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ASPECTS OF TIRMAGA GRAMMAR

The members of the Committee approve the masters thesis of Michael Grayson Bryant

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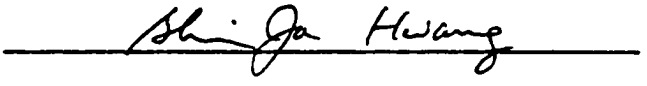

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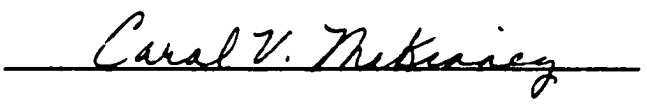

Donald A. Burquest

ASPECTS OF TIRMAGA GRAMMAR

by

MICHAEL GRAYSON BRYANT

Presented to the Faculty of the Graduate School of

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for the Degree of

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ABSTRACT

ASPECTS OF TIRMAGA GRAMMAR

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Supervising Professor: Shin Ja Hwang

Tirmaga is a language spoken in Southwest Ethiopia, which is part of a dialect cluster referred to as Chai-Tirma-Mursi (Dimmendaal 1998). Some research has been done in the Chai and Mursi dialects, but little has been done in Tirmaga. The data used are from both elicited and textual material.

Using a descriptive approach, an overview of the Tirmaga phonology and grammar is presented. Although many of the Tirmaga tonal phenomena have yet to be described, grammatical tone is prevalent in the language marking case, person of subject, mode and voice. The case system is of interest because while it sometimes appears to have split ergative marking, it is actually a nominative-accusative system. The verb morphology is dealt with in detail covering such areas as TAM marking, valence adjusting devices, and participant reference marking. The final chapter presents some of the subordinate and coordinate clause combinations found in Tirmaga such as relative, temporal, reason, conjoined and contrastive clauses.

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CHAPTER 1
INTRODUCTION

1.1. Thesis Overview

Tirmaga is part of a dialect cluster referred to by some as Chai-Tirma-Mursi (Dimmendaal 1998:13). No extensive description of the language has been done to date. The purpose of this study is to provide a sketch of the Tirmaga grammatical system; as such it will be of use to the greater linguistic community, especially those who are interested in Surmic languages. It also contributes to developing a writing system for the Tirmaga people and eventually educational materials in their language. Most of the thesis will focus on sentence-level phenomena; discourse level research is still in the initial stages.

The study builds on the descriptive approach of Thomas Payne's *Describing Morphosyntax* (1997). The book is designed to be a tool for describing the morphology and syntax of under-documented languages. As a result, Payne does not attempt to promote any particular linguistic theory in his book; however, the work of linguists such as Greenburg and Comrie is referenced quite often concerning linguistic universals and typologies. Payne also references the functional-typological approach used by linguists such as Givon. This approach has its basis in prototype theory, which presupposes that all categories have "fuzzy" boundaries. Because of these fuzzy boundaries, most cross-linguistic phenomena are best understood as universal tendencies since they do not always fit into the proper "linguistic universal" mold. With this presupposition of fuzzy categories, descriptive linguists are able to use universal tendencies as a map to guide them in the description of a given language rather than attempting to make the language fit into a particular linguistic

box. It has been interesting to note how Tirmaga fits these universal tendencies in some respects but does not in others.

Chapter 1 of this thesis gives some background information about the Tirmaga people, their sociolinguistic status and a brief overview of the linguistic research that has been done in their language. Chapter 2 presents an overview of the Tirmaga phonology. The first part of chapter 3 deals with both constituent order and morphological typology while the second part of the chapter gives an overview of the nouns and some adpositions found in Tirmaga. The Tirmaga case system is presented as well as the noun morphology used to mark number. Eighteen different suffixes have been identified that mark number on Tirmaga nouns and some of the number marking strategies that are used seem to be based on semantic or iconic categories. This has been observed in some other Surmic languages as well. Chapter 4 focuses on verb morphology, covering areas of inflection such as subject, object and benefactive agreement as well as tense, aspect and voice inflection, which also occur on the verb. Since little has been written on the verb morphology of Tirmaga-Chai-Mursi, this chapter should be the most appealing to linguists interested in Surmic languages. This area has proven the most interesting for me, because it has been one of the most complicated problems to deal with in language learning and analysis. Chapter 5 focuses on some clause and sentence structure issues in Tirmaga including conditional and relative clauses. The appendix contains two sample texts from which some of the data in this study are taken.

1.2. The Tirmaga People

The Tirmaga people live in a remote area of southwestern Ethiopia and have a population of 10,000 to 15,000. Although the Tirmaga language is referred to as "Tirma" in the name of the Chai-Tirma-Mursi dialect cluster, I will use the name Tirmaga rather than

Tirma in this paper. Tirmaga is the native speaker pronunciation, but many times the [g] is not pronounced between homorganic vowels in normal speech. Of the three dialects, Chai and Tirmaga are linguistically and geographically the closest to each other. The names Tirmaga and Chai are self-names, each coming from the opposite dialect's perspective yet accepted by both. Chai comes from the verb **cayá** which means 'to revenge' because the Tirmaga say that the Chai are always quick to revenge the killing of one of their people. The word Tirmaga comes from the verb **timagá** which means 'they don't know' because of their determination to take revenge for a killing even if it means that many of their men will lose their lives in the process. Both of these names illustrate the importance of revenge in their societies. The local people say that historically the names of the two groups were **ŋaus** for the Chai and **ɓal** for the Tirmaga. I do not know, however, what the meanings of these two names might be. The people just refer to them as old words.

Collectively, the Tirmaga and Chai call themselves **súrí**; however, they do not know the origins of this term. Suri is a term that also incorporates the neighboring Baale people who are similar to the Tirmaga and Chai culturally, but different linguistically. All three groups are pastoralists who share the cultural practices of stick fighting and the wearing of lip plates by women. These practices are the distinguishing factors that set them apart from other local ethnic groups. In spite of their linguistic differences, the Tirmaga and Baale share at least one ritual leader between them, known as a **komorú**. There is also some intermarrying between the Tirmaga and Baale since they are the closest of the three groups geographically.

Despite their cultural similarities, they still see themselves as being distinct in respect to their origins. Two things that point to these differences are found in their burial rites and in the central fire of a village. The Tirmaga and Chai bury their dead in the fetal position facing east where their ancestors came from, while the Baale bury their dead facing

west toward Sudan from where their ancestors came. This same distinction can be seen in the central village fire **go kabarí** that is surrounded by a semi-circle of rocks with the open end pointing toward the east in a Tirmaga-Chai village and toward the west in a Baale village.

To the east of the Chai live the neighboring Mursi people. They share the same practices of stick fighting, the wearing of lip plates and even a common language with the Tirmaga and Chai. However, they do not consider themselves Suri. This may be influenced by the separation of the Mursi from the other three groups by the Omo River. Figure 1 shows the location of the Baale, Tirmaga, Chai, and Mursi peoples. The Mursi live to the east of the Omo River, the Chai between the Omo and Kibbish Rivers, the Tirmaga between the Kibbish River and the Sudan border and the Baale live to the west of the Tirmaga extending over into Sudan. In other parts of Ethiopia the Tirmaga, Chai, and Baale are known as "Surma". This term probably originates from the ethnonym Suri. In this paper, we will use the term Tirmaga instead of Suri to avoid confusion and because most of our linguistic research has been conducted with Tirmaga speakers.

The Tirmaga live primarily to the west of the Kibbish River and in the southern part of the Tulge valley located between the towns of Jeba and Tum. The bulk of the population lives in the semi-arid savannah of the Kibbish River valley. They are pastoralists, who also practice subsistence farming. Their main crops are maize and sorghum with some beans, cassava and greens as well. They have two harvests annually, the first being in June-July and the second in October-November. The stick fighting season begins at the first harvest and lasts until November. During this time, there is plenty of food and beer available to give nourishment to the stick fighters and the spectators. In fact, most ritual celebrations are held during this time of year because there is sufficient food (e.g., weddings, the celebration of an elderly person's death and age-grade promotions). In the months of January-February,

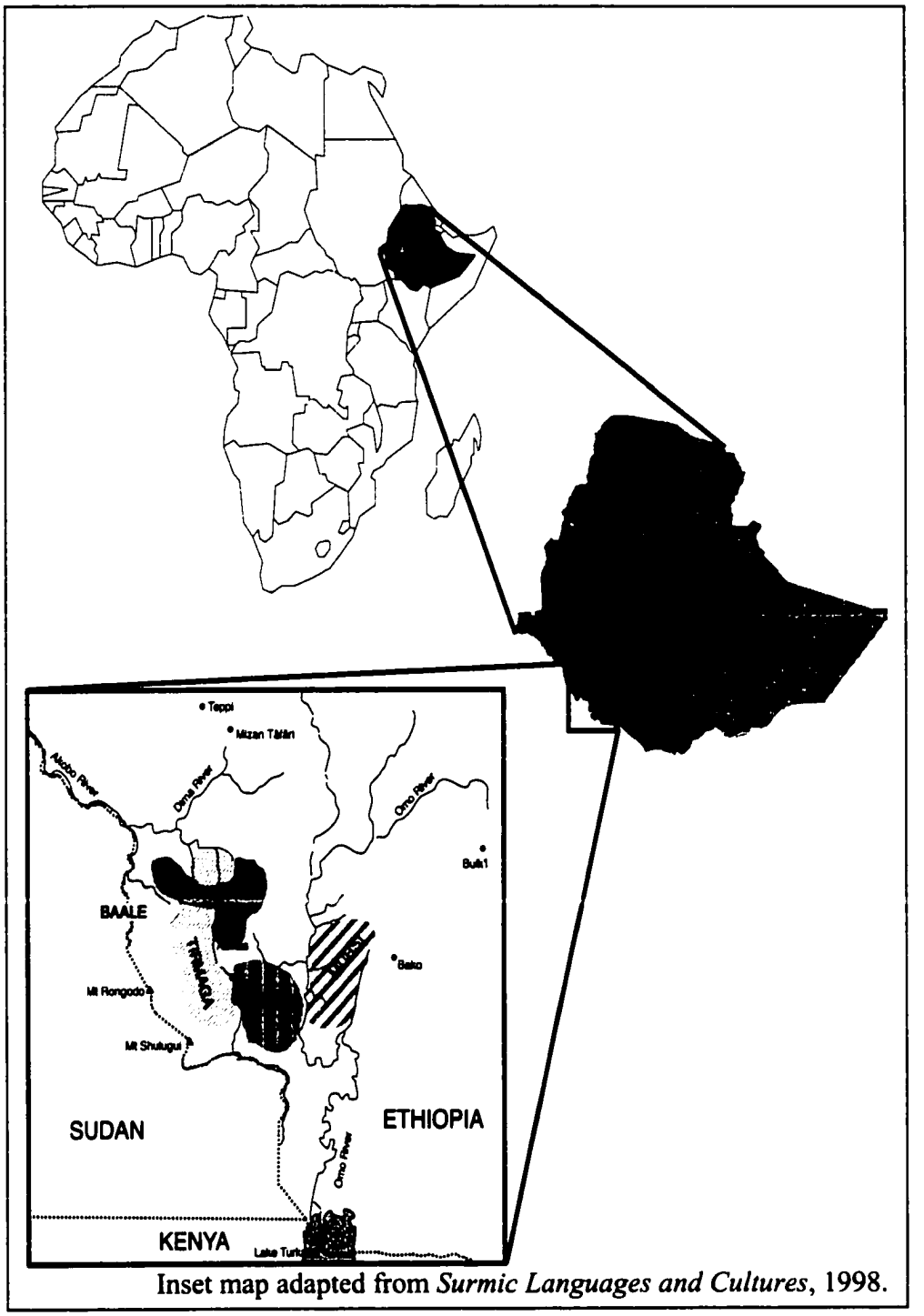

Figure 1. Location of the Tirmaga people and surrounding ethnic groups.

the focus is on preparing gardens for the next year by slashing and burning forested areas. Typically, the period of March-April, when the new crops are planted is also the time when grain stores run low and a time of hunger ensues. During this time, they become more dependent on the cows for milk, game hunting and foraging for roots, fruit and edible plants. They may also travel to the local market towns of Tum, Maji and Jeba or the Sudanese refugee settlement of Dima to buy grain if there is peace with those groups at the time.

Over the past twenty to thirty years, there has been a northward migration into the Tulge valley caused by the infiltration of the Nyangatom from the south and the Toposa from the west. Now the Tirmaga co-exist with the neighboring Dizi people who occupy the highlands between the Kibbish and Tulge valleys. This co-existence is relatively peaceful in the Tulge area. The Dizi are different from the Tirmaga linguistically and culturally because they speak an Omotic language and are agriculturalists who own very few cows. Although the Tirmaga are the newcomers to the area, there seems to be no felt need for them to learn the Dizi language. In fact, the opposite seems to be true. This is probably due to the aggressive nature of the Tirmaga and their possession of many more firearms than the Dizi. In some cases, the Tirmaga have entered into protective agreements with the Dizi. These agreements allow the Tirmaga to live in a Dizi village and have gardens in the area if they will help the Dizi fight off the Toposa encroaching on their territory from the west. These agreements have resulted in a relatively peaceful co-existence between the Tirmaga and the Dizi living to the west of the Tulge valley. While living in Tulge in 1995, I even observed the initiation of Dizi males into the new Tirmaga age grade. The celebration was held in a mixed Dizi-Tirmaga village that had a Dizi leader.

There is also some intermarriage between the two groups with the Tirmaga men taking Dizi women as second or third wives. I have never heard of a Dizi man who married

a Tirmaga woman, though the possibility exists. A traditional brideprice of only four to six cows is required to marry a Dizi woman because the Dizi are primarily farmers rather than cattle herders and do not have many cows. This is compared to the typical Tirmaga brideprice of twenty cows or more. So, marrying a Dizi woman is economically beneficial for the Tirmaga as well as promoting peaceful relations between the two groups. In these marriages, the wife typically learns Tirmaga if she does not already know it, rather than the man learning Dizi. The children may grow up knowing both languages, but culturally they are Tirmaga in every way. These marriages also provide the Tirmaga with a connection to the Dizi during the time of year when the Tirmaga grain supplies have been depleted. Since the Dizi live in the higher elevations, they are able to grow other varieties of sorghum that are harvested at a different time of the year than the Tirmaga lowland variety. Therefore, the Tirmaga rely on the Dizi harvest as a source of food they can buy during their annual agricultural cycle. The Tirmaga, however, do not peacefully co-exist with the Dizi living to the north and east of them toward the towns of Tum and Maji. There is constant tension in these areas where peace tends to come and go. Even during peaceful times, that peace is always fragile.

1.3. Sociolinguistic Situation

The languages that the Tirmaga are most influenced by are Dizi, Baale and Amharic. First, we will consider Dizi. As stated above, there is some intermarriage between the Dizi and Tirmaga. However, probably ten percent of Tirmaga speakers, at the most, are proficient speakers of Dizi. In any mixed situation of Tirmaga-Dizi that I have witnessed, the Dizi were speaking Tirmaga instead of the opposite. The Dizi I have had contact with feel that Tirmaga is an "easy" language to learn. On many occasions, I have been present when cattle or other items were being sold and all negotiations took place in Tirmaga. On

one occasion, I attended the marriage of a Tirmaga man to a Dizi woman where many Dizi were present. It was held in a Tirmaga village, but the wedding was performed according to Dizi customs. The man who was the interpreter for all the public speeches was a Dizi man. When the Dizi and Tirmaga communicated with each other at the wedding, it was usually done in Tirmaga.

It must be understood, however, that I have never been to Maji or any other local market town in Dizi territory to observe the Tirmaga in an outside environment. All of my observations have been of Dizi in the Tirmaga area. The local Dizi market towns would be the most likely place for Tirmaga to use Dizi. However, from talking to one former Dizi merchant, the trend seems to be for him to learn the language of the customer rather than vice versa. He boasted about how he knew the Tirmaga-Chai and Me'en languages from his past experiences as a merchant.

Concerning the Baale language, there seems to be more multilingualism. This is not surprising since the Tirmaga and Baale share the ethnonym "Suri," as mentioned earlier. Quite often they will hold joint stick fights, live together in villages, and on border areas there is intermarriage between the two groups. On several occasions Tirmaga speakers have expressed their pride in being able to speak both Tirmaga and Baale. The few speakers I have known, all learned Baale as children because they lived in a mixed Tirmaga-Baale village. There is no sense of Baale being considered a more prestigious language. It seems one is simply proud of the fact that he knows another language. The Tirmaga also consider Baale an easy language to learn. This is not unexpected since they are both Surmic languages.

Amharic is the language of wider communication in Ethiopia. However, because of their isolation, the Tirmaga have never felt the need to participate in the politics of their country. They have also had experiences in the past where government officials deceived

them into gathering at one location and slaughtered many of their people. These types of situations have left bitter feelings in the hearts of the Tirmaga toward anything that is considered "government". However, the present government has been encouraging more participation on the part of the Tirmaga people and they now have administrators and a parliament representative who are Tirmaga-Chai. Most of the Tirmaga-Chai administrators know Amharic because they went to government schools when they were children. Though few of them finished more than sixth grade, they hold the government offices because they are proficient enough in Amharic to communicate with outsiders. In conjunction with the Ethiopian Evangelical Church Mekane Yesus and the Presbyterian Church (USA), the government opened two schools in the Tirmaga area in 1994. Presently there are two functioning schools with an attendance of approximately 100-150 students. The language of instruction is Amharic. School is about the only place that a typical Tirmaga speaker needs to use Amharic. Even with the recent reopening of education in the Tirmaga area, less than one percent of the Tirmaga are proficient in Amharic, and there seems to be no felt need or benefit to learning it. Some parents do encourage their children to go to school, but most of the children attend on their own accord. A child who goes to school is generally seen as a lazy child who does not want to be out guarding the cattle or working in the garden.

