)

The negative equivalents of copular constructions using *-a* involve a negative marker *ka-* followed by the subject agreement marker, followed by a second negation marker, *-si* (196-197).

(196) ka-a-si                    d̥ agoni  
 NEG-3SG.SM-NEG            home  
 'He isn't home.'

(197) ka-yu-si<sup>75</sup>                mutru  
 NEG-16.SM-NEG            person  
 'There isn't anyone.'  
 (Rombi 1983:181)

In the first-person singular, we find *tsi-neg*, which contains both person and number information and negation. (See chapter 5 for more discussion of first-person singular

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<sup>75</sup> The form *kayu* is much more common for 'there is no...'. It is possible that *kayu* was actually borrowed from Makua, which has a similar word. See chapter 1.

agreement.)

- (198) tsi-si           ɖ agoni  
1SG.SM.NEG-NEG home  
'I am not home.'

### 3.2.10.b ɖe

The copula ɖe is generally optional, it displays no agreement with its subject, and it is available only with a present tense interpretation. Like -a, it is available for interpretations involving possession (199) and location (200). It is also used in relative clauses (201), wh-questions (202) and focus constructions (203-204).

- (199) nyumba           inu   (ɖe)   yangu  
9.house           9.DEM (COP) 9.my  
'This house is mine.'

- (200) mazhuzhu       ɖe   inyuma       mwa   i-nyumba  
trash.pile       COP   behind       of   9.DEF-house'  
'The trash pile is behind the house.'

- (201) paha   ɖe   y-a-la                   i-tsohole  
9.cat   COP   9.SM-PST-eat           9.DEF-rice  
'It's the cat that ate the rice.'

(202) mbani *ɗe* a-ni-hira-o?  
 who COP 3SG.SM-1SG.OM-call-RM  
 'Who is calling me?'

(203) ni-si-tsaha *ɗe* ile  
 1SG.SM-PRES.PROG-want COP that  
 'I want that (and not something else)'

(204) *ɗe* r-a-mo-angalia mindru yatru  
 COP 1PL.SM-IRREAL-MD.POSS-see 4.feet 4.our  
 'It's then that we saw our feet.' (or 'That's when we saw our feet.'  
 (R. 2005-03-23)

The negative of the *ɗe* copula is *tsiɗe* or just *tsi*.

(205) a. *tsiɗe* hatru  
 COP.NEG our.house  
 'This isn't our house.'

b. gari lini *tsi* langu  
 5.car 5.this COP.NEG 5.my  
 'This car isn't mine.'  
 (Rombi 1983:179)

### 3.2.10.c -ka

The copula *-ka* is a full verb, available in all tenses and aspects, except the present,

where *d*e and *-a* prevail. It is a regular verb, in the sense that it follows regular rules for displaying tense and aspect. However, for vowel harmony, it contains no vowel with which the final vowel can harmonize, so it has an "irregular" vowel harmony retrospective aspect form (206a). In (206), I give *-ka* in its various temporal and aspectual forms. In (207), I give the negated versions of the sentences in (206).

- |          |                        |                |
|----------|------------------------|----------------|
| (206) a. | ri-ka                  | <i>d</i> agoni |
|          | 1PL.SM-be.RETRO        | home           |
|          | 'We were home.'        |                |
| b.       | ri-tso-ka              | <i>d</i> agoni |
|          | 1PL.SM-FUT-be          | home           |
|          | 'We will be home.'     |                |
| c.       | r-a-tso-ka             | <i>d</i> agoni |
|          | 1PL.SM-PST-FUT-be      | home           |
|          | 'We would be home.'    |                |
| (207) a. | ka-r-a-ka              | <i>d</i> agoni |
|          | NEG-1PL.SM-PST-be      | home           |
|          | 'We were not home.'    |                |
| b.       | ka-ri-tso-ka           | <i>d</i> agoni |
|          | NEG-1PL.SM-FUT-be      | home           |
|          | 'We will not be home.' |                |

- c. ka-r-a-tso-ka                      dʒagoni  
 NEG-1PL.SM-PST-FUT-be      home  
 'We would not be home.'

In (208), I show the distribution of the three copulas with respect to subject marking, present-tense interpretation, displaying of tense/aspect, form of the negative, and occurrence in relative clauses, wh-questions and focus constructions.

(208) Three Shimaore copulas

	Subject marking	Present interpretation	Tense/Aspect displayed	Negation	Rel. Clauses, wh-questions, focus
-a	X	X		ka-SM-si	
dʒe		X		tsidʒe	X
-ka	X		X	ka-SM-ka	

### 3.3 The Shimaore sentence

#### 3.3.1 Word order

Like most other Bantu languages, Shimaore is a language with the word order subject-verb-object (SVO). The examples in (209-211) demonstrate this SVO order.

- (209) kula      mutru                      a-su-pashia                      laka  
 each    1.person                      3SG.SM-PRES.PROG-take      pirogue  
 'Everyone took his/her pirogue boat'  
 (Literally, 'Everyone is taking his/her pirogue boat.')
- (Soilihi & Blanchy 1991:28)

(210) sinema            ile        i-rongoa                            zitrongo            zile  
           9.cinema            9.DEM 9.SM-tell.RETRO                            10.things            10.DEM  
 'The movie talked about these things.'  
 (French translation given: 'Le cinéma parla et raconta tout.'  
 (Blanchy et al. 1993:95)

(211) watru                    ka-wa-su-latsa    tsena    zitru  
           2.people                    NEG-3PL.SA-PRES.PROG-throw.away    still    10.things  
 'People don't throw anything away anymore.'  
 (Rombi 1983:192)

(212a-c) involve simple verbs, whereas (212d) is formed with a complex verb, because the applicative morpheme *-e-* is suffixed to it, with the verb having an additional object argument, reflected in the verb as *-m-*, referring to *mnyahe* 'his friend'. Unlike other Bantu languages such as Swahili, which requires the indirect object to be adjacent to the verb, (212c) demonstrates that the direct object can be adjacent to the verb, with the indirect object being farther out.

(212) a.        Wa-truBaBa    wa-fany-a            hazi    malavuni.  
                   2-man    3PL.SM-do-RETRO    work    in.the.country  
 'The men worked in the country.'  
 (Cornice 1999:27)

b.        Tsi-m-ba    fundi    shio.  
                   1SG.SM-3SG.OM-give.RETRO    teacher book  
 'I gave the teacher a book.'



- c. Tsi-m-ba shio fundi.  
 1SG.SM-3SG.OM-give.RETRO book teacher  
 'I gave the teacher a book.'
- d. Mohamadi a-su-m-som-e-a mnyahe shio.  
 M. 3SG.SM-PRES-3SG.OM-read-APPL-FV his.friend book  
 'Mohamadi is reading a book to/for his friend.'  
 (adapted from Cornice 1999:71)
- e. A-m-ba-yo.  
 3SG.SM-3SG.OM-give.RETRO-9.OM  
 'S/he gave it to him/her.'  
 (Cornice 1999:61)

### 3.3.2 Simple declaratives

(213a – e) are examples of Shimaore simple declarative sentences. (213a) is formed from an intransitive predicate; (213b) from a transitive predicate; (213c) and (213d) from ditransitive predicates; and (213e) from a complex predicate.

- (213) a. W-ana wa-si-hima.  
 2-child 3PL.SM-PRES.PROG-get.up  
 'The children are getting up.'  
 (Cornice 1999:14)

- b. Ri-si-karibisha                      u-wadjeni.  
 1PL.SM-PRES.PROG-welcome      2.DEF-guests  
 'We are welcoming the guests.'  
 (Cornice 1999:14)
- c. Tsi-m-ba                                  fundi shio.  
 1SG.SM-3SG.OM-give.RETRO      teacher book  
 'I gave the teacher a book.'
- d. Tsi-m-ba                                  shio fundi.  
 1SG.SM-3SG.OM-give.RETRO      book teacher  
 'I gave the teacher a book.'
- e. Mohamadi      a-su-m-som-e-a  
 M.                      3SG.SM-PRES.PROG-3SG.OM-read-APPL-FV  
  
 mnyahe              shio.  
 his.friend              Cl.7.book  
  
 'Mohamadi is reading a book to/for his friend.'  
 (adapted from Cornice 1999:71)

### 3.3.3 Fronting and post-posing

Subjects can be post-posed (214), and object NP's can be fronted (215), with a focused interpretation.

(214) A-ja                                    a-baki                                    vale    **mwanamtsa**    **ule**  
 3SG.SM-come.RETRO    3SG.SM-stay.RETRO    there    1.child                    1.DEM  
 'She went and stayed there, that child.'  
 (Soilihi & Blanchy 1991:58)

(215) **zitru**                                    **zile**                                    pia    a-zi-lats-a                                    vale  
 10.things                    10.DEM                                    all    3SG.SM-10.OM-throw.away                    there  
 'all those things, she threw them away there'  
 (Blanchy et al. 1993:73)

### 3.3.4 Passives

The passive morpheme *-(l)w-* can be used to passivize both direct (216) and indirect objects (217).<sup>76</sup>

(216) A-rem-w-a                                    na    **ba**bahe.  
 3SG.SA-hit-PASS-FV                                    by    his/her.father  
 'S/he was beaten by his/her father.'  
 (Rombi 1983:136)

(217) Wa-vo-lw-a                                    zahula                                    z-awo.  
 3PL.SM-give-PASS-FV                                    10.food                                    10-their  
 'They were given their food.'  
 (Rombi 1983: 136)

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<sup>76</sup> Also see chapter 4 for a discussion of passives.

As in Swahili, when the sentence contains both an indirect object and a direct object, only the indirect object can be passivized.

- (218) \*I-marike                      i-ni-vo-lw-a                      na                      mayangyu.  
9.DEF-money                      9.SM-1SG.OM-give-PASS-FV                      by                      my.mother  
'The money was given to me by my mother.'

### 3.3.5 Imperatives

Second-person singular imperatives are formed using simply the bare stem of the verb (219).

- (219) a.        Zina!                      (uzina = to dance)  
                  'Dance!'  
  
                  b.        Lisha!                      (ulisha = to let go)  
                  Let go!

First- and second-person plural imperatives are formed using the subjunctive (220-221).

- (220) Na-ri-fany-e                      hazi!  
                  and-1PL.SM-do-IRREAL                      work  
'Let's work!'

- (221) Na-mu-reng-e                    i-nyama!  
 and-2PL.SM-take-IRREAL    9.DEF-9.meat  
 'Take the meat!'  
 (Rombi 1983:158)

Negative imperatives are all formed using the negative subjunctive (222-223).

- (222) U-si-lil-e!  
 1SG.SM-NEG-cry-IRREAL  
 'Don't cry!'  
 (Rombi 1983:160)

- (223) Mu-si-m-rem-e!  
 2PL.SM-NEG-3SG.OM-hit-IRREAL  
 'Don't (you all) hit him/her!'  
 (adapted from Cornice 1999:6)

### 3.3.6 Complex sentences

Finite subordinate clauses are introduced by the complementizer *amba* 'that', and word order in the finite subordinate clause is also SVO<sup>77</sup> (224).

- (224) Fatou a-ko-fikiri                    **amba** Sufati a-ka  
 Fatou 3SG.SM-PST.PROG-think    that    Sufati 3SG.SM-be.RETRO

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<sup>77</sup> The complementizer *amba* 'that' derives from a verb meaning 'say', which we can see in the applicative form of the verb, *-amb-i-a* 'tell'. This is also the case for the Swahili complementizer *kwamba*.

a-mw-ambi-a	<b>amba</b>	u-wana	madza	wa-ka
3SG.SM-3SG.OM-tell-FV	that	2.-children	already	3PL.SM-be.RETRO
wa-som-o		i-shio.		
3PL.SM-read-VH.RETRO		7.DEF-7.book		

'Fatou thought that Sufati had told her that the children had already read the book.'

(Su., Spring 2000)

Non-finite subordinate clauses, on the other hand, do not involve the complementizer *amba*. The verb in the subordinate clause occurs in the subjunctive form (225), with the final vowel *-e* irrealis marker instead of the default *-a*. Negative verbs also contain the negation marker *-si-* (226), rather than the negation marker *ka-*, which occurs in finite clauses (227).

(225)	mayangu	a-ni-ambia	ni-zin-e
	my.mother	3SG.SM-1SG.OM-tell.RETRO	1SG.SM-dance-IRREAL

'My mother told me to dance.'

(226)	mayangu	a-ni-ambia	ni-si-zin-e
	my.mother	3SG.SM-1SG.OM-tell.RETRO	1SG.SM-NEG-dance-IRREAL

'My mother told me not to dance.'

(227)	ka-ri-tso-zina
	NEG-1PL.SM-FUT-dance

'We will not dance.'

### 3.3.7 Negation

Negative voice constructions in Shimaore are formed by using the negative marker *ka-* in main clauses.

(228) Ka-wa-su-jua.

NEG-3PL.SM-PRES.PROG-know

'They do not know.'

Negation involving *ka-* can also change the meaning of certain words or affixes, e.g. *-paro-* 'already, never' (229), *mutru* 'person, someone, no one' (230), and *tsena* 'still, no longer' (231).

(229) a.     r-a-**paro**-nunua                   trovi  
                  1PL.SM-PST-ANTER-buy           green.bananas  
                  'We have (already) bought green bananas.'

          b.     **ka-r-a-para**-nunua               trovi  
                  NEG-1PL.SM-PST-ANTER-buy       green.bananas  
                  'We have never bought green bananas.'

(Rombi 1983:163)

(230) a.     ywa               **mutru**  
                  there.is            person  
                  'There is someone (there).'

b.     **ka-vu**            **mutru**  
           there.is.not     person  
           'There is no one (there).'

(231) a.     a-tso-regea                    **tsena**  
               3SG.SM-FUT-come.back   again  
               'S/he will come back again.'

b.     **ka-a-tso-regea**                    **tsena**  
           NEG-3SG.SM-FUT-come.back    again  
           'S/he will never come back again ('will come back no more').'  
           (Rombi 1983:166)

In relative clauses with negation, no relative morphology is used, so the verb form is identical to what it would be in a main clause.

(232) gini                    ka-l-a-la...  
        5.genie                NEG-5.SM-PST-eat  
        'the genie (that) hasn't eaten...'

As in Swahili, negation involving first-person singular subjects acts differently. In both Swahili and Shimaore, the regular first-person singular subject marker *ni-* cannot be used in conjunction with the negative marker, *ha-* in Swahili and *ka-* in Shimaore, to form a negative.





- (235) Wawe ɔe u-jua-o.  
 you COP 2SG.SM-know-RM  
 'You are the one who knows.' ('You know best.')

In the past tense, an *-a-* past tense marker occurs in the regular position for tense markers (unlike the non-relative clause form of the past, which is realized through vowel harmony), and there is no relative marker. It is necessary to have a subject that is not a third-person human subject (236) in order to see this *-a-* marker, which otherwise is conflated with the subject marker *a-* (237).

- (236) Wami ɔe n-a-fanya hazi leo.  
 I COP 1SG.SM-PST-do work today  
 'I'm the one who worked today.'  
 (T. 2005-01-26)

- (237) Mayangu ɔe a-(a)-sona nguoyangu.  
 my.mother COP 3SG.SM-PST-sew 9.clothing 9.my  
 'It's my mother who sewed my clothes.'  
 (T. 2005-01-26)

In negative relative clauses, there is no relative marking on the verb.

- (238) Wawe ɔe k-w-a-ndra likoli leo.  
 you COP NEG-2SG.SM-PST-go school today  
 'You're the one who didn't go to school today.'

### 3.3.9 Interrogatives

#### 3.3.9.a Yes/No questions

Yes/No questions (239b) involve the same sentence structure as declaratives (239a).

Intonation indicates that the speaker is asking a question.

- (239) a. Mutruḃaḃa    ule    u-hir-iw-a    Soulé.  
          1.man            1.DEM    HAB-CALL-PASS-FV    Soulé  
          'That man is called Soulé.'
- b. Mutruḃaḃa    ule    uhiriwa    Soulé?  
          1.man            1.DEM    HAB-CALL-PASS-FV    Soulé  
          'Is that man's name Soulé?'

#### 3.3.9.b Question word interrogatives

The following are the question words of Shimaore:

'who'	mbani
'what'	(shitru) trini
'when'	lini
'where'	havhi
'why'	mana trini
'how'	-jeje / namna trini

For object questions, *in situ* constructions (240-242 ) or relative constructions (243 - 244) are used.

(240) Mohamadi a-m-rem-e **mbani?**

Mohamadi 3SG.SM-3SG.OM-hit-VH.RETRO who

'Who did Mohamadi hit?'

(241) U-tsaha **trini?**

2SG.SM-want what

'What do you want?'

(Cornice 1999:41)

(242) U-su-soma **shio trini?**

2SG.SM-PRES.PROG-read book what

'Which book are you reading?'

(T. 2005-02-09)

(243) **Shio trini** (ɗe) u-soma-o?

book which (COP) 2SG.SM-read-RM

'Which book are you reading?'

(T. 2005-02-09)

(244) **Mbani** ɗe Mohamadi a-rema-o?

who COP Mohamadi 3SG.SM-hit-RM

'Who did Mohamadi hit?'

For subject questions, a relative construction is used (245, 246).



pointing out the "lack of correspondences" between affirmative and negative forms of the various verbal forms, and analyzing each formative as being temporal, aspectual, or modal in nature. I have also given a description of the three copular construction types and discussed issues around the Shimaore sentence, including word order, simple declaratives, fronting, post-posing, passives, imperatives, complex sentences, negation, focus/clefting and question formation.

In the next chapter, we will examine the verbal functional projections of Shimaore in light of similar work on other languages, mainly by Cinque (1999) and Julien (2002).

## **CHAPTER 4: VERBAL FUNCTIONAL PROJECTIONS IN SHIMAORE**

### **4.1 Introduction**

Like other Bantu languages, Shimaore has a large number of elements that belong to the verbal complex, many of them residing in the inflectional layer. I am focusing on the inflectional layer in this chapter, rather than the lexical layer, which gives an overview of many of these affixes and situates them within the context of the universal ordering of functional projections proposed by Cinque (1999). The chapter is structured as follows: Section 4.3 gives an overview of Cinque's (1999) hierarchy for functional heads, followed by a discussion of Julien's (2002) work on word formation crosslinguistically in section 4.3. Section 4.4 gives analyses for several common verbal affixes in Shimaore, followed by in section 4.2. Section 4.4 is an ordering of Shimaore verbal functional heads compared to Cinque's hierarchy and Julien's framework, with a particular focus on vowel harmony in affirmative and negative clauses, and including a sub-section on problematic morphemes that do not fit nicely into the frameworks proposed by Cinque and Julien. Conclusions for this chapter are given in section 4.5.

### **4.2 Cinque (1999)**

Chapter 3 of Cinque (1999) argues that functional heads come in a strict order, crosslinguistically, drawing on data from a wide variety of languages and language

families, and building on work by Baker (1988), Pollock (1989), Belletti (1990), Chomsky (1995) and others. This section will give an overview of Cinque's chapter 3, giving evidence from agglutinating languages, inflectional languages, and mixed systems, and touch on issues raised in other parts of the book that deal with the ordering of functional projections.

#### 4.2.1 Evidence from agglutinating languages

Ignoring negation and agreement, which seem to occur in a variety of places, Cinque first introduces data from languages with agglutinative morphology, such as Korean, to demonstrate the order that is found in these languages. Examples in (248) - (251) are used to develop the relative order of functional heads given in (252).

(248) Evidence for ordering: Mood<sub>speechact</sub> > Mood<sub>evaluative</sub> > Mood<sub>evidential</sub> > Modality > T(Past) > T(Anterior) > Voice (> V)

a. Ku pwun-i cap-hi-si-ess-ess-keyss-sup-ti-kka?  
 the person-NOM catch-PASS-AGR-ANT-PST-EPISTEM-AGR-EVID-Q  
 'Did you feel that he had been caught?'

(Korean: Cinque 1999:53)

b. Ku say-ka cwuk-ess-keyss-kwun-a!  
 that bird-NOM die-ANT-EPISTEM-EVALUAT-DECL  
 'That bird must have died!'

(Korean: Cinque 1999:53, originally from Sohn 1994:354)



(249) Evidence for ordering: Mod<sub>EPISTEMIC</sub> > T(absolute) > Mod<sub>ROOT</sub>

a. Er bin-kwan-de-darib.

she go-FUT-3SG-PROBAB

'She might go.'

(Una: Cinque 1999:55, originally from Louwrese 1988:55)

b. Ni buk-ti-nyi.

I sit-ABIL-PRES

'I can sit.'

(Una: Cinque 1999:55, originally from Louwrese 1988:25)

(250) Evidence for ordering: Aspect<sub>perfect</sub> > Aspect<sub>completive</sub>

Ta zuotian xie-wan-le yifeng xin.

he yesterday write-COMPL- PERF- a letter

'He wrote a letter (to the end).'

(Chinese: Cinque 1999:55, originally from Smith 1987:96ff)

(251) Evidence for ordering: Mood<sub>evidential</sub> > Tense

a. John Türkiye-ye gid-ecek-mjs.

J. Turkey-to go-FUT-EVID

'Reportedly, John will go to Turkey.'

(Turkish: Cinque 1999:56, originally from Yavaş 1980:41)

b. Yağmuryağ-acak-miş.

rain[NOUN] rain[VERB]-FUT-QUOTATIVE-EVID

'It is reported that it will rain.'

(Turkish: Cinque 1999:56, originally from Aksu-Koç & Slobin 1986:161)

Based on these and a few other examples, Cinque develops the following overall relative ordering of verbal affixes (252).

(252) V-voice / completive aspect / progressive aspect-perfect aspect-anterior tense / habitual aspect / root modality-grammatical mood-future tense-past tense-epistemic modality-evidential mood-evaluative mood-speech act mood

He takes this as evidence, under the Mirror Principle, for the following relative order of functional heads (253).

(253) Mood<sub>speechact</sub> > Mood<sub>evaluative</sub> > Mood<sub>evidential</sub> > Mod<sub>EPISTEMIC</sub> > T(Past) > T(Future) > Mood<sub>(ir)realis</sub>  
> Mod<sub>root</sub> / Aspect<sub>habitual</sub> / T(Anterior) > Aspect<sub>perfect</sub> > Aspect<sub>progressive</sub> / Aspect<sub>completive</sub> / Voice  
> V

#### 4.2.2 Evidence from inflectional languages

In "head-initial" inflectional languages<sup>79</sup>, we don't typically find more than one suffix per word, so when there is more than one suffix in a sentence, "more verbs are needed to

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<sup>79</sup> I use the terms "head-initial" and "head-final" to describe languages which have traditionally been categorized in such a way. This does not imply an acceptance of such categorizations.