In summary, the Tirmaga are largely monolingual, with Tirmaga being the language of the household. There is some limited multilingualism with the Baale people who are their friends. The Dizi and Amharic languages are not considered of high importance for the Tirmaga to learn. They are thought of as outside languages for which they presently have little need to learn due to their isolated situation.

1.4. Language Classification

Tirmaga is a Southeast Surmic language, with its closest relative (outside of the CTM cluster) being Me'en located northeast of the Maji area. The Surmic language family is classified as part of the Eastern Sudanic phylum within the Nilo-Saharan family (Bender 1983:2). Although it has undergone several modifications, Fleming's (1983) classification of Surmic languages shows the basic structure of the Surmic language family. It is divided into Northern, Southwestern and Southeastern Surmic groups. Working from Fleming's classification and the research of others since 1983, Dimmendaal (1998:3-13) has proposed the subclassification of the Surmic language family seen in figure 2. The only modification I have made to Dimmendaal's (1998:13) chart is to change "Tirma" to read "Tirmaga":

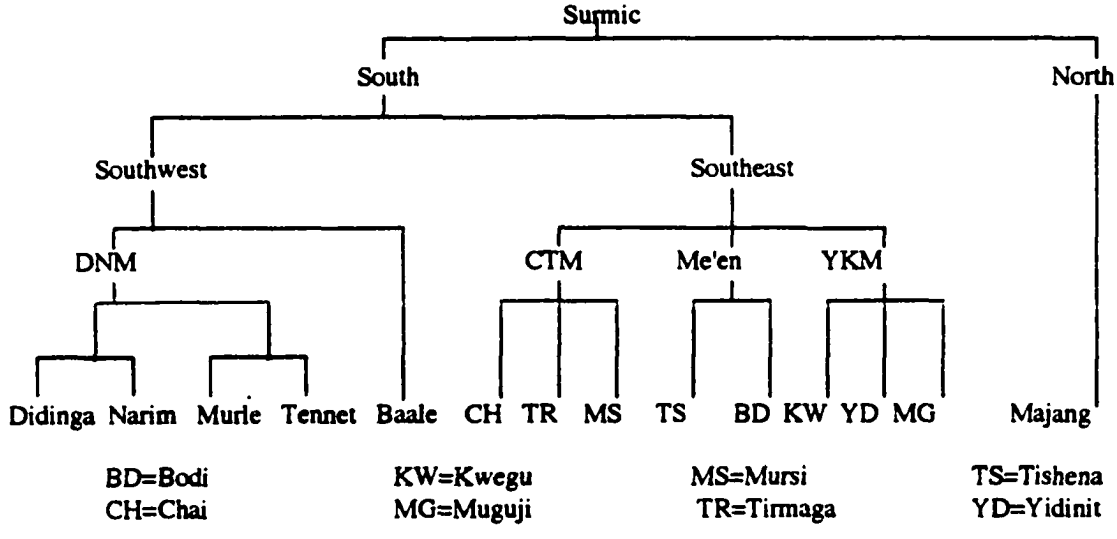

Figure 2. Sub-classification of Surmic languages.

1.5. Previous Linguistic Research

Tucker and Bryan (1956), in their attempt to classify related languages of Ethiopia and Sudan, refer to Tirma (Tirmaga), Tid (Chai) and Mursi as part of the Didinga-Murle

Group of languages. In this article, they reference other research by Lyth (1947) on Suri and Rossini (1914) on Tirma and Mursi. In 1971, Bender collected some word lists of Tirma, Mursi and other languages that were considered part of the Didinga-Murle Group proposing that they be called "Surma" instead. Turton and Bender published the first significant amount of linguistic research on the Chai-Tirmaga-Mursi cluster in 1976. Turton, who had been doing anthropological fieldwork among the Mursi periodically from 1968-75, wrote a brief phonology and grammar sketch of the Mursi language.

More recent research has consisted of two grammar sketches of Chai by Lucassen (1994) and Last (1995). At the time of their research, it was difficult to gain access to the language area because of tension between the Chai and neighboring Dizi people. Therefore, they had to rely initially on data given to them by a non-native speaker. They eventually worked with two native speakers, but were able to collect only one text. Considering their less than ideal situation for research, Lucassen and Last did an adequate sketch of the Chai grammatical system.

Lucassen gave a good analysis of the Chai phonological system although her main focus was grammar. She dealt essentially with phrase level grammar and below analyzing such things as number, demonstratives, the pronominal system and some verb morphology. There is, however, no evidence of a three-way distinction in marking number on some nouns as she concludes and her analysis of the Chai "specifier" suffix is also flawed. An analysis of the Chai case system was given, finding that Chai distinguishes "absolute, nominative, genitive, locative and instrumental cases" (1995:75). Some discourse concerns such as topic, focus and contrast were also addressed. The analysis should be considered preliminary since there was only one text available to work with. While her analysis of word order affecting the topic and focus of a discourse was good, her analysis of comparison as being overtly marked is faulty.

Since the data available to Lucassen and Last were the same, most of the conclusions reached by Last in his thesis were the same as Lucassen's. However, Last differed in his analysis of the case marking system, stating that only genitive case is marked. What Lucassen analyzed as locative and instrumental cases, Last proposes to be postpositions and the nominative case he calls a "nominative suffix" instead. He also looked at the possibility of Chai being an ergative or split ergative language. In the end Chai did not meet the criteria, from a Functional Grammar perspective, of an ergative language. Finally, Last uses Functional Grammar and Government and Binding theories to analyze the Chai 'relator' suffix used in attributive constructions. The relator suffix /-ə/ looks the same as the Chai copula /ə/. He concludes that a copula is needed in Chai in order to form an attributive construction. From my perspective, it seems only to be a coincidence that the copula and relator suffix are similar.

At the time that this thesis was nearing completion, the book *Surmic Languages and Cultures* (1998) was published. Included in that book was an article by Lucassen and Last on Chai grammar. I regret that I did not have time to thoroughly review the article to see if any of their conclusions have changed from their original theses. However, the article seemed to be a combination of the conclusions reached by Lucassen and Last in their original works. There are several other articles in the book concerning related Surmic languages that I was not able to review as well.

Although no grammatical sketches have been written on Tirmaga specifically, a sketch of Chai would largely apply to Tirmaga as well. In my research, I have noticed only a few minor differences in the grammar of the Tirmaga and Chai dialects. Several word lists for Tirmaga and Chai have been published. Girard and Middleton (1993) published a comparative 300 word list of the Tirmaga, Chai and Mursi dialects. In 1993, Abbink published a 700+ word list incorporating words from Bender's list from 1971. The latest list

has been a Suri-Amharic-English dictionary by Bryant and Olekibo (1997) containing 1,300+ words. Eight Tirmaga-Chai primers have also been published by the Surma Translation Project (M. Bryant, A. Bryant, Olekibo and Kibo 1998).

1.6. Types of Data

The data used for this thesis were collected over a period of three years between 1995-1998 while I was living in the Tirmaga area known as the Tulge valley. The work was conducted in conjunction with the Surma Translation Project of the Ethiopian Evangelical Church Mekane Yesus. The data came from various sources. The first source is elicited data, which was intended to help my wife, Andrea Bryant, and me learn the Tirmaga language as well as to be used in analysis for developing a viable orthography for Tirmaga-Chai. Most of these data were elicited from our language teachers, Bargola Dera and Daniel Bambu who are both Tirmaga speakers. The second source of data is from texts that were recorded from various Tirmaga and Chai speakers. The texts include a variety of genres including hortatory speeches, folk stories, personal event narratives, conversations and one public prayer. About half of these were recorded from our language teachers, Bargola and Daniel, with the rest being other Tirmaga and Chai speakers of various ages. The third source of data is a 1,500+ word lexicon that was started by Mike Middleton in 1994 while living in Tulge for one year. During the past three years, we continually added to the lexicon until its present state. Some of the entries have illustrative sentences but most do not.

Few differences have been found between the Tirmaga and Chai dialects. A list of 1,300+ words was elicited from one Chai speaker in 1998 and compared to the Tirmaga words. The main difference found between the two dialects was in the phonemic status of

[ʃ] and [c]. In Chai, [ʃ] and [c] are phonemes while in Tirmaga they are free variants. Consider the following examples:

(1) Chai

a. /kú-cúr-nén-ø-tɔ/ /kú-ʃúr-nén-ø-tɔ/
1Su-wash.Ipf-1/2Prg-SiSu-PFI 1Su -worry.Ipf-1/2Prg-SiSu-PFI
'I am washing' 'I am worrying'

Tirmaga

b. [kú-cúr-nén-ø-dɔ] ~ [kú-ʃúr-nén-ø-dɔ]
1Su-wash/worry.Ipf-1/2Prg-SiSu-PFI 1Su-wash/worry.Ipf-1/2Prg-SiSu-PFI
'I am washing/worrying' 'I am washing/worrying'

Chai Tirmaga
c. /cówa/ 'bushpig' [cówa] ~ [ʃówa] 'bushpig'

For the Tirmaga speaker, the meaning difference for the sentences in example (1b) is determined by the context. It is unlikely there would be any confusion as to what activity is taking place at a given time because the language external factors would indicate this. There are relatively few instances where the Tirmaga [c]/[ʃ] variation is found to make a lexical distinction in Chai as seen between examples (1a) and (1b). Most examples are like (1c) where no meaning difference exists.

1.7. Notation

All data in this study will be presented in its phonemic form unless otherwise indicated by the use of brackets, [ ], to denote the phonetic form. Tone will be marked as follows:

(2) High tone =é (acute)
Low tone =e (unmarked)

An interlinear example will consist of three parts: the Tirmaga text, the morpheme-by-morpheme gloss, and a free translation in English. A typical interlinear example will be as follows:

(3) aɲe k-ám-í tîlá
I 1Su-eat.Ipf-SiSu corn.porridge
'I eat corn porridge.'

In both the Tirmaga text, and the morpheme-by-morpheme gloss, a hyphen (-) will show the morpheme breaks. The abbreviations in the gloss will be set off by a capital letter (e.g., 1SiSu = First Singular Subject). All abbreviations are listed on page 149. When more than one English word is used in a gloss, the words will be separated by a period (e.g., corn.porridge).

CHAPTER 2

PHONOLOGY SKETCH

This chapter is an overview of the major aspects of Tirmaga phonology. The consonant and vowel phonemes are presented in the first two sections along with their applicable phonological rules. Although most of the rules demonstrate synchronic changes, some diachronic changes will be discussed as well. A discussion of suprasegmental phenomena such as vowel length, gemination and tone are also given in this chapter. Tone research in Tirmaga is still in the preliminary stages, but the findings show that both lexical and grammatical tone operate in the language. Some morphophonemic rules are also given along with the phonological changes they cause.

2.1. Consonants

The consonant phonemes of Tirmaga are as follows:

Table 1. Tirmaga Consonant Phonemes

		LABIAL	ALVEOLAR	PALATAL	VELAR
Plosive	vl.		t	c	k
	vd.	b	d	j	g
Implosive		ɓ	ɗ	ʄ	ɠ
Fricative	vl.		s		h
	vd.		z		
Nasals		m	n	ɲ	ŋ
Flap			r		
Lateral			l		
Approximant		w		y	

As seen in table 1, Tirmaga has a full set of implosives. The palatal and velar implosives occur infrequently. Only three words with a palatal implosive have been found to date. Other Surmic languages with a full set of implosives are Didinga (de Jong n.d.:2) and Baale (Yigezu & Dimmendaal 1998:280) which are both Southwest Surmic languages. No contrast has been found between the dental and alveolar points of articulation for the plosives as exists in other Surmic languages such as Tenet (Randal 1995:5) and Didinga (de Jong n.d.:2).

2.1.1. Plosives

The voiceless plosives occur in all positions. Word finally, the voiceless alveolar plosive /t/ is deleted and the voiceless palatal plosive /c/ is weakened to a palatal semi-vowel.

(1) PLOSIVE DELETION
/t/ → ø / __#

(2) PLOSIVE WEAKENING
/c/ → [y]/ __#

Examples are as follows:

(3) a. /ít-ø kɛɔ / → [í kɛɔ] (Plosive deletion)
carry.Ipf-3SiSu wood
'He carries wood.'

b. /mát-ø ma / → [má ma]
drink.Ipf-3SiSu water
'He drinks water.'

(4) a. /lóm-ø wuc / →[lóm wuy] (Plosive weakening)
have.Ipf-SiSu four
'He has four'

b. /ɟóc-ø karí / →[ɟóy karí]
combine.Ipf-3SiSu together
'He combines (them) together'

As seen in examples (3) and (4), word final voiceless plosives are usually found in verbs. This is attributed to the neutralization which takes place between words ending in /t/ and words ending with a vowel. The same is true of /c/ being neutralized word finally with other words ending in /y/. Because of this neutralization, it is difficult to determine which phoneme is represented in the word final position. It should be mentioned that /wuc/, the word meaning 'four' seen in (4) and (11), is the only non-verb root example of a word final /c/ that has been found. The discovery of this example was possible because some Tirmaga speakers still use variant forms of the word ([wuc] ~ [wuy]).

The phonemes /t/ and /c/ are identifiable in verbs because they are realized as [t] and [c] when preceding certain suffixes. Some of the plural subject suffixes, for example, cause a preceding consonant to geminate. Because of this, it is proposed that certain affixes have a "geminate" characteristic associated with them. This is dealt with further in sections 4.3 and 4.9. Consider the realizations of the verb roots /it/ and /idoc/ in (5) and (6) with a singular subject as opposed to a plural subject.

(5) a. /ít-ø kɛɔ / → [í kɛɔ]
carry.Ipf-3SiSu wood
'He carries wood.'

b. /ít-ɛ kɛɔ / → [ít-tɛ kɛɔ]
carry.Ipf-3PlSu wood
'They carry wood.'

(6) a. /ídóc-ø karí / →[ídóy karí]
combine.Ipf-3SiSu together
'You combines (them) together'

b. /ídóc-ɛ karí/→[ídóc-cɛ karí]
combine.Ipf-3PlSu together
'You (pl) combine (them) together'

A diachronic analysis offers some insight into the word final neutralization of /t/ and vowel final words as well as /c/ and /y/. I recently did a sociolinguistic study of a variation found in the subordinate clause clitic -te and the phrase final verb suffix -tɔ in an

intervocalic environment. Usually, these suffixes are realized as [-ɵ] and [-ɔ] intervocalically (an epenthetic [ɣ] occurs between back vowels), but occassionally they are realized as [-ðɵ] and [-ðɔ]. The only time [ð] occurs in the Tirmaga phonological system is in this variable environment. The results of the study show that the [ð] variant is predominately used by Tirmaga speakers who are over the age of sixty and never used by anyone under forty. This indicates that historically the intervocalic allomorphs of -tɵ and -tɔ were -ðɵ and -ðɔ but today are rarely realized as such. While this study did not concern /t/ in a word final environment, this same diachronic variation of [ð]~ ø ~ [ɣ] is seen morpheme finally in some nouns where the underlying phoneme could be /t/. Examples are as follows:

(7)

	YOUNGER TIRMAGA SPEAKERS		OLDER TIRMAGA SPEAKERS	
a.	[kaɣ-ɔ]	[ka-e]	[kað-ɔ]	[kað-e]
	tongue-Sg	tongue-Pl	tongue-Sg	tongue-Pl
b.	[mé-i]	[mét-ó]	[méð-í]	n.d.
	grinding.rock-Sg	grinding.rock-Pl	grinding.rock-Sg	
c.	[ɛ-ø]	[ɛ-ɛɲa]	[ɛ-ø]	[ɛð-ɛɲa]
	pattern-Sg	pattern-Pl	pattern-Sg	pattern-Pl

More evidence to support this theory may be found by comparing some Tirmaga words with their counterparts in Me'en, which is a closely related language.

(8)

Tirmaga	Me'en	
kaɣ-ɔ	kat	'tongue'
si-ɔ	sit	'hand'
urí	urít	'smith'
ólli	ólit	'sugar cane'

Based on the findings of the sociolinguistic study, the diachronic variants in some Tirmaga nouns as seen in (7), and the comparison of the Tirmaga words to Me'en in (8), there seems to be a historical process of plosive → fricative → deletion at work with /t/ in an intervocalic environment. In the word final environment, the process is plosive → deletion.

The historical process of /c/ changing to /y/ word finally can also be seen when comparing some Tirmaga words to their Me'en counterparts.

(9)	Tirmaga	Me'en	
	ɓéy	ɓéc	'ax'
	baŋéy	ɓaŋéc	'marsh'
	kaŋáy	káŋac	'baboon'

As mentioned in section 1.6, [ʃ] is a variant of /c/ in all environments for Tirmaga speakers, but for Chai speakers [ʃ] and [c] are phonemes.

The voiced plosives, except for /d/, occur in all positions. The voiced alveolar plosive /d/ never occurs word finally. The voiced plosives are devoiced word finally.

(10) PLOSIVE DEVOICING
/b, j, g/ → [p, c, k]/ __#

After applying the Plosive Devoicing rule in (10) and the Plosive Weakening rule in (2), there is neutralization of /c/, /j/ and /y/ in the word final environment.

(11)	/wuc/		[wuy]	'four'
	/ʃáwúy/		[ʃáwúy]	'an edible plant'
	/új-ø	kúra/	[úy kúra]	'He throws the ball'
	throw.Ipf-3SiSu	ball		

It seems plausible that /d/ could be included in the Plosive Devoicing rule given in (10). This would result in /t/, /d/ and ø being neutralized word finally just as /c/, /j/, and /y/ are neutralized. However, there are no verb roots that end in /d/. This would be the most likely place to find a word final /d/ because verb roots ending with /b/, /j/, and /g/ do exist.

The voiced labial and velar plosives have fricative allophones intervocalically.

(12) PLOSIVE FRICATIVIZATION
/b, g/ → [β, ɣ] / V__V

Some examples are as follows:

(13) /ɲabí/ → [ɲaβí] 'ear' /kólóbí/ → [kólóβí] 'grassy plain'
/ɓogúm/ →[ɓoɣum] 'roasted sorghum' /kɔgiɲáy/ → [kɔɣiɲáy] 'horn'

However, between homorganic vowels they are sometimes deleted.

(14) PLOSIVE DELETION

$$/b, g/ \sim \emptyset \; / [\alpha F]\_\_[\alpha F]$$

Examples are as follows:

(15)

/kabarí/	~ [kaarí]	'eye'
/ɗébé/	~ [ɗéé]	'clay lip plate'
/jogoréy/	~ [jooréy]	'ankle bell'
/digiréy/	~ [diiréy]	'tree species'

The synchronic rules in (10) and (12) resemble the diachronic process mentioned earlier of plosive→fricative→ø that seems to be in operation for /t/.

2.1.2. Implosives

The implosives /ɓ, ɗ/ are found in all positions. They are realized as voiceless plosives word finally and before a consonant.

(16) IMPLOSIVE DEVOICING

$$/ɓ, ɗ/ \rightarrow [p, t] / \left\{ \begin{matrix} \_\_C \\ \_\_\# \end{matrix} \right\}$$

Examples are as follows:

(17) /kɔ́ɓ-ø ʃérɛtɛní jagar-ɛ/ → [kɔ́p ʃérɛtɛní jagarɛ]
follow.Ipf-3SiSu porcupine foot-Pl
'He follows the porcupine tracks.'

(18) /in-te táɓ-ø-te á ŋɛré/ → [inde tápte á ŋɛré]
SiCl-NSpRl perform.ritual.Ipf-3SiSu-Sb is traditional.healer
'The traditional healer is the one who performs the ritual (put limestone on one's face).'

(19) /úhúɗ-ø ɓíré/ → [úhút ɓíré]
wax.Ipf-3SiSu stick
'He waxes a stick'

(20) /tumu ɓáɗ-ø-tɔ/ → [tumu ɓáttɔ]
God/sky strikes.Ipf-3SiSu-PFl
'God strikes.' (referring to lightning)

As with the voiceless plosives, the implosives are realized in verbs when followed by certain suffixes. Compare example (17) to (21) as well as example (19) to (22).

(21) /kɔ́-kɔ́ɓ-o ʃéɾɛtɛní jagar-ɛ/ → [kɔ́-ɔ́ɓ-ɓo ʃéɾɛtɛní jagaɾɛ]
1Su-follow.Ipf-PlxSu porcupine foot-Pl
'We follow the porcupine tracks.'

(22) /úhúɗ-ɛ ɓíɾɛ́/ → [úhúɗ-ɗɛ ɓíɾɛ́]
wax.Ipf-3PlSu stick
'They wax a stick.'

The Implosive Devoicing rule in (16) causes neutralization of /**ɓ**/ and /**ɓ**/ in the pre-consonantal and word final positions. Examples of /**ɓ**/ in these environments are seen in (23a) and (23b). Examples (24a) and (24b) are of /**ɓ**/ in these environments. Because of neutralization, word final and pre-consonantal examples of /**ɓ**/ have only been found in verbs because it is realized as /**ɓ**/ when certain suffixes follow the verb root as seen in (21).

(23) a. /úlú**ɓ**-ø-tɔ/ → [úlú**p**tɔ]
cover.Ipf-3SiSu-PFI
'He covers it'

b. /sá**ɓ**/ → [sá**p**]
'leather necklace that holds a cow bell'

(24) a. /kali kali úcú**ɓ**-ø-tɔ/ → [kali kali úcú**p**tɔ]
day day selfish.Ipf-3SiSu-PFI
'He is always selfish'

b. /ɾɔsɔ sá**ɓ**-ø tílá/ → [ɾɔsɔ sá**p** tílá]
dog smell.Ipf-3SiSu food
The dog smells food'

The palatal and velar implosives, /**ʄ**/ and /**ɠ**/, do not occur word finally.

(25)

ʄán	'evening'	kéʄogá	'round scarification scars'
ɠárátéy	'vervet'	**ɠ**ɔ́**ɠ**ɔl	'river crossing'

2.1.3. Fricatives

The voiceless fricatives, /**s, h**/, occur in all positions except pre-consonantal. They are deleted in word final position.

(26) FRICATIVE DELETION
/s, h/ → ø / __#

Examples are as follows:

(27) /mis/ → [mi] 'grazing land' /ɗɛs/ → [ɗɛ] 'solemnly'

(28) /túh-ø góre/ → [tú góre] /kɔ́h-ø halɛ/ → [kɔ́ halɛ]
spit.Ipf-3SiSu very weed.Ipf-2SiSu slowly
'He really spits.' 'Weed slowly!'

The existence of /s/ and /h/ in word final position is evident when suffixes are added to examples (27) and (28) as seen in (29)-(32). In the case of example (30), [s] varies with ø word finally.

(29) /mis-ɔ́/ → [misɔ́] 'to/at the grazing land'

(30) /ɗɛs/ → [ɗɛs] ~ [ɗɛ] 'solemnly'

(31) /túh-i góre/ → [túhi góre]
spit.Ipf-2SiSu very
'You really spit.'

(32) /kɔ́h-i halɛ/ → [kɔ́hi halɛ]
weed.Ipf-2SiSu slowly
'You weed slowly'

The voiced fricative, /z/, occurs word initially and intervocalically but not in pre-consonantal or word final positions.

(33) zig 'dry cattle dung' zɔ́y 'type of ant' mɛzí 'discussion'

2.1.4. Nasals

The nasals, /m, n, ɲ, ŋ/, are found in all positions. The nasals occur with their homorganic counterparts in nasal + [-son] consonant clusters. Most of the time, the plosives fill the [-son] consonant slot. The only time nasals do not cluster with their homorganic plosive counterparts is in reduplicated words.

(34)

UNREDUPLICATED		REDUPLICATED	
dambu	'tobacco'	kɔ́mkɔ́m	'type of game'
bandúy	'juniper tree'	gingini	'lukewarm'
aɲjóy	'palm tree'	n.d.	
diŋgóy	'tree species'	doŋdoŋí	'fat'

2.1.5. Liquids

The liquids, /l, ɾ/, occur in all environments. /ɾ/ varies with the trilled [r] in word initial and final position. In preconsonantal position, /ɾ/ is realized as the trilled [r] when preceding a coronal consonant.

(35) /ɾ/ → [r]/ __C[+cor]

Examples are as follows:

(36)

PRECEDING CORONAL CONSONANT		PRECEDING NON-CORONAL CONSONANT	
/murnáy/ → [murnáy]	'arrow'	/darmáy/ → [darmáy]	'aloe'
/ʃórtí/ → [ʃórtí]	'hair'	/lóórkí/ → [lóórkí]	'acacia'

2.1.6. Approximants

The approximants, /w, y/, occur in all positions. The approximants have been analyzed as genuine consonants instead of glides for the following reasons: Tirmaga has CVC syllables, the tendency is for the coda slot of a CVC syllable to be filled by a [+son] consonant, and the approximants occur in all positions.

(37) a. wowóy 'type of grass' (Word initial)
b. yiɾɔ 'bicep'

(38) a. éwó 'debt' (Word medial)
b. loyá 'jackal'

(39) a. gawtéy 'gold pan' (Pre-consonantal)
b. gayséy 'type of tree'

(40) a. áw 'oldest child' (Word final)
b. dákumóy 'cheekbone'

2.2. Vowels

Tirmaga has a total of seven vowels as seen in table 2.

Table 2. Tirmaga Vowel Phonemes

	FRONT	CENTRAL	BACK
Close	i		u
Close-mid	e		o
Open-mid	ɛ		ɔ
Open		a	

The vowels, /i, u/, have the allophones [ɪ, ʊ] in CVC syllables.

(41) VOWEL REDUCTION
/i, u/ → [ɪ, ʊ] / C__C

Examples are as follows:

(42) /zig/ →[zɪk] 'slush' /ɲúrluy/→[ɲúrluy] 'Anuak person'
/híndé/→[híndé] 'if' /guldú/→[guldú] 'navel'

2.3. Lengthened Vowels

Although lengthened vowels are found in Tirmaga, length is not phonemic. No word has been found where long and short vowels contrast, and the words that have long vowels are few. Out of a dictionary of approximately 1,500 words, only twenty-two of them have lengthened vowels. Some examples are given in (43).

(43) ɓíík-tɔ 'he/she breaks it' kúús-tɔ 'It swells'
dɛ́ɛ́s-tɔ 'he/she is surprised' lóórkí 'acacia'
tɔ́ɔ́l 'heat from the ground' taán 'flood'

Will (1993:79) considers lengthened vowels for Me'en to be a result of "emotional lengthening" because of the emotional nature of the words in which vowel length is usually found. There are also such words in Tirmaga where vowel length might be attributed to the emotional nature of the word.

(44) /cɛ́/→ [cɛ́ɛ́] 'well' /góre/→ [góóre] 'very'
/tí/ → [tíí] 'always' /ɓɔ́/ → [ɓɔ́ɔ́] 'wide'

I do not think, however, that emotion is the best explanation for most of the words with lengthened vowels in Tirmaga. Rather, the few lengthened vowels present in Tirmaga

today probably result from the deletion of an historic intervocalic consonant. This finds evidence in the intervocalic variation of /b, g/ ~ ø seen earlier in section 2.1.1. When an historic consonant is deleted, it results in a CV.VC syllable pattern. The words **tɔ́ɔ́l** and **taán** in (43) offer more evidence of a V.V syllable break since the vowels have contrastive tone. Turton and Bender (1976: 539) also felt that the loss of a consonant was one of the factors attributing to vowel length in Mursi and did not assign it phonemic status. Example (45) shows some examples taken from their article where an intervocalic consonant has been deleted in Mursi but is still present in Tirmaga.

(45)	Tirmaga	Mursi	
	káɓáyák-i-ɔ	ká-ɓaak-i-ɔ	'I am eating it'
	jagarɛ	jaare	'feet'
	ʃógóné	ʃuune	'his father'

When comparing to Will's Me'en data (1993:67) one can see how the presence of an intervocalic consonant has changed in Tirmaga and been deleted in Mursi.

(46)	Me'en	Tirmaga	Mursi	
	ɓacák	ɓáyák	ɓaak	'eat/ bite off'

2.4. Geminates

Monomorphemic geminates are found in all classes of consonants in Tirmaga, but it does not occur with all consonants. All plosives can be geminated except the palatal.

(47)	LABIAL		ALVEOLAR		VELAR	
			mattiwóy	'maternal cousin'	ɓókkól	'Me'en'
	sábbá	'head'	mɛddɛrɛ	'sheep'	síggi	'metal bracelet'

The only geminated implosive is /ɗ/. There is even one contrastive pair for the alveolar implosive as seen in (48).

(48) **keɗɗéy** 'mountain pass' **maɗá** 'to teach' **máɗɗá** 'snake venom'

There are only three examples of geminated fricatives and two of them are cardinal numerals. Gemination in numerals has been attributed to "emotional lengthening" in Me'en

(Will 1993:79) and is plausible for Tirmaga as well because it occurs in seven of the ten basic numerals.

(49) rammán 'two' sizzi 'three' illɛy 'six' isabbay 'seven'
issey 'eight' sakkal 'nine' tɔmmɔn 'ten'

The only example of a geminated fricative, which does not occur in a numeral, is given in (50).

(50) hózzo 'hunger'

The highest frequency of geminates is found among the nasals and liquids. However, only the labial and alveolar nasals are geminated.

(51) hammógí 'tree species' hunnay 'ravine'

Other than the one example of /ɗ/ in (48), contrastive gemination occurs only with the liquids of which there are many examples. When the /r/ is geminated, it is realized as a trilled /r/.

(52) /érri/ → [éri] 'white acacia' /tárrá/ ([tárá] 'liver'

Contrastive examples of the liquids are as follows:

(53) érí 'child' tárá 'Taste it!' kali 'day' bolo 'spots'
érri 'white acacia' tarra 'liver' kállí 'switch' bóllo 'castor beans'

There is only one example of monomorphemic gemination among the approximants. Example (54) is the only word found with a geminated palatal consonant.

(54) óyyó 'rainy season'

In summary, monomorphemic geminates usually occur with [-continuant] consonants. There is no phonemic gemination in the language because it is not predictable. Rather, the geminates are a result of consonant clusters at (C)VC.CV(C) syllable boundaries.

2.5. Tone

The two phonemic tones in Tirmaga are high tone and low tone. High tone is marked throughout this paper by an accent mark (e.g., **é**), and low tone is unmarked. Tone analysis is still in the initial stages, but some of the various grammatical functions of tone are mentioned here and expanded on in the appropriate sections of this thesis.

Only one monosyllabic example of contrastive tone has been found in Tirmaga.

(55) ɾé 'broken cooking pot' ɾɛ 'body'

There are a few examples of contrastive tone found in two syllable words as seen in (56).

(56)

érí	'child'	káláy	'shin'	ɲábá	'blood'
erí	'skin'	kálay	'type of bird'	ɲaba	'ears'

Even though Tirmaga has lexical tone, as seen in (55) and (56), it carries a low functional load. Grammatical tone is much more pervasive throughout the language. Tone carries grammatical information on the verbs such as aspect, person of the subject, voice and mode. Since tone indicates various grammatical functions with the verbs, the verb roots all behave alike and are analyzed as having no inherent tone. In example (57), tone distinguishes between non-narrative and narrative perfective.

(57)

NON-NARRATIVE PERFECTIVE	NARRATIVE PERFECTIVE
wa kí-ʃík-ø-**ká**	kí-ʃík-ø-**ka**
recent.past 1Su-hear.Pf-SiSu-1SiNNa	1Su-hear.Pf-SiSu-1SiNa
'I just heard it'	'I heard it'

The following example demonstrates how the tone on the verb root indicates the person of the subject.

(58)

FIRST PERSON	THIRD PERSON
ɲání k-**ár**-ø-ɾó	ɲani k-**ár**-ø-ɾo
not.yet 1Su-see.Pf-SiSu-NegPF	not.yet 3Su-see.Pf-SiSu-NegPF
'I haven't seen it'	'He hasn't seen it'

Tone is also a factor in distinguishing between active and passive voice. In the following examples, the tone on the verb root changes to a low tone when the passive **kv-**[1] prefix is added, which also has a low tone.

(59) ACTIVE
in-te **kɔ́n-ø-té** á noy?
SiCl-NSpRl kill.Ipf-3SiSu-Sb is who.Nom
'Who is the one that killed (shot, stabbed)?

(60) PASSIVE
in-te **kɔ-kɔn-ø-té** á nɛ?
SiCl-NSpRl Psv-kill.Ipf-3SiSu-Sb is who.Acc
'Who is the one that was killed (shot, stabbed)?

There is a tonal distinction between the realis and irrealis modes in the perfective aspect. The narrative and non-narrative perfectives have high tone verb roots denoting realis. The jussive and subjunctive moods have low tone verb roots denoting irrealis. Example (61) shows the conjugation of a non-narrative verb, and (62) a subjunctive verb with an auxiliary, using the root **/ar/** 'to see'. These examples demonstrate the tonal distinction between realis and irrealis modes.

(61) NON-NARRATIVE (REALIS)

wa k-**ár**-ø-rá	'I just saw (it)'
wa **ár**-ø-ú	'You just saw it'
wa **ár**-ø-rá	'He just saw it'
wá k-**ar**-t-á	'We (in) just saw it'
wa k-**ár**-t-ó	'We (ex) just saw it'
wa **ár**-t-ó	'You (pl) just saw it'
wa **ár**-t-á	'They just saw it'

(62) SUBJUNCTIVE (IRREALIS)

kééní k-**ar**-ø-to	'I want to see (it)'
séní **ar**-ø-to	'You want to see it'
sé k-**ár**-ø-to	'He wants to see it'
kéé k-**ar**-agí-to	'We (in) want to see it'
kééno k-**ar**-tó-to	'We (ex) want to see it'
sééno **ar**-agí-to	'You (pl) want to see it'
se k-**ár**-ági-to	'They want to see it'

[1] The small letter v is used throughout the thesis to refer to the process of vowel copying that occurs with some affixes. A capital V is not used because at times it is necessary to show the tone that occurs on the vowel. This should not be confusing to the reader because there is no [v] found in Tirmaga.

One will notice in (61) that the first person plural inclusive form has low tone on the verb root instead of high tone as the other persons. Also in (62), there is high tone on the verb root in the third person singular and plural forms rather than low tone as the other persons. These are cases where the tone indicating the person of the subject takes precedence over the realis/irrealis tones. For realis mode, the non-narrative perfective is the only one that has a low tone verb root in the first person plural inclusive. The other realis verb category (narrative perfective) has high tone verb roots for all persons. The other irrealis verb category (jussive/imperative) exhibits the same high tone verb roots in the third person singular and plural forms as in the subjunctive example (62).

Another grammatical function of tone is found in the case system. The "normal" word order for Tirmaga is SVO. However, the subject and object positions are sometimes switched in order indicate a new topic or introduce new information into a discourse. When the subject appears after the verb, the last syllable has a high tone, if it is a proper name or ends with an /o/. This marks it as a post-verbal subject as seen in the following example:

(63)	S	V	O		O	V	S
	bi	ám-ø	kono		bi	ám-ø	konó
	cow	eat.Ipf-3SiSu	snake		cow	eat.Ipf-3SiSu	snake
	'The cow eats the snake.'				'The snake eats (bites) the cow.'		

This was a recent finding and most examples available are of words with LL tone pattern, so I am not sure how it affects words of all tone patterns. The Tirmaga case system is further dealt with in section 3.3.1.