'bear' them" (Cinque 1999:57). In "head-initial" languages, where successive leftward movements of lower portions of the clause are not possible, if we find a sequence of verbs and functional suffixes, we can take this to be direct evidence for the relative order of the corresponding functional heads (Cinque 1999:57). Thus, sentences such as the English example (254) give us evidence for the ordering of functional heads in (255), which does not contradict the ordering proposed in (253).

(254) These books *have been being read* all year.

(255) Tense > Aspect<sub>perfect</sub> > Aspect<sub>progressive</sub> > Voice (> V)

"Head-final" inflectional languages such as Hindi give evidence of a mirror image, as in (256).

(256) a.      Kis-ko raam-ne socaa            ki        siitaa-ne            dekhaa thaa.  
                  who    Raam    thought        that    Sita                    see-ANT be.PST  
                  'Who did Raam think that Sita had seen?'

b.      Raam roTii khaataa            rahtaa thaa.  
                  Raam bread eat                    PROG    be.PST  
                  'Raam used to keep on eating bread.'

(Hindi: Cinque 1999:57, originally from Mahajan 1990:39, 78)

### 4.2.3 Evidence from the order of functional particles

Creole languages characteristically display all their functional particles before the

verb, and thus give us a good opportunity to observe the order of free functional morphemes, or particles. The ordering of these particles has been observed to be T(ense)-M(ood/odal)-A(spect). However, a closer look reveals more subtleties, and some languages appear to have the order Modal > Tense, rather than Tense > Modal. Examples from Guyanese Creole, including (257) and (258), lead Cinque to posit (259) as the ordering of functional heads.

(257) T(Past) > T(Future)

Jaan bin gu riid.

John PST FUT read

'John would have read.'

(Guyanese Creole: Cinque 1999:59, originally from Gibson (1986):585)

(258) Mod<sub>EPISTEMIC</sub> > T(Past)

Jaan shuda bin kyaan get fu gu.

John MOD EPISTEMIC PST MOD<sub>r</sub> MOD<sub>r</sub> go

'John should not have been able to be allowed to go.'

(Guyanese Creole: Cinque 1999:59, originally from Gibson (1986):585)

(259) Mod<sub>EPISTEMIC</sub> > T(Past) > T(Future) > Asp<sub>habitual</sub> / T(Anterior) > Asp<sub>durative</sub> > Asp<sub>progressive</sub> > V

Cinque also draws on other creole languages, namely Sranan and Haitian Creole, as evidence for the sequence of functional heads given in (259). The main difference between (259) and (261) is the presence of Asp<sub>retrospective</sub>.

(260) Jan te toujou te ap rakonte yon istwa  
 J. PST always ANT PROG tell a story  
 'J. had always been telling a story.'

(Haitian Creole: Cinque 1999:61, originally from Leblanc 1989)

(261) Mod<sub>EPISTEMIC</sub> > T(Past) > T(Future) > Asp<sub>habitual</sub> / T(Anterior) > Asp<sub>retrospective</sub> > Asp<sub>durative</sub> >  
 Asp<sub>progressive</sub> > (V)

The West African language, Gungbe, provides evidence (in Cinque's (52), among others) for the sequence of functional heads given in (262), which is consistent with the orderings given already.

(262) Mood<sub>speech act</sub> (> NEG) > T(Future) > Asp<sub>habitual</sub> > Asp<sub>progressive</sub> > Asp<sub>prospective</sub> (> V)

Data from various Tibeto-Burman languages (e.g., Kachi, Mizo), the Australian language Maranungku, the Sanio-Hiowe language of New Guinea, and Basque, all of which are "head-final", appear to display a mirror image of what is seen in the "head-initial" languages above. This is more evidence for the sequences already given.

#### 4.2.4 Evidence from mixed cases

If there is a fixed hierarchy of functional heads, we would expect there to be limits on the combinations of free and bound morphemes that are possible. Cinque thus explores cases in which particles or auxiliaries co-occur with bound functional morphemes. Welsh

gives us evidence that Tense/Mood is above (perfect) aspect, which is then higher than the main verb, because the particle in  $Asp_{\text{perfect}}$ , *wedi*, prevents the main verb from raising to Tense/Mood, and an auxiliary is inserted which bears the Tense/Mood suffix. This is seen in the word *bydda* in (263b), as opposed to (263a), in which the Tense/Mood suffix appears on the verb *cana* 'sing'.

- (263) a.      *Cana*            *i*            *yfory*.  
                  sing-FUT-1SG    I            tomorrow  
                  'I will sing tomorrow.'
- b.      *Bydda*            *i*            *wedi*    *canu*    *rbyn*    *saith*    *o'r*    *gloch*.  
                  be-FUT-1SG    I            PERF    sing    by        seven    o'clock  
                  'I will have sung by seven o'clock.'
- (Welsh: Borrowed from Cinque 1999:66,  
 originally from Hendrick 1991:172-3)

When another aspectual marker, the progressive marker *yn*, co-occurs with *wedi*, the progressive marker precedes the perfective marker, giving evidence for the ordering given in (264).

- (264) Evidence for ordering: T/Mood >  $Asp_{\text{perfect}}$  >  $Asp_{\text{progressive}}$  > V
- Oedd*    *y*            *bachgen*            *wedi*    *bon*    *yn*            *ymlad*.  
                  be-PST    the        boy                    PERF    be        PROG    fight  
                  'The boy had been fighting.'
- (Welsh: Borrowed from Cinque 1999:67, originally from Hendrick 1991:173)

Cinque illustrates similar phenomena in Korean and Turkish.

#### 4.2.5 Prefixes, Derivation and Inflection

In his section entitled "Some remarks on prefixes, derivation and inflection" (section 3.5), Cinque raises problems for the Mirror Principle that arise from Athapaskan languages and some Bantu languages. I will focus on the Bantu issues here. The problem is that the surface ordering of tense and aspect prefixes appears to directly reflect the order of the functional heads, i.e., Agreement is to the left of Tense, which is to the left of Aspect. This makes an incorporation analysis appear implausible. An analysis that seems to make more sense is to treat the elements in question as free morphemes, or particles, separate from the verb, that cliticize on the verb. In fact, some Bantu languages have these elements cliticized onto something besides the verb, as in Nɔmaándɛ (265).

(265) Tu-ti-ké-búl-asɔ<sup>80</sup> fána.

IPL-NEG-FUT-HAB-IPL read

'We will not have the habit of reading (from tomorrow).'

(Nɔmaándɛ: Borrowed from Cinque 1999:70, originally from Wilkendorf 1991:143)

In this example, we see negation, future tense, and a habitual marker all affixed to two affixes that indicate a first-person plural subject. It is not clear how the affixes would have incorporated into the agreement morphemes, and so an analysis of these affixes as clitics appears to make more sense.

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<sup>80</sup> There should be a high tone mark on the final vowel of the first word in this example.

#### 4.2.6 Cinque's proposed universal hierarchy of functional projections

Based on the data given above, along with his chapter on adverbs and their positions, Cinque gives the universal hierarchy of functional projections (p.106)<sup>81</sup> in (266).<sup>82</sup> I have bolded the projections that seem to be relevant for Shimaore verbal projections.

- (266) Mood<sub>speech act</sub> > Mood<sub>evaluative</sub> > Mood<sub>evidential</sub> > Mod<sub>epistemic</sub> > **T(Past)** > **T(Future)** >  
    **Mood<sub>irrealis</sub>** > Mod<sub>necessity</sub> > **Mod<sub>possibility</sub>** > **Asp<sub>habitual</sub>** > Asp<sub>repetitive(I)</sub> > Asp<sub>frequentive(I)</sub> >  
    Mod<sub>volitional</sub> > Asp<sub>celerative(I)</sub> > **T(Anterior)** > Asp<sub>terminative</sub> > Asp<sub>continuative</sub> > Asp<sub>perfect(?)</sub> >  
    **Asp<sub>retrospective</sub>** > Asp<sub>proximative</sub> > Asp<sub>durative</sub> > **Asp<sub>generic/progressive</sub>** > Asp<sub>prospective</sub> > Asp<sub>SgCompletive(I)</sub> >  
    Asp<sub>PlCompletive</sub> > Voice > Asp<sub>celerative(II)</sub> > Asp<sub>repetitive(II)</sub> > Asp<sub>frequentive(II)</sub> > Asp<sub>SgCompletive(II)</sub>

#### 4.3 Julien (2002)

Julien (2002) differs from Cinque (1999) in some ways, including her argument that there is some crosslinguistic variation in the position of various grammatical markers within the clause structure. Like Cinque, her work draws on data from a large number

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81 I have left out the adverbs in this version of the hierarchy, as what interests us in Shimaore is the ordering of functional heads.

82 Grimshaw (2005) argues against selection in favor of projection when examining Cinque's hierarchy. For example, if Asp<sub>retrospective</sub> is optional in a given language, then Asp<sub>perfect</sub> has to have Asp<sub>proximative</sub> as a projection that it selects for. And what if Asp<sub>proximative</sub> is optional? Then it must add Asp<sub>durative</sub> as a selectional possibility. According to Grimshaw, there is no way to account for the optionality of heads in a non-random way under selection. Instead, Grimshaw argues for an approach in which each head has an F-value determined by its position in the universal hierarchy. A head higher in the hierarchy (i.e., with a higher F-value) would always c-command a lower head (i.e., a head with a lower F-value). In this way, the structural organization of combinations of functional heads follows, regardless of how many of the potential functional heads occur in the structure. For Grimshaw, this does away with the randomness that she associates with Cinque's hierarchy.



(530) of languages and seeks to reach conclusions about how syntax works, crosslinguistically.

Julien views syntactic heads as being central to word formation. For Julien, grammatical markers that appear after the verbal root result from the movement of heads and phrases, whereas grammatical markers that appear before the verbal root are the consequence of no movement.

As Julien states, her theory makes two main predictions. First, if she is correct, morpheme order in sequences of preposed markers should be the converse of that found in sequences of post-posed markers. And second, if a root has both preposed and postposed markers, the preposed ones should represent heads in relatively high positions, and postposed ones should represent relatively low heads. This is because the verb root must have moved past the heads realized as postposed, but not as high as preposed markers.

Julien (2002:192-201) gives a fairly extensive application of her theory to the facts found in Shona (Bantu), drawing on work by Myers (1990). She argues that the subject agreement, tense and aspect markers occurring before the verb stem in Bantu languages are simply heads spelled out in their base-generated order. For example, in the Chibemba example (267), the first three grammatical markers show the underlying order of these three morphemes in the syntax.

(267) *Chibemba*

n-kà-láá-boomba

1S-FUT-PROG-work

'I'll be working tomorrow.'

(Julien 2002: 192; originally from Givón 1972)

While verbal complexes such as that in (267) are traditionally taken to be words in the Bantuist tradition, Julien follows Myers (1990) in analyzing them as simply phonological units, rather than syntactic or morphological constituents. For instance, in the Shona example (268), the verbal stem *téngésá* is analyzed as a constituent, contained within one complex head, formed by successive head movement. Evidence for this analysis comes from the fact that in reduplication (269b), it is *tengesa* that gets copied, rather than the entire verbal complex, or some other part thereof.

(268) á-cha-rí-téng-és-á

3SG.SA-FUT-3S.OBJ-buy-CAUS-FV

'S/he will sell it.'

(Shona: Julien 2002:195; originally from Myers 1990:27)

(269) a. ku-téng-és-á

INF-buy-CAUS-FV

'to sell'

- b. ku-téng-és-á-tengesa  
 INF-buy-CAUS-FV-REDUP  
 'to go all around selling'

(Julien 2002:195, originally from Myers 1990:30)

Julien (p. 229) points out that Cinque (1999) has grammatical mood (realis/irrealis or subjunctive/indicative) encoded in the head immediately below T(Future), based mostly on the examples given in (270) and (271), cited in Cinque (1999:73).

(270) *Ndyuka*

I	ben	o	sa	poi	(fu)	nyan	ete?
2s	PST	FUT	IRR	can	for	eat	yet

'Would you have been able to eat already?'

(Originally from Huttar & Huttar 1994:519)

(271) *Kammu*

Cə'ə	pə'	pɪ	'an	pə	màh
IRR	NEG	can	eat	food	

'(I) will not be able to eat anything.'

(Originally from Svantesson (1994):268)

For Julien, however, the final vowel in Shona is a marker of grammatical mood, and she has it below the habitual aspect marker and various modals. (Additional evidence for this ordering comes from Jacalteco. See discussion in Julien 2002:229-30.) Julien also draws on data from languages such as Yagua, which seem to have the irrealis marker

located higher than the tense marker in their structures. For Julien, there is at least some crosslinguistic variation in the position of the various grammatical markers, as opposed to Cinque, who proposed that there is a strict crosslinguistic hierarchy for grammatical markers.

Let us now turn to how Cinque's and Julien's theories can be applied to Shimaore.

#### **4.4 Verbal functional projections in Shimaore**

In this section I will discuss the Shimaore verbal functional heads introduced in the previous chapter and how they appear to be ordered, comparing with Cinque's hierarchy and Julien's work. Remember from section that Bantu languages present a challenge to the Mirror Principle, because the surface order of morphemes tends to reflect the underlying structural order, rather than being a mirror image. For Cinque and Julien, this means that no movement has taken place. For Julien, when another order occurs, it is because there has been either phrasal movement or successive head-to-head movement, resulting in a complex head.

##### **4.4.1 Ordering the Tenses**

When both the past tense marker *-a-* and the future tense marker *-tso-* are present to form a conditional interpretation, *-a-* immediately precedes *-tso-*. While it would be possible for them to be in the same projection, it makes more sense to say that each heads its own projection, namely T(Pst)P and T(Fut)P, with the understanding that the two together form a conditional interpretation.

(272) w-                                    a-        tso-     ri-                    rema  
           3PL.SM-                    PST-     FUT-     1PL.OM- hit-        FV  
 'They would beat us.'  
 (R. 2005-03-23)

This ordering respects the order in Cinque's hierarchy and matches examples given for languages such as Turkish and Guyanese Creole above, repeated here as (273) and (274), respectively.

(273) Oku-y-abil-ecek-ti-m.  
           read-y-MOD-FUT-PST-1SG  
 'I was going to be able to read / I **would be able** to read.'  
 (Turkish: Cinque 1999:54, originally from Jaklin Cornflit, p.c. with Cinque)

(274) Jaan     bin        gu        riid.  
           John    PST        FUT        read  
 'John would have read.'  
 (Guyanese Creole: Cinque 1999:59; Originally from Gibson 1986:585)

We can thus order these two tense morphemes in this way:

(275) T(Pst) > T(Fut)

The anterior tense marker, *-paro-*, follows the future tense marker *-tso-*, as shown in (276).

(276) Nadjeli u-ka u-handrisa hazi yaho saa shendra,  
 if 2SG.SM-be 2SG.SM-start 9.work 9.your hour nine

madza w-a-tso-paro-malidza.  
 already 2SG.SM-PST-FUT-ANT-finish

'If you had started your work at 3:00, you would already be finished.'

(T. 2005-01-26)

This demonstrates the ordering T(Past) > T(Fut) > T(Anterior), showing no conflict with Cinque's hierarchy. However, certain questions arise when one considers the implications of an analysis of more than one Tense head in the clause structure. For example, if more than one Tense head is present, which one licenses the external argument? Which one licenses agreement? These issues are taken up in the following chapter.

#### 4.4.2 Ordering other verbal morphemes

##### 4.4.2.a Mood<sub>irrealis</sub> and *V*

Shimaore has two instantiations of the Mood<sub>irrealis</sub> head<sup>83</sup>, namely *-e* and *-a-*, which

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83 The subjunctive marker *-e* has been analyzed as a mood marker in Swahili and other Bantu languages (e.g., by Julien 2002, Myers 1990). Bantuists commonly assert that the "final vowel" in Bantu is an instantiation of mood, but they are not specific about what type of mood it is, i.e., realis/irrealis or speech act mood. (See Cinque 1999:78 for a discussion of the importance of distinguishing between these two main types of mood.) The final vowel in Shimaore can be indicative of subjunctive, negation, retrospective aspect and negative present habitual aspect, and it is not clear how these four notions could all be grouped together under a single "mood" umbrella. For this reason, I analyze the default final vowel *-a* as being

occur in subjunctive forms. We find *-e* quite commonly, as it occurs with affirmative verbs, as in (277-282), or in negative verbs involving the *-si-* negative marker (283).

- (277) na- r(i)- he- e vhanu ri- jem- e  
 and- 1PL.SM- go.up- IRREAL there 1PL.SA- pick.coconut- IRREAL  
 'Let's go up there and pick coconuts.'  
 (R. 2005-03-23)

- (278) ri-su-tsaha ri-ju-e i-nyumba i-le  
 1PL.SM-PRES.PROG-want 1PL.SM-know-IRREAL 9.DEF-house 9.AGR-DEM  
 y-a-wah-w-a mana yayo  
 9.SM-PST-build-PASS-FV 9.way 9.DEM  
 'We want to know how that house was built.'  
 (Blanchy et al. 1993:38)

- (279) N-a-ko-tsaha n-a-hu-angali-e  
 1SG.SM-PST-PST.PROG-want 1SG.SM-MVT-2SG.OM-see-IRREAL  
 'I wanted to see you.'  
 (Soilihi & Blanchy 1991:86)

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present in order to meet phonological requirements (i.e., the preference for CV syllables), and provide separate analyses for the other vowels found in final position. See section for an analysis of vowel harmony in the affirmative and section for a discussion of vowel harmony in the negative. Swahili does not have a preverbal irrealis *-a-* marker. I have not been able to locate such a marker in other Bantu languages, and am therefore unaware of how it might have been analyzed.

- (280) a-su-tsaha                      a-ul-e                      i-nyombe  
3SG.SM-PRES.PROG-want              3SG.SM-kill-Md.IRREAL      9.DEF-9.COW  
'she wants to kill the cow'  
(Soilihi & Blanchy 1991:22)
- (281) ni-tso-endra                      n-a-mu-lol-e  
1SG.SM-FUT-go                      1SG.SM-MVT-3SG.OM-marry-IRREAL  
'I will go marry her.'  
(Soilihi & Blanchy 1991:14)
- (282) u-tso-jua                      u-bu-e  
2SG.SM-FUT-know                      2SG.SM-open-IRREAL  
'you will be able to open'  
(Soilihi & Blanchy 1991:56)
- (283) ni-su-mu-ambia-ni                      Allah    Allah    mu-a-si-yir-e  
1SG.SM-PRES.PROG-3PL.OM-tell-3PL.OM      ALLAH    ALLAH    2PL.SM-MVT-NEG-go.by-IRREAL  
ndzi    ya    shilindrojuu  
9.road    9.of    up.top  
'I'm warning you not to go to the public square!'  
(Soilihi & Blanchy 1991:46)

Clear-cut examples of *-a-* as an irrealis marker are less abundant, but they can be found nonetheless. They are found in cases in which the first verb is a verb of volition,



and is in the negative. For example, in (284b), we see the negative version of (284a), and instead of *-e*, we find *-a-*.

- (284) a.    ni-si-tsaha                      ni-      som-    e                      shio    ile  
                  1SG.SM-PRES.PROG-want    1SG.SM- read-    IRREAL                      7.book 7.DEM  
                  'I want to read that book.'
- b.    tsi-si-tsaha    n-      a-      soma    shio    ile  
                  1SG.SM.NEG-PRES.PROG-want                      1SG.SM- IRREAL- read    7.book 7.DEM  
                  'I do not want to read that book.'

Similarly, in (285a), we find *-e* in the second verb, with an affirmative first verb, and *-a-* in the second verb in (285b), following a negative verb.

- (285) a.    i-ka                      i-lazimu    u-som-e                      i-shio  
                  9.SM-be.RETRO    9.SM-be.necessary    2SG.SM-read-IRREAL                      9.DEF-book  
                  na      mapema.  
                  with    early  
                  'You should have read the book earlier.'
- b.    ka-y-a-ka                      y-a-lazimu    u-a-soma                      shio    ini.  
                  NEG-9.SM-PST-be    9.SM-PST-be.necessary    2SG.SM-IRREAL-read    9.book 9.this  
                  'You shouldn't have read this book.'
- (R., p.c.)

We find a similar alternation when the first verb is *-endra*. In the affirmative, we find a

subjunctive form ending in *-e* (286a), whereas when *-endra* is in the negative, the second verb is in the *-a-* subjunctive form (286b).<sup>84</sup>

(286) a.      ni-s-endra                      n-a-zunguh-e                      li-djini  
                   I SG.SM-PRES.PROG-go      I SG.SM-MVT-look.for-IRREAL      5.DEF-genie  
  
                   lo                      ni-li-wul-e  
                   in.order.to      I SG.SM-5.OM-kill-IRREAL

'I am going to go look for the genie so that I can kill it.'

(Rombi 1983:159)

b.            tsi-s-endra                      n-a-zunguha  
                   I SG.SM-NEG-PRES.PROG-go      I SG.SM-IRREAL-look.for

'I am not going to go looking for...'

(Rombi 1983:60)

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<sup>84</sup> I analyze the *-a-* morpheme in (286a) as being a movement marker. This is seen widely in Shimaore, when the action involves movement in either space or time. It is not possible to say whether this marker is present in (286b) or not, because it would collapse down with the irrealis mood marker *-a-* if it were present. The *-a-* movement marker can also co-occur with the subjunctive marker *-e*, for example in negative commands, in which it is optional.

u-a-si-zin-e (wasizine)  
 2SG.SM-MVT-NEG-dance-IRREAL

'Don't dance.'

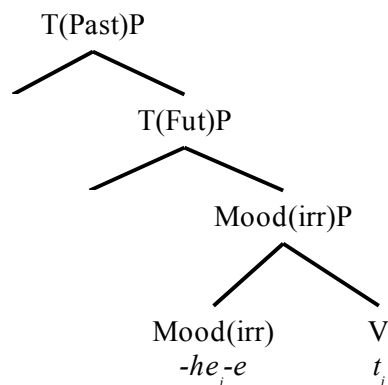
The implication is that the dancing that is being warned against would occur in the future. This negative command can also be given without the *-a-*, resulting in *usizine*. The fact that it can co-occur with the *-e* irrealis mood marker is evidence that it is not the irrealis mood marker *-a-* that is discussed in this section. It should be noted that there is no functional projection matching "movement" in Cinque's hierarchy.

The fact that both *-a-* and *-e* are used in the subjunctive form following verbs like *-tsaha* 'want' and *-lazimu* 'be necessary' is strong evidence that both are instantiations of Mood<sub>irrealis</sub>. It is common for irrealis markers to have different forms in affirmative and negative, as is the case in some Romance languages.