2.6. Suffixes

There are both consonant and vowel initial suffixes found in Tirmaga. The consonant-initial suffixes always begin with a coronal consonant. Examples of consonant-initial suffixes are as follows:

(64)	ŋa-ɠárátéy-**tá**	ŋa-ɛl-én-**tonú**	bagá-**ɲá**	tóhó-**ɲá**
	Dm-vervet-Nr	Dm-spring-Pl-Fr	milk.container-Pl	tree.species-Pl
	'this vervet'	'those springs'	'milk containers'	'tohoy trees'

The suffixes seen in the examples (65) and (66) are actually clitics and occur at the end of subordinate clauses. Both of these were taken from a text.

(65) híndé sú kún-ø-**te** kɔ́-jɔ́-ø-á-u gaŋgu ɓé ciɲi
when sun come.Ipf-3SiSu-Sb 1Su-find.Pf-SiSu-MT-SiSuM path place small
'When the sun rises (rose), I found a small path.'

(66) té-ø zug-**té** áná-ní
be.Pf-3SiSuNa people-NSpRl stranger(s)- !
'They were strangers!'

A phonological Voicing Rule and an Assimilation Rule account for most of the changes that occur when an alveolar consonant initial suffix occurs.

(67) PLOSIVE VOICING

$$C \rightarrow [+voice] / C \begin{bmatrix} +son \\ -cont \end{bmatrix} \_\_$$

(68) PLOSIVE ASSIMILATION

$$[+cor] \rightarrow [\alpha POA] / C \begin{bmatrix} +son \\ -cont \\ \alpha POA \end{bmatrix} + \_\_$$

The application of the Voicing and Assimilation rules are seen in the following examples:

(69) /ŋa-ɛl-én-tonú/ → [ŋaɛléndonú]
Dm-spring-Pl-Fr
'those springs'

(70) /híndé sú kún-ø-te.../ → [híndé sú kún-ø-de...]
When sun come.Ipf-3SiSu-Sb
'When the sun rises...'

(71) /ám-ø-tɔ/ → [ám-bɔ] /ŋa-kiɗoŋ-tá/ → [ŋakiɗoŋgá]
eat.Ipf-3SiSu-PFI Dm-drum-Nr
'He eats it.' 'this drum'

However, a rule is needed to account for the deletion of /t/ when a /-t/ initial suffix follows a fricative or a vowel.

(72) /-t/ DELETION

$$\begin{bmatrix}\text{-voice}\\ \text{+cor}\end{bmatrix} \rightarrow \emptyset \Big/ \left\{ \begin{matrix} \text{V} \\ \text{C} \begin{bmatrix}\text{-son}\\ \text{+cont}\end{bmatrix} \end{matrix} \right\}^{+}\_\_$$

This rule is necessary because deletion only occurs when a /-t/ initial suffix is added. There are many examples of an intervocalic /t/ otherwise found in Tirmaga.

(73) bútí 'crushed limestone' gotáy 'palm of hand' ɾɛtɛ 'honey'

The /-t/ Deletion rule also applies when a /-t/ initial suffix follows an /s/. There are no fricative + plosive consonant clusters in the language, so, when a /-t/ initial suffix is added to a word final /s/, the /-t/ yields to pattern pressure and is deleted. This can be seen in the examples that follow:

(74) ŋa-ɾɔs-**tá** → [ŋaɾɔsá] més-ø-**tɔ** → [mésɔ]
Dm-dog-Nr do.Ipf-3SiSu-PFI
'This dog' 'He does it'

There are two types of vowel-initial suffixes: those that cause a preceding consonant to geminate and those that do not. In examples (75) and (76), the suffixes do not cause the preceding consonant to geminate resulting in the intervocalic spirantization of the plosive.

(75) /k-íɓ-**i**-tɔ/ → [k-íß -**i**-yɔ] /bóɾót-ø-**ú**/ → [bóɾóy-**ú**]
1Su-grab.Ipf-SiSu-PFI jump.Pf-SiSu-2SiNNa
'I grab' 'You jumped'

(76) /yók-**ag**-ey/ → [yóɣ-**og**-iy] /iríc-ø-**ag**-aɲ/ → [iríy-**ag**-aɲ]
tell.Pf-1/2Ben-1PlO stretch.Pf-SiSu-1/2Ben-1SiO
'Tell us!' 'Stretch it for me!'

The only consonants that spirantize when followed by these suffixes are /**ɓ, t, c, k**/. Examples of vowel initial suffixes that cause the preceding consonant to geminate are as follows:

(77) /kí-cík-**o**-tɔ/ → [kí-cík-**ko**-yɔ] /wa cík-ø-**á**/ → [wa cík-**ká**]
1Su-hear.Ipf-PlxSu-PFI recent.past hear.Pf-SiSu-3SiNNa
'We hear (it).' 'He just heard (it).'

(78) /kí-hín-**o**-tɔ/ → [kí-hín-**no**-yɔ] /íɓ-**ɛ**-tɔ/ → [íɓ-**ɓɛ**-yɔ]
1Su-want.Ipf-1PlxSu-PFI grab.Ipf-3PlSu-PFI
'We want (it).' 'They are grabbing (it).'

A comparative example of how some vowel-initial suffixes spirantize the preceding plosive and other suffixes cause it to geminate are seen in (79) and (80) with the conjugation of two verbs in the perfective aspect. The suffixes indicating a first and third person non-narrative subject geminate the preceding consonant whereas the second person non-narrative subject suffix does not. The ø morpheme indicates a singular subject and the reasons for this are discussed in section 4.3.

(79) /wa kí-cík-ø-**á**/ → [wa kí-cík-ø-**ká**] 'I just heard'
/wa cík-ø-**ú**/ → [wa cíɣ-ø-**ú**] 'You just heard'
/wa cík-ø-**á**/ → [wa cík-ø-**ká**] 'He just heard'

(80) /góra wa ká-máyíc-ø-**á**/ → [góra wa ká-máyíc-ø-**cá**] 'I just shelled corn'
/góra wa máyíc-ø-**ú**/ → [góra wa máyíy-ø-**ú**] 'You just shelled corn'
/góra wa máyíc-ø-**á**/ → [góra wa máyíc-ø-**cá**] 'He just shelled corn'

The benefactive suffix seen in (76) as well as some other suffixes, spirantize a preceding plosive in perfective aspect but with imperfective aspect cause the preceding consonant to geminate. A contrastive example using the verb root **íɓ** 'grab' is as follows:

(81) [wa k-íβ-ø-**ág**-íɲ-ó] (Perfective)
recent.past 1Su-grab.Pf-SiSu-1/2Ben-2SiO-PFPf
'I just got it for you'

(82) [k-íɓ-**ag**-íɲ-ø-dɔ] (Imperfective)
1Su-grab.Ipf-1/2Ben-2SiO-SiSu-PFI
'I will get it for you'

Some vowel initial suffixes change according to the vowel of the preceding syllable. For example, with the first person plural, second person singular and second person plural object suffixes, the vowel of the suffix dissimilates from the vowel of the preceding syllable. Although the environmental feature causing the allophones is +/-ATR, the height of the vowel seems to be the crucial factor rather than the tense/lax nature of it.

(83) VOWEL DISSIMILATION

$$\begin{bmatrix}\text{-high}\\ \text{+ATR}\end{bmatrix} \rightarrow [+\text{high}] / [\text{-ATR}](C)+\underset{V}{\_\_}$$

Some examples are as follows:

(84) /áj-**ey**-ø-tɔ/ → [**á**j**iy**tɔ]
give.Ipf-1PlO-3SiSu-PFI
'He gives (it) to us'

(85) /kɔ-dɔŋ-**éɲ**-tɔ/ → [kɔdɔŋ**j**ndɔ]
1Su-lift.Ipf-2SiO-PFI
'We lift (praise) you'

(86) /k-éŋérs-**oŋ**-ø-to/ → [kéŋérsu**ŋ**go]
1Su-afraid.Ipf-2PlO-SiSu-PFI
'I am afraid of you all.'

Other vowel-initial suffixes assimilate to the vowel of the preceding syllable. Again the height of the vowel is the distinguishing factor rather than its tense/lax nature.

(87) $\begin{bmatrix}\text{+back}\\ \text{-ATR}\end{bmatrix}$ ASSIMILATION

$$\begin{bmatrix}\text{+back}\\ \text{-ATR}\end{bmatrix} \rightarrow [+\text{ATR}] / [+\text{ATR}] (C)+\underset{V}{\_\_}$$

Example (88) demonstrates how the vowel of the first person singular object suffix assimilates to the vowel of the preceding syllable.

(88) /ŋór-**aɲ**-ɛ-ɔ/ → [ŋóro**ɲ**ɛɔ] /yél-**aɲ**-ø-tɔ/ → [yélo**ɲ**dɔ]
carry.Ipf-1SiO-3PlSu-PFI love.Ipf-1SiO-3SiSu-PFI
'They carry me.' 'He loves me.'

The Vowel Assimilation rule also applies to the benefactive suffix most of the time. However, there are some instances where the rule does not work for it. More data is needed to accurately determine the environment. Examples (89) and (90) have +ATR vowels in the verb roots but they have different allomorphs of the benefactive suffix.

(89) /ím-**ag**-aɲ-ø kɛ-ɔ/ → [ím-**ag**-aɲ kɛɔ]
plant.Ipf-1/2Bn-1SiO-3SiSu tree-Sg
'He plants a tree for me.'

(90) /útúm-**ag**-aɲ-ø go/ → [útúm-**og**-oɲ go]
tend.fire.Ipf-1/2Bn-1SiO-3SiSu fire
'He tends the fire for me.'

2.7. Prefixes

The only prefix that occurs on nouns is the demonstrative prefix, which also has an accompanying suffix. This prefix causes no morphophonemic changes. Examples are as follows:

(91)

ŋa-ɠárátéy-**tá**	**ŋa**-ɛl-én-**tonú**	**ŋa**-bagá-y-**tá**
Dm-vervet-Nr	Dm-spring-Pl-Fr	Dm-milk.container-Sg-Nr
'this vervet'	'those springs'	'this milk container'

All other prefixes occur on verbs and indicate the person of the subject, passive voice or negation. The prefixes that indicate the person of the subject and passive voice involve vowel insertion by copying the vowel of the initial syllable of the verb root. An epenthesis rule is needed to account for this.

(92) /**k**-/ Vowel Insertion
/k-/ → kV /__+CV(C)

Examples are as follows:

(93)

ká-ɓák-i	ŋáa	**k**-ar-ø-áɲ-o	aɲ **kó**-hó-t-o-yɛ
1Su-live.Ipf-SiSu	here	Psv-see.Pf-SiSu-1SiO-PFPf	Let 3Su-go.Pf-PlSu-3PlJ-PFJ
'I live here'		'I've been seen'	'Let them go.'

These prefixes affect the initial consonant of a verb root if the initial consonant is /**k**/. When there is a /**ka-ka**/ or /**kɔ-kɔ**/ sequence, the root initial /**k**/ is deleted resulting in a lengthened vowel. With all other vowels, the root initial /**k**/ is spirantized. Examples are as follows:

(94) /kɔ-**k**ɔh-inén-tɔ/ → [kɔ́-ɔ́h-inén-dɔ] 'I am weeding'
/ká-**k**áɲ-iɲ-tɔ/ → [ká-áɲ-iɲ-dɔ] 'I forbid you'

(95) /ké-**k**éɗ-i kɛɔ/ → [ké-**ɣ**éɗ-i kɛɔ] 'I chop a tree'
/ku-**k**um-an-éɲ-tɔ/ → [ku-**ɣ**um-an-íɲ-dɔ] 'You are being touched'

There is one example where a root initial /ɗ/ is realized as an [ɾ]. The root initial /ɗ/ does not change with other verb roots. The verb root /ɗak/, seen in (95), is the only example where this change occurs.

(96) /ka-ɗak-éɲ-o/ → [ka-ɾak-íɲ-o] 'You were hit'
/ká-ɗák-i-tɔ/ → [ká-ɾáɣ-i-yɔ] 'I hit (it)'

The third prefix occurring on verbs indicates negation and causes no change in the following consonant.

(97)

ŋa-kí-ʃík-i-tɔ	ŋa-kí-hín-i-tɔ
Neg-1Su-hear.Ipf-SiSu-PFI	Neg-1Su-want.Ipf-SiSu-PFI
'I don't hear (it)'	'I don't want (it)'

CHAPTER 3

TYPOLOGY AND GRAMMATICAL CATEGORIES

This chapter is divided into two major sections. In the first section, the constituent order and morphological typologies of Tirmaga are presented. The synthesis and fusion indices as outlined by Comrie (1989) are used to determine the morphological typology. In the second section, the grammatical categories of noun, pronoun, demonstrative, adposition and adverb are presented. The number marking system is of special interest. Nilo-Saharan languages are known for their complexity in this area. Although no final conclusions have been made, some interesting semantic categories for marking number in Tirmaga have been observed. A brief analysis of the Tirmaga case system is given here and compared to the conclusions reached by Lucassen (1994) and Last (1995) for Chai.

The verb and adjective categories will be discussed in chapter 4. These categories have been relegated to their own chapter because the agglutinative nature of the language especially affects the verb morphology requiring a greater focus on that area.

3.1. Morphological Typology

Comrie (1989:51) says "there are two major indices, independent of one another, that are needed in morphological typology: the index of synthesis...and the index of fusion." The synthesis index relates to the number of morphemes that tend to occur on a word. The two extremes of the synthesis index are isolating languages, where every word has only one morpheme, and polysynthetic languages, where words tend to have many morphemes. In an ideal polysynthetic language a sentence is comprised of only one word. Tirmaga is a fairly polysynthetic language because a sentence may be expressed through one word if there is a first or second person object in a sentence. But, it is not possible to

have a sentence with only one word if there is a third person object unless it is understood from the context. Examples of one-word sentences are as follows:

(1) ídóg-aŋ-ɛ-tɔ
scare.Ipf-1SiO-3PlSu-PFI
'They scare me.'

(2) ká-tál-ag-oŋ-ó-tɔ
1Su-transact.Ipf-1/2Bn-2PlO-1PlxSu-PFI
'We will buy (it) for you all.'

The Tirmaga verbs are far from isolating, having up to seven morphemes per word while the nouns may consist of four morphemes maximum.

(3) g-é gɛrs-té ŋa-kí-hín-ag-oŋ-ó-o (Verb)
PlCl-NSpRl bad,Stv-Sb Neg-1Su-want.Ipf-1/2Bn-2PlO-PlxSu-NegPF
'We do not want anything that is bad for you(pl).'

(4) ŋa-rɔs-í-tonú (Noun)
Dm-dog-Pl-Fr
'those dogs'

The fusion index deals with how many meaning components a morpheme may carry. The two extremes of the fusion index are highly fusional and agglutinative. A highly fusional language is one in which one morpheme simultaneously carries several meaning components. With an agglutinative language, one morpheme has only one component of meaning. Tirmaga is primarily an agglutinative language; however, it does have some fusional characteristics to it as well. An example of the agglutinative nature of Tirmaga is seen in example (5) where most of the morphemes represent one component of meaning.

(5) ŋa-kí-hín-ag-oŋ-ó-o
Neg-1Su-want.Ipf-1/2Bn-2PlO-PlxSu-NegPF
'We do not want for you (pl).'

Tirmaga also has fusional characteristics many times manifested by tone as seen in example (6). This is considered fusional because "specific chunks of morphology cannot be isolated" (Payne 1997:29).

(6) ŋání ki-cik-ø-kó
not.yet 1Su-hear.Pf-SiSu-NegPF
'I haven't heard.'

ŋani kí-cík-ø-ko
not.yet 3SuJ-hear.Pf-SiSu-NegPF
'He hasn't heard.'

In example (6), a low tone on the verb root and the person prefix indicates a first person subject but a high tone on the verb root and the person prefix indicates a third person subject. Therefore, the meaning of the person prefix and verb root are determined by the tone which they carry. This is discussed further in section 4.3. One will also notice that the tones change on the word **ŋani** and the negative suffix **-ko** in example (6). Their tones seem to dissimilate from the tones that indicate the person of the subject on the verb. Therefore, they are analyzed as having no inherent tone just as the Tirmaga verb roots.

Another example of fusion in Tirmaga can be seen in the verb roots. Many verbs in Tirmaga contain the meaning of the action taking place as well as the aspect. One can tell by the verb root whether the action is imperfective or perfective.

(7)

IMPERFECTIVE	PERFECTIVE
k-ór-i-tɔ	wa k-ár-ø-rá
1Su-see.Ipf-SiSu-PFI	recent.past 1Su-see.Pf-SiSu-1SiNNa
'I see (it).'	'I just saw (it).'

While not all Tirmaga verb roots carry aspectual information, many of them do. Aspect is discussed in further detail in section 4.9.

3.1.1. Morphological Processes

Payne (1997) states that there are seven morphological processes used in languages "by which stems can be formally altered to adjust their meanings to fit their syntactic and communicational context." These processes are prefixation, suffixation, infixation, stem modification, reduplication, suprasegmental modification, and suppletion. Payne does not directly include suppletion in his list of morphological processes because stem replacement "may not appropriately be called morphological" (1997:29). However, he does mention that information may be coded by suppletion just as the other morphological processes. I have

included it here because it is relevant to Tirmaga. Tirmaga is a predominately suffixing language, but uses prefixation, stem modification, suprasegmental modification, and suppletion as well. Each morphological process is presented in examples (8)-(12).

(8) PREFIXATION

a. **ká**-már-i-tɔ
1Su-refuse.Ipf-SiSu-PFI
'I refuse'

b. **ŋa**-már-i
Neg-refuse.Ipf-2SiSu
'Don't refuse!'

(9) SUFFIXATION

a. már-**aɲ-ɛ-tɔ**
refuse.Ipf-1SiO-3PlSu-PFI
'They refuse me.'

b. ŋa-gú-**ŋá-tonú**
Dm-garden-Pl-Fr
'those gardens'

(10) STEM MODIFICATION

a. k-**ór**-i-tɔ
1Su-see.Ipf-SiSu-PFI
'I see.'

k-**ár**-ø-ra
1Su-see.Pf-SiSu-1SiNa
'I saw.'

a. kí-**cíg**-i-tɔ
1Su-laugh.Ipf-SiSu-PFI
'I laugh.'

kɛ́-**cɛ́g**-ø-ga
1Su-laugh.Pf-SiSu-1SiNa
'I laughed.'

(11) TONE MODIFICATION

a. ŋání **k-ar-ø-ró**
not.yet 1Su-see.Pf-SiSu-NegPF
'I haven't seen (it).'

ŋani **k-ár-ø-ro**
not.yet 3SuJ-see.Pf-SiSu-NegPF
'He hasn't seen (it).'

b. ŋání **ki-cik-ø-kó**
not.yet 1Su-hear.Pf-SiSu-NegPF
'I haven't heard.'

ŋani **kí-cík-ø-ko**
not.yet 3SuJ-hear.Pf-SiSu-NegPF
'He hasn't heard.'

(12) SUPPLETION

a. ká-**mát**-i-tɔ
1Su-drink.Ipf-SiSu-PFI
'I am drinking'

wa k-**ír**-ø-rá
just 1Su-drink.Pf-SiSu-1SiNNa
'I just drank (it).'

b. k-íh-i	láy	kɛ́-tɛ́-ø-wa	láy
1Su-exist.Ipf-SiSu	quietly	1Su-exist.Pf-SiSu-1SiNa	quietly
'I exist quietly.'		'I existed quietly.'	

3.1.2. Head/Dependent Marking

Tirmaga usually marks both the head and dependent of a phrase as seen in examples (13)-(15).

(13) GENITIVE PHRASE
gaŋgu-á beyó-ɲ
road-SpRl cows-Gn
'cow's road'

(14) ADJECTIVAL PHRASE (SPECIFIC)
gaŋgu-á cal-á
road-SpRl good.Stv-SpRl
'good road'

(15) ADJECTIVAL PHRASE (NON-SPECIFIC)
bi-té gɔlɔŋ-té
cow-NSpRl red.Stv-Sb
' a cow that is red'

Only the head is marked in a possessive construction when a proper name or a possessive pronoun is used.

(16) PROPER NAME
bi-á Bargólay
cow-SpRl Bargolay
'Bargola's cow'

(17) POSSESSIVE PRONOUN
bi-á n-anú
cow-SpRl SiPsd-1SiPsr
'my cow'

3.2. Constituent Order Typology

The basic constituent order of an intransitive clause in Tirmaga is SV.

(18)

S	V
tɛr-ú	hó-t-á-ní
woman-Pl	came.Pf-PlSu-3NNa-!

'(The) women came!'

The neutral basic constituent order for a transitive clause is SVO:

(19) **S** **V** **O**
líy-á n-anú írít-ø-ú hoy-a mɛrí
son-SpRl SiPsd-1SiPsr born.Pf-SiSu-3SiNa offspring-Pl many
'My son birthed (gave birth to) many children.'

In short stretches of speech, the basic constituent order of a transitive clause is SVO as seen in (19). However, in a text it is very difficult to identify a "neutral basic constituent order" containing two NP arguments. Most of the time only one NP argument is found. This has been observed by Du Bois (1987) to occur cross-linguistically. The transitive sentence in (19), however, was taken from a text.

Variant constituent orders are abundant in Tirmaga. As noted by Lucassen (1994:85) and Last (1995:71), the word order changes in order to focus on a particular constituent. When the agent is in focus, the word order changes to OVS. This type of word order is frequently seen in response to a question. Question words always occur sentence finally in Tirmaga. This goes against Greenberg's (1966:83) universal number 12 for VO languages to have question words in sentence-initial position. The sentence-final occurrence of question words is a common feature of all Surmic languages (Arensen, de Jong, Randal, and Unseth 1997). Therefore, the argument about which a question is being asked tends to fill the slot of the question word when the answer is given. Examples (20)-(22) demonstrate how the word order for a statement differs from that of a question and how the word order of an answer emulates that of the question.

(20) **S** **V** **O** (Statement)
súrí-ø bare éj-t-á sú-ɲá
Suri-Pl yesterday shoot.Pf-PlSu-3NNa Dizi-Pl
'Some Suri people shot some Dizi people yesterday.'

(21) **O** **V** **S** (Question)
sú-ɲá bare éj-t-á géɔ́ŋ?
Dizi-Pl yesterday shoot.Pf-PlSu-3NNa who.Pl.Nom
'Who shot the Dizi yesterday?'

(22) **V** **S** **(Answer)**
éj-t-á súri-ø
shoot.Pf-PlSu-3NNa Suri-Pl
'The Suri shot (them).'

Another variant word order is OV or SOV, which occurs when a sentence is negated.

(23) **O** **V**
méá gesó ŋa-kí-hín-i-o-cí
now beer Neg-1Su-want.Ipf-SiSu-NegPF-!
'I no longer want beer.'

(24) **S** **O** **V**
aŋe bi ŋa-kí-hín-i-tɔ
I cow Neg-1Su-want.Ipf-SiSu-PFI
'I do not want a cow.'

(25) **O** **V**
wólólo ŋání ŋa-kú-dúrí-ø-o
wedding not.yet/still Neg-1Su-dance.Ipf-SiSu-NegPF
'I will never dance (the wololo part of) a wedding.'

The SOV order may also be used to emphasize the patient.

(26) **S** **V** **O** **(No emphasis)**
aŋe kí-hín-i bi
I 1Su-want.Ipf-SiSu cow
'I want a cow'

(27) **S** **O** **V** **(Emphasis)**
aŋe bi kí-hín-i góre
I cow 1Su-want.Ipf-SiSu very
'I really want a cow.'

3.3. Nouns

Tirmaga nouns are evidenced by five distributional properties. They may act as the head of a noun phrase, the subject of a clause, the object of a clause, a possessor, or a possessed item. Each of these is shown in examples (28)-(32).

(28) **lɔ́g-té** **més-é** **tɛr-ú-te** **(Head of a noun phrase)**
word-NSpRl do.Ipf-3PlSu woman-Pl-Sb
'things that the women do'

(29) **S** **V** (Subject)
tɛr-ú hó-t-á-ní
woman-Pl came.Pf-PlSu-3NNa-!
'(The) women came!'

(30) **S** **V** **O** (Object)
nɔ áj-ey-ø **tílá**
3SiP give.Ipf-1PlO-3SiSu food
'He/she gives us food.'

(31) á tílá-á **kéllé-y-ɲ** (Possessor)
is food-SpRl rabbit-Sg-Gn
'It's the food of the rabbit (rabbit's food).'

(32) á **kéllé-y**-á n-anú (Possessed)
is rabbit-Sg-SpRl SiPsd-1SiPsr
'It is my rabbit.'

A noun may be inflected for number, case and to express demonstratives as seen in the following examples:

(33) kɛ-ɔ **kɛ-nɔ** (Number)
tree-Sg tree-Pl
'tree' 'trees'

(34) túrɛ́ íh-ø **alley-ɔ́** bay (Oblique case)
horn exist.Ipf-3SiSu table-Obl down
'The horn is under the table.'

(35) komor-u-á **túmú-ɲ** kó **ba-ɲ** (Genitive case)
leader-Sg-SpRl sky-Gn Crd ground-Gn
'leader of the sky and the ground'

(36) **ŋa-kɛ-tá** **ŋa-kɛ-tonú** (Demonstratives)
Dm-tree-Nr Dm-tree-Fr
'this tree' 'that tree'

3.3.1. Case

Lucassen (1994:75) writes that Chai has "absolute case, nominative case, genitive case, locative case and instrumental case". With her inclusion of nominative and absolute cases she must have felt that there were signs of split ergativity evident in the language although she did not pursue that analysis in great detail. Her colleague, Last (1995:76), on

the other hand does a closer examination of the Chai case system and concludes that only the genitive case is morphologically marked in Chai. The instrumental and locative cases he reanalyzes as postpositions. He also looks extensively into the split ergative possibility for Chai and concludes that it does not exist. Instead, what looks like an ergative-absolutive case marking system in a predominately nominative-accusative language is only the marking of the post-verbal subject. He calls this post-verbal subject marker a "nominative suffix" instead of a nominative case marker. He attributes the use of a post-verbal subject (agent) to the pragmatic function of introducing new information into a text, or changing the topic.

3.3.1.1. Nominative and Accusative Case

I have analyzed the Tirmaga case system in much the same way as Last did for Chai. Tirmaga is a nominative-accusative language. The grammatical relations of subject and object are marked primarily by the SVO or VO word order of a sentence. Neither the subject nor object are morphologically marked when in this order. However, the subject occasionally occurs after the verb resulting in an OVS or VS word order. When there is a post-verbal subject, it is morphologically marked by an **-o** suffix, tone change, or the loss of a word final **-ɔ**. The most common morphological marker for post-verbal subjects is the **-o** suffix.[1] This is seen in the examples (37)-(39) with **ŋatuɲ** 'lion'.

(37) **S** **V** (Intransitive subject)
ŋatuɲ-ø ám-ø-tɔ
lion-Sg eat.Ipf-3SiSu-PFI
'The lion eats.'

(38) **S** **V** **O** (Pre-verbal transitive subject)
ŋatuɲ-ø ám-ø cíggín-ø
lion-Sg eat.Ipf-3SiSu hartebeast-Sg
'The lion eats the hartebeast.'

[1] The **-o** suffix is realized as an [u] when it occurs after a word with an /ə/ or /ɔ/ in the final syllable.

(39) O V S (Post-verbal transitive subject)
cíggín-ø ám-ø **ŋatuɲ-ø-o**
hartebeast-Sg eat.Ipf-3SiSu lion-Sg-PVS
'The lion eats the hartebeast.'

Tone change marks a post-verbal subject when it is a proper name or a common noun that ends with an /o/. When tone marks a post-verbal subject, it seems that the tone of the final syllable changes. The only occurrence in my data of a high tone pre-verbal subject that also occurs as a post-verbal subject is seen in examples (20)-(22) in section 3.2. In those examples, the final high tone syllable changes to low tone when it occurs as a post-verbal subject. Most post-verbal examples in my data that are marked by tone have a low tone on the final syllable in pre-verbal position as seen with the word **zugo** 'people' in examples (40) and (41). In all of these cases, the low tone of the final syllable changes to high tone when the word is a post-verbal subject.

(40) S V (Intransitive subject)
zugo úŋús-ɛ-tɔ
people sleep.Ipf-3PlSu-PFI
'The people sleep.'

(41) S V O (Pre-verbal transitive subject)
zugo ɗák-ɛ kono
people hit.Ipf-3SiSu snake
'The people hit the snake.'

(42) V S (Post-verbal transitive subject)
na ɗák-áɲ-é **zugó** ɓé ciɲi
and hit.Ipf-1SiO-3PlSu people.PVS place little
'Then the people hit me a little bit.'

When a post-verbal subject ends with an /ɔ/, the /ɔ/ is deleted and the last low tone of the word changes as seen in examples (43)-(46) with the word **tɔŋɔ** 'goat'.

(43) S V (Intransitive subject)
tɔŋɔ ŋés-ø-tɔ
goat run.Ipf-3SiSu-PFI
'The goat runs.'

(44) S V O (Pre-verbal transitive subject)
tɔŋɔ kɔ́n-ø bargólay
goat stab.Ipf-3SiSu Bargolay
'The goat stabs Bargolay.'

(45) O V S (Post-verbal transitive subject)
bargólay kɔ́n-ø **tɔ́ŋ**
Bargolay stab.Ipf-3SiSu goat
'The goat stabs Bargolay.'

(46) S V O (Transitive with **tɔŋɔ** as object)
bargólay kɔ́n-ø **tɔŋɔ**
Bargolay stab.Ipf-3SiSu goat
'Bargolay stabs the goat.'

The pronouns are also marked when occurring as post-verbal subjects. Most of the post-verbal subject pronouns have an **-o** suffix like many post-verbal common noun subjects as seen in (39). However, the **-o** suffix seen with post-verbal subject pronouns has a high tone unlike other nouns and it replaces the word final **-e** vowel of the pre-verbal singular pronouns. The third singular pronoun involves a different modification than just an **-o** suffix as seen in table 3. It compares the pre-verbal and post-verbal subject pronouns. The pre-verbal and post-verbal object pronouns are the same as pre-verbal subject pronouns. The Tirmaga third person pronouns are different from Chai. The Chai (pre-verbal) third person pronouns are /**nɔŋ**/ and /**yɔg**/ (Last 1995:38). However, elements of a word final velar consonant are seen on the Tirmaga third person plural pronoun when it occurs post-verbally.

Table 3. Pre-verbal and Post-verbal Pronouns

	PRE-VERBAL SUBJECT PRE-VERBAL AND POST VERBAL OBJECT	POST-VERBAL SUBJECT
'I'	aɲe	áɲ-ó
'you'	iɲe	íɲ-ó
'he/she'	nɔ	n-ɛ́a
'we'	age	ágé-ó
'you (pl)'	ige	ígé-ó
'they'	yɔ	yɔk-ó

Tirmaga does not have separate personal pronouns for the first person inclusive and exclusive forms as Me'en does (Will 1989:130); however, Tirmaga possessive pronouns do distinguish between first person plural inclusive and exclusive. Some examples of pre-verbal and post-verbal pronouns are as follows:

(47) **S V** (Intransitive subject)
aŋe kɔ́-gɔ́-ø-tɔ
I 1Su-go.Ipf-SiSu-PFI
'I go.'

(48) **S V O** (Pre-verbal transitive subject)
aŋe ká-ɗák-i kono
I 1Su-hit.Ipf-SiSu snake
'I hit a snake.'

(49) **V S** (Post-verbal transitive subject)
ká-ɗák-eŋ-ø **áŋó**
1Su-hit.Ipf-2SiO-SiSu 1SiP.PVS
'I will hit you.'

(50) **O V S**
ŋa-kɛ-tonú béré ánda kú-gúŋ-o **ágéó** sabbo
Dm-tree-Fr long.ago TpP 1Su-look.Ipf-PlxSu 1PlP.PVS before
'That tree from long ago, we look at it before (from the front).'

(51) **V O** (Post-verbal object)
gĩn-á[2] ki-gin-éŋ-ø **iŋe**
ask-Nlr 1Su-ask.Ipf-2SiO-PlnSu you
'(Concerning) question/s, we ask you.'

From examples (47)-(51), one can see that Tirmaga marks post-verbal transitive subjects while intransitive subjects and all objects remain unmarked. This type of case marking gives the appearance of a split ergative system. When a subject is pre-verbal, the case system is nominative-accusative with both subject and object being unmarked.[3] But when a subject is post-verbal, the case marking resembles an ergative-absolutive system with the transitive subject being marked while the object and intransitive subject are

[2] The word **gĩná** is not considered to be a direct object of the following clause because it is not referenced in the verb. It sets the topic for the following clause.

[3] More study as to what role tone may play in marking nominative and accusative case needs to be done.

unmarked. However, the post-verbal subject of an intransitive clause is also marked in Tirmaga.

(52) **V** **S**
bárár-ø **nɛ́a** sɔ́ŋ
powerful.Ipf-3SiSu 3SiP.PVS only
'He only (is) powerful.'

(53) **V** **S**
k-ílágás-i **áɲó**
1Su-sick.Ipf-SiSu 1SiP.PVS
'I am sick.'

(54) **V** **S**
ké-més-o **ágé-ó**
1Su-do.Ipf-PlxSu 1PlP-PVS
'We will do (it).'

These types of intransitive clauses are generally used for clarification of a situation. For example, (52) occurs in a text where there is a discussion about the power of God and Satan. Immediately preceding example (52) one speaker talks about God and then says that only God is powerful. Since the post-verbal subjects of both intransitive and transitive clauses are marked Tirmaga is not a split ergative language. The only thing that Last lacked in his Chai data to make a definitive stand against the split ergativity of the language was a VS order clause with a marked post-verbal subject.

Now we will turn to the pragmatic function of the post-verbal subject. Last observes (1995:71) that the post-verbal subject functions within a Chai discourse to introduce a new topic or new information. Tirmaga also uses the post-verbal subject to introduce new information in narrative texts by beginning a new episode. The text in Appendix B has four post-verbal subjects in independent clauses. In each case, a transition is made from one episode to another. The five episodes are the spitting ritual, the bride running away from the wedding, the final wedding dance, the coffee ritual and the women's ritual. These transition sentences are seen in (55)-(58).

(55) húná k-ubur-aɲ-í na ɗák-áɲ-é **zugó** ɓɛ́ ciɲi
when Psv-spit.Ipf-1SiO-Tm and hit.Ipf-1SiO-3PlSu people.PVS place little
'When I had been spit on[4] then the people hit[5] me a little bit.'

(56) kɛ́-tɛ́-ø-wa ɗul ná kóó dígán-t-a
1Su-exist.Pf-SiSu-1SiNa permanently and then accompany.Pf-PlSu-3Na

tɛr-ú-o sɛgén
woman-Pl-PVS again
'I (groom) existed permanently (sense of loneliness) and then the women accompanied (bride) again.'

(57) híndé kú-dúrí-o na té-ø ócá-té zugo
T/C 1Su-dance.Ipf-PlxSu and be.Pf-3SiSuNa enough-Sb people

ɗák-ø-ú **hózzo** góre
hit.Pf-SiSu-3SiNa hunger very'When we dance and it was enough, people were very hungry.'