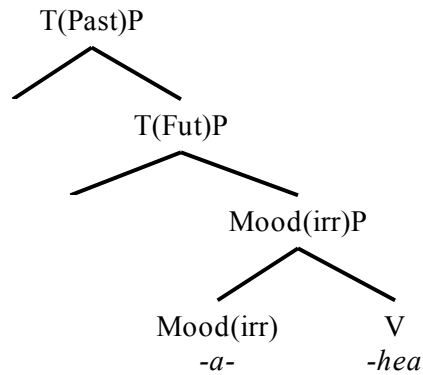
Cinque and Julien differ on the position of the irrealis head within the clause structure. For Cinque, the head housing the irrealis marker *-e* is situated just below the T(Fut) head. For Julien, the irrealis head can show variation across languages, and for Shona (Bantu), she has it situated below habitual aspect and root modals, considerably lower than the position it takes in Cinque's hierarchy of functional projections. Let's look at the implications of these two positions for the facts of Shimaore.

Under Cinque's system, the irrealis marker is housed rather high in the clause structure, just below future tense. Under such a system, we would have to say that when *-a-* surfaces, the verb has remained in situ, and when *-e* occurs, it is because the verb has left-adjoined to Mood<sub>irrealis</sub>. These two situations are demonstrated in (287a) and (287b).

(287) a. *-e* irrealis marker, involving verb raising



b. *-a-* irrealis marker, without verb raising



As previously mentioned, for Julien, grammatical mood is housed below habitual aspect and root modals. Shimaore does not have the types of root modals discussed by Julien, and there is no co-occurrence of habitual aspect and either of the irrealis markers, *-e* or *-a-*. For this reason, it is difficult to know specifically where the irrealis mood marker occurs within the Shimaore clause structure. Either Cinque's proposal or Julien's would work for Shimaore.

#### 4.4.2.b *Vowel harmony: Retrospective or completive aspect?*

Vowel harmony is the only example of TAM we find in Shimaore that is a process, rather than a morpheme *per se*. As a reminder, vowel harmony involves the changing of the final vowel of a verb (which is *-a* by default) to match, or harmonize with, the vowel in the verb stem (288). If the verb stem contains the vowel *a*, then the final vowel remains *a* (289).

(288) ri-      on-      o                      mwana              mnadzi              mtiti  
 1PL.SM- see-      VH.RETRO              child              coconut.tree              small  
 'We saw a small coconut tree.'  
 (R. 2005-03-23)

(289) ri-      law-      a                      d̥ago-ni  
 1PL.SM- leave-      RETRO              village-MVT  
 'We left the village.'  
 (R. 2005-03-23)

Using the arguments developed by Beaudoin-Lietz (1999) for the Swahili tense/aspect system, an analysis of Shimaore vowel harmony as retrospective aspect makes the most sense. Beaudoin-Lietz argues for an analysis of the Swahili affix *-me-* (290) as retrospective aspect for a variety of reasons.

(290) a-**me**-soma                      kitabu  
 3SG.SM-RETRO-read              book  
 'She has read the book.'

For example, the default locus of orientation, if there are no other indicators, is the present. Shimaore vowel harmony used in affirmative verbs patterns with the Swahili marker *-me-* in several ways:

- Neither can occur with a negative marker.<sup>85</sup>

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<sup>85</sup> Vowel harmony used in negative verbs indicates the negative habitual. I discuss this in the following section.

- Each represents an event from a point of view exterior to the event just after its completion.
- Each can have either a retrospective or resultative interpretation, depending on the Aktionsart of the verb and the context (e.g., Shimaore *Alawa* can be either 'S/he has left' or 'S/he is gone', and Swahili *Amekufa* can be either 'S/he has died' or 'S/he is dead').
- Neither is possible in relative clauses.

For these reasons, an analysis of Shimaore vowel harmony as retrospective aspect is attractive. On the other hand, the position of vowel harmony at the end of the verb makes an analysis of completive aspect appealing, as this is one of the last functional heads under Cinque's hierarchy. Vowel harmony is the only inflection that occurs following the verb, rather than preceding it, as all the other affixes do. However, because an analysis of vowel harmony as retrospective aspect does not cause any problems for affix ordering, and it seems to be supported by the diagnostics used in Swahili, I choose to analyze Shimaore vowel harmony as retrospective aspect. Both Cinque's and Julien's frameworks work best for affixation and do not have a great deal to say about processes such as vowel harmony.

#### ***4.4.2.b.1 Historical or phonological cases of vowel harmony blocking***

Vowel harmony is blocked in several circumstances, some of which can be explained phonologically or historically, and others of which require further explanation. In this section, I will describe the circumstances in which we do not find vowel harmony

expressing retrospective aspect, explaining those with a phonological account as I go, and providing a morphosyntactic analysis of the other cases in the next section.

One situation in which we do not find vowel harmony in the retrospective aspect is in verbs of non-Bantu origin, most of which have been borrowed from Arabic (291) or French (292). These verbs simply do not participate in vowel harmony because they are not Bantu verbs. I assume that this is because they are already specified for a full form containing a final vowel, so there is no place for the default Bantu *-a* vowel to surface.

(291) Arabic verbs in retrospective aspect<sup>86</sup>

<b>Verb root</b>	<b>Retrospective form</b>
<i>-baki</i> 'stay'	<i>-baki</i>
<i>-hasibu</i> 'count'	<i>-hasibu</i>
<i>-rudi</i> 'return'	<i>-rudi</i>

(292) French verbs in retrospective aspect

<b>Verb root</b>	<b>Retrospective form</b>
<i>-barje</i> 'take the ferry between Grande Terre and Petite Terre'	<i>-barje</i>
<i>-proteje</i> 'protect'	<i>-proteje</i>

Another situation in which we do not find vowel harmony in retrospective aspect is in verbs whose roots<sup>87</sup> end in a vowel. The vowel harmony forms of these verbs is blocked

<sup>86</sup> Examples in (291) borrowed from Rombi (1983:149).

<sup>87</sup> By *verb roots*, I am referring to the verb in its bare form, without the final vowel, which is *-a* in verbs of Bantu origin. For example, in the infinitive *usoma* 'to read', the verb root would be

because Shimaore has a strong preference for CV syllables, which would be violated by verbs ending in *-uu*, *-ii* for example.<sup>88</sup> For this reason, the final vowel *-a* is retained in these cases. The disallowed and observed forms of a few of these verbs in retrospective aspect are given in (293).

(293) Verbs ending in a vowel in retrospective aspect<sup>89</sup>

Verb root	Disallowed vowel harmony form	Observed retrospective form	Example	
-nunu- 'buy'	*- <i>nunuu</i>	-nunua	tsi-nunua	'I bought'
-ki- 'hear'	*- <i>kii</i>	-kia	tsi-kia	'I heard'
-zili- 'cool down'	*- <i>zili</i>	-zilia	maji ya-zilia	'the water cooled down'
-foro- 'pierce'	*- <i>foroo</i>	-foroa	i-foroa	'it pierced'
-to- 'take'	*- <i>too</i>	-toa	tsi-zi-toa	'I took them'
-he- 'go up, climb'	*- <i>hee</i>	-hea	ri-hea	'we went up'
-fu- <i>nguo</i> 'wash clothes'	*- <i>fu</i>	-fua	tsi-fua <i>nguo</i>	'I washed clothes'

The other cases of the blocking of vowel harmony require morphosyntactic explanations, which I will address in the next section.

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-*som*-.

88 There are a few exceptions, including *-ria* 'be afraid' (*tsi-rii* 'I was afraid').

89 Most of the examples in (293) are borrowed from Rombi (1983:149-50).



4.4.2.b.2 *Morphosyntactic cases of vowel harmony blocking*

Vowel harmony does not occur in the so-called "derived verbs", e.g., passive, applicative, causative, etc. The disallowed and observed forms of a few of these verbs in retrospective aspect are given in (294).

(294) "Derived" verbs in retrospective aspect<sup>90</sup>

Verb stem (root + affix)	Disallowed vowel harmony form	Observed retrospective form	Example
<i>-andr-is-</i> (‘begin’ + CAUS) <sup>91</sup>	* <i>-andr<u>i</u>si</i>	<i>-andrisa</i>	<i>ri-andr-is-</i> <i>a</i> ‘we started’
<i>-dzi-pu-lis-</i> (REFL + ‘take off’ + CAUS)	* <i>-dz<u>i</u>pu<u>l</u>isu</i>	<i>-dzipulisa</i>	<i>ri-dzi-pu-</i> <i>lis-a</i> ‘we landed’
<i>-hos-w-</i> (‘stick’ + PASS)	* <i>-h<u>o</u>sw<u>o</u></i>	<i>-hoswa</i>	<i>ri-hos-w-a</i> ‘we were stuck’ (by thorns’

The fact that vowel harmony is disallowed in so-called derived verbs cannot be explained phonologically, as it does not involve a change of syllabic structure away from CV (which was the case with examples given in (293)) and the language does not disallow similar patterns in other circumstances. Another hypothesis might be raised, however. Could we say that, for example, in cases like (295), the reason that we do not find vowel harmony between the vowel in the verb root *-pu-* and the final vowel is that there is an intervening vowel, *i* of the causative affix *-lis-*?

<sup>90</sup> The examples given in (294) can be found in Appendix 1.

<sup>91</sup> The verb *-andris-* ‘start’ is not a straightforward example of a causative verb in Shimaore, because there is no verb *-andr-* in current use. Nonetheless, it disallows vowel harmony, as other causative verbs in the language do.

(295) ri-dzi-pu-lis-a (\*ri-dzi-pu-lis-u)

1PL.SM-REFL-take.off-CAUS-FV

'We landed'

(Appendix 1)

This would be a plausible hypothesis, except for the fact that we have examples that do not involve an intervening vowel, but which nonetheless exhibit no vowel harmony. For example, in (296), we find the passive suffix *-w-* still causing the blocking of vowel harmony between the *o* of the verb root *-hos-* and the final vowel, even though they are in adjacent syllables.

(296) ri-hos-w-a (\*ri-hos-w-o)

1PL.SM-stick-PASS-FV

'we were stuck (by thorns)'

(Appendix 1)

Rather, we must look to morphosyntax for an explanation of why we do not find forms such as \**rih<sub>o</sub>sw<sub>o</sub>*. An approach that views syntactic heads as being central to word formation will allow us to account for the facts of vowel harmony blocking in Shimaore in a straightforward way. In the next section, I give an outline of such a system, developed by Julien (2002) and based on the work of Kayne (1994) and others.

#### **4.4.2.b.3 Complex head formation**

Building on work by Halle & Marantz (1993) and Halle & Marantz (1994) in the Distributed Morphology approach, Julien (2002) argues that word formation is

accomplished syntactically, and that what are commonly thought of as "words" often do not constitute constituents in the syntax. She does a survey of 530 languages, over a total of 280 genera of languages, and concludes that grammatical markers that appear after the verbal root result from the movement of heads and phrases, whereas preposed grammatical markers (i.e., those that appear before the verbal root) are the consequence of no movement.

In Julien's system, head movement is triggered by a strong feature in the attracting head. Following Kayne (1994), syntactic movement and adjunction are always to the left in Julien's system. She draws on affirmative and negative examples from Northern Saami (Finnic) to illustrate how head movement works. The trees in (298a, b) represent the derivations of the examples in (297a, b).

(297) *Northern Saami*

a. Mu-n vástid-i-n oanehaččat.

I-NOM answer-PST-1s briefly

'I answered briefly.'

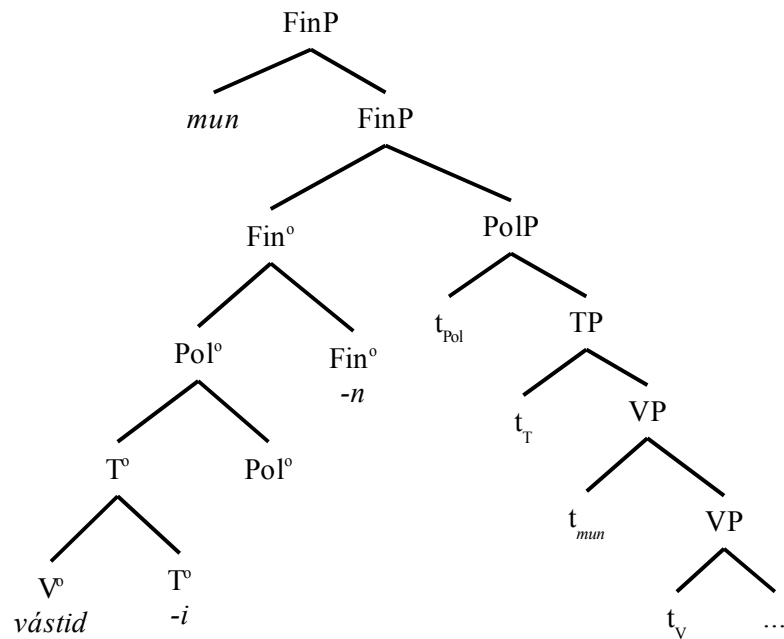
b. Mu-n i-n vástid-án

I-NOM NEG-1s answer-PST.PTC COMP

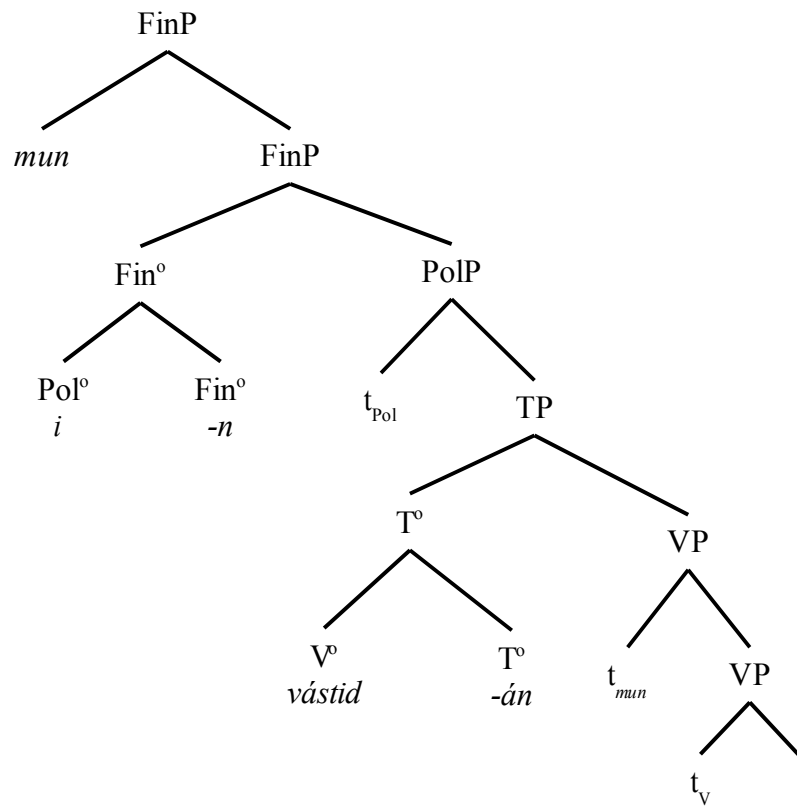
'I did not answer.'

(Julien 2002:56)

(298) a. Representation of (297a)



b. Representation of (297b)



The left-adjunction of a raised head to its host results in a complex head, such as  $T^0$  *vástid-án* in (298b). The movement of a complex head is also possible, as seen in  $Fin^0$  *vástid-i-n* in (298a).

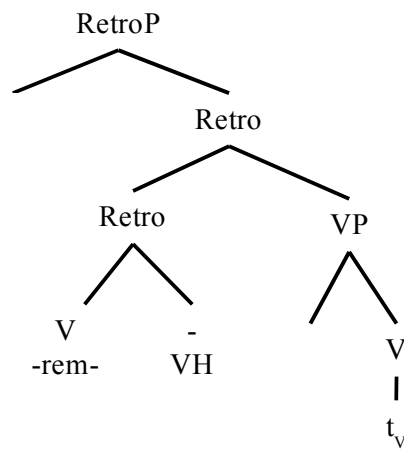
#### 4.4.2.b.4 Head movement and locality in Shimaore<sup>92</sup>

Following Julien (2002) and others, this section will describe how head movement is the syntactic process resulting in syntactic word formation in some cases in Shimaore. Focusing on the harmonizing retrospective aspect zero-morpheme (Retro) and a variety of "derivational affixes" (e.g., passive, causative, applicative), I will demonstrate that the

<sup>92</sup> This section draws largely on section 7.2 in Butler (2005).

verb raises by head movement and adjoins to Retro<sup>o</sup>, and this is what results in vowel harmony between the verb root and the final vowel of the verbal complex. In (299), the verb raises to left-adjoin to Retro<sup>o</sup>, presumably to check a strong feature in Retro<sup>o</sup>, and the result is vowel harmony between the *e* in *-rem-* 'hit' and the final vowel, which surfaces as *-e*.<sup>93</sup>

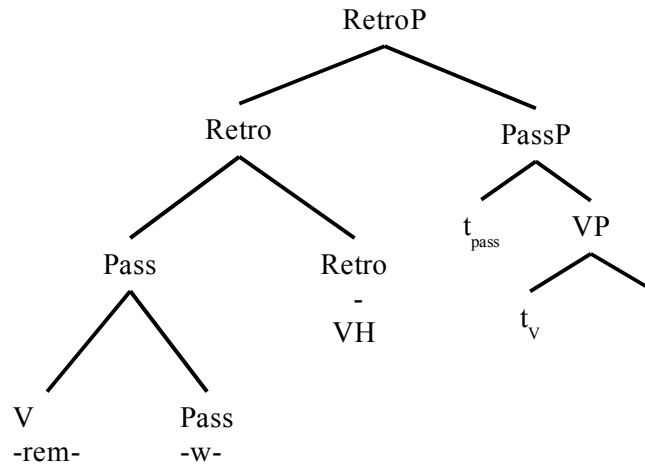
(299)



In (300), on the other hand, V raises and left-adjoins to Pass<sup>o</sup>, presumably to check the strong feature of Pass<sup>o</sup>, and the complex head Pass<sup>o</sup> raises and left-adjoins to Retro<sup>o</sup>. In (300), the harmonizing retrospective zero-morpheme (Retro) is no longer in a domain of locality with the verb, so the vowel features of V are not able to spread to the zero-morpheme Retro. The result is the default final vowel *-a*.

<sup>93</sup> I assume that when there is no vowel harmony on the final vowel, it surfaces as a default *-a*, simply to meet the requirement for a CV syllable. This differs from the standard analysis of the Bantu final vowel *-a* as a mood marker.

(300)



Such an analysis allows us to account for most non-historical and non-phonological cases of non-occurrence of vowel harmony.<sup>94</sup>

#### 4.4.2.b.5 *Vowel harmony with negation: negative present habitual*

In addition to the vowel harmony discussed in the previous section, which has an interpretation of retrospective aspect, Shimaore also has verbs that involve both vowel harmony and negation, in which the interpretation is one of negative present habitual (301 - 302), rather than the expected negative retrospective aspect.

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<sup>94</sup> Vowel harmony is also not found in negative verbs with retrospective aspect. Verbs containing both negation and vowel harmony give the meaning of negative present habitual, meaning that the subject never carries out the action indicated. We do not find vowel harmony in verbs in relative clauses, either. The analysis of such relative clauses is beyond the scope of this dissertation, and will be left for future research.

(301) **k(a)-a-pih-i**

NEG-3SG.SM-cook-VH.NEG.HAB

'S/he never cooks.'

(Rombi 1983:154)

(302) **ka-mu-shindr-i**

ufanya trongo ata

u-ula

NEG-2PL.SM-be.able-VH.NEG.HAB

to.do thing in.order

to.kill

mwanamtsa ule?

1.child 1.that

'Can't you do something (Aren't you capable of doing something) to kill that girl?'

(Blanchy et al. 1993:21)

In the affirmative, the present habitual is indicated with an *u-* morpheme at the beginning the verb, followed by the verb stem. It takes the same form as the infinitive. A full subject or free-standing subject pronoun must be present in the affirmative, presumably because otherwise the subject would not be apparent. In (303), I contrast the affirmative (303a) and negative (303b) forms of the present habitual.

(303) a. wasi u-piha kula suku

we PRES.HAB-cook every day

'We cook every day.'



- b. ka-ri-pih-i  
 NEG-1PL.SM-cook-VH.NEG.HAB  
 'We never cook.'

For a few verbs the vowel harmony found in the negative present habitual forms is different from that found in the affirmative retrospective aspect forms. For example, the verb *-jua* 'know' displays no vowel harmony in the affirmative retrospective aspect form (304),<sup>95</sup> but its form in the negative present habitual form is *-ji* (305, 306).

- (304) tsi-**jua**  
 1SG.SM-know.RETRO  
 'I know' ('I have learned')  
 (Rombi 1983:148)

- (305) tsi-m-**ji**  
 1SG.SM.NEG-3SG.OM-know.NEG.HAB  
 'I don't know him/her.'  
 (Rombi 1983:154)

- (306) fundi                      wahe                      k(a)-a-**ji**  
 religious.leader 1.her                      NEG-3SG.SM-know.NEG.HAB  
 'her fundi doesn't know'  
 (Blanchy et al. 1993:19)

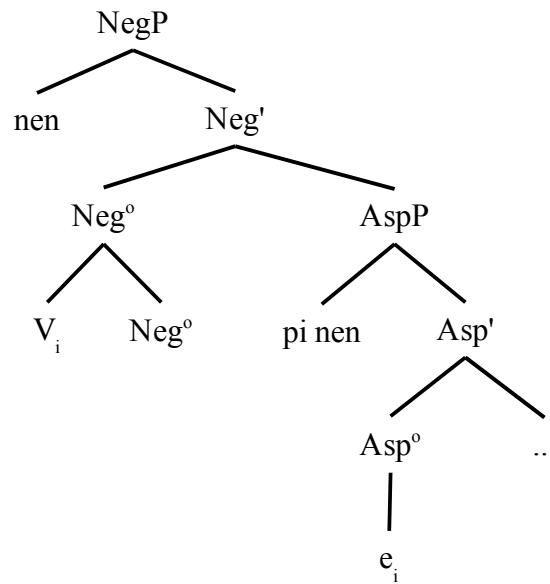
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<sup>95</sup> There is no overt vowel harmony in (304) because vowel harmony generally does not occur when the verb stem, in this case *-ju-*, does not end in a consonant. This is presumably because Shimaore prefers to avoid long vowels.

I believe that the vowel harmony found in forms such as (301), (302), (303b), (305), and (306) is an instantiation of the spell-out of the features housed in the head of a habitual aspect phrase, rather than those in the head of the retrospective aspect phrase, which is the case for the affirmative cases such as (303a) and (304). This habitual aspect head appears to have two allomorphs, namely *u-* and vowel harmony, depending on whether the verb is affirmative or negative. It is possible that this vowel harmony reflects the features that are housed in the retrospective aspect head in both cases, but this is unlikely for two reasons: first, we would expect to find the same interpretation on both cases of vowel harmony if they were housed in the same place; and second, the fact that there is at least one case of the vowel harmony not being identical in the affirmative and negative verb forms could be taken as evidence that the vowel harmony processes are not instantiations of features that are housed in the same head within the structure.