(58) més-é **tɛr-ú-o** dámbí-té n-nɛ ná no kabar-í-ɔ
do.Ipf-3PlSu woman-Pl-PVS custom-NSpRl SiPsd-PlPsr and but eye-Sg-Obl

ŋání k-ar-ø-ró aɲenot.yet 1Su-see.Pf-SiSu-NegPF 1SiP
'The women did their (wedding) custom but by eye I have never seen it.'

Example (58) has an unmarked post-verbal subject **aɲe**, instead of **áɲó**, in the second independent clause of the sentence. This is probably because it is a negative clause rather than a statement.

3.3.1.2. Oblique Case

Nouns are also morphologically marked when occurring in the oblique case. The oblique case suffix is realized as an **-ɔ** on nouns with a word final consonant, **-gie** on nouns with a word final vowel, and **-e** on nouns with a word final [+coronal] nasal consonant with a preceding high vowel. The oblique case has a dual function marking both instrumental

[4] Part of the Tirmaga marriage ceremony involves the bride and groom drinking a liquid made from a certain type of tree bark and spitting it out together. It is supposedly a very nasty tasting drink. Spitting on someone else is also seen as a sign of blessing among the Tirmaga people.

[5] At a Tirmaga wedding the groom dances around while the people hit him with switches, pinch him and taunt him. The men hit the groom on the first night and the women hit him at following celebrations which take place over the course of a month.

and locative functions. No distinction is made between 'going to' or 'going away from' a location when the oblique case has a locative function. The following examples demonstrate both functions of the oblique case:

(59) a. na gín hɛ́-ø bom-ɔ (Locative)
and others go.Ipf-3PlSu Bom-Obl
'And others go to Bom.'

b. ɗák-aɲ-ø lalάŋ-ɔ (Instrumental)
hit.Ipf-1SiO-3SiSu bracelet-Obl
'She hit me with a bracelet.'

(60) a. gín hɛ́-ø mun-é (Locative)
others go.Ipf-3PlSu Mun-Obl
'Others go to Mun.'

b. ayu ké-géɗ-o warά-cin-é (Instrumental)
meat 1Su-cut.Ipf-PlxSu knife-Pl-Obl
'We cut meat with knives.'

(61) a. gín hɛ́-ø sógórɛ-gie (Locative)
others go.Ipf-3PlSu Sogore-Obl
'Others went to Sogore.'

b. ké-géɗ-i warά-ø-gie (Instrumental)
1Su-cut.Ipf-SiSu knife-Sg-Obl
'I cut (it) with a knife.'

3.3.1.3. Genitive Case

Genitive[6] case is also morphologically marked in Tirmaga. The genitive suffix is realized as -ɲ following a vowel and -uɲ following a word final consonant. The genitive case uses the same marking as possessive relationships shown in section 3.3.1.3.1. The possessed item is always marked by an -a suffix. The possessor is marked with the genitive case suffix, or a possessive pronoun. The possessive pronouns are given in section 3.3.1.3.1 as well. Some examples of the genitive case are as follows:

[6] The genitive case referred to here also represents the associative case.

(62) gaŋgu-á beyó-ɲ
road-SpRl cows-Gn
'cow's road'

(63) komor-u-á túmú-ɲ kó ba-ɲ
leader-Sg-SpRl sky-Gn Crd ground-Gn
'leader of the sky and the ground (heaven and earth).'

(64) á líbá-á lɛbɛŋ-úɲ
is sorghum-SpRl first.harvest-Gn
'It's the sorghum of the first harvest.'

When a proper name is used for the possessor of an item, the genitive suffix is not used unless the name has a word final consonant. If there is a word final consonant, the genitive suffix for proper names is -i. Examples of this are seen in section 3.3.1.3.2.

3.3.1.3.1. Possessive Pronouns

There is a two-way distinction in the possessability of Tirmaga nouns. The distinction is between nouns that are inherently possessed and those that are optionally possessed. There are only four inherently possessed nouns in Tirmaga. They are mother, father, brother and sister. The inherently possessed nouns use a separate set of possessive suffixes for the second and third person possessor in the singular possessed forms. Example (65) shows how 'father' is possessed.

(65)

cógɔ́-nú	cɔ́-ŋ-gu
father-2SiPsr	father-PlPsdI-2PlPsr
'your father'	'your (pl) father'
cógɔ́-nɛ́	cɔ́-ŋ-gɛ
father-3SiPsr	father-PlPsdI-3PlPsr
'his father'	'their (pl) father'

When the possessor of these is in first person or the plural forms of these nouns are used, the noun reverts to a different form and uses the pronouns for optionally possessed items.

(66)

babá-á n-anú	babá-cíná-á g-aɲú
father-SpRl SiPsd-1SiPsr	father-Pl-SpRl PlPsd-1PlPsr
'my father'	'my fathers'
babá-cíná-á g-uɲú	babá-cíná-á g-ɛɲɛ́
father-Pl-SpRl PlPsd-2SiPsr	father-Pl-SpRl PlPsd-3SiPsr
'your fathers'	'his fathers'

All other nouns are optionally possessed. There is a distinction made between singular and plural possessed items, which is common for all Surmic languages. /**n**/ typically marks a singular item and /**g**/ typically marks plural items for all Surmic languages (Unseth 1991). The **n-** (SiCl) and **g-** (PlCl) that mark the number of a noun, act as clitics in Tirmaga. These clitics are discussed further in section 3.4. In possessive constructions they mark the number of the possessed item. Example (67) gives the possessive pronouns for optionally possessed nouns.

(67)

SINGULAR POSSESSED ITEM		PLURAL POSSESSED TEMS	
bi 'cow'		beyo 'cows'	
'my cow'	bi-á n-anú	'my cows'	bey-á g-aɲú
'your cow'	bi-á n-unú	'your cows'	bey-á g-uɲú
'his/her cow'	bi-á n-ɛnɛ́	'his/her cows'	bey-á g-ɛɲɛ́
'our(ex) cow'	bi-á n-áyo	'our(ex) cows'	bey-á g-áyo
'our(in) cow'	bi-á n-na	'our(in) cows'	bey-á g-ga
'your(pl) cow'	bi-á n-nu	'your(pl) cows'	bey-á g-gu
'their cow'	bi-á n-nɛ́	'their cows'	bey-á g-gɛ́

Lucassen (1994) and Last (1995) make no mention of a distinction between first person plural inclusive and exclusive possessor suffixes in their analysis of Chai although it does occur in their data. Mursi also distinguishes between first person plural inclusive and exclusive possessor according to Turton's (1976) data.

3.3.1.3.2. Proper Names

Proper names do not take the usual genitive suffix **-ɲ**. If a proper name ends with a vowel, no genitive suffix occurs. If the proper name ends with a consonant, an **-i** genitive

suffix occurs instead. Example (68) contrasts a vowel final proper name with the common noun that composes the name when used in the genitive case.

(68) á g-á **Bartɛrú** á g-á **tɛr-ú-ɲ**
is PlCl-SpRl Barteru is PlCl-SpRl woman-Pl-Gn
'They are Barteru's.' 'They are the women's'

Example (69) contrasts a consonant final proper name with the common noun that composes the name when used in the genitive case.

(69) á dádáb-á **Bartágís-i** á dádáb-á **tágís-uɲ**
is book-SpRl Bartagis-Gn is book-SpRl moon-Gn
'It's Bartagis' book.' 'It's a book of the moon (calendar).'

3.3.2. Mass Nouns

There are underived and derived mass nouns in Tirmaga. The derived mass nouns are derived from verbs. The underived mass nouns are usually things such as liquids and different types of dirt that are inherently plural. More evidence of their plurality is seen in possessive constructions where they always occur with plural possessed suffixes.

(70) á ma-á g-aɲú
is water-SpRl PlPsd-1SiPsr
'It's my water.'

(71) á digiri-á g-uɲú
is clay-SpRl PlPsd-2SiPsr
'It's your clay.'

(72) á gesó-á g-ɛɲɛ́
is beer-SpRl PlPsd-3SiPsr
'It's his beer.'

The derived mass nouns may be considered singular or plural as seen in the following examples:

(73) na aɲe durí-ø-á n-anú gár-ø-ú-ní
and I dance.Ipf-Nlr-SpRl SgPsd-1SiPsr disappear.Pf-SiSu-3SiNa-!
'Then my wedding was over.'

(74) maɗ-á-á g-ɛɲé á ɗandal-í
teach.Ipf-Nlr-SpRl PlPsd-3SiPsr is hard.Stv-Adj
'His teachings are hard (difficult).'

The mass nouns are also distinguished from count nouns because they usually occur with qualitative adjectives when expressing a quantitative idea. Example (75) shows the correct and incorrect co-occurrence of mass nouns with adjectives.

(75) urɔ á bu *urɔ á mɛrí
milk is big * milk is many
'There is a lot of milk.'

méá kɔɗ-á á bu *méá kɔɗ-á á mɛrí
now kill.Ipf-Nlr is big * now kill.Ipf-Nlr is many
'There is a lot of fighting (are many battles) now.'

Verb nominalization is dealt with further in section 4.7.

3.3.3. Count Nouns

Nilo-Saharan languages are notorious for having complex number marking systems, and Tirmaga is no exception. From a collection of about 850 nouns, eighteen different singular and plural suffixes have been identified. In this section, I will note some of the most common ways that Tirmaga nouns are marked for number and make some initial observations about these categories. An in-depth study of the number system is beyond the scope of this thesis. Much investigation still needs to be done in this area including the role that tone plays in these suffixes.

Tirmaga uses the following four methods to mark number on the nouns: singular unmarked-plural marked, singular marked-plural marked, singular marked-plural unmarked and suppletion. Of these four methods, the singular unmarked-plural marked is the most commonly used. There are seven different suffixes that mark the plural in this method. They are listed in table 4 along with a number to the side of each suffix indicating its frequency of occurrence in a collection of 850 nouns.

Table 4. Number of Nouns, by Suffix, Using the Singular Unmarked-Plural Marked Method

SINGULAR UNMARKED	PLURAL MARKED	FREQUENCY OF USE
ø	-ɲá	187
ø	-éna	54
ø	-í	45
ø	-o	26
ø	-á	21
ø	-cina	21
ø	-yóga	19

Arensen (1992:112) says that in Murle, a Southwest Surmic language, nouns belonging to a specific semantic category are similarly marked. Even the words that are borrowed from other languages are marked for number according to the appropriate semantic category when they are incorporated into the Murle language. As I have studied the Tirmaga nouns, there also seems to be a correlation between semantic categories and the way they are marked for number. However, in Tirmaga, almost all of the borrowed terms tend to fit into one category rather than being dispersed throughout other semantic categories like Murle. Tirmaga borrowed words tend to be marked like the first category seen in table 4 which marks plural with **-ɲá**. The **-ɲá** category contains more nouns than any other category found in the number marking system. Some examples are as follows:

(76)

NON-BORROWED		BORROWED	
bɛ́káy	bɛ́káy-ɲá	dádáb	dádáb-ɲá
friend	friend-Pl	book	book-Pl
camáni	camání-ɲá	lómbu	lómbú-ɲá
hunter	hunter-Pl	flashlight	flashlight-Pl

Two of the other categories in table 4 offer evidence of a possible semantic grouping. The category with **-éna** marking the plurals contains many animal names and some body parts. There were also many names of body parts found in the category where **-í** marks the plural.

(77) CATEGORY WITH **-éna** MARKING PLURAL

marcán	marcan-éna	loggór	loggor-éna
lesser.kudu	lesser.kudu-Pl	throat	throat-Pl
gɛr	gɛr-éna	luddúm	luddum-éna
oribi	oribi-Pl	chest	chest-Pl

(78) CATEGORY WITH **-í** MARKING PLURAL

ɓugúy	ɓuguy-í	girɔŋ	girɔŋ-í
upper.back	upper.back-Pl	nose	nose-Pl
gɔtáy	gɔtáy-í	rɛh	rɛh-í
palm.of.hand	palm.of.hand-Pl	body	body-Pl

Another semantic category observed in this first method is found with nouns marked by **-cina** in the plural. Many of these nouns are things that one might associate with guarding cattle.

(79)	búgá	búgá-cina	gahá	gahá-cina
	hyena	hyena-Pl	small.shelter	small.shelter.Pl
	go	go-cina	dórá	dórá-cina
	fire	fire-Pl	type.of.fox	type.of.fox-Pl

The second method involves the marking of both the singular and plural. This method has five major categories of suffixes, which are seen in table 5 along with their frequency of occurrence.

Table 5. Number of Nouns, by Suffix, Using the Singular Marked-Plural Marked Method

SINGULAR MARKED	PLURAL MARKED	FREQUENCY OF USE
-í	-a	70
-í	-ó	21
-u, -a	-én	19
-óy	-á	15
-éy	-a	8

The only interesting semantic category found in this method is seen with **-í** singular, **-a** plural category. Many of the words found in this category have something to do with

pain. It may be a body part that is often injured at a stick fight, thorn trees or insects that cause pain. Some examples are as follows:

(80)

borkoɗ-í	borkoɗ-a	érr-í	érr-a
small.thorn.tree-Sg	small.thorn.tree-Pl	white.acacia-Sg	white.acacia-Pl
gogotɛn-í	gogotén-a	kɔm-í	kɔ́m-a
kidney-Sg	kidney-Pl	knee-Sg	knee-Pl
céretɛn-í	cérétén-a	lewg-í	lewg-a
porcupine-Sg	porcupine-Pl	mosquito-Sg	mosquito-Pl

In the third method of marking number the singular is marked and the plural unmarked. Payne (1997:97) refers to this method as being rare in the languages of the world, however it is also found in other Surmic languages such as Murle (1992:129), Tenet (1995:39), Didinga (Odden 1983:170) and Me'en (n.d.:3). In Tirmaga, there is only one category of marking in this method as seen in (81).

(81)

SINGULAR MARKED	PLURAL UNMARKED	FREQUENCY OF USE
-y	-ø	128

When one considers the word final neutralization of /**c, j, y**/ found in Tirmaga as mentioned in section 2.1.1, it is interesting to compare the Tirmaga singulative suffix **-y** to a common singulative suffix **-c** found in Murle (1992:129), Tenet (1995:39), Didinga (Odden 1983:170) and Me'en (n.d.:3). This method of marking the singular instead of the plural, represents a semantic category of things that are normally seen or understood as being plural for a Tirmaga speaker. The Tirmaga nouns that occur with singulative marking are things such as tree types, plants, ethnic groups and animals that are usually seen in a group. This is also seen in Chai (Lucassen 1994:35) and Murle (Arensen 1992:129). Examples of Tirmaga nouns with singulative marking are as follows:

(82)

a. aɲjó-y	bandó-y	(Plants)
palm-Sg	juniper-Sg	

b. aɲjó-ø palm-Pl bandó-ø juniper-Pl

(83) a. kaŋá-y baboon-Sg cɔyá-y guinea.fowl-Sg (Animals)

b. kaŋá-ø baboon-Pl cɔyá-ø guinea.fowl-Pl

(84) a. góla-y Ethiopian-Sg ɲúrlu-y Anuak-Sg (Ethnic Groups)

b. góla-ø Ethiopian-Pl ɲúrlu-ø Anuak-Pl

The fourth method of marking number used in Tirmaga is suppletion of which there is only one example.

(85) hírí 'person' zúgo 'people'

There are also a few irregular verbs as seen in the following examples:

(86) bi 'cow' beyɔ 'cows' tɔŋɔ 'goat' tenɔ 'goats' siyɔ 'hand' senɔ 'hands'

Contrary to Lucassen's observations for Chai (1994:34), plural nouns are used quite frequently in Tirmaga and in fact are essential in proper discourse. It is typical for the number of a Tirmaga noun to agree with the subject/object marking on the verb. Examples taken from texts of plurals agreeing with the number of the subject or object marked on the verb are as follows:

(87) na **beyo** hóɲ-ø-tɔ
and cows come.Ipf-3PlSu-PFI
'Then the cows will come.'

(88) bume-ø més-án-ɛ **yɔkó**-so
Bume-Pl do.Ipf-MT-3PlSu 3PlSu.PVS-!
'The Bume, they are the ones doing it.'

Lucassen (1995:40) also reports that the number of some nouns have a "three-way distinction" in Chai. This does not exist in Tirmaga and I am highly skeptical of the Chai data she used to propose this.

3.4. Reflexive, Indefinite, and Other Pronouns

The subject and object pronouns are discussed in section 3.3.1.1, and this section covers the reflexive, indefinite, number clitics and interrogative pronouns. There are only two reflexive pronouns: one for all singular persons and one for all plural persons. The hearer knows which person is being referred to by the conjugation of the verb. The reflexive pronoun always follows the verb but is not a suffix.

(89) éna 'singular self' ɛygó 'plural selves'

Some examples are as follows:

(90) suricɛn kí-cík-i **éna**
Suri.language 1Su-hear.Ipf-SiSu SiRflP
'I understand the Suri language myself (I don't need a translator).'

(91) tógód-ø-u **éna**
shoot.Pf-SiSu-3SiNa SiRflP
'He shot himself.'

(92) més-o **ɛygó**
do.Ipf-2PlSu PlRflP
'You are doing it to yourselves.'

(93) lóm-ɛ **ɛygó**
have.Ipf-3PlSu PlRflP
'They have themselves.'

Example (93) was used in reference to cows when someone unsuccessfully attempted to steal them. A statement like this is also used when a hunter shoots at an animal but misses. Since the animal has himself or a self, he cannot be killed. This may mean that one's self is like a spirit that knows when it is or is not the time to die. This is speculation on my part and has not been confirmed by a Tirmaga.