Another possibility to account for the negative vowel harmony forms would be to have two positions for negation in the structure. Zanuttini (1997) proposes a NegP with one negation marker associated with the specifier position and one negation marker associated with the head, for Piedmontese.

(307)



The final vowel in Swahili negative present tense verbs is often considered to be an instantiation of negation, so such an analysis would not be far-fetched. But it is difficult to see why *ka-* would be in specifier position, with vowel harmony in the head position, given that *ka-* is the regular negation marker found in all (non-first person singular) matrix verbs. But with *ka-* in the head position, it would be difficult to get the correct ordering of morphemes in the verbal complex.

Because of the problems with analyzing vowel harmony as being a marker of negation, and with analyzing the vowel harmony in negative verbs as being in the retrospective aspect head, I conclude that *u-* and the vowel harmony found in negative habitual verbs are both housed in the habitual aspect head.<sup>96</sup>

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<sup>96</sup> I do not have the necessary data to be able to know whether the complex head analysis that I proposed in the section on retrospective aspect would also be applicable to the case of negative present habitual vowel harmony. This would require sentences like "The food is never cooked", which require a very specific context, and thus are probably fairly rare. This

#### 4.4.2.c Problematic Morphemes

##### 4.4.2.c.1 -su-/-si- and -ko-

The affixes *-su-/-si-* and *-ko-* both give a progressive reading to the verb, the former in the present (308) and the latter in the past (309).

(308)	u-wanzani	wa-	<b>su-</b>	waswili
	2.DEF-friends	3PL.SM-	PRES.PROG-	arrive
	'The friends are arriving.'			
	(Cornice 1999:14)			

(309)	r-	a-	<b>ko-</b>	ndro-	jem-	a
	1PL.SM- PST-	PST.PROG-	go-	pick-	FV	
	'We were going (coconut) picking'					
	(R. 2005-03-23)					

*-ko-* can also have a habitual reading (310, 311), but this interpretation is much less common with *-su-/-si-*. Present habitual is generally indicated using what looks like the infinitival form (312, 313). (See chapter 3 for a discussion of this morpheme.)

(310)	watru	wa-bole	wa	ɗ agoni	pia	
	2.people	2.AGR-big	2.of	the.village	all	
	w-	a-	<b>ko-</b>	shapiha na	wanatsa	watiti
	3PL.SM- PST-	PST.PROG-	care.for with	2.children	2.small	

---

will have to be left for future research.

'All the adults of the village used to take care of the small children.'

(R. 2005-03-23)

(311) wantru            wengi ka-        wa-        **ko-**        mu-            yendza Bob Dénard  
2.people            2.many NEG-        3PL.SM- PST.PROG- 3SG.OM-        like Bob Dénard

'Lots of people didn't like Bob Dénard.'

(R. 2005-03-03)

(312) wami **u-**        hir-        iw-        a                    Soulé  
I            HAB-        call-        PASS-        FV                    S.

'My name is Soulé.'

(313) wami **u-**        som-        es-        a  
I            HAB-        read-        CAUS-        FV

'I teach' (I am a teacher.)

(Cornice 1999:18)

The problem is that both of these affixes seem like they should be analyzed as progressive aspect, but with different tenses. There is no tense marker obligatorily present in either case (*-ko-* can occur with an optional *-a-* past tense morpheme), but *-su-* clearly gives a present interpretation, while the interpretation in cases using *-ko-* is clearly past. Cinque puts both generic aspect and progressive aspect in the same position, and this seems like a reasonable explanation for *-si-/ -su-*, which can also involve an interpretation without any particular aspectual nature (314).

- (314) ni-      si-                      hu-      yendz- a  
 1SG.SM- PRES.PROG-              2SG.OM- love-      FV  
 'I love you.'

In what position, then, should *-ko-* be placed? This affix is not as far along in the grammaticalization process as is *-si-/-su-*, because it is still possible to find forms in which the full verb *-ka* 'be' (the origin of the *-ko-* morpheme) is followed by an infinitive. In these cases, there is no *-a-* past tense morpheme, and the notion of pastness is implied<sup>97</sup>. When we find the full *-a-ko-* form, should we interpret *-ko-* as being another instantiation of  $\text{Asp}_{\text{generic/progressive}}$ ? There doesn't seem to be another category that matches the interpretation of *-ko-*. Perhaps it is just necessary to say that  $\text{Asp}_{\text{generic/progressive}}$  has two forms, depending on whether the action occurs in the past or in the present.

#### 4.5 Conclusion

Let us compare what we have seen in the ordering of Shimaore verbal affixes with the ordering given in Cinque's hierarchy.

- (315) Ordering of preverbal affixes in Shimaore

$\text{T(Past)} > \text{T(Future)} > \text{Mood}_{\text{irrealis}} > \text{T(Anterior)} > \text{Asp}_{\text{retrospective}} > \text{Asp}_{\text{generic/progressive}}$

- (316) Cinque's hierarchy

$\text{Mood}_{\text{speech act}} > \text{Mood}_{\text{evaluative}} > \text{Mood}_{\text{evidential}} > \text{Mod}_{\text{epistemic}} > \mathbf{\text{T(Past)}} > \mathbf{\text{T(Future)}} >$

$\mathbf{\text{Mood}_{\text{irrealis}}} > \text{Mod}_{\text{necessity}} > \text{Mod}_{\text{possibility}} > \text{Asp}_{\text{habitual}} > \text{Asp}_{\text{repetitive(I)}} > \text{Asp}_{\text{frequentive(I)}} >$

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<sup>97</sup> By 'implied', I mean that the retrospective vowel harmony form of the verb *-ka* is simply *ka*. It is an irregular verb for vowel harmony, because there is no vowel internal to the verb stem *-k-* for the final vowel to harmonize with.

Mod<sub>volitional</sub> > Asp<sub>celerative(I)</sub> > **T(Anterior)** > Asp<sub>terminative</sub> > Asp<sub>continuative</sub> > Asp<sub>perfect(?)</sub> >  
**Asp**<sub>retrospective</sub> > Asp<sub>proximative</sub> > Asp<sub>durative</sub> > **Asp**<sub>generic/progressive</sub> > Asp<sub>prospective</sub> > Asp<sub>SgCompletive(I)</sub>  
 > Asp<sub>PlCompletive</sub> > Voice > Asp<sub>celerative(II)</sub> > Asp<sub>repetitive(II)</sub> > Asp<sub>frequentive(II)</sub> > Asp<sub>SgCompletive(II)</sub>

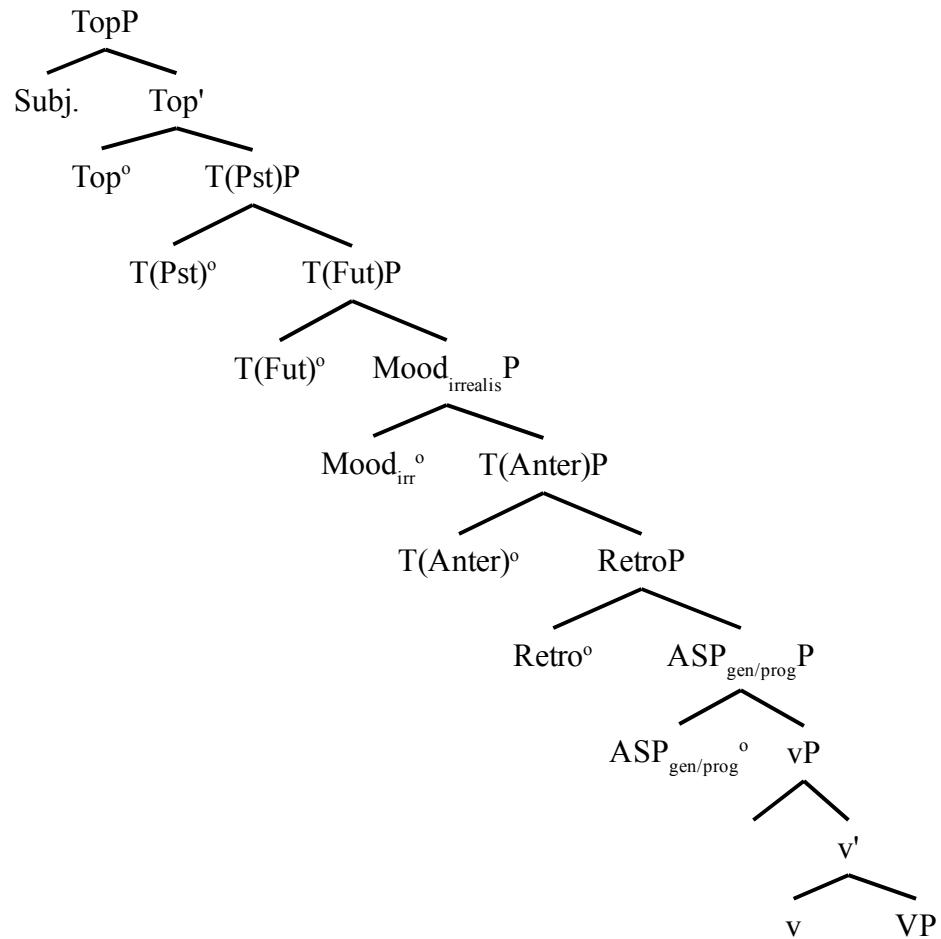
I have bolded the applicable Shimaore affixes in Cinque's hierarchy, to make it clear to the reader that the ordering found in Shimaore displays no major conflict with that argued for by Cinque, keeping in mind that we must treat the elements in question as free morphemes that cliticize on the verb, rather than entertaining a Mirror Principle analysis. Cinque's hierarchy thus allows us to account, for the most part, for the preverbal morpheme ordering found in the Shimaore verbal complex.

Vowel harmony is probably the area of Shimaore verbal morphology that is the most interesting. We have seen that in the affirmative, vowel harmony is an instantiation of retrospective aspect, and that in the negative, it represents the head of the habitual aspect phrase. Drawing on data from cases in which we do not find vowel harmony, I tested Julien's Complex Head approach to word formation and found that it worked for the facts of Shimaore vowel harmony, explaining cases in which no vowel harmony is found. Cinque's and Julien's theories together provide a good account of Shimaore ordering in the verbal complex, with Cinque's hierarchy accounting pretty well for the preverbal affixes and Julien's account working well for "derivational" affixes. I propose the following as the clause structure for Shimaore:<sup>98</sup>

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98 I leave the details of the vP for future work.

(317) Clause structure of Shimaore



The next chapter includes a discussion of the position of the lexical subject in Shimaore, and the nature of subject and object marking.



## **CHAPTER 5: SUBJECT AND OBJECT MARKING IN SHIMAORE**

### **5.1 Introduction**

In this chapter, I argue for several positions with respect to subjects and objects in Shimaore and the relations that they have with other elements of syntax. In section , I argue that subject NPs in Shimaore are actually topics, rather than syntactic subjects, drawing on diagnostics by Alexiadou & Anagnostopoulou (1998) and arguments made in favor of such an analysis in other Bantu languages. In section , I argue that subject markers in Shimaore are markers of subject agreement, rather than incorporated pronouns, for example. I argue that Shimaore object affixes are markers of agreement in section and I address the nature of that agreement.

### **5.2 Status of the subject in Shimaore**

As syntactic theory has evolved, various positions have been proposed for where the lexical subject resides within the clause structure. In this section, I will address the nature of the lexical subject in Shimaore, and argue for its residing outside of IP. Going back to Bresnan & Mchombo (1987), it has been noted that subjects in Bantu languages have a topic status. Alexiadou & Anagnostopoulou (1998) argue that arguments that trigger strong agreement on the verb do not reside in canonical Spec of IP subject positions, but instead are dislocated in an adjoined or left peripheral position, outside of IP. Henderson (2006) reaches the conclusion that lexical subjects in most Bantu languages are actually

topics in CP, and that the true subjects are null arguments (*pro*) that are licensed by rich agreement, following the analysis of lexical subjects in Kinande by Schneider-Zioga (2007). Let us begin with an exploration of Alexiadou and Anagnostopoulou's (1998) work on null subject languages, in section , and an application of their diagnostics to Shimaore, in section .

### **5.2.1 On null subject languages (NSL's)**

Various diagnostics have been proposed to determine whether or not a given language is a Null Subject Language (NSL). In their work on Null Subject Languages, Alexiadou and Anagnostopoulou (1998) (henceforth, A&A) proposed that NSL's have the following properties: a) the possibility of pro-drop in the language; b) a VSO/VOS word order alternation, c) A' status of subjects in SVO orders; d) the absence of Definiteness Restriction effects in unaccusative constructions; and e) the existence of verb raising independent of V2. In this section, I will focus on pro-drop, VSO/VOS word alternation, A' status of subjects, and Definiteness Restriction effects in Shimaore, leaving the other topics for future research. This section will apply some of these diagnostics to Shimaore, in order to determine the nature of the Shimaore subject.

#### *5.2.1.a Pro-drop*

One simple diagnostic suggesting that Shimaore is an NSL is given in (318), which shows the pro-drop property of the language. (318a) is a simple sentence with an overt lexical subject. In (318b), the overt lexical subject NP has been replaced with a pronoun, and the interpretation is emphatic or focused. (318c) has a null subject, and this is the

form that speakers would use if the subject NP has been previously identified in the discourse.

- (318) a.      Soulé              a-su-fanya              hazi              likoli  
                  S.                      3SG.SM-PRES.PROG-do      work              school  
                  'Soulé works at the school.'
- b.      Waye              a-su-fanya              hazi              likoli  
                  s/he                      3SG.SM-PRES.PROG-do      work              school  
                  'S/he works at the school.'
- c.      a-su-fanya              hazi              likoli  
                  3SG.SM-PRES.PROG-do      work              school  
                  'S/he works at the school.'

### 5.2.1.b *VSO/VOS word order alternation*

One of the properties that Null Subject Languages in some language families tend to have, according to A&A, is SVO/VSO word order alternation.<sup>99</sup> For example, in Greek, the lexical subject can either precede or follow the verb, in both matrix and embedded clauses. They demonstrate this in an embedded clause, as in (319).

- (319) i              idisi      oti      (o Petros)      episkeftike      (o Petros)      tin Ilektra  
                  the      news      that      Peter              visited              Peter              Ilektra  
                  'the news that Peter visited Ilektra'  
                  (Greek: A&A ex. 6)

<sup>99</sup> A&A's (1998) work focuses on Germanic, Celtic, Arabic, Romance and Greek.

Shimaore does not appear to have full-fledged VSO or VOS, but it does allow VS order in certain circumstances.

As discussed in chapter 3, the basic word order for Shimaore is SVO (320), or either SVIoDo (321) or SVDIo (322, 323) when both an indirect and a direct object are present.

(320) kula mutru a-su-pashia laka  
 each 1.person 3SG.SM-PRES.PROG-take pirogue

'Everyone took his/her pirogue boat'

(Literally, 'Everyone is taking his/her pirogue boat.')

(Soilihi & Blanchy 1991:28)

(321) mtsunga nyombe a-mu-voshea mwanamtsa u-le  
 herder 3SG.SM-3SG.OBJ-take.away.RETRO 1.child 1.DEM

pere i-le

9.ring 9-DEM

'The herder took away the ring from the child.'

(Rombi 1983:237)

(322) mwanamtsa u-le a-reng-e zitru z-a mayahe  
 1.child 1-that 3SG.SM-take-VH.RETRO 10.things 10-of her.mother

'the child took her mother's things'

(Blanchy et al. 1993:19)

- (323) Ri-(wa)-nunu-li-a                      nyama                      wanzani                      watru.  
 1PL.SM-(3PL.OM)-buy-APPL-FV      9.meat                      2.friends                      2.our  
 'We bought meat for our friends.'  
 (R. 2005-03-10)

However, VS order is observed in expletive constructions (324), which show subject agreement with a noun class other than the postverbal lexical subject, namely noun class 16.

- (324) ata      hule      yu-lawa                      kukui.  
 until      there      16.SM-come.out.RETRO      5.rooster  
 'And then out came a rooster.'  
 (Soilihi & Blanchy 1991:28)

In (325), in which we observe VS order, we find the subject marker for class 16, which is the class for 'place'<sup>100</sup>, rather than a subject marker that agrees with the lexical subject *kukui* 'rooster'. In this construction, the subject *kukui* is in the specifier of VP position. Presumably, we find class 16 subject agreement through subject-verb agreement with a little *pro* in the specifier of TP.<sup>101</sup> When the order is SV, we find a subject marker agreeing with the lexical subject (325).

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<sup>100</sup> It is rare to find a verb along with a subject *yahanu* 'place', but the class 16 subject marker can be found in *yw-a* 'there is' and *ka-yu-si* (or *kayu*) 'there is not'.

<sup>101</sup> The details of subject agreement will be discussed in the following section.

(325) kukui            **li**-lawa  
 5.rooster            5.SM-come.out.RETRO  
 'A rooster came out.'

We can also observe VOS order when the subject is right-dislocated and thus focused (326).

(326) a-reng-e                    zitru            zi-le    a-zi-tsan-ia-tsan-ia  
 3SG.SM-take-VH.RETRO    10.things            10-DEM    3SG.SM-10.OM-distribute-distribute

mtru            a-ndro-lol-a-o            mwana            w-a    mfalume  
 1.person            3SG.SM-go-marry-FV-REL    1.child            1-of    king

'He took the things and handed them out right and left, the person who was going to marry the king's daughter.'

(Rombi 1983:239)

Shimaore does not appear to have the locative inversion that is common in many other Bantu languages. For example, in Chichewa, following a locative noun phrase, the verb shows agreement with the locative, rather than with the lexical subject (327b).

(327) a.    Chi-tsime            **chi**-li            ku-mu-dzi.  
 7-well            7.SM-be            17-3-village  
 'The well is in the village.'

- b. Ku-mu-dzi    **ku-li**    chi-tsîme.  
 17-3-village    17.SM-be    7-well  
 'In the village is a well.'  
 (Chichewa: Bresnan & Kanerva 1989:2)

## 5.2.2 Applying Alexiadou & Anagnostopoulou's diagnostics to Shimaore

A&A's tests for preverbal subjects being in an A' position in NSL's can be grouped into three categories: a) distributional facts, b) scope facts, and c) binding facts. I will focus on the distributional facts of Shimaore here, namely the adverb test, negation, the complementizer test, and definiteness restrictions. The results of these diagnostics point us toward an analysis of Shimaore lexical subjects as being outside of IP.

### 5.2.2.a The adverb test

A&A give example (328) as evidence that there is no spec-head relation between the position of the preverbal subject and the finite verb, since a number of adverbs or adverbial phrases can intervene between the preverbal subject and the finite verb.

- (328) **O Petros**    xtes            mets    apo    poles    prospathies  
 Peter            yesterday    after    from    many    efforts  
  
**sinandise**    si Mary.  
 met            Mary

'After many efforts, Peter met Mary yesterday.'

(data borrowed from Letsholo 2002:89, originally from A&A, ex. (15))





- (331) mfalume            **madza** a-tsaha                            kamwe            a-law-e  
 1.king                already 3SG.SM-want.RETRO            right.away            3SG.SM-leave-IRREAL  
 'the king already wanted to leave right away'  
 (Soilihi & Blanchy 1991:38)

5.2.2.b *Negation*<sup>103</sup>

Negation follows the lexical subject in Shimaore (332).

- (332) a.        Soulé                **ka**-a-si-fanya (kasifanya)                            hazi  
                  S.                            NEG-PRES.PROG-do                            work  
                  'Soulé isn't working.'
- b.        \* **Ka**    Soulé    a-si-fanya                            hazi.  
                  NEG    S.        3SG.SM-PRES.PROG-do            work

Negation is generally considered to be at the top of IP when it is present.<sup>104</sup> Since negation follows the lexical subject in Shimaore, this suggests that the lexical subject is in fact in the CP domain, above negation. Additionally, if we take the subject marker to be an agreement marker in AgrSP (see section for a discussion of subject marking in Shimaore), the lexical subject cannot be in Spec of AgrSP, since negation precedes subject agreement but follows the lexical subject.<sup>105</sup>

<sup>103</sup> See chapter 3 for further discussion of negation in Shimaore.

<sup>104</sup> But Cinque (1999) argues that there is more than one possible position for negation in the clause structure.

<sup>105</sup> Admittedly, the negation argument is not a particularly strong one. However, arguments from other areas of syntax provide more evidence that the lexical subject in Shimaore is not actually a subject at all.

### 5.2.2.c *The complementizer test*

The complementizer *if* is generally understood as being in the CP domain. A&A use examples such as (333), in which the lexical subject *o Petros* 'Peter' precedes *an* 'if', as evidence that the lexical subject is in CP.

- (333) epidid            o Petrosan        erthi    i Maria        tha        figi  
         becausePeter            if        comes Maria        FUT        leave  
         'Because if Peter comes, Mary will leave.'  
(Letsholo 2002:91, originally from A&A ex. 17a)

In Shimaore, it is possible for a lexical subject to precede *neka* 'if' (334)<sup>106</sup>.

- (334) mwana    mtiti    **neka**    a-fanya                    kosa...  
         child    small    if        3SG.SM-make.RETRO        mistake...  
         'If a small child made a mistake (or 'was naughty')...'  
(R. 2005-03-23)

Since the lexical subject can occur to the left of *neka* 'if', this is evidence that the lexical subject is in CP, rather than IP.

### 5.2.2.d *Definiteness restriction effects*

Null Subject Languages lack definiteness restriction effects in unaccusative, transitive and unergative constructions. A&A point to (335) for lack of such effects in

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<sup>106</sup> I have only one example of a lexical subject preceding *neka* 'if', and numerous examples of *neka* preceding the lexical subject. I take this as evidence that *neka* can be housed in either Force or Fin within the CP, as suggested by Brent Henderson (personal correspondence).

unaccusatives in Greek.

- (335) eftase ena pedi/o Jorgos/kathe filou mu  
arrived a child/George/every friend mine  
(A&A ex. 32)

Shimaore appears to allow either indefinite (336) or definite<sup>107</sup> (337) subjects in unaccusative constructions. I do not have any examples of *every N* in an accusative.

- (336) yu-law-a tu mtru a-ving-i lake yahe  
16.SM-come.out.RETRO only 1.person 3SG.SM-bring-VH.RETRO 9.canoe  
9.POSS  
'out came a man who brought his canoe'  
(Blanchy et al. 1993:25)

- (337) yu-law-a mtru a-l(i)-o na zarde zi-le  
16.SM-come.out-RETRO 1.person 3SG.SM-be-REL with 10.garden  
10.AGR-DEM  
'out came the person who takes care of the gardens'  
(Soilihi & Blanchy 1991:36)

Shimaore seems to pattern with the Greek data in (335), in that no definiteness restriction effects occur. Consistent with the analysis proposed by A&A for Greek, I

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<sup>107</sup> There is no definiteness marker, or augment, in this example, so it is not syntactically definite. However, in relative clauses, it is rare to find definiteness indicated on the relativized NP in Shimaore. Additionally, in the context of the tale that is being told, it is clear that the person in question is a particular gardener, rather than a random gardener.



### 5.3 Shimaore subject markers: agreement markers, clitics, or something else?

Like other Bantu languages, Shimaore verbs have an obligatory marker matching the noun class of their subjects, whether the subjects are full (340), pronominal (341) or understood (342).

- (340) Saidi    **a**-hir-iw-a                      'mbwa'                      na                      wanatsa                      wangina.  
              Said    3SG.SM-call-PASS-FV                      dog                      by                      2.children                      2.other  
              'Said was called "dog" by the other children.'  
              (S. 2005-03-14)

- (341) Juma    waye    **k-a**-vendz-e    konokono...  
              Juma    he                      NEG-3SG.SM-like-VH.NEG.HAB                      custard.apple  
              'Juma doesn't like custard apples.'  
              (S. 2005-03-14)

- (342) **Ri**-tayarisha    mikoba                      yatru.  
              2PL.SM-prepare    6.bags                      6.our  
              'We prepared our bags.'  
              (S. 2005-03-14)

The subject marker is obligatory and always precedes the tense morpheme, if one is present. The subject marker appears immediately adjacent to the subject noun phrase (343), if one is present. In the case of focused (344) or cleft (345) constructions, the

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domain. (See Henderson 2006:119.)



subjects in the Shingazidja and Shimwali dialects of Comorian (see Lafon 1990, Picabia 1996 and Full 2001), and also with third-person singular human subjects in Ikalanga (see Letsholo 2002:122-8), although the factors affecting the subject marking are somewhat different for each language.

There are three different markers for first-person singular subjects in Shimaore: *ni-*, *tsi-<sub>NEG</sub>*, and *tsi-<sub>PST</sub>*. Although the last two SM's are phonetically identical, I separate them out for reasons that will become apparent. The form of the subject marker is determined by negation and by tense/aspect.

### 5.3.1.a *Negation*

Negation in Shimaore normally involves the negation marker *ka-*, followed by the regular subject marker, as in (346) and (347). Generally the only difference between the affirmative and the negative forms is the presence of the negation marker *ka-* in the case of the negative.<sup>109</sup> This can be seen in (346, 347), in which the (b) versions are identical to their (a) counterparts, with the exception that they contain the negation marker *ka-*.

(346) a.	mu-si-fanya	hazi
	2PL.SM-PRES.PROG-do	work
	'You are working.'	

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<sup>109</sup> However, see chapter 3 on the "lack of correspondences" between affirmative and negative forms for vowel harmony, *-a-* past.

- b.     **ka**-mu-si-fanya                   hazi?  
           NEG-2PL.SM-PRES.PROG-do       work  
           'Aren't you working?'  
           (Cornice 1999:14)

- (347) a.     wanatsa           wa-tso-regea           ɗ agoni  
               2.children       3PL.SM-FUT-return     home  
               'The children will return home.'
- b.     wanatsa           **ka**-wa-tso-regea       ɗ agoni  
               2.children       NEG-3PL.SM-FUT-return   home  
               'The children will not return home.'

*Ka-* co-occurs with all non-1sg. subjects, as demonstrated in (348a-e), in which *ka-* is shown with each of the human subject markers that do not indicate 1st person singular.<sup>110</sup>

- (348) a.     k-**u**-si-som-a   'you are not studying'  
           b.     kw-**a**-si-som-a   's/he is not studying'  
           c.     ku-**ri**-si-som-a   'we are not studying'  
           d.     ku-**mu**-si-som-a 'you (pl.) are not studying'  
           e.     ku-**wa**-si-soma   'they are not studying'

First-person singular subjects, however, require a slightly different negation strategy. It is not possible to negate an affirmative sentence involving the first-person singular

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<sup>110</sup> See (348) for other subject markings for human subjects, but the same holds true for all classes of non-human subjects as well.



subject *ni-* (349a) using *ka-ni-* (349b). Rather, it is necessary to use the subject marker *tsi-* to indicate both subject agreement and negation (349c).<sup>111</sup>

- (349) a.     *ni-su-endra*            *likoli*  
                   1SG.SM-PRES.PROG-go    school  
                   'I am going to school.'
- b.     \****ka-ni-su-endra***        *likoli*  
                   'I am not going to school.'
- c.     ***Tsi-su-endra***            *likoli*  
                   1SG.SM.NEG-PRES.PROG-go school

First-person singular subject NP's of negated finite sentences take the agreement marker *tsi-*, which I call *tsi-<sub>NEG</sub>*.

- (350) ***tsi-si-soma***  
                   1SG.SM-PRES.PROG-read  
                   'I am not reading'

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111 In the case of affirmative vs. negative sentences with respect to first-person singular agreement, Shimaore patterns with Swahili. Swahili does not allow its default first-person singular subject marker *ni-* to be used in conjunction with its negative marker *ha-*. Instead, a portmanteau morpheme *si-*, including both agreement and negation information, surfaces.

- a.     \****ha-ni-ku-enda***  
                   NEG-1SG.SM-PST.NEG-go  
                   'I did not go.'
- b.     ***si-ku-enda***  
                   1SG.SM.NEG-PST.NEG-go  
                   'I did not go.'

In the first-person singular, all negated finite verbs carry the *tsi*<sub>-NEG</sub> subject marker (351), which acts as a portmanteau morpheme, carrying both subject marking and negation information.

- (351) a.     **tsi**-si-som-a            'I am not reading.'
- b.     **tsi**-tso-som-a       'I will not read.'
- c.     **ts**-a-som-a            'I did not read.'
- d.     **ts**-a-tso-som-a       'I would not read.'

### 5.3.1.b Tense/Aspect

In Shimaore, first-person singular subject marking and tense/aspect share a close relation. Affirmative verbs in the present progressive (352a), future (353a), conditional (354a) and affirmative past tense clauses (355a) take the *ni*- subject marker, as do both affirmative and negative verbs in subjunctive mode (357, 358a). The (b) examples show that neither *tsi*<sub>-PST</sub> nor *tsi*<sub>-NEG</sub> is compatible with these constructions, if they have an affirmative interpretation.<sup>112</sup>

- (352) a.     **ni**-si-soma                    Shifarantsa
- I.SM-PRES.PROG-read        French
- 'I am studying French.'
- b.     \***tsi**-si-soma
- 'I am studying French.'

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<sup>112</sup> Note that (352b - 355b) are grammatical with a negative interpretation, in which case the *tsi* that appears is actually *tsi*<sub>-NEG</sub> rather than *tsi*<sub>-PST</sub>.

- (353) a. **ni-tso-zina**                    meso  
           1.SM-FUT-dance                tomorrow  
           'I will dance tomorrow.'
- b. **\*tsi-tso-zina**  
           'I will dance tomorrow.'
- (354) a. **n-a-tso-zina**  
           1.SM-PST-FUT-dance-FV  
           'I would dance.'
- b. **\*ts-a-tso-zina**  
           'I would dance.'
- (355) a. i-shio                    n-a-i-soma  
           7-book                    1.SM-PST-7.OM-read  
           'the book that I read'
- b. \*i-shio **tsi-a-i-soma**  
           'the book that I read'
- (356) a. ni-si-tsaha                    **ni-zin-e**  
           1.SM-PRES.PROG-want        1.SM-dance-IRREAL  
           'I want to dance.'
- b. \*ni-si-tsaha                **\*tsi-zin-e**

- (357) a.      ilazimu            **ni**-si-zin-e  
                  it.is.necessary    1.SM-NEG-dance-IRREAL  
                  'I mustn't dance.'
- b.      \*ilazimu            **tsi**-zin-e

In contrast to (353-357a), sentences that are marked for retrospective aspect through vowel harmony (358a), or for past progressive aspect through the appearance of the *-ko-* marker (359a), must take the subject marker *tsi-*<sub>PST</sub>.<sup>113</sup> The (b) examples show that *ni-* is incompatible with these constructions.

- (358) a.      **tsi**-som-o                    shio    ile  
                  1.SM-read-VH.RETRO      7.book 7.DEM  
                  'I (have) read that book.'
- b.      \***ni**-som-o

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113 In addition to the *tsi-ko-V* form, there is also a possible *n(i)-a-ko* form, in which we find the *ni-* subject marker coupled with the past tense morpheme *-a-*, e.g. *n-a-ko-soma* 'I was reading'. I believe that this shows that the *-ko-* morpheme is in the process of grammaticalization, with *nakosoma* being a more recent innovation than the form involving *tsi-*, which derives from *tsika usoma*, with the vowel harmony retrospective form on the first verb. We see the same phenomenon with the *-paro-* morpheme, as discussed in chapter 3 and 4. The occurrence of *ni-* and *-a-* together in place of *tsi-*<sub>PST</sub> gives us additional evidence that *tsi-*<sub>PST</sub> is an instantiation of both subject marking and past tense. These two morphemes are also found together in the past tense form that is used in relative clauses, e.g., *shio n-a-i-som-a* 'the book that I (have) read'.

- (359) a.      **tsi**-ko-soma                                  shio    ile  
                  1.SM-PST.PROG-read                  7.book 7.DEM  
                  'I was reading that book.'
- b.            \***ni**-ko-soma

The important distinction here appears to be one of past vs. non-past. Affirmative verbs with an interpretation that something happened in the past take *tsi*-<sub>PST</sub>, whereas those with a non-past interpretation take *ni*-.

Table 1 gives an overview of how the first-person singular subject marker differs with respect to tense/aspect and negation.

*Table 1: Shimaore 1st person singular subject marking*

<b>Tense/Aspect</b>	<b>Declarative</b>	<b>Subjunctive</b>	<b>Negation</b>
Present	ni-	ni-	tsi- <sub>NEG</sub>
Future	ni-	N/A	tsi- <sub>NEG</sub>
Past	tsi- <sub>PST</sub>	N/A	tsi- <sub>NEG</sub>

Recall from chapter 4 that the *-a-* past was replaced over time in finite clauses with the vowel harmony form. It is exactly in those forms that have vowel harmony that we find *tsi*-<sub>PST</sub> agreement in the first-person singular. It is likely that this split between *ni*- and *tsi*-<sub>PST</sub> came about at the same time as the move from the *-a-* past to the vowel harmony form.

### **5.3.2 Implications for an analysis of Shimaore subject markers**

Recall that our five main possibilities for Shimaore subject markers were the

following: a) strong pronouns, b) weak pronouns, c) incorporated pronouns, d) agreement markers, or e) clitics. The diagnostics provided by Cardinaletti & Starke (1999) lead us to the conclusion that subject markers in Shimaore are neither strong nor weak pronouns. While we do not have any specific arguments for or against an analysis of subject markers being incorporated pronouns or clitics, I propose that subject markers in Shimaore are agreement markers indicating the relation between the subject and the verb. The main argument in favor of such an analysis comes from the interaction between tense/aspect and subject marking. Crosslinguistically, it is somewhat common for languages to demonstrate a relation between agreement and tense/aspect<sup>114</sup>, even if it is not usually limited to a small part of the paradigm. There is no such crosslinguistic tendency linking tense/aspect with clitics or incorporated pronouns. I thus propose that subject markers in Shimaore be analyzed as subject agreement (SA) markers, and will gloss them as such in further examples. (Letsholo 2002 reached the same conclusion for subject markers in Ikalanga, which shows similar subject agreement patterns.)

I analyze the occurrence of *tsi*-<sub>PST</sub> as simply being a question of contextual allomorphy, rather than involving any particular syntactic processes. And *tsi*-<sub>NEG</sub> acts as a portmanteau

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<sup>114</sup> The Indo-Pacific language Kewa appears to have a similar phenomenon. In (i) and (ii), *-a-* represents both third-person singular agreement and past tense. (Both examples are borrowed from Cinque 1999:56, originally from Foley & Van Valin 1984:218.)

(i) Íra-a-n.

cook-3SGPAST-seen

'He cooked it (I saw it).'

(ii) Íra-a-ya.

cook-3SGPAST-unseen

'He cooked it (hearsay, I didn't see it).'

morpheme, carrying both negation and agreement information.

## **5.4 The nature of subject agreement in Shimaore**

Now that we have established that subject marking in Shimaore is subject agreement, we need to address the nature of that agreement. Let us first examine how subject agreement in general has been analyzed, followed by a discussion of agreement in Bantu languages, and then move to analyses of subject agreement in Bantu compound tenses.

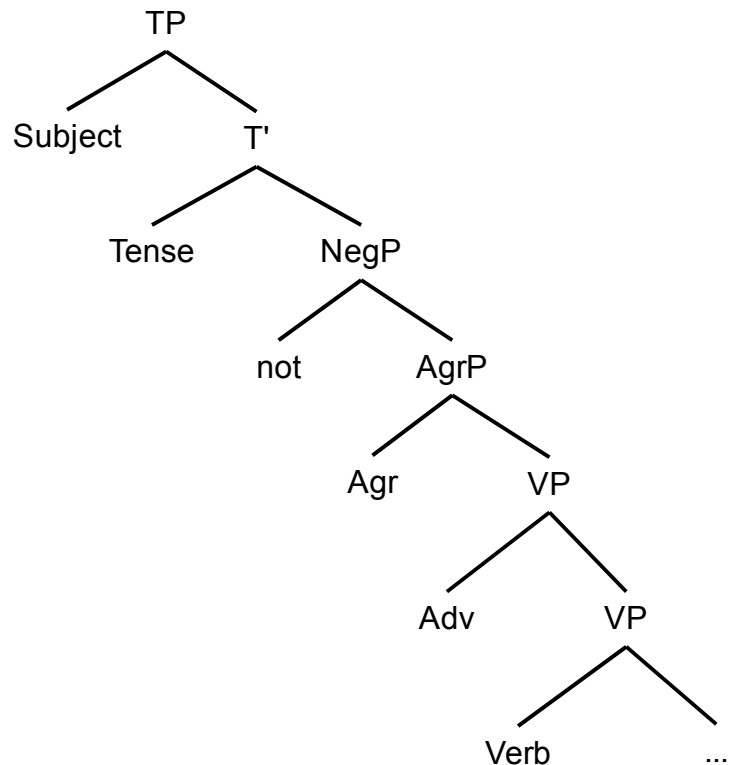
### **5.4.1 Agreement as a functional or relational notion?<sup>115</sup>**

Prior to Pollock (1989), subject agreement was seen to be part of the I(nflectional) head, which also included negation and tense information. Pollock (1989) proposed that INFL be split into three separate functional projections: Tense, Negation and Agreement (360).

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<sup>115</sup> This section draws on Schneider-Zioga (1996).

(360) Pollock's (1989) "Exploded INFL"



Pollock specifies that not all languages must have AgrP, and that the ordering of AgrP and other phrases can vary. The notion of an AgrP has been argued against in recent years for a variety of reasons. Iatridou (1990) argues against the notion of an agreement phrase on the grounds that it is difficult to account for word order differences in French and English with respect to adverb ordering if we assume the existence of agreement phrases. Reversing his earlier position on the matter, Chomsky (1995) asserts that only "functional categories with intrinsic properties that are manifested at the interface levels" are conceptually necessary, suggesting that a functional category Agr is unnecessary under minimalism. He argues that it is better to view agreement as a relational notion than as a functional one. This view is shared by Carstens & Kinyalolo (1989), who note the



abundance of agreement within a single clause in some languages, including Bantu languages. Nonetheless, there are Bantuists who have continued to argue for the agreement phrase, including Schneider-Zioga (1996), drawing on data from Kinande, which displays an interaction between *wh*-movement and agreement.<sup>116</sup> For our purposes, an agreement phrase does not appear to be necessary in explaining the facts of Shimaore, which does not have the type of agreement facts displayed in Kinande for example, and for this reason, I will not include it in my analysis of Shimaore clause structure, instead accounting for subject agreement relationally.

#### **5.4.2 Subject Agreement in Bantu languages**

It has long been noted that verbs in Bantu languages often display subject agreement with an NP other than the logical subject of the sentence. In Dzamba, for example, in sentences involving topicalization, the verb agrees with the topicalized NP, rather than the logical subject, as in (361b, c). In (361a), we find the verb agreeing with the lexical subject. In (361b), it agrees with the topicalized indirect object *bá-ba-azi* 'the women', and in (361c), it agrees with the topicalized direct object *i-nzete* 'the trees'. See Bokamba (1980) and Bokamba (1993) for more discussion of agreement patterns in a variety of Bantu languages.

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<sup>116</sup> Letsholo (2002) also makes use of the agreement phrase in her analysis of Ikalanga, which displays similar facts to those of Kinande, although Letsholo does not explain why she chooses to utilize the agreement phrase in her analysis of Ikalanga clause structure.

- (361) a.      ó-Petélo      a-kpét-el-eki      ba-azi      nzete      wáabo.  
                  SPF-Peter      **1SA**-cut-APP-IMPF      2-women      trees      here  
                  'Peter chopped down [some] trees here for some women.'
- b.      Bá-ba-azi      ba-kpét-el-eki      ó-Petélo      nzete      wáabo.  
                  SPF-**2**-women      **2SA**-cut-APP-IMPF      SPF-Peter      trees      here  
                  ('The women chopped down [some] trees here for Peter.')
- c.      í-nzete      i-kpét-el-eki      ó-Petélo      ba-azi      wáabo.  
                  SPF-**10**trees      **10SA**-cut-APP-IMPF      SPF-Peter      2-women      here  
                  'The trees, Peter cut for some women here.'
- (Dzamba: Bokamba (1993): ex. 44)

Similarly, in (362a), we see the embedded verb *i-mú-tom-aki* showing agreement with the relativized object *i-mu-ndondo* 'jug', rather than with the logical subject, *Poso*. When the verb agrees with *Poso*, the sentence is ungrammatical (362b).

- (362) a.      o-Moséká      á-zw-aki      **i-mu-ndondo** **i-mú-tom-aki**  
                  SPF-Moséká      1SA-received SPF-jug      SPF-RM-sent  
                  Poso      loo me.  
                  Poso      today  
                  'Moséká received the jug that Poso sent today.'
- b.      \*o-Moséká      á-zw-aki      i-mu-ndondo **a-tom-aki** **Poso** loo me.  
                  (a- = Cl. 1, agreeing with Poso)

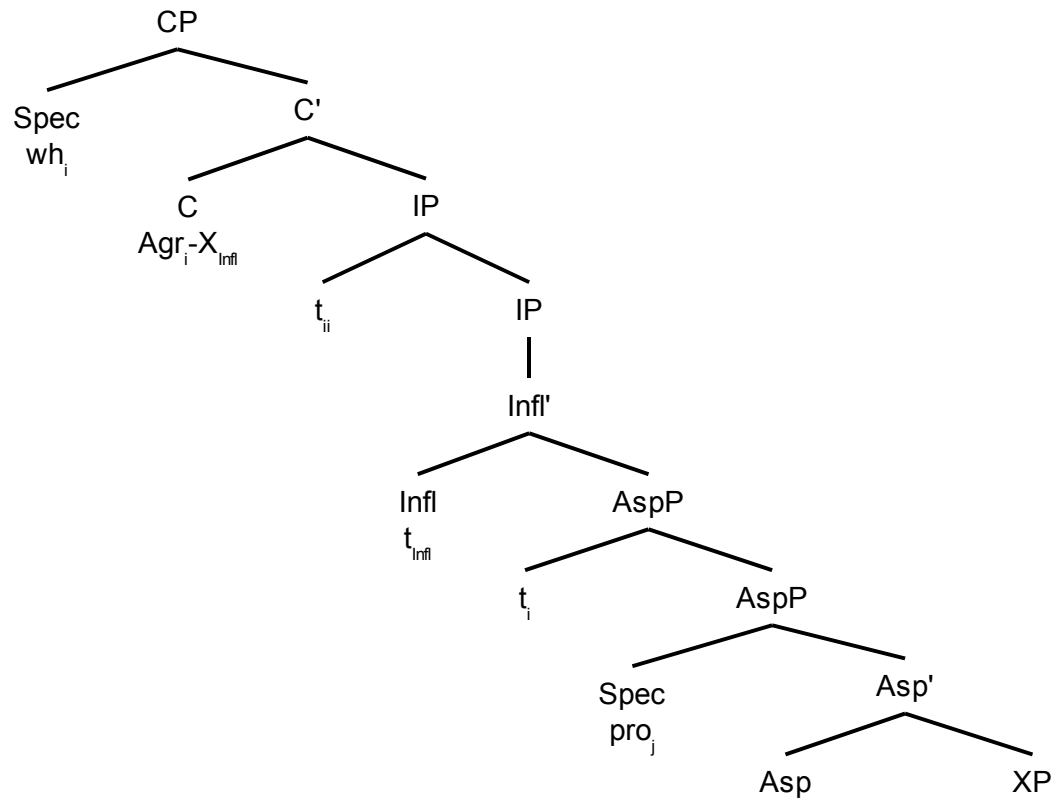
Kinyalolo's (1991) work on subject agreement in KiLega in particular highlights some interesting properties in the subject agreement patterns of this language. In (363), we see that the *wh*-word *bíkí* 'what' has raised to the front of the question, triggering agreement on the verb.

- (363) *bíkí*    *bí-á-kás-íl-é*                      *bábo bíkulu*    *mwámí mu-mwílo?*  
       **8**what **8RM-A-give-IL-FV**                      2that 2woman 1chief 18-3village  
       'What did those women give the chief in the village?'  
       (KiLega: Kinyalolo 1991: ex. 13b)

Kinyalolo argues that this agreement is Spec-Head agreement between the raised *wh*-phrase, in the specifier of CP, and the verb, which has raised to C. Kinyalolo provides a detailed description of such agreement phenomenon in KiLega. Kinyalolo argues that agreement such as that seen in (363) is Spec-Head agreement between the raised *wh*-phrase, which is in the specifier of CP, and the verb, which has raised to C.

Kinyalolo assumes that with respect to *wh*-movement, a *wh* operator adjoins to every maximal projection on its way to Spec of CP. After the I-to-C raising of the verb, the result is in (364).

(364) Kinyalolo's analysis of agreement between wh-phrase and verb in KiLega  
 (Kinyalolo 1991:63)



In addition to Kinyalolo, others have also argued that subject agreement in Bantu languages requires (or results in) a spec-head relation (see, e.g., Carstens & Kinyalolo 1989 and Baker 2002).

In the next section, I will explain the problem for explanations of agreement that is caused by Compound Tense Constructions (CTCs) in Bantu languages, focusing on Swahili.