The indefinite pronouns are as follows:

(94) kóná 'another' gená 'others'

The number clitics indicate the number of a noun to which they refer. The number clitics can never stand alone, but must be inflected for specificity or demonstrative

constructions. For this reason, they are not pronouns, but are discussed in this section since they stand in place of a noun when they are properly inflected. The singular number clitic (SiCl) is **n-** and the plural number clitic (PlCl) is **g-** or **gi-**. This follows the typical pattern of Surmic languages in marking the number of nouns. A word initial [i] occurs on the singular number clitic when it is non-specific in order to conform to pattern pressure. This is seen in example (95a) for the singular number clitic with the non-specific relator (NSpRl) suffix. The following examples demonstrate how the number clitics are inflected for specificity when the modified noun is knowɪ (SpRl) or unknown (NSpRl) to the speaker. The demonstrative inflections are presented in section 3.5.

(95) a. in-te g-e (Non-specific head noun)
SiCl-NSpRl PlCl-NSpRl
'a/an' 'some'

b. n-a g-a (Specific head noun)
SiCl-SpRl PlCl-SpRl
'the one' 'the ones'

The examples of the number clitics seen in (96)-(99) are taken from the text in Appendix A, which is a prayer that was spoken at a public meeting.

(96) mɛnɛŋ-í-te í-ø tóyé-té **in-te** ɲúg-ey-ø
spirit-Sg-NSpRl exist.Ipf-3SiSu inside-Sb SiCl-NSpRl shut.Ipf-1PlO-3SiSu

sabb-í-té
head-Pl-Sb
'a spirit that exists inside, one that shuts us (our) heads'

(97) **g-e** g-áyo k-ɛ́sɛ́ɗ-o sinis-i-té
PlCl-NSpRl PlPsd-1PlxPsr 1Su-think.Ipf-PlxSu heart-Pl-Sb
'our things that we think (in our) hearts'

(98) **n-á** beré íh-í ŋa-kal-tá íh-í alé
SiCl-SpRl past exist.Ipf-2SiSu Dm-day-Nr exist.Ipf-2SiSu future

kíŋi íh-í án-i iɲe sɔŋ
far.off exist.Ipf-2SiSu is-2SiSu you only
'the one who exists(ed) in the past, exists today and will exist in the future is you only.'

(99) kó-hóɲ-é-o **g-á** gɛrs-á
1Su-come.Ipf-VI-PlxSu PlCl-SpRl bad-SpRl
'We bring specific bad things.'

The interrogative words and pronouns used in Tirmaga are seen in (100). They usually occur at the end of a question.

(100)

QUESTION WORDS		INTERROGATIVE PRONOUNS	
ɔŋ	'what'	noy	'who (Sg. Subject)'
ɔnɔ́ŋ	'by what means'	géɔ́ŋ	'who (Pl. Subjects)'
kéɔŋ	'for what (why)'	nɛ	'whom (Sg. Object)'
mináŋ	'when'	geɔ́ŋ	'whom (Pl. Objects)'
orí	'where '	inɔ́ŋ	'which one'
ɛnéŋ	'how'	giɔ́ŋ	'which ones'
ɛnɛnéŋ	'what type (color pattern)'	níni	'whose (Sg. Possessed)'
		gígi	'whose (Pl. Possessed)'

Some examples are as follows:

(101) ŋa-n-tá **á ɔŋ?**
Dm-SiCl-Nr is what
'What is this?'

(102) wók-an-ø **mináŋ?**
return.Ipf-MT-2SiSu when
'When will you return?'

(103) ŋa-gi-tá á g-á **gígi?**
Dm-PlCl-Nr is PlCl-SpRl whose.PlPsd
'Whose are these?'

3.5. Demonstratives

The demonstratives specify the distance of an object from the speaker and the number of the object. The two degrees of distance specified are near and far. There is no third degree of distance specified in Tirmaga as posited by Lucassen (1994:49) for Chai. The word **sur**, used by Lucassen in proposing a remote degree of distance, means 'all the way over there'. It is normally used when referring to very long distances (e.g., across a valley, on the other side of a mountain), and should not be considered part of the demonstrative system. As noted by Last (1995:42) for Chai, the demonstrative pronouns

may be seen as being composed of three different morphemes. The **ŋa-** prefix indicates the demonstrative function. The **n-** or **gi-** morphemes are the singular and plural number clitics as discussed in section 3.4. Again, these morphemes are not free standing words but must have some kind of inflection. The **/n/** and **/g/** are common indicators of singular and plural among Surmic languages as mentioned in section 3.3.1.3.1. The **-ta** and **-tonu** suffixes[7] indicate whether the noun is in close or far proximity in relation to the speaker. The demonstrative pronouns are as follows:

(104)	NEAR	FAR
	ŋa-n-tá	ŋa-n-tonú
	Dm-SiP-Nr	Dm-SiP-Fr
	'this'	'that'
	ŋa-gi-tá	ŋa-gi-tonú
	Dm-PlP-Nr	Dm-PlP-Fr
	'these'	'those'

The division of morphemes in (104) differs from the divisions made by Lucassen (1994:53) and Last (1995:42). They included [**-t/d**] as part of the noun rather than part of the suffix denoting proximity of the noun in relation to the speaker. The demonstrative pronouns are used more frequently in normal speech than the third person pronouns seen in table 3 of section 3.3.1.1. The plural demonstrative pronoun **ŋa-gi-onú** is often realized as **ŋagonú** in normal speech because of the vowel assimilation. The demonstratives combine with a noun by means of a circumfix as demonstrated in (105).

(105)	**ŋa-kɛ-tá**	**ŋa-kɛ-tonú**
	Dm-tree-Nr	Dm-tree-Fr
	'this tree'	'that tree'
	ŋa-kɛ-n-tá	**ŋa-kɛ-n-tonú**
	Dm-tree-Pl-Nr	Dm-tree-Pl-Fr
	'these trees'	'those trees'

[7] The suffixes are phonologically conditioned by the Plosive Assimilation and Voicing rules given in section 2.6.

3.6. Postpositions

Tirmaga does not adhere to the tendency for VO languages of having prepositions as stated by Greenberg's universals number 3 and 4 (1966:78-9). Postpositions are the norm for Tirmaga as well as the other Surmic languages. Examples of locative adpositions following the head noun are given in (106)-(109).

(106) sén-o k-ɛr-ø ór **toyé** ŋáa
say.PlAu 1Su-die.Pf-SiSuJ village inside here
'Do you all want me to die here in the village?'

(107) na méá nɔ í-ø túm-ɔ́ **túndo**
and now he exist.Ipf-3SiSu sky-Obl on.top.of
'Now he is in the sky.'

(108) dádáb í-ø alley-ɔ́ **bay**
book exist.Ipf-3SiSu chair-Obl under
'The book is under the chair.'

(109) í-ø gaŋgu **karanɛ**
exist.Ipf-3SiSu road downhill
'It's downhill from the road.'

The noun of the noun phrase preceding the postposition may or may not have an oblique case marker.

3.7. Adverbs

The three categories of adverbs found in Tirmaga are manner, emphatic and time adverbs. The manner and emphatic adverbs always follow the verb and are typically the last word of a clause or sentence. Examples of manner adverbs are as follows:

(110) ké-tɛ́-ø-wa **ɗúl**
1Su-exist.Pf-SiSu-1SiNa permanently
'I existed permanently (I just was).'

(111) k-ulal-t-ésé go **húŋ**
1Su-perform.ritual.PfJ-PlxSu-3Bn fire simply
'Let's simply perform the ritual on the fire for them.'

The following are examples of emphatic adverbs:

(112) zugo ɗág-ø-ú hózzo **góre**
people hit.Pf-SiSu-3SiNa hunger very
'People were very hungry (hunger hit the people).'

(113) á ŋa-n-tá **sóŋ**
is Dm-SiCl-Nr only
'This is the only one.'

One can distinguish between a manner adverb and an emphatic adverb by whether it occurs with the verb of existence or not. The manner adverbs may co-occur with the verb of existence as seen in examples (114) and (115); however, the emphatic adverbs cannot occur with the verb of existence as demonstrated by the ungrammatical examples in (116).

(114) í-ø **húŋ**
exist.Ipf-3SiSu simply
'He simply exists.' (a common expression)

(115) í-ø ŋaŋá **ɗúl**
exist.Ipf-3SiSu like.this completely
'It's like this for good.'

(116) a. *í-ø góre 'He really exists.'
b. *í-ø soŋ 'He only exists.'

The time adverbs do not have the same constituent order as the manner and emphatic adverbs. The time adverbs usually precede the verb and often occur at the beginning of a clause or sentence. This constituent order is seen in the following examples:

(117) aɲe g-á g-aɲú **bɔɔ** kú-ɗúm-an-é-í tɛr-í á
I PlCl-SpRl PlPsd-1SiPsr long.ago 1Su-get.Ipf-MT-VI-SiSu woman-Sg is

ŋa-gi-tá
Dm-PlCl-Nr
'My things (story) from long ago about how I got a wife are these.'

(118) **mɛ́á** aɲe g-á g-aɲú á ŋa-gi-tá
now I PlCl-SpRl PlPsd-1SiPsr is Dm-PlCl-Nr
'Now, my things (story) are these.'

(119) **tá** á ŋaŋá
always is like.this
'It's always like this.'

CHAPTER 4

VERB MORPHOLOGY

The Tirmaga verb has a quite complex morphological system. It has given and continues to give me my greatest challenge in analyzing and learning to speak the language. Lucassen (1994) and Last (1995) did some initial analysis of the Chai verb morphology, but they stressed the preliminary status of their research in this area. This chapter should be considered the second step toward a proper analysis of Tirmaga-Chai verb system. Much more analysis still needs to be done, especially in understanding the role that grammatical tone plays. At this stage, I am reasonably certain of the role tone has in some person, mode and aspectual distinctions. However, I am not sure how tone works together with the direct object and benefactive suffixes. One can see in my data where the tone on these suffixes is not always the same. Much of the data used for researching the verb morphology has been elicited data with some comparison to texts. For this reason, many verb paradigms will be presented here instead of text examples. Admittedly, more research needs to be done using texts in hopes of understanding some of the problems we are now confronting.

The first part of this chapter provides an overview of the distributional and structural properties of the Tirmaga verb. A brief outline of the aspectual system is also given here because the verb structure in imperfective aspect is different from perfective aspect. The adjectives are discussed in this chapter because most of them are a sub-type of verbs. Things such as participant reference, nominalization, and TAM marking are also presented. Both subject and object may be marked on the Tirmaga verb. Sometimes the meanings of participant reference suffixes are fused together with TAM markers. Tirmaga uses several valence adjusting devices on the verb. The valence increasing devices

presented are causative, benefactive and direction/goal suffixes. The two valence decreasing devices that will be discussed are reciprocal/progressive/habitual and passive.

4.1. Distributional and Structural Properties

As stated earlier, Tirmaga is a fairly polysynthetic language that is agglutinative in nature. For this reason, there is little or no verb phrase for the verb to act as the head of. The most indicative distributional property by which a verb may be identified is its function as the predicate of a clause. Examples (1)-(3) show verbs functioning as the predicate of subordinate and independent clauses. The subordinate clauses are in brackets and the verbs are bolded.

(1) RELATIVE CLAUSE
[ŋa-kɔrɔ-ɲ-tá bu **k-ɛŋɛrés-ø** kɔrɔ-té]
Dm-black-Nlr-Nr big 1Su-fear.Ipf-PlnSu black.Stv-Sb

ɓék-ø-ey-ó cɛ́ɛ́
guard.Pf-2SiSu-1PlO-PFPf well
'This big, black darkness that we fear, you guarded us (from it) well.'

(2) CONDITIONAL CLAUSE
[hinde **ɗák-éy-ɛ**-te] tɛr-í ŋé-ú kocí-ɔ
T/C hit.Ipf-1PlO-3PlSu-Sb woman-Sg run.Pf-3SiSuNa forest-Obl
'When they hit us, (my) wife ran into the forest.'

(3) INDEPENDENT CLAUSE
kú-dúrí-o ŋoónu na **k-úŋús-o-tɔ**
1Su-dance.Ipf-PlxSu there and 1Su-sleep.Ipf-PlxSu-PFI
'We dance over there and then sleep.'

The best way to identify a Tirmaga verb is by the structural properties it exhibits. A Tirmaga verb may be inflected for subject, object, aspect, mode, direction, benefactive, voice, and negation. The arrangement of the affixes differs between imperfective and perfective aspects. Figure 3 shows the typical order of verbal affixes that occur on imperfective verb roots along with an example verb.

Negative	Person of Subject Passive Voice	Root	Benefactive Motion Reciprocal/ Progressive/ Habitual Causative	Person /Number of Object	Person /Number of Subject	Negative Phrase Final Imperfective Phrase Final
ŋa-	kó-	**yók**	-ag	-oŋ	-ó	-o
Neg	1Su	tell	1/2Bn	2PlO	PlxSu	Neg

'We will not tell to you (Pl).'

Figure 3. Order of affixes on the verb root in imperfective aspect.

As seen in figure 3, the person of the subject is marked on the verb by a prefix and a suffix. The prefix only marks a first person subject. So, when it is not present, one knows the subject is in second or third person. The subject suffix indicates the person and number of the subject. In imperfective aspect, a singular subject suffix is realized as ø when another suffix (e.g., direct object, benefactive) precedes it in independent clauses; however, it is realized if the verb occurs in some types of subordinate clauses (e.g., relative, **hínaa**). If the subject is plural, the person/number suffix is not affected when following other suffixes. The benefactive (Bn) suffix is seen in the fourth column of figures 3 and figure 4. It raises the valence of a verb by allowing it to take an indirect object. This will be discussed further in section 4.4.2.

Figure 4 illustrates the order of the verbal affixes that may occur on perfective verb roots along with an example. With perfective aspect, the suffix indicating person of the subject is fused together with the affixes that indicate narrative, non-narrative, jussive, or subjunctive mood. If another participant reference suffix occurs on a perfective aspect verb (e.g., object suffix, benefactive), the suffix indicating the person of the subject does not occur. A singular subject is indicated by a ø morpheme as seen in figure 4. This is discussed further in sections 4.3 and 4.9.

Person of Subject	Root	Number of Subject	Benefactive Motion	Person/Number of Object Person of Subject/ Mood	Negative PF Perfective PF Jussive PF
k-	íɓ	-ø	-ág	-eɲ	-o
1Su	grab	SiSu	1/2Bn	1SiO	PfPF

'I got it for you.'

Figure 4. Order of affixes on the verb root in perfective aspect.

The Tirmaga verb system divides into the two main categories of imperfective and perfective. Comrie (1976:16-40) discusses the division of these two aspects defining imperfective aspect as an "ongoing process" where a situation is viewed from within and perfective aspect as a "complete" situation viewed from the outside having a beginning, middle and end. The understanding of perfective aspect should not be a "completed" situation but a "complete" situation seen as a whole. Indeed this is true of Tirmaga because some subcategories of the perfective aspect involve situations that have not yet been completed or even started. These subcategories are divided into realis and irrealis modes. Payne (1997:244) writes: "A prototypical realis mode strongly asserts that a specific event or state of affairs has actually happened or actually holds true." A prototypical irrealis mode, however, "makes no claims with respect to the actuality of the event or situation described." Figure 5 illustrates the division of the Tirmaga verb system.

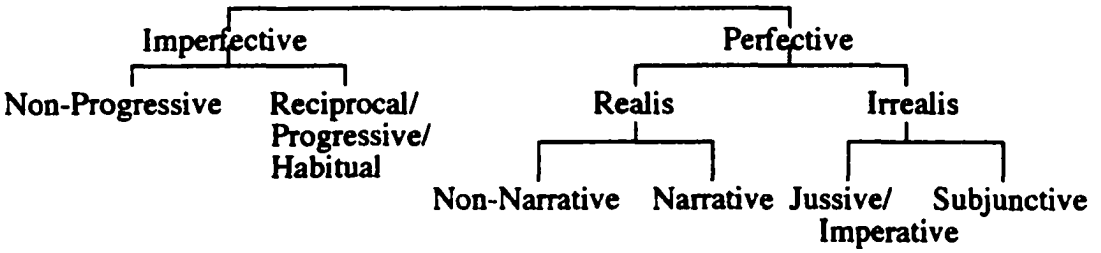

Figure 5. The Tirmaga verb system.

The verb roots are usually the same in the imperfective aspect as they are in the perfective aspect. However, about 20% of the 400+ verb roots collected thus far differ from imperfective to perfective aspect. These differences are also found in other Surmic languages. The changes may involve a vowel change, loss or change of final consonant, addition of a **tv-**[1] prefix, or suppletion. Some verb roots undergo two of the above changes (e.g., vowel change and addition of **tv-** prefix). Examples of verb roots that differ from imperfective to perfective aspects are as follows:

	IMPERFECTIVE	PERFECTIVE		
(4)	kɔɗ	tɔkɔn	'kill, stab'	(Addition of **tv-** Prefix)
	ɛŋɛrs	tɛŋɛr	'be afraid'	
	ɠoc	toɠoc	'to scoop'	
(5)	cig	cɛg	'laugh'	(Vowel Change)
	jor	jar	'flee'	
	guɲ	gɔɲ	'look'	
(6)	bans	ban	'stand'	(Final Consonant Change
	sen	sɛɓ	'say'	or Loss)
	dɛɛs	dɛɛb	'be happy'	
(7)	mat	ir	'drink'	(Suppletion)
	am	us	'eat'	
	uj	cɔ	'throw'	

[1] The small letter v is used throughout this thesis to represent a vowel instead of capital V when referring to affixes that copy the vowel of a verb root. It is used because tone needs to be marked on some vowel affixes. This should not be confusing to the reader since there is no [v] in Tirmaga.

A few verbs have different verb roots for singular and plural subjects. These singular and plural subject verb roots may also differ from imperfective to perfective aspect as seen in examples (8)-(10)

(8)	IMPERFECTIVE	PERFECTIVE		
	kɔ	ok	'go'	(Singular person)
	hɛ	ay	'go'	(Plural persons)
(9)	kun	ko	'come'	(Singular person)
	hoɲ	ho	'come'	(Plural persons)
(10)	ih	te	'exist'	(Singular person)
	ɛl	tel	'exist'	(Plural persons)

The following examples demonstrate these differences using the word 'go':

(11) kɔ́-**kɔ́**-ø tuɓúŋ-ɔ
1Su-go.Ipf-SiSu Tubung-Obl
'I go to Tubung.'