#### 5.4.2.a Compound tense constructions (CTCs) in Swahili

Agreement patterns found in the so-called "compound tense" constructions (CTCs), in

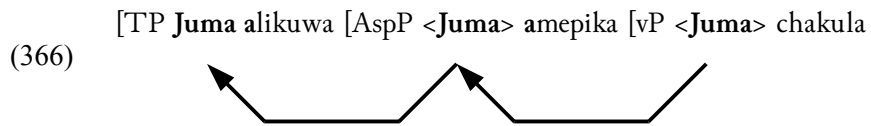
which we observe full subject agreement on both the auxiliary verb and the lexical verb, have triggered a lot of discussion as to the nature of subject agreement. The "double agreement" patterns found in some Bantu languages is exemplified in Swahili (365), in which we find the third-person singular subject agreement marker *a-* on both the auxiliary verb *alikuwa* and the lexical verb *amepika*.

(365) Juma    **a**-li-kuwa            **a**-me-pika            chakula  
          J.            3SG.SA-PST-be    3SG.SA-RETRO-COOK    food  
          'Juma had cooked the food.'

Examples such as (365) raise problems for Chomsky's (2001) suggestion that Case on a given argument is checked when that argument values a complete set of phi-features on a verbal head. For Chomsky (2000, 2005), Case checking is a sort of side effect of phi-feature valuation. When the same argument triggers agreement on more than one verb in a clause (which is a problem because presumably the Case is checked only once), the agreement realized on the topmost verb is generally richer or "more complete" than agreement realized on lower verbs. He takes this as evidence that arguments can value phi-features on lower verbs without getting their Case checked, as long those phi-feature sets are not complete. When a subject values the phi-features of the auxiliary, its Case gets checked, because the auxiliary has complete agreement.

Examples such as (365) are problematic for this theory because neither verb has more complete agreement than the other. Based on this, Carstens (2001) dismisses the possibility that Case checking is a side effect of checking person features or

person+number features, instead arguing that we need to separate agreement from Case checking relations in the syntactic derivation. Building on Carstens & Kinyalolo (1989), Carstens (2001) analyzes Compound Tense Constructions (CTCs) such as (365) as raising constructions, i.e., that the subject *Juma* raises through the specifier position of each verb head on its way to its final A-position, as demonstrated in (366).



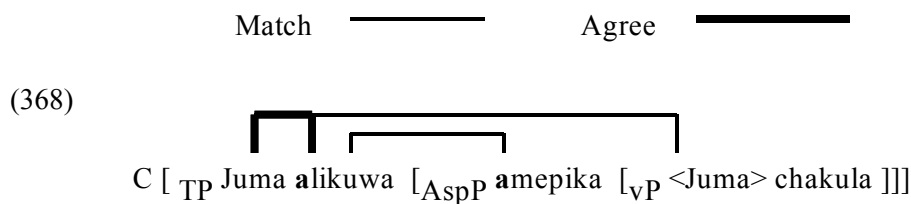
Henderson (2006) also argues for a system in which agreement and Case checking relations are separate in the syntactic derivation, although as opposed to Carstens (2001), he analyzes CTCs in Swahili (and other Bantu languages) as cases of one-to-many probe-goal relations. Henderson uses the following definitions in his analysis:

(367) For any probe feature P and goal feature G:

- a. Match (P,G) if P and G are features of the same type.
- b. Agree (P,G) if a feature of P is valued by G and Match (P,G) obtains.
- c. Move (P,G) if P moves to the specifier of G and Agree (P,G) obtains.

For Henderson, who builds on work by Pesetsky & Torrego (2001, 2004) and others, the phi-features of lower verbs in CTCs are valued by Agree relationships with other verbs, rather than by direct Agree relations with the subject. Lower verbs head aspectual projections (which is consistent with the analysis of CTCs given in Beaudoin-Lietz 1999), and the probing phi-features in T selected by C (what Chomsky 2005 calls 'T with tense') are the only probing phi-features involved. (Little *v* is valued with aspect features.)

T probes the structure (i.e., it looks in its c-command domain), looking for a DP with phi-features to value its unvalued phi-features. It enters into Match relations with all DPs in its c-command domain, and the most local of these relations becomes an Agree relation. For Henderson, in (365), the auxiliary verb *alikuwa* has probing phi-features that enter Match relations with the lower verb *amepika* and with the subject *Juma*. The phi-features of the main verb *amepika* are unvalued, so they cannot value the phi-features of the auxiliary (because Agree relations must be local). An Agree relation is established between the auxiliary verb and the subject, which is the most local element that has valued phi-features. The subject moves directly to Spec of TP.



'Juma had cooked the food.'

(Swahili: Henderson 2006:160)

Henderson supports his Multiple Agree analysis, as opposed to Carstens' raising analysis, with word order facts from Swahili relative clauses involving complex tense constructions.<sup>117</sup> For Henderson, under a raising analysis, we should expect the copy of the subject that is pronounced to be the one in Spec of AspP. We should thus expect it to be possible to find a subject NP between the auxiliary verb and the main verb under a raising

<sup>117</sup> In supporting his Multiple Agree analysis, Henderson also draws on word order and agreement data from languages that allow agreement with the relativized NP in relative clauses, rather than with the subject, such as Kirundi. See Henderson (2006:163-6).





(371) ni-li-**mw**-on-a (Swahili)

1SG.SA-PST-1.OM-see-FV

'I saw him/her.'

These OMs agree with the argument that they reference. For example, in (371), the OM *-mw-* is used to show that the object is a singular noun from class 1/2, the class for human beings.

All Bantu languages allow objects to be marked on the verb by OM's that agree with the NP they reference. Languages differ, however, as to whether this object marking is disallowed, optional, or required when a full lexical object NP is present in the clause. These three types are illustrated in (372-374). (372) demonstrates that in Dzamba, it is not grammatical to have an OM present when there is a full object NP. Swahili allows an optional OM in the presence of an inanimate full object NP (373).<sup>118</sup> When the object NP is animate, however, Swahili requires an OM agreeing with it (374).

(372) Dzamba: OM disallowed in presence of full object NP

*na- <b>mu</b> -tomel-aka	oPoso	mwenzi	yana
1SG.SA-3SG.OM-send.to-PST	1.Poso	5.message	yesterday

'I sent a message to Poso yesterday.'

(Dzamba: from Henderson 2006:60)

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<sup>118</sup> Swahili does not have definite articles, and object marking in conjunction with an object NP often causes a definite reading on the object.

(373) Swahili: OM optional in presence of full inanimate object NP

Juma a-li-**ki**-soma kitabu jana

Juma 3SG.SA-PST-7.OM-read book yesterday

'Juma read a book yesterday.'

(Swahili: from Henderson 2006:178)

(374) Swahili: OM required with animate object NP

Juma a-li-**m**-som-e-a mtoto kitabu

Juma 3SG.SA-PST-3SG.OM-read-APPL-FV 1.child 7.book

'Juma read a book to/for the child.'

(Swahili: from Henderson 2006:60)

Shimaore patterns with Swahili, Zulu, Chichewa and some other Bantu languages in allowing the co-occurrence of object marking and a full object NP in a local relation with the object marker (375, 376). However, this object marking is always optional, and excluding object marking appears to be preferred, even with an animate object<sup>119</sup>. Notice the lack of object marking in (377-378).

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<sup>119</sup> There are few examples of object marking in conjunction with a full object NP in the oral tales and naturally occurring data. Most such examples involve agreement with a human object, or else agreement with the object in object relativization. I have not done a frequency study of object marking.

(375) a-mo-ja                      a-mo-jo-**mu**-dzisa  
 3SG.SA-MOD.POSS-come    3SG.SA-MOD.POSS-come-**1.OM**-question-FV

mwanamtsa    u-le

1.child            1-DEM

'when he came to question the child...'

(Blanchy et al. 1993:20)

(376) a-**mw**-ambia              mwananya-he              amba...  
 3SG.SA-**1.OM**-tell              1.sibling-3SG.POSS              that

'He told his sister that...'

(Soilihi & Blanchy 1991:50)

(377) wa-ja                      wa-\_\_\_-ving-i                      mwanamtsa    u-le...  
 3PL.SA-COME.RETRO              3PL.SA-\_\_\_-bring-VH.RETRO              1.child              1-DEM

'They brought the child...'

(Blanchy et al. 1993:21)

(378) gini    1-a-\_\_\_-l-a                      mwanamtsa    u-le    1-a              peu  
 5.genie 5.SA-PST-\_\_\_-eat-FV              1.child              1-DEM    5.AGR-COP              mean

'The genie that ate the child is mean.'

(Rombi 1983:175)

Shimaore allows multiple object marking (379, 380), but with only the indirect object

marked preverbally, and the direct object at the end of the verbal complex<sup>120</sup>. This is different from languages such as Chaga (381), which allow both the direct and indirect objects to be marked to the left of the verb, and from Swahili (382), which only allows one object marker.

(379) a-a-**m**-b-a-**zo** (ambazo)

3SG.SA-PST-1.OM-give-FV-10.OM

'S/he gave them to him/her.'

(Rombi 1983:134)

(380) a-lo-sudz-a                      sembea                      li-lo                      a-**mu**-Ba-**lo**

3SG.SA-then-sharpen-FV    5.knife                      5.AGR-DEM                      3SG-1.OM-give-5.OM

'He went to sharpen the knife and gave it to her.'

(Soilihi & Blanchy 1991:58)

(381) Mangí                      n-á-lé-**i**-m-zríká

chief                      FOC-3SG.SA-PST-9.OM-1.OM-send

'The chief sent it with him' (where *it* refers to *the meat* and *him* refers to *the messenger*)

(Chaga: Henderson 2006:62, originally from Demuth 1995)

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<sup>120</sup> It might be better to analyze examples such as (379) and (380) as involving relativization, given that the final vowel is /o/ as in non-past relative clauses. Apparently the *i* of the class 10 object marker *zi* drops out in order to respect Shimaore's preference for CV syllables.

(382) \*Juma a-li-**m-i**-tum-i-a (Swahili)

J. 3SG.SA-PST-1.OM-9.OM-send-APPL-FV

'Juma sent it to her'

(Henderson 2006:62)

However, like Swahili (383), Shimaore does not allow two object markers to the left of the verb (384).

(383) \*a-li-**m-zi**-b-a (Swahili)

3SG.SA-PST-1.OM-10.OM-give-FV

'S/he gave it to him/her.'

(384) \*a-**m-zi**-ba (Shimaore)

3SG.SA-1.OM-10.OM-give.RETRO

'S/he gave it to him/her.'

Also similar to Swahili, Chichewa and Zulu, Shimaore allows an OM to occur in object relativization. Chichewa (385) and Shimaore (386) allow this object marking optionally, as does Swahili for inanimate objects (387) (although the semantic interpretation differs depending on the presence of absence of the OM), and it is required in Zulu (388), and in Swahili when an animate object is relativized (389).

- (385) Mbuz ziméné mú-kú-(**zi**)-fu<sup>h</sup>na-(\*zo) (Chichewa)  
 10.goats 10.REL 2PL.SA-PRES-10.OM-want-10.RP  
 'the goats that you want'  
 (Henderson 2006:210)
- (386) zizio wanatsa wa-tso-(**zi**)-som-a-o (Shimaore)  
 10.books 2.children 3PL.SA-FUT-(10.OM)-read-FV-REL  
 'the books the the children will read'
- (387) kitabu amba-cho Juma a-li-(**ki**)-som-a (Swahili inanimate obj.)  
 7.book COMP-REL J. 3SG.SA-PST-(7.OM)-read-FV  
 'the book (we were discussing) that Juma read'  
 (Henderson 2006:193)
- (388) Inja umfana o-wa-\*(**yi**)-thenga-(yo) in-hle (Zulu)  
 9.dog 1.boy REL-3SG.SA-9.OM-buy-RP 9.SA-good  
 'the dog which the boy bought is good'  
 (Henderson 2006:208)
- (389) watoto amba-o Juma a-li-\*(**wa**)-on-a (Swahili animate obj.)  
 2.children COMP-2.REL J. 3SG.SA-PST-2.OM-see-FV  
 'the children that Juma saw'  
 (Henderson 2006:192)

Shimaore and the other languages mentioned differ from other Bantu languages that

do not allow an object marker to co-occur with a lexical NP in the same clause, such as Dzamba, Kirundi and Lingala (390).

- (390) Munganga      a-(\*mo)-kumb-áki                      mwana              lelo      (Lingala)  
          1.doctor              3SG.SA-1.OM-carry-PST      1.child              today  
          'The doctor carried the child today.'  
          (Lingala: Henderson 2006:178)

The question arises as to the nature of the object markers found in these languages. Are they agreement markers, pronouns, or something else? Various analyses have been proposed. Let's first look at Bresnan & Mchombo's seminal (1987) work on object marking in Chichewa and other Bantu languages. Bresnan & Mchombo (henceforth B&M) analyzed object marking as always representing anaphoric agreement (i.e., being pronominal in nature). For B&M, "the OM is unambiguously used for anaphoric interpretation. In other words, it is not an agreement marker at all, but an incorporated object pronoun." Their analysis is based on a few key pieces of evidence.

First, B&M note that object marking on the Bantu verb allows a wider variety of constituent orders with respect to objects, as compared to cases in which the OM is absent, as demonstrated in (391) for Chichewa.

- (391) Word order possibilities in Chichewa
- a. Without OM:              SVO, VOS, \*OVS, \*VSO, \*SOV, \*OSV
  - b. With OM:                  SVO, VOS, OVS, VSO, SOV, OSV

The fact that the OM can license the object non-locally leads B&M to conclude that

OM's are anaphoric pronouns. However, B&M were working in the framework of Lexical Functional Grammar (LFG), which does not allow for the possibility of null arguments. As Henderson (2006) and Letsholo (2002) point out in their work, the null pronominal argument 'little *pro*' that has been a part of the generative tradition for quite some time, can account for the facts of Chichewa and other Bantu languages without resorting to a pronominal account. In the case of clauses with no lexical subject, and as we have seen in Shimaore, in languages whose lexical subjects are in topic position, *pro* is assumed to be the subject of the clause, licensed by agreement on the verb.<sup>121</sup>

(392) *pro*      a-som-o                      i-shio  
           PRO      3SG.SA-read-RETRO          9.DEF-9.book  
           'S/he read the book.'

Applying a similar analysis to object markers is a logical extension of its use with subject marking. Under such an analysis, phi-features in *v* could be checked by an overt NP, or by *pro* in the case of a null object, or a lexical object in a position outside the clause. This would allow us to explain why the object either raises out of the VP (393a) or is found in an adjoined position (393b).

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<sup>121</sup> According to Huang (1984), little *pro* is available in languages with very rich agreement, which is the case in Shimaore, or with no agreement at all.



(393) a. Ndi-na-funa kuti mu-wa-pats-é mphantso  
 1SG.SA-PST-want COMP 3SG.SA.-2.OM-give-SUBJUNCT 3.gift

**alenje** dzulo

3.hunters yesterday

'I wanted you to give the hunters a gift yesterday.'

b. Ndi-na-funa kuti mu-wa-pats-é mphantso  
 1SG.SA-PST-want COMP 3SG.SA.-2.OM-give- SUBJUNCT 3.gift

dzulo, **alenje**

yesterday 3.hunters

'I wanted you to give them a gift yesterday, the hunters.'

(Chichewa: borrowed from Henderson 2006:172)

Keach (1995) also analyzes OM's in Swahili as agreement markers when they are not used anaphorically, partially because lexical objects must occur in a local configuration with their co-referential OM's and can be indefinite and non-specific, including question words (394c).

(394) a. \*Mariamu a-li-piga mtoto. (Swahili)

M. 3SG.SA-PST-hit 1.child

'Mariamu hit the child.'

b. Mariamu a-li-**m**-piga mtoto  
 M. 3SG.SA-PST-1.OM-hit 1.child  
 'Mariamu hit **the/a/some** child.'

c. Mariamu a-li-**m**-piga **nani?**  
 M. 3SG.SA-PST-1.OM-hit 1.who  
 'Who did Mariamu hit?'

Shimaore patterns with Swahili in cases like (394c). However, because object marking is always optional in Shimaore, even with animate or human lexical objects, (395a) is also grammatical. Additionally, Shimaore has a set of augments that can immediately precede an NP, so in order to get a definite reading in (395b), it is necessary to use the class 1 definiteness marker *u-*.

(395) a. Anfiat a-(a)ngalia mwana.  
 A. 3SG.SA-watch.RETRO 1.child  
 'Anfiat cared for a child.'

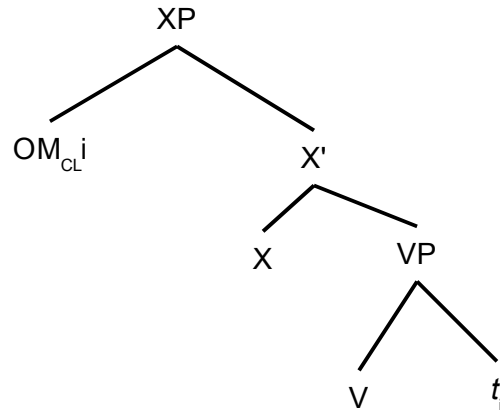
b. Anfiat a-mw-angalia **u**-mwana  
 A. 3SG.SA-3.OM-watch.RETRO 1.DEF-1.child  
 'Anfiat cared for the child.'

c. Anfiat (De) a-a-mw-angali-a mbani?  
 Anfiat (COP) 3SG.SA-PST-3.OM-watch-FV who  
 'Who did Anfiat care for?'

In certain contexts, the OM is required to be in a local relation with an overt NP

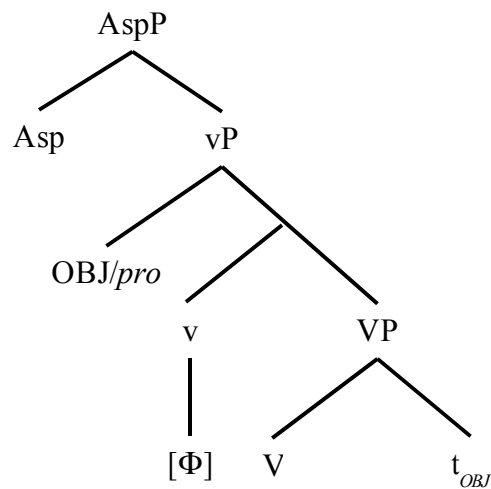
object. This is evidence that the OM cannot be a pronominal clitic with the structure in (396).

(396) Structure of pronominal clitics proposed by previous authors



Rather, if we assume that little *pro* is available for object agreement the way that it is available for subject agreement, the phi-features in *v* could be checked either by an overt NP or by *pro*, if there is no overt NP or if it is in an adjoined position. This structure is represented in (397).

(397)



Henderson (2006) analyzes the object markers in languages like Shimaore, Chichewa, Swahili and Zulu as being agreement markers, while OM's in languages like Lingala are taken to be pronominal in nature. His survey of 23 Bantu languages shows a distribution in which pronoun-type languages (such as Lingala) are largely spoken in central and central eastern Africa, whereas agreement-type languages (such as Swahili) are generally spoken in south eastern and southern Africa (see Figure 1 in Henderson 2006:181). Since the original inhabitants of Mayotte and the other Comoro islands are thought to have come from coastal East Africa, it is not surprising to find that Shimaore patterns with east African Bantu languages. The historical process in question is the grammaticalization of a pronominal argument to a functional morpheme (agreement), and the various languages are different stages of that grammaticalization.

He thus concludes that object markers in Swahili (and other similar languages, such as Chichewa) are agreement markers, rather than pronouns. Due to the way in which Shimaore patterns, for the most part, with Swahili in terms of the diagnostics given, I will analyze Shimaore OM's as being agreement markers, rather than pronouns, and as participating in the structure given in (397).<sup>122</sup>

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<sup>122</sup> Two factors that lead Letsholo (2002) to the conclusion that object markers in Ikalanga are pronominal clitics, i.e. arguments of the verb, rather than agreement markers, are also present in Shimaore. The first is the fact that object markers do not interact with tense/aspect the way that subject markers do. However, it is not clear why one would expect subject agreement and object agreement to act the same way. The other reason is that object markers are not obligatory as subject markers are, but again, it is not clear why one would expect object agreement to be obligatory simply because subject agreement is. Indeed, it has been noted that in languages that employ subject agreement, it is overwhelmingly obligatory, whereas there is more variation among languages that use object agreement. In some languages, object

## 5.5 Conclusions

In this chapter, I have argued that the Shimaore lexical subject is actually in topic position, based on how the language patterns with other languages that have determined to have their lexical "subjects" in topic position. I have also argued that Shimaore subject markers are markers of agreement, rather than, for example, incorporated pronouns, drawing from data involving first-person singular subjects and verbs from a variety of tenses. I have placed Shimaore subject agreement within the framework of previous work on subject agreement in other Bantu languages. I have demonstrated that Shimaore object markers are agreement markers, and not incorporated pronouns, as has been argued for some other Bantu languages. This is not a surprising finding for Shimaore, as it fits in with the distribution that has been found in which agreement-type languages like Swahili and Comorian are generally spoken in south eastern and southern Africa, and speakers of pronoun-type languages are more often located in central and central eastern Africa.

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agreement is always obligatory, whereas in others there are certain well-defined contexts where it is required, and otherwise it is optional or disallowed. (See Comrie (1981) and Woolford 1999, among others.) The other evidence given by Letsholo that Ikalanga object markers are the real arguments of the verb involve tone facts and adverbial placement that do not apply in the case of Shimaore.

## CHAPTER 6: CONCLUSIONS

### 6.1 Summary of findings

In this dissertation, I have provided what I hope is a more detailed description of the Shimaore dialect of Comorian than what has previously been available. I have given background on the phonology of Shimaore, including various phonological processes involving the consonants and vowels of the language. I have also given a description of the Shimaore noun class system, which is very similar to those of other Bantu languages. Within that discussion, I have explored issues of word order with respect to modifiers, such as numerals, quantifiers, demonstratives, and possessives.

In describing the Shimaore verbal system, I have tried to compare Shimaore with its closest relative, Swahili, pointing out the similarities and differences between the two languages. We have seen that the tense-aspect-modality (TAM) system of Shimaore is a complex one, from the "lack of correspondences" between affirmative forms and negative forms, to the interaction between tense and agreement that we find with first-person singular subjects.

In this dissertation, I have placed a special focus on structures of interest to linguists that had been neglected in previous work on Shimaore. I believe that this is one of the major contributions of this thesis on Shimaore, which has been studied almost exclusively in a descriptive tradition. Bantuists and other linguists will now be able to

draw on data from Shimaore that was previously unavailable in their analyses of languages and language families.

We have seen that Shimaore raises some challenges for previous work on clause structure, particularly since little work has been done on processes like vowel harmony, with most research on functional projections focusing on affixation. I have provided an explanation for the blocking of the retrospective-marking vowel harmony process, drawing on a complex head formation approach à la Julien (2002), and arguing that when "derivational" affixes are present, the verb is no longer in a local relation with the head of the retrospective aspect phrase, thereby blocking the vowel harmony process. I have also demonstrated that Shimaore raises some minor issues for the universal ordering of functional projections laid out in Cinque (1999).

I have also demonstrated that the Shimaore lexical subject is actually in topic position, drawing on diagnostics provided in previous work on Bantu languages and other work more generally. I have argued that subject and object markers in Shimaore are markers of agreement, as opposed to incorporated pronouns, and are thus not the actual arguments of the verb. We have seen that this places Shimaore among other agreement-type Bantu languages spoken in south eastern and southern Africa. I have provided an analysis of subject and object agreement as a relational notion, rather than through the use of an agreement phrase, which has recently been argued to be a superfluous functional category, unnecessary in accounting for agreement in most, if not all, languages.

## 6.2 Areas for further research

Because Shimaore has been studied mainly in a descriptive tradition, many constructions in Shimaore have simply not yet been fully laid out for analysis. For example, full sentences involving a lexical subject, a verb and a lexical object are rare in the literature currently available on Shimaore, and so word order restrictions are difficult to find. Additionally, in this dissertation, I have focused mainly on subjects and objects, leaving adjuncts for further research. The Shimaore relative clause system also seems to be an area of particular potential.

Another area that requires further research is that of so-called derived verbs and their implications for a more detailed analysis of the vP in Shimaore. For example, restrictions on applicative constructions, argument ordering, object marking, and idiomatic vs. literal interpretations would all be interesting to study further, particularly in light of research that has been done on such constructions in other Bantu languages. The asymmetric nature of Shimaore does not seem to be as solid as that of, for example, Swahili, so more testing should be done on object asymmetries in the language.

A rather large area upon which I have only begun to work is that of codeswitching. With French as the official language of Mayotte and large numbers of younger speakers being equally fluent in both French and Shimaore, there is a great deal of codeswitching in daily conversation. Even more interesting would be codeswitching between Shimaore and Malagasy, given the very different types of structures in these two languages. I am not aware of previous work on codeswitching between a Bantu language and an Austronesian language.



There are many areas of Shimaore grammar that have simply not been explored at all yet. My hope is that this dissertation will prove useful to those who undertake some of that research in the future.

## BIBLIOGRAPHY

- Ahmed-Chamanga, Mohamed. "L'accentuation du verbal en shindzuani (Anjouanais, îles Comores)." *Afrique et langage* 25 (1986): 35-54.
- Ahmed-Chamanga, Mohamed. *Lexique comorien (shindzuani) français*. Paris: L'Harmattan, 1992.
- Ahmed-Chamanga, Mohamed. *Dictionnaire français-comorien*. Paris: L'Harmattan, 1997.
- Ahmed-Chamanga, Mohamed, and Noël-Jacques Gueunier. *Le dictionnaire comorien-français et français-comorien du R.P. Sacleux*. Paris: SELAF, 1979.
- Aksu-Koç, Ayhan, and Dan Slobin. "A Psychological Account of the Development and Use of Evidentials in Turkish." *Evidentiality: The Linguistic Coding of Epistemology*. Ed. Wallace Chafe and Johanna Nichols. Norwood, N.J.: Ablex, 1986. 159-67.
- Alexandre, Pierre, and Marie-Françoise Rombi. "Echantillon bantu." *Modèles linguistiques* 6.1 (1984): 93-99.
- Alexiadou, Artemis, and Elena Anagnostopoulou. "Parameterizing Agr: Word Order, Movement, and EPP Checking." *Natural Language and Linguistic Theory* (1998): 491-539.
- Alsina, Alex. "On the argument structure of causatives." *Linguistic Inquiry* 23.4 (1992): 517-55.

- Angot, A. "Grammaire anjouanaise." *Bulletin de l'Académie Malgache* 27 (1946): 89-123.
- Ashton, Ethel O. *Swahili Grammar*. New York: Longman, 1944.
- Baker, Mark. *Incorporation: A Theory of Grammatical Function Changing*. Chicago: University of Chicago Press, 1988.
- Baker, Mark. "Building and merging, not checking: the non-existence of (Aux)-S-V-O languages." *Linguistic Inquiry* 33 (2002): 321-8.
- Beaudoin-Lietz, Christa A.M. "Formatives of Tense, Aspect, Mood and Negation in the Verbal Construction of Standard Swahili". Diss. Memorial University of Newfoundland, 1999.
- Belazi, Heidi, Edward Rubin, and Almeida Jacqueline Toribio. "Codeswitching and X-Bar Theory: The functional head constraint." *Linguistic Theory* 42 (1994): 221-37.
- Belletti, Adriana. *Generalized Verb Movement*. Turin: Rosenberg & Sellier, 1990.
- Besha, Ruth Mfumbwa. *A Study of Tense and Aspect in Shambala*. Berlin: D. Reimer, 1989.
- Blanchy-Daurel, Sophie. *La vie quotidienne à Mayotte*. Paris: L'Harmattan, 1990.
- Blanchy, Sophie. *L'interprète : Lexique mahorais-français et français-mahorais*. Mayotte: C.M.A.C. et Editions Kashkasi, 1987.
- Blanchy, Sophie. *Dictionnaire mahorais-français français-mahorais*. Paris: L'Harmattan, 1996.
- Blanchy, Sophie, Zaharia Soilihi, Noël Jacques Gueunier, and Madjidhoubi Sai. *La Maison de la mère: Contes de Mayotte*. Paris: L'Harmattan, 1993.

- Bokamba, Eyamba. "Verbal agreement as a non-cyclic rule in Bantu." *Papers from the Regional Meetings, Chicago Linguistic Society* 16 (1980): 10-29.
- Bokamba, Eyamba. "Language variation and change in pervasively multilingual societies: Bantu languages." *Topics in African Linguistics*. Ed. Mufwene, Salikoko S. & Lioba Moshi. Amsterdam: John Benjamins, 1993. 207-52.
- Brandon, Jean-Philippe. "Linguistique: Le shimaore, une langue bantoue à part entière." *Bulletin de naturalistes, historiens et géographes de Mayotte* 5 (2001): 30-38.
- Bresnan, Joan, and Jonni M. Kanerva. "Locative inversion in Chichewa: A case study of factorization in grammar." *Linguistic Inquiry* 20.1 (1989): 1-50.
- Bresnan, Joan, and Lioba Moshi. "Object asymmetries in comparative Bantu syntax." *Theoretical Aspects of Bantu Grammar*. Ed. Mchombo, Sam. Stanford, CA: CSLI Publications, 1993. 47-91.
- Bresnan, Joan, and Sam Mchombo. "Topic, Pronoun, and Agreement in Chichewa." *Language* 63.4 (1987): 741-82.
- Butler, Lindsay K. "Exceptional blocking of Yucatec Maya Vowel Harmony." *LSO Working Papers in Linguistics* 5 (2005): 25-39.
- Cardinaletti, Anna, and Michal Starke. "The typology of structural deficiency: A case study of the three classes of pronouns." *Clitics in the Language of Europe*. Ed. Van Riemsdijk, Henk. Empirical Approaches to Language Typology New York: Mouton de Gruyter, 1999. 145-233.
- Carstens, Vicki. "Multiple agreement and Case deletion: Against  $\Phi$ -(in)completeness." *Syntax* 3 (2001): 147-63.
- Carstens, Vicki, and Kasangati Kinyalolo. *On IP Structure: Tense, Aspect and Agreement*. Ms. Cornell University and UCLA, 1989.

- Cassimjee, Farida, and Charles W. Kisseberth. "Shingazidja Nominal Accent." *Studies in the Linguistic Sciences* 19.1 (1989): 33-61.
- Cassimjee, Farida, and Charles W. Kisseberth. "Optimal Domains Theory and Bantu tonology: A case study from Isixhosa and Shingazidja." *Theoretical Aspects of Bantu Tone*. Ed. Hyman, Larry M., & Kisseberth, Charles W.. Stanford, CA: Center Study Language & Information, 1998. 33-132.
- Cheikh, Moïnaesha. "*Morphologie du verbe dans la langue comorienne (grand-comorien)*". Masters Thesis, Aix-en-Provence, 1981.
- Chomsky, Noam. *The Minimalist Program*. Cambridge, MA: MIT Press, 1995.
- Chomsky, Noam. *On Phases*. Ms. MIT, 2005.
- Chung, Sandra, and Alan Timberlake. "Tense, Aspect and Mood." *Language Typology and Syntactic Description*. Ed. Shopin, Timothy. Cambridge, UK: Cambridge University Press, 1985. 202-58.
- Comrie, Bernard. *Language Universals and Linguistic Typology*. Oxford: Blackwell, 1981.
- Contini-Morava, Ellen. *Discourse Pragmatics and Semantic Categorization*. Berlin: Mouton de Gruyter, 1989.
- Cornice, Abdillahi D. *Manuel grammatical du shimaore*. Mamoudzou, Mayotte: L'Association SHIME, 1999.
- Deed, Florence. *Giryama-English Dictionary*. Kampala: East African Literature Bureau, 1964.
- Demuth, Katherine. "Questions, Relatives and Minimal Projection." *Language Acquisition* 4.1-2 (1995): 49-71.

- Drobc, Ursula. "On the PERFECT in Swahili." *Afrikanistische Arbeitspapiere* 29 (1992): 63-87.
- Fischer, F. *Grammaire-dictionnaire comorien*. Strasbourg: Société d'Éditions de la Basse-Alsace, 1949.
- Fishman, Joshua. "Language maintenance and language shift as a field of inquiry: a definition of the field and suggestions for its further development." *Linguistics* 9 (1964): 32-70.
- Full, Wolfram. "Two tenses in Comorian: Morphological form and inherent meaning." *Afrikanistische Arbeitspapiere* 68 (2001): 49-58.
- Gibson, Kean. "The Ordering of Auxiliary Notions in Guyanese Creole." *Language* 62 (1986): 571-86.
- Givón, Talmy. 1972. *Studies in Chibemba and Bantu Grammar. Studies in African Linguistics*, 3, suppl. 3. Los Angeles: Dept of Linguistics, UCLA.
- Gordon, Raymond G., Jr. (ed.). *Ethnologue: Languages of the World, Fifteenth edition*. Dallas, Tex.: SIL International, 2005. Online version: <http://www.ethnologue.com/>
- Grégoire, Claire. "Les voyelles finales alternantes dans la conjugaison affirmative des langues bantoues centrales." *Journal of African Languages and Linguistics* (1979): 141-172.
- Grimshaw, Jane B. *Words and Structure*. Stanford, CA: Center for the Study of Language and Information, 2005.
- Gueunier, Noël Jacques. "Documents sur la langue makhuwa à Madagascar et aux Comores." *Études Océan Indien* 35-36 (2003-04): 149-223.

- Guthrie, Malcolm. *The Classification of the Bantu Languages*. London: Publications for the International Africa Institute, 1948.
- Guthrie, Malcolm. *Comparative Bantu: An Introduction to the Comparative Linguistics and Prehistory of the Bantu Languages*. 4 vols. Farnborough: Gregg, 1967-71.
- Hair, P. "The Earliest extant word-list of Swahili, 1613." *African Studies* 40(2) (1981): 151-3.
- Halle, Morris, and Alec Marantz. "Distributed Morphology and the pieces of inflection." *The View from Building 20*. Ed. Kenneth Hale and Samuel Jay Keyser. Cambridge, MA: MIT Press, 1993. 111-76.
- Halle, Morris, and Alec Marantz. "Some key features of Distributed Morphology." *Papers on Phonology and Morphology*. Ed. Andrew Carnie, Heidi Harley, and Tony Bures. : , 1994. 275-288.
- Heepe, M. "Die Komoriendialekte Ngazidja und Nzwani auf Grund älteren und neueren Materials". Diss. Universität Leipzig, 1914.
- Heepe, M. "Die Komoriendialekte Ngazidja, Nzwani, und Mwali." *Abhandlungen des Hamburgischen Kolonialinstituts* 23 (1920): 1-166.
- Henderson, Brent Mykel. "The Syntax and Typology of Bantu Relative Clauses". Diss. University of Illinois at Urbana-Champaign, 2006.
- Hendrick, Randall. "The Morphosyntax of Aspect." *Lingua* 85.2-3 (1991): 171-210.
- Hildebrandt, J. "Fragmente der Johanna-Sprache." *Zeitschrift für Ethnologie* (1876): 89-96.
- Huang, C.-T. James. "On the distribution and reference of empty pronouns." *Linguistic Inquiry* 15 (1984): 531-74.
- Huttar, George L., and Mary L. Huttar. *Ndyuka*. London: Routledge, 1994.

- Iatridou, Sabine. "About Agr(P)." *Linguistic Inquiry* 21 (1990): 551-77.
- Ibrahim, Mahmoud. *État français et colons aux Comores (1912-1946)*. Paris: Éditions L'Harmattan, 1997.
- INSEE. . : Institut National des Études Statistiques et Écono, 2003.
- Johansen, Aimee. "Why Kiswahili adopted the words for six, seven and nine." *Studies in African Linguistics* 32.2 (2003): 99-103.
- Julien, Marit. *Syntactic Heads and Word Formation*. Oxford, UK: Oxford University Press, 2002.
- Kayne, Richard. *The Antisymmetry of Syntax*. Cambridge, MA: MIT Press, 1994.
- Keach, Camillia N. "Subject and Object Markers as Agreement and Pronoun Incorporation in Swahili." *Theoretical Approaches to African Linguistics*. Ed. Akinlabi, Akinbiyi. Trenton, NJ: Africa World Press, 1995. 109-16.
- Kinyalolo, Kasangati. "Syntactic Dependencies and the Spec-head Agreement Hypothesis in Kilega". Diss. UCLA, 1991.
- Lafon, Michel. "Brève présentation du système verbal et du fonctionnement d'un auxiliaire en shingazidja." *Oralité Documents* 4 (1982): 151-77.
- Lafon, Michel. "Régularité et irrégularité dans le système verbal du shingazidja (grand-comorien): La voyelle finale des thèmes verbaux (avec des références au swahili)." *Afrique et langage* 22 (1984): 5-33.
- Lafon, Michel. "L'expression de la qualité en shingazidja: Les adjectifs." *Linguistique africaine* supplément (1988): 145-79.
- Lafon, Michel. *Petit vocabulaire français-shingazidja à l'usage des amateurs*. Travaux et documents du CEROI 7. Paris: INALCO, 1989.



- Lafon, Michel. "La négation dans la prédication en shingazidja (Grand-Comorien)." *Linguistique Africaine* 4 (1990): 123-144.
- Lafon, Michel. *Lexique français-shingazidja*. Travaux et documents du CEROI 14. Paris: INALCO, 1991.
- Leblanc, Annie. "Le status syntaxique des adverbes de temps en créole haïtien." *Revue Québécoise de Linguistique* 18 (1989): 41-63.
- Letsholo, Rose. "Syntactic Domains in Ikalanga". Diss. University of Michigan, 2002.
- Liszkowski, Henri Daniel. . Mamoudzou, Mayotte: Editions du Baobab, 2000.
- Louwerse, J. *The Morphosyntax of Una in Relation to Discourse Structure: A Descriptive Analysis*. Pacific Linguistics, Series B. Canberra: Australian National University, 1988.
- Mahajan, Anoop. "The A/A-Bar Distinction and Movement Theory". Diss. MIT, 1990.
- Marantz, Alec. "Implications of asymmetries in double object constructions." *Theoretical Aspects of Bantu Grammar*. Ed. Mchombo, Sam. Stanford, CA: CSLI Publications, 1993. 113-51.
- McGinnis, Martha. "Variation in the phase structure of applicatives." *Linguistic Variation Yearbook* 1 (2001): 105-46.
- Mohammed, Mohammed A. *Modern Swahili Grammar*. Nairobi: East African Educational Publishers, 2001.
- Möhlig, Wilhelm, Gérard Philippon, Marie-Françoise Rombi, and J.C. Winter. "Classification dialectométrique de quelques parlers swahilis." *Dialectologie et comparatisme en Afrique Noire*. Ed. Guarisma, G. & S. Platiel. Paris: SELAF, 1980. .

- Mugane, John M.. *Tujifunze Kiswahili: Let's Learn Swahili*. Athens, Ohio: Aramati Digital Technologies Publications, 1999.
- Myers, Scott. *Tone and the Structure of Words in Shona*. New York: Garland, 1990.
- Newitt, Malyn. *The Comoro Islands: Struggle Against Dependency in the Indian Ocean*. Boulder, CO: Westview Press, 1984.
- Nurse, Derek. "The proto-Sabaki verb system and its subsequent development." *Sprache und Geschichte in Afrika* 5 (1983): 45-109.
- Nurse, Derek. "Is Comorian Swahili? Being an examination of the diachronic relationship between Comorian and coastal Swahili." *Le swahili et ses limites*. Ed. Marie-Françoise Rombi. Paris: , 1989. .
- Nurse, Derek, and Thomas J. Hinnebusch. *Swahili and Sabaki: A Linguistic History*. Berkeley: University of California Press, 1993.
- Ottenheimer, Harriet, & Martin Ottenheimer. "The classification of the languages of the Comoro islands." *Anthropological Linguistics* 18.1 (1976): 408-15.
- Pesetsky, David, and Esther Torrego. "T-to-C movement: Causes and consequence." *Ken Hale: A life in language*. Ed. Michael Kenstowicz. Cambridge, MA: MIT Press, 2001. 355-426.
- Pesetsky, David, and Esther Torrego. "Tense, case, and the nature of syntactic categories." *The Syntax of Time*. Ed. Jacqueline Guéron, Jacqueline Lecarme. Cambridge, MA: MIT Press, 2004. 495-538.
- Philippon, Gérard. "Observations sur une étude récente de morphologie verbale de la langue comorienne." *Etudes Océan Indien* 2 (1983): 123-6.
- Philippon, Gérard. "L'accentuation du comorien: Essai d'analyse métrique." *Etudes Océan Indien* 9 (1988): 35-79.

- Picabia, Lélia. "La morphologie du démonstratif en comorien [Jikomor]." *Papers from the 25th Regional Meeting of the Chicago Linguistic Society* (1989): 157-66.
- Picabia, Lélia. "La proposition finie en grand comorien: Analyse des unités fonctionnelles." *Linguistique Africaine* 16 (1996): 69-95.
- Picabia, Lélia. "Accord en 'définitude' dans les phrases attributives du grand comorien." *"Être" et "Avoir": Syntaxe, sémantique, typologie*. Ed. Rouveret, Alain. : , 1998. 197-225.
- Pollock Jean-Yves. "Verb Movement, Universal Grammar, and the Structure of IP." *Linguistic Inquiry* 20 (1989): 365-424.
- Polomé, Edgar C. *Swahili Language Handbook*. Washington, D.C.: Center for Applied Linguistics, 1967.
- Poplack, Shana. "Sometimes I'll start a sentence in Spanish y termino en español." *Linguistics* 18 (1980): 581-618.
- Pylkkänen, Liina. "Introducing Arguments". Diss. MIT, 2002.
- Rey, Véronique. "Détermination des schèmes accentuels du système verbal en shingazidja." *Travaux de l'Institut de Phonétique d'Aix* 12 (1988): 133-52.
- Romaine, Suzanne. *Bilingualism*. Oxford: Blackwell Publishers, 1995.
- Rombi, Marie-Françoise. *Le Shimaore: Première approche d'un parler de la langue comorienne*. Paris: SELAF, 1983.
- Rombi, Marie-Françoise. "Les langues de Mayotte." *Les langues de France*. Ed. Cerquiglini, Bernard, M. Alessio and J. Sibille. Paris: Presses universitaires de France, 2003. 305-16.

- Rombi, Marie-Françoise, and Pierre Alexandre. "Les parlers comoriens, caractéristiques différentielles, position par rapport au swahili." *Etudes sur le Bantu Oriental*, no. 9. Ed. Marie-Françoise Rombi. Paris: SELAF, 1982. 17-39.
- Saleh, Ali. "Le Swahili, langue véhiculaire de l'Afrique orientale et des Comores." *Revue française d'études politiques africaines* 70 (1971): 82-94.
- Saleh, Ali. *Cours d'initiation à la langue comorienne*. Paris: G.-P. Maisonneuve et Larose, 1979.
- Schneider-Zioga, Patricia. "An Argument in favor of Agreement Phrase." *Proceeding from the Eastern States Conference on Linguistics*. Ed. Virginia Montapayne and Anthony D. Green. : , 1996. Cornell University.
- Schneider-Zioga, Patricia. "Anti-agreement, anti-locality and minimality: The syntax of dislocated subjects." *Natural Language and Linguistic Theory* 25.2 (2007): 403-46.
- Sibertin-Blanc, J.-L.. "Sur quelques aspects des dialectes comoriens en contraste avec le kiswahili." *Etudes et documents* 1 (1980): 33-68.
- Smith, Carlota. "Notes on Aspect in Chinese." *Texas Linguistic Forum* 28 (1987): 91-127.
- Sohn, Ho-Min. *Korean*. London: Routledge, 1994.
- Soilihi, Zaharia, and Sophie Blanchy. *Furukombe et autres contes de Mayotte*. Paris: Editions Caribéennes, 1991.
- Steere, E. *Short Specimens of the Vocabularies of Three Unpublished African Languages*. London: C. Cull, 1869.
- Struck, B. "An unpublished vocabulary of the Comoro language." *African Society Journal* 8 (1909): 412-21.

- Svantesson, Jan-Olof. "Tense, mood and aspect in Kammu." *Tense, Aspect and Action*. Ed. Carl Bache, Hans Basbøll, and Carl-Erik Lindberg. Berlin: , 1994. 265-78.
- Wilkendorf, Patricia. "Le système temporel et aspectuel de la langue nɔ́maándɛ́." *Tense and Aspect in Eight Languages of Cameroon*. Ed. Summer Institute of Linguistics and University of Texas. : , 1991. 105-46.
- Woolford, Ellen. "Animacy hierarchy effects on object agreement." *New dimensions in African linguistics and languages*. Ed. Paul F.A. Kotey. Trends in African Linguistics 3. Trenton, NJ: Africa World Press, 1999. 203-16.
- Yavaş, Feryal. "On the Meaning of the Tense and Aspect Markers in Turkish". Diss. University of Kansas, 1980.
- Zanuttini, Raffaella. *Negation and Clausal Structure: A Comparative Study of Romance Languages*. New York: Oxford University Press, 1997.

## APPENDIX A: A SHORT STORY IN SHIMAORE

This story was told by one of my language consultants, R., on March 23, 2005.

Mengo-ni      na      Dago-ni      ha-tru,      vhw-      a  
 9.back-LOC      and      village-LOC      17.AGR-our      16.SA-      COP  
 mi-nadzi<sup>123</sup>      me-      ngi      tu.  
 4.coconut.trees      4.AGR-      many      only

*'Next to our village, there are many coconut trees.'*

Vhw-a      mi-nadzi      mi-Bole      na      mi-nadzi      mi-titi.  
 16.SA-COP      4.coconut.trees      4.AGR-big      and      4.coconut.trees      4.AGR-small

*'There are big coconut trees and small coconut trees.'*

Suku      mengo-ni      mw-a      suku,      tsi-Dungan-a      na      mwanzani      wangu.  
 9.day      back-LOC      18.of      9.day      1SG.SA-follow-VH.RETRO      and      1.friend      1.my

*'One day, I was accompanied by my friend.'*

R-endr-e      hari      na      vhahanu      vhavho,  
 1PL.SA-go-VH.RETRO      middle      and      16.place      there

r-a-ko-ndro-jema.

1PL.SA-PST-PST.PROG-go-pick.coconuts.

*'We went up to that place to go pick coconuts.'*

Na...      wakati      io,      watru      wa-Bole      wa      Dago-ni      pia  
 and...      11.time      11.that      2.people      2.AGR-big      2.of      village-LOC      all

wa-(a)-ko-shapiha      na      wanatsa      wa-titi.  
 3PL.SA-PST-PST.PROG-care.for      and      2.children      2.AGR-small

*'And, at that time, all the adults of the village took care of the small children.'*

Mwanatsa      m-titi      neka      a-fanya      kosa,  
 1.child      1.AGR-small      if      3SG.SA-make.RETRO      mistake

watru      wa-Bole      wa-ko-m-remu.  
 2.people      2.AGR-big      3PL.SA-PST.PROG-3SG.OA-hit

*'If a small child made a mistake, the adults would beat him/her.'*

<sup>123</sup> The noun *nadzi* refers to a dry coconut, and the word *m-nadzi* 'coconut tree' (plural *mi-nadzi*) is derived from this noun.

Basi... ri-Dungana na mwanzani wangu,  
 so... 1PL.SA-follow with 1.friend 1.my  
*'So, along with my friend,'*

ri-law-a Dago-ni ri-hea pak(a) malavu-ni,  
 1PL.SA-go.out-VH.RETRO village-LOC 1PL.SA-go.up until countryside- LOC  
*'we left the village, went up into the countryside,'*

ri-on-o mwana<sup>124</sup> mnadzi m-titi.  
 1PL.SA-see-VH.RETRO 1.child 3.coconut.tree 3.AGR-small  
*'and we saw a small coconut tree.'*

Mwanzani wangu a-ni-ambia, "Na-r(i)-he-e vhanu  
 1.friend 1.my 3SG.SA-1SG.OBJ-tell and-1PL.SA-climb-SUBJUNCT here  
 ri-jem-e."  
 1PL.SA-pick.coconuts-SUBJUNCT  
*'My friend said to me, "Let's climb up here and pick coconuts."'*

Basi ri-hea mwana mnadzi u-le,  
 so 1PL.SA-climb 1.child 3.coconut.tree 3.AGR-DEM  
 ri-andrisa, ri-si-rengedz-a ri-jem-e.  
 1PL.SA-start.RETRO 1PL.SA-PRES.PROG-prepare-FV 1PL.SA-pick.coconuts-SUBJUNCT  
*'So we climbed up the little coconut tree, and we started getting ready to pick coconuts.'*

Ata kayahoma<sup>125</sup> ri-kia maji y-a  
 until right.away 1PL.SA-hear.RETRO 6.voices 6.AGR-of  
 watru wa-ili wa-Bole w-a Dago-ni oho  
 2.people 2.AGR-two 2.AGR-big 2.AGR-of village-LOC far  
 wa-s-endr-a na u-hadisi.  
 3PL.SA-PRES.PROG-go-FV and INF-discuss  
*'We hadn't finished yet when we heard the voices of two adults from the village who were walking and talking.'*

Moja a-su<sup>126</sup>-mw-ambia mnya-he  
 one 3SG.SA-PRES.PROG-3SG.OA-tell companion-his  
*'One of them said to the other...'*

124 The noun *mwana* 'child' is used here as a diminutive, referring to the coconut tree being small.

125 Blanchy gives the translation of *kayahoma* as 'aussitôt, sans attendre, sans tarder' ('right away, without waiting, without being late'), and the verb *-homa* means 'last', so it looks like the word could be broken down as follows: *ka-y-a-homa* 'it didn't last'.

126 Note the use of the present progressive in the story, with a past tense translation in English. This is common in story telling, and there are several other examples in this story.

"Mwana mnadzi m-titi unu vhanu...  
 1.child 3.coconut.tree 3.AGR-small 3.DEM here  
 wanatsa ka-wa-law-a u-hea vhanu  
 2.children NEG-3PL.SA-go.out-VH.NEG.PRES.HAB INF-climb here  
 na u-jema."  
 and INF-pick.coconuts  
 ' "This little coconut tree here... children are always climbing up here and picking coconuts." '

I-lera ile a-a-toa (atoa) hadisi ile,  
 9.DEF-time 9.DEM 3SG.SA-PST-tell 9.story 9.this  
 a-dzoa matso yahe u-angalia mnadzi inu<sup>127</sup>.  
 3SG.SA-raise 6.eyes 6.his INF-look.at 3.coconut.tree 3.DEM  
 'At the time he was saying this, he looked up at the coconut tree.'

Isa a-ri-on-o  
 then 3SG.SA-2PL.OA-see-VH.RETRO  
 'Then he saw us.'

a-mw-ambia mnya-he kamwe, "Vhw-a tsuwale<sup>128</sup>!"  
 3SG.SA-3SG.OA-tell companion-his right.away 16.SA-COP CL.2.PRESENTATIVE  
 'He said to his companion, "There they are!" '

Wakati ile wami na mnya-ngu  
 10.time 10.DEM me and companion-my  
 ka-r(i)-(a)-suButu r-a-dunga mnadzi r-a-shuka  
 NEG-1PL.SA-PST-dare 1PL.SA-IRR-follow 3.coconut.tree 1PL.SA-IRR-come.down  
 'At that time, my companion and I didn't dare come down gently from the coconut tree.'

ri-a-ruka tu ula mnadzi-ni  
 1PL.SA-PST-jump just 3.DEM 3.coconut.tree-LOC  
 'We just jumped down from the coconut tree.'

<sup>127</sup> We would expect *mnadzi unu*, rather than *mnadzi inu* here.

<sup>128</sup> The final vowel of the presentative was drawn out by the speaker, resulting in a pronunciation similar to *tswaleee*.



Ri-dzi-pu-lis-a                      u-dzi-TOA!    isa    ula<sup>129</sup>                      mbiyo  
 1PL.SA-REFL-fall-CAUS-FV        INF-REFL-eject    then    ???                      10.speed  
 za    kusudi<sup>130</sup>  
 10.of    5.intention

*'We landed hard on the ground, and then ran like crazy.'*

Ri-vhir-i                      hari    na                      miBa                      y-a-ka                      vhavho  
 1PL.SA-pass.by-VH.RETRO    middle by                      4.thorns                      4.sa-PST-be                      there  
 ri-SHUK-U                                                                utsini                      oho    ri-trala  
 1PL.SA-go.down-VH.RETRO                      on.the.ground                      far                      1PL.SA-disappear.RETRO

*'We went by some thorns that were there, got down on the ground, and disappeared.'*

Lera                      r-a-asili<sup>131</sup>                      mbali                      r-a-jua                      amba  
 9.time                      1PL.SA-PST-???                      far                      1PL.SA-PST-know                      that  
 ka-w-a-tso-ri-Dunga                                                                tsena  
 NEG-3PL.SA-PST-FUT-1PL.OA-follow                      still

*'We had gone a long way when we realized that they weren't following us anymore.'*

R(i)-endr-e                      ri-ketsi.  
 1PL.SA-go-VH.RETRO                      1PL.SA-sit.down

*'We went and sat down.'*

De    r-a-mo-angalia                      mindru                      ye-tru  
 COP    1PL.SA-PST-POSS-look.at    4.feet                      4.AGR-our

*'That's when we looked at our feet.'*

Ri-su-ona                      miBa                      MEEEE-ngi<sup>132</sup> ya                      mtsongoma.  
 1PL.SA-PRES.PROG-see                      4.thorns                      4.AGR-many                      4.of                      mtsongoma

*'We saw MANY thorns from the mtsongoma (thorny plant).'*

129 The expression for *run* given in Blanchy's dictionary is *-endra mbiyo*, literally 'go speed', and I have been unable to determine what *ula* is in this sentence. The verb *eat* can be either *-la* or *-dya*, but that does not seem to be what is occurring here.

130 The speaker elongated and stressed every syllable of the word, which resulted in a pronunciation similar to *kuusuudii*.

131 It is possible that this verb is related to the noun *asili*, defined by Blanchy (1996:34) as 'origine' ('origin').

132 The vowel in the first syllable of *mengi* 'many (cl. 4)' was drawn out very long to emphasize that there were a great deal of thorns in the children's feet.

Ri-ketsi          ri-su-lila                  na          roho                  za-tru  
1PL.SA-sit.down 1PL.SA-PRES.PROG-cry          and          10.hearts                  10.AGR-our

zi-s-endra                  da da da da da  
10.SA-PRES.PROG-go          da da da da da

*'We sat down and cried, and our hearts were beating very fast.'*

Suku    iyo          tsi-ri-i                  swafi.  
9.day    9.DEM    1SG.SA-be.afraid.RETRO          very.much

*'That day, I was very scared.'*

Mana                  neka    watru                  wa-Bole                  wa-ka                  wa-ri-para  
because          if          2.people                  2.AGR-big                  3PL.SA-be.RETRO    3PL.SA-1PL.OA-get.RETRO

w-a-tso-ri-rema  
3PL.SA-PST-FUT-1PL.OA-hit

*'Because if the adults had gotten us, they would have beaten us.'*

Na          De          vhavho                  r-a-shuka                  vhavho  
and          COP          there                  1PL.SA-PST-go.down                  there

ri-kodz-o,                  mana                  ri-hos-w-a  
*1PL.SA-get.hurt-VH.RETRO          because                  1PL.SA-stick-PASS-FV*

ha nguvu          na          miba  
hard                  by          4.thorns

*'And the place where we came down, we got hurt, because we were stuck very hard by the thorns.'*

Vhahe...          iyo          De          hadisi, Aimee.  
there.you.go    9.DEM    COP          story    A.

*'There you go. That's the story, Aimee.'*

## **APPENDIX B: IS SHIMAORE A SYMMETRICAL OR AN ASYMMETRICAL BANTU LANGUAGE?**

Bantu languages generally allow more than one postverbal NP object (i.e., both a direct object and an indirect object), but they can be broken down into two main groups with respect to the syntactic behavior of those objects. The first type is *asymmetrical type* languages, in which only one of these objects exhibits properties of a 'primary object', namely passivizability, object agreement, adjacency to the verb, etc. The second type is the *symmetrical type* language, in which more than one of these postverbal objects can exhibit such 'primary object' syntactic behaviors. Swahili is an *asymmetrical type* language, and Shimaore seems to generally pattern with Swahili, but with a couple of exceptions. In this section, I give examples of how Shimaore acts with respect to the 'primary object' behavior, comparing with Swahili and other Bantu languages, and will demonstrate that Shimaore patterns with the asymmetrical type languages.

6.2.1.a *Passives*

In double-object constructions, as an asymmetrical type language, Swahili allows only the indirect object to be passivized (398), whereas the facts are not so clear in Shimaore. The indirect object can definitely be passivized (399-400). With respect to direct objects, language consultants insisted that the direct object could not be passivized (401), but examples such as (402) were found in literary texts that showed direct objects being passivized in double-object constructions.

(398) a.      ni-li-pik-i-w-a                      chakula              na      Hamisi  
                  1SG.SA-PST-COOK-APPL-PASS-FV      food              by      Hamisi  
                  'I was cooked food for by Hamisi.'  
                  (Swahili: Ashton 1944:224)

b.      \* Chakula      ki-li-ni-pik-i-w-a                      na      Hamisi  
                  7.food              7.SA-PST-COOK-1SG.OM-COOK-APPL-PASS-FV      by      Hamisi  
                  'Food was cooked for me by Hamisi.'

(399) Wa-vo-lw-a                      zahula              zawo.  
                  3PL.SA-give-PASS-FV      10.food              10.their  
                  'They were given their food.'  
                  (Rombi 1983: 136)

(400) Tsiwo      umwana                      a-rengele-dz-e-w-a  
                  1.REF      1.DEF-child                      3SG.SA-prepare-CAUS-APPL-PASS-FV





- (405) a.     **a-m-b-a**                             i-shio  
               3SG.SA-3SG.OM-give-RETRO     7.DEF-7.book  
               'S/he gave the book to him/her.'
- b.     **\*a-mu-i-b-a**  
               3SG.SA-3SG.OM-7.OM-give-RETRO  
               'S/he gave it to him/her.'
- c.     **\*a-i-mu-b-a**  
               3SG.SA-7.OM-3SG.OM-give-RETRO  
               'She gave it to him/her.'
- (406) a.     **a-m-b-a**                             i-shio  
               3SG.SA-3SG.OM-give-RETRO     7.DEF-7.book  
               'S/he gave the book to him/her.'
- b.     **\*a-i-b-a**                         u-mwana  
               3SG.SA-7.OM-GIVE-RETRO     1.DEF-1.child  
               'S/he gave it to the child.'

In terms of object marking, Shimaore acts like an asymmetrical type language.<sup>133</sup>

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<sup>133</sup> Shimaore allows for two object markers in the verbal complex, but only the indirect object marker can be preverbal.

*tsi-m-ba-zo*

1sg.sa-3sg.om-give.retro-10.om

'I gave them (class 10 object) to him/her.'

### 6.2.1.c Reciprocalization

The reciprocal suffix of the verb reduces the syntactic objects of the base verb by one. In the reciprocalized example (b) we see that there is one less object than in (a), without reciprocalization.

- (407) a.      Wana              wa-rem-i-a              mbwa mipweke.  
                 2.children        3<sub>PL</sub>.SA-hit-APPL-FV        dogs sticks  
                 'The children hit the dogs with sticks.'
- b.      Wana              wa-rem-e-an-a              mipweke.  
                 2.children        3<sub>PL</sub>.SA-hit-APPL-RECIP-FV        sticks  
                 'The children hit each other with sticks.'

In symmetric languages such as Kichaga, the patient can be reciprocalized in the presence of any applied object, including a beneficiary (408). In asymmetric languages, which is not possible. Shimaore appears to be asymmetric in this respect (409).

- (408) Wà-chàkà        wá-i-w'ágh-i-àn-à        màngì.  
                 2-Chaga            2<sub>SA</sub>-PRES-kill-APPL-RECIP-FV        1.chief  
                 'The Chagas are killing each other for the chief.'  
                 (Kichaga: Bresnan & Moshi 1993:54)

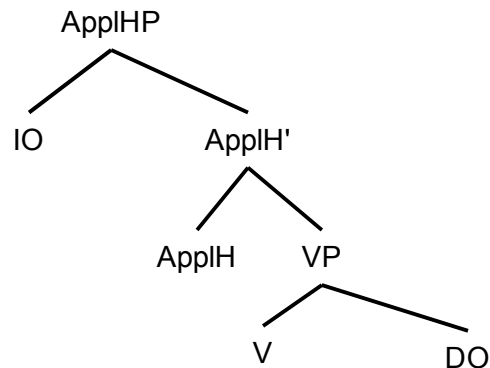
- (409) \*Wana              wa-rem-e-an-a              mayawo.  
                 2.children        3<sub>PL</sub>.SA-hit-APPL-RECIP-FV        their.mother  
                 'The children hit each other for their mother.'



There are also certain interactions of object properties that are permitted in symmetric languages but not asymmetric languages, but that will have to be left for future research in Shimaore.<sup>134</sup>

With respect to those asymmetries relating to applicatives, Pykkänen (2002) argues persuasively that there are two types of applicatives, high applicatives (AppIH), which denotes a relation between an event and an individual, and low applicatives (AppIL), which denotes a relation between two individuals. The AppIH is shown in (410), and the AppIL is shown in (411).

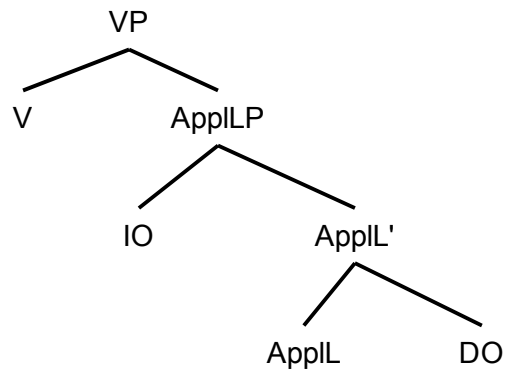
(410) High applicative



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<sup>134</sup> For example, unspecified object deletion should not be possible in the case of applicatives, in cases such as 'He is eating for his wife', but one language consultant allowed such constructions. More speakers need to be consulted on some of these constructions.

(411) Low applicative



Building on Pytkänen's distinction between high and low applicatives, McGinnis (2001) argues that the Benefactive applicative is a high applicative in languages that allow, for example, passivization of either the Theme (direct object) or the Benefactive (indirect object), like Kichaga (412).

(412) a.    K-èlyá<sub>i</sub>            k-i-lyì-í-ò            m`-kà    t<sub>i</sub>.<sup>135</sup>  
               7-food            7<sub>SA</sub>-PRES-eat-APPL-PASS            1-wife  
               'The food is being eaten for the wife.'

b.        m`-kà<sub>i</sub>            n-a-i-lyì-í-ò    t<sub>i</sub>            ku-èlyâ.  
               1-wife            FOC-1<sub>SA</sub>-PRES-eat-APPL-PASS            7-food  
               'The wife is having the food eaten for her.'

(Kichaga: McGinnis 2001:9)

On the other hand, languages like Icelandic and English (413), in which only the Recipient (indirect object) can raise to subject position, have low applicatives. Only the

<sup>135</sup> There should be a double high tone on the first *i* of *k-i-lyì-í-ò* in (412a). There should be a double high tone on the *a* and on the first *i* in *n-a-i-lyì-í-ò* in (412b).

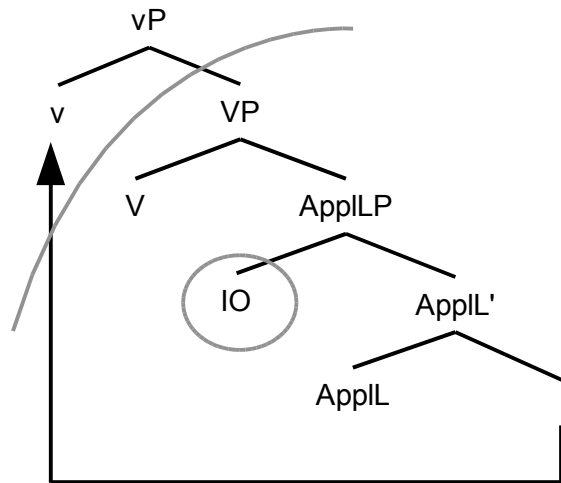
higher, applied object can undergo A-movement to the subject position.

- (413) a. Alicia<sub>i</sub> was baked *t<sub>i</sub>* a cake.  
b. \*A cake<sub>i</sub> was baked Alicia *t<sub>i</sub>*.

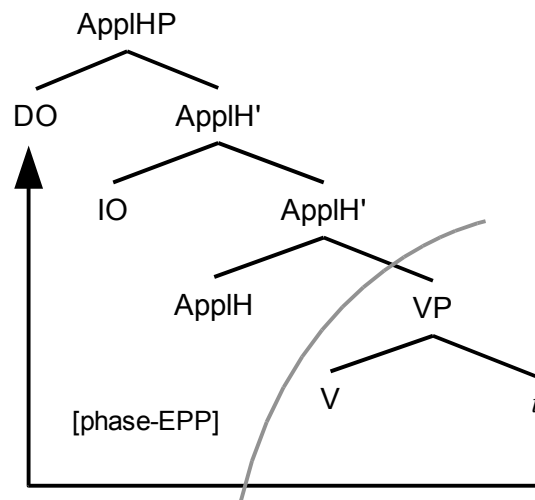
(McGinnis 2001:10)

Because A-movement must respect relativized locality (following Chomsky 1995, among others), the higher object, which is the DP closest to T, blocks the lower object from undergoing A-movement to Spec of TP. Working in a framework involving phases, McGinnis uses a phase-Epp feature in her explanation of how passivization is allowed or disallowed by different languages. In languages like Kichaga, a phase-EPP feature can be added to ApplH (the high applicative) in the passive, which then allows the lower argument to leapfrog over the higher one. Once the direct object occupies a higher specifier of the higher applicative, it is the closest DP to T, so it can raise to Spec of TP. Since ApplP is not a phrase, no phase-EPP feature can be added to ApplL to allow the direct object to undergo A-movement to a specifier above the indirect object. The situation in languages like English is given in (414a), and that of languages like Kichaga is given in (414b).

(414) a. Languages not allowing raising of direct object to Spec of TP



b. Languages allowing raising of direct object to Spec of TP



Such an analysis appears to work for Shimaore, which patterns with English in these constructions, or with Chichewa, Swahili and other asymmetric Bantu languages.<sup>136</sup>

<sup>136</sup> Letsholo (2002) found the same result for Ikalanga.

(415) a. Tsiwo umwana a-rengele-dz-e-w-a mihare zaye.  
 1.REF 1.DEF-child 3SG.SA-prepare-CAUS-APPL-PASS-FV 4.cakes 10.his

'This child's cakes were prepared.'

(Literally, 'this child was prepared his cakes')

(Rombi 1983:205)

b. \*Mihare zaye zi-rengele-dz-e-w-a  
 4.cakes 10.his 10.SA-prepare-CAUS-APPL-PASS-FV

mwana ule

1.child 1.DEM

'His cakes were prepared for that child.'

Shimaore appears to have low applicatives, which do not allow for a phrase-EPP feature to be added to ApplL to allow the direct object to raise to a specifier above the indirect object. Thus, only the indirect object can raise, resulting in passivization of the indirect object only. This explanation is preferable to earlier analyses offered, e.g., by Bresnan & Moshi (1993) and Marantz (1993), because they relied on arbitrary variation from language to language. McGinnis's analysis instead states that there are two types of applicatives available, and that some languages have one type or the other, and some languages have both.

Shimaore patterns for the most part with asymmetric Bantu languages, but there is more work to be done to fill in some of the gaps. I am providing the data that I have on this topic in the hopes of contributing to the discussion on the status of Shimaore as an asymmetrical Bantu language.

## **AUTHOR'S BIOGRAPHY**

Aimee Johansen Alnet was born in Vancouver, Washington, in 1972. She graduated from Nebraska Wesleyan University in 1995 with Bachelor's degrees in sociology and French. After teaching English in France for two years, she returned to the U.S. to begin graduate school at Boston University, where she earned a Master of Arts in French in 1999 and a Master of Arts in Applied Linguistics in 2001. Alnet will join the faculty in the Department of International Languages and Culture at Télécom Bretagne, an engineering school in Brittany, France, in March of 2009.