(12) bere k-**ók**-ø-ká tuɓúŋ-ɔ
long.ago 1Su-go.Pf-SiSu-1SiNNa Tubung-Obl
'Long ago I went to Tubung.'

(13) kɛ́-**hɛ́**-o tuɓúŋ-ɔ
1Su-go.Ipf-PlxSu Tubung-Obl
'We go to Tubung.'

(14) bare k-**áy**-t-ó tuɓúŋ-ɔ
yesterday 1Su-go.Pf-PlSu-xNNa Tubung-Obl
'We go to Tubung.'

Since some subject suffixes have a zero realization, it is possible for a verb root to stand alone with no affixes in a sentence if an argument follows the verb. This can only happen in the imperfective aspect when the subject of the verb is third person singular. In perfective aspect, this may only happen with the second person singular imperative. Examples are as follows:

(15) **kɔ́**-ø tuɓúŋ-ɔ
go.Ipf-3SiSu Tubung-Obl
'He is going to Tubung.'

(16) ná ɓɛ-á modós-a **ɓayak-ø** íɲó
and place-SpRl soft-SpRl eat.Pf-SiSu you.PVS
'You eat the soft part!' (command)

If no arguments follow the verb, a phrase final suffix is required for the imperfective, and a jussive phrase final suffix is required for the imperative as seen in the following examples in bold print:

(17) kɔ́-ø-**tɔ**
go.Ipf-3SiSu-PFI
'He goes.'

(18) ɓayak-ø-**a**
eat.Pf-SiSu-2SiPFJ
'Eat!'

4.2. Adjectives-Stative Verbs

Adjectives are a problematic category for most languages because there are no universal characteristics of a prototype adjective. In fact, some languages have no distinct category of adjectives (Payne 1997:63). Tirmaga is one of those languages with no distinct adjective category. However, most Tirmaga adjectives are a sub-class of verbs, which will be called stative verbs. These verbs are termed stative because they "express a state of affairs rather than action" and they "do not occur in a progressive form" (Crystal 1997:361). A sub-class of verbs that function as adjectives also occurs in Murle (Arensen 1982:88), Me'en (Will 1989:137), Chai (Last 1995:40), and Majang (Bender 1983:120). All of the Tirmaga stative verbs end with the suffix -í when used in a copular sentence and usually have a LH or LLH tone pattern.

(19)

á ɲagas-í	á mɔkɔɲ-í	á cal-í	á gɔlɔɲ-í	á ɗandal-í
is old-Adj	is short-Adj	is good-Adj	is red-Adj	is hard-Adj
'It's old.'	'It's short.'	'It's good.'	'It's red.'	'It's hard.'

Examples (20)-(22) illustrate some of these verbs functioning as the full predicate of a sentence without the copula **á**.

(20) wa ká-nágá-á-áú
recent.past 1Su-old.Pf-MT-SiSuM
'I became old (olded).'

(21) alé mɔ́kɔɲ-ø-tɔ
future short.Ipf-3SiSu-PFI
'In the future it will become short.'

(22) mumo gɔ́lɔ́ɲ-ø kéɔ́ŋ?
face red.Ipf-3SiSu why
'Why is your face (turning) red?'

When a stative verb serves an attributive function, the head and adjective operate in the same way as the head and a relative clause as discussed in section 5.1.1. Both the head noun and the stative verb are marked for specificity. If the modified noun is known to the speaker, the adjectival suffix -**í** changes to the specific suffix -**á**. If the modified noun is unknown to the speaker, the non-specific relator (NSpRl) suffix -**te** is used as seen in the following examples:

(23) a. tɔŋ-**á** ɲagas-**á** óg-ø-ú orí?
goat-SpRl old.Stv-SpRl go.Pf-SiSu-3SiNa where
'Where did the old goat go?'

b. tɔŋ-**té** ɲagas-**té** óg-ø-ú orí?
goat-NSpRl old.Stv-Sb go.Pf-SiSu-3SiNa where
'Where did a goat that is old go?'

(24) a. tɔŋ-**á** gɔlɔɲ-**á** óg-ø-ú orí?
goat-SpRl red.Stv-SpRl go.Pf-SiSu-3SiNa where
'Where did the red goat go?'

b. tɔŋ-**té** gɔlɔɲ-**té** óg-ø-ú orí?
goat-NSpRl red.Stv-Sb go.Pf-SiSu-3SiNa where
'Where did a goat that is red go?'

This same construction is used when a non-stative verb modifies a noun.

(25) a. tɔŋ-**á** ŋes-inɛn-**á** óg-ø-ú orí?
goat-SpRl run.Ipf-Nlr-SpRl go.Pf-SiSu-3SiNa where
'Where did the running goat go?'

b. tɔŋ-**té** ŋes-inɛn-**té** óg-ø-ú orí?
goat-NSpRl run.Ipf-Nlr-Sb go.Pf-SiSu-3SiNa where
'Where did a goat that is running go?'

When one noun modifies another noun, the modifying noun follows the head noun and usually agrees with it in number. The noun connector (NCn) word **kú** also occurs between the two nouns as seen in examples (26)-(28). Examples (26) and (27) are non-specific while (28) is specific.

(26) zug-te **kú** arájja-ø-té suricin ŋa-cík-ɛ-o
people-NSpRl NCn foreigner-Pl-Sb Suri.language Neg-hear.Ipf-3PlSu-NegPF
'People that are foreigners do not understand the Suri language.'

(27) zug-te **kú** arájja-ø **kú** sízzi-te wa áy-t-á
people-NSpRl NCn foreigner-Pl NCn three-Sb recent.past go.Pf-PlSu-3NNa

tubúŋ-ɔ
Tubung-Obl
'Three people that are foreigners just went to Tubung.'

(28) zugo **kú** arájja-ø **kú** sizzi wa áy-t-á tubúŋ-ɔ
people NCn foreigner-Pl NCn three recent.past go.Pf-PlSu-3NNa Tubung-Obl
'The three foreign people just went to Tubung.'

Most of the stative verbs are only used in third person imperfective form. Stative verbs are seldom used as predicates but one of the most common examples has taken on an idiomatic form as seen in example (30).

(29) á lalén-i
is cold-Adj
'It's cold.'

(30) alé hale **lalén-ø-tɔ**
after slowly cold.Ipf-3SiSu-PFI
'After a while he will get cold (better).' (when a person is sick)

There are two commonly used adjectives that cannot be considered stative verbs. These adjectives are **bu** 'big' and **cini** 'little'. Although **cini** looks like it should fit into the stative verb category because of the word final -í, both of these words exhibit noun characteristics in a noun phrase. They both agree in number with the modified noun unlike the stative verb adjectives. Examples (31) and (32) show these two adjectives in copular sentences. Examples (33)-(35) show how they function in noun phrases.

(31) a. bu 'big (Sg.)' ŋandá á bu 'This is big.'
b. bibi 'big (Pl.)' ŋagiyá á bibi 'These are big.'

(32) a. ciɲi 'little (Sg.)' ŋandá á ciɲi 'This is little.'
b. cici 'little (Pl.)' ŋagiyá á cici 'These are little.'

(33) na lɔ́m-ø ɲágári-**ŋa**-á **cici**-á[2] kó g-á **bibi**-á
and have.Ipf-3SiSu airplane-Pl-SpRl little.Pl-SpRl Crd PlCl-SpRl big.Pl-SpRl
'There are small airplanes and big airplanes.'

(34) ŋandá á ɲágári-**ø**-á **ciɲ**-á
This is airplane-Sg-SpRl little.Sg-SpRlThis is an airplane that is small.'

(35) ŋandá á ɲágári-**ø**-á **bu**-á
This is airplane-Sg-SpRl big.Sg-SpRl
'This is an airplane that is big.'

It is normal for the adjective to agree in number with the modified noun in other Surmic languages such as Me'en (Will 1989:137), Murle (Arensen 1982:101), and Majang (Unseth 1989:100). However, the adjectives in (31) and (32) are the only ones that show number agreement in Tirmaga. Lucassen (1994:46) and Last (1995:41) attempted to obtain Chai noun phrases with the adjective in a plural form but "in a few cases this was judged ungrammatical." I propose that Tirmaga shows no number agreement between the stative verb adjectives and the head noun, but there is number agreement when one noun modifies another.

4.3. Participant Reference

Tirmaga is a pronominal argument language because it has anaphoric participant reference marking on the verb. One verb can stand alone as a sentence because the subject is marked on the verb. The object may optionally be marked as well.

(36) ɗák-aŋ-ɛ-tɔ
hit.Ipf-1SiO-3PlSu-PFI
'They will hit me.'

---

[2] The specific relator suffix is phonologically conditioned by the vowel assimilation rule discussed in section 2.6.

Prefixes, suffixes, and tone are used to refer to the subject of a clause. In the imperfective, non-narrative and narrative perfective aspects, a **kv-** prefix is used to identify a first person subject as well as the corresponding subject suffixes. The **kv-** prefix copies the first vowel of the verb root if the verb root begins with a consonant. If the verb begins with a vowel, the prefix is simply **k-**. Examples of verbs with a first person subject are seen in (37) using the **kv-** prefix.

(37)	**ká**-ɗák-i-tɔ	**kí**-hín-no-tɔ	**k**-ár-ø-ra
	1Su-hit.Ipf-SiSu-PFI	1Su-want.Ipf-PlxSu-PFI	1Su-see.Pf-SiSu-1SiNa
	'I hit.'	'I want.'	'I saw.'

Tone and the **kv-** prefix are used to distinguish between first and third person subjects in the irrealis perfective aspects. In irrealis mode, a **kv-** prefix with low tone indicates a first person subject while a **kv́-** prefix with high tone indicates a third person subject. Consider the following examples:

(38)	áɲ **ka**-ɗak-ø bi	aɲ **ká**-ɗák-ø bi
	let 1Su-hit.Pf-SiSuJ cow	let 3SuJ-hit.Pf-SiSuJ cow
	'Let me hit the cow.'	'Let him hit the cow.'

The subject suffixes are different between imperfective and perfective aspect. Even within the perfective aspect, the suffixes indicating the person and number of the subject are different for the non-narrative, narrative and imperative/jussive moods. Some of the person suffixes cause the final consonant of the verb root to geminate. A similar process occurs in Didinga that De Jong (n.d.:5) refers to as a fortis element on the suffixes. Here we will refer to it as gemination represented by a [G] in the illustrations that follow.

The anaphoric suffixes that refer to the subject of a clause in imperfective aspect are given in table 6.

Table 6. Imperfective Subject Suffixes

1 Singular Subject	-i	1 Plural Inclusive Subject	-ø
		1 Plural Exclusive Subject	-[G]o
2 Singular Subject	-i	2 Plural Subject	-[G]o
3 Singular Subject	-ø	3 Plural Subject	-[G]ɛ

The **kv-** prefix mentioned earlier occurs with all first person subjects and helps distinguish, for example, between a first plural inclusive subject and a third person singular subject in the imperfective aspect. The examples in (39) show **hin** 'want' in imperfective aspect conjugated for all persons. The suffix **-tɔ** is a phrase final suffix, which will be presented shortly in section 4.6.

(39)

kí-hín-i-tɔ	'I want'	ki-hín-ø-tɔ	'We (incl.) want'
		kí-hín-**no**-tɔ	'We (excl.) want'
hín-i-tɔ	'You want'	hín-**no**-tɔ	'You (Pl) want'
hín-ø-tɔ	'He wants'	hín-**nɛ**-tɔ	'They want'

The imperfective subject suffix follows all other participant reference and valence adjusting suffixes as seen in figure 3. If an object suffix or valence adjusting suffix occurs on a verb stem, the singular person subject suffixes are usually deleted; however, the plural subject suffixes are still present.

(40)

SINGULAR SUBJECT SUFFIX	PLURAL SUBJECT SUFFIX
ká-ɗák-eɲ-ø-tɔ	ká-ɗák-eɲ-**o**-tɔ
1Su-hit.Ipf-2SiO-SiSu-PFI	1Su-hit.Ipf-2SiO-PlxSu-PFI
'I will hit you.'	'We will hit you.'
ɗák-aɲ-ø-tɔ	ɗák-aɲ-ɛ-tɔ
hit.Ipf-1SiO-2SiSu-PFI	hit.Ipf-1SiO-3PlSu-PFI
'You will hit me.'	'They will hit me.'

The singular person subject suffixes are not deleted if the verb occurs in a subordinate clause beginning with the conjunction **híná** or a relative clause. The conjunction **híná** is used to indicate an action that happened long ago and always correlates with imperfective aspect. Example (41) is a **híná** clause and the singular subject suffix is

retained after a valence adjusting suffix on the verb. However, the subject suffix does not occur on the independent clause verb **k-ubur-aɲ** following the direct object suffix.

(41) **híná** kú-dúm-án-í tɛr-i kú-gún-é-ø na kóó
when 1Su-get.Ipf-MT-SiSu woman-Sg 1Su-come.Ipf-VI-SiSu and then

k-ubur-aɲ-ø ʃán-ɔ́
1Su-spit.Ipf-1SiO-SiSu evening-Obl
'When I got my wife, I brought her so that I could be (ritually) spit upon in the evening.'

The perfective aspect divides into realis and irrealis modes. The realis mode further divides into two subcategories that will be called non-narrative and narrative. One reason for this division is because the subject suffixes are different between the two subcategories. The non-narrative person subject suffixes usually occur with realis perfective aspect verbs that are used in non-narrative texts. The narrative person subject suffixes usually occur on realis perfective aspect verbs found in narrative texts. Although the person subject suffixes of the two subcategories are different, one common feature between the two is that the number of the subject is indicated by the same suffixes. A singular realis subject is indicated by a ø morpheme, and many of the plural realis subjects by a -**t**.[3] Although the number of the subject is indicated by a separate suffix most of the time, the person suffixes also indicate the number of the subject as well. The non-narrative subject suffixes are given in table 7.

Table 7. Non-Narrative Subject Suffixes

First Singular	-[G]á	First Plural Inclusive	-á
		First Plural Exclusive	-ó
Second Singular	-ú	Second Plural	-ó
Third Singular	-[G]á	Third Plural	-á

[3] The plural subject suffixes are phonologically conditioned as expressed by the plosive voicing and assimilation rules discussed in section 2.6.

An example of the verb **tɛhɛn** 'want' in non-narrative perfective aspect is seen in (42).

(42)

ké-téhén-ø-**na**	'I wanted'	ké-téhén-t-**á**	'We (incl) wanted'
		ké-téhén-t-**ó**	'We (excl) wanted'
téhén-ø-**ú**	'You wanted'	téhén-t-**ó**	'You (pl) wanted'
téhén-ø-**ná**	'He wanted'	téhén-t-**á**	'They wanted'

When the direction/goal suffixes **-a** and **-ɛ** occur in perfective aspect, they occur with the non-narrative mood. In this case there is no geminate feature on the singular subject suffixes and the first and second singular suffixes are different. They are realized as **-ú** rather than the suffixes seen in table 7. Examples of the motion suffixes in conjunction with non-narrative perfective aspect are seen in (43) and (44) with the verb **ɔɗ** 'unroll'.

(43) MOTION TOWARD THE SCENE

k-ɔ́ɗ-á-**ú**	haya	'I unrolled the sleeping mat.'
ɔ́ɗ-á-**ú**	haya	'You unrolled the sleeping mat.'
ɔ́ɗ-á-**á**	haya	'He unrolled the sleeping mat.'
k-ɔ́ɗ-t-**a**-á	haya	'We (incl.) unrolled the sleeping mat.'
k-ɔ́ɗ-t-á-**ó**	haya	'We (excl.) unrolled the sleeping mat.'
ɔ́ɗ-t-á-**ó**	haya	'You (pl.) unrolled the sleeping mat.'
ɔ́ɗ-t-á-**á**	haya	'They unrolled the sleeping mat.'

(44) MOTION AWAY FROM THE SCENE

k-ɔ́ɗ-é-**ú**	rɛ	'I unrolled (my) body.' (stretched out)
ɔ́ɗ-é-**ú**	rɛ	'You unrolled (your) body.'
ɔ́ɗ-é-**á**	rɛ	'He unrolled (his) body.'
k-ɔ́ɗ-t-**ɛ**-á	rɛhí	'We (incl.) unrolled (our) bodies.'
k-ɔ́ɗ-t-é-**ó**	rɛhí	'We (excl.) unrolled (our) bodies.'
ɔ́ɗ-t-é-**ó**	rɛhí	'You (pl.) unrolled (your) bodies.'
ɔ́ɗ-t-é-**á**	rɛhí	'They unrolled (their) bodies.'

A major distinction made between the narrative and non-narrative perfective person subject suffixes is tone. Most of the narrative person subject suffixes have low tone but all of the non-narrative subject suffixes have high tone. The first person plural inclusive and third person plural suffixes of the narrative subject suffixes copy the vowel of the preceding verb root indicated by **v** in table 8 and the tables that follow. The subject suffixes for narrative perfective aspect are as follows:

Table 8. Narrative Perfective Subject Suffixes

First Singular	-[G]a	First Plural Inclusive	-vyɛ
		First Plural Exclusive	-o
Second Singular	-u	Second Plural	-o
Third Singular	-ú	Third Plural	-vyɛ

Example (45) shows the verb **tɛhɛn** 'want' as used in the narrative perfective aspect.

(45)	ké-téhén-ø-**na**	'I wanted'	ké-téhén-**ɛyɛ**	'We (incl) wanted'
			ké-téhén-t-**o**	'We (excl) wanted'
	téhén-ø-**u**	'You wanted'	téhén-t-**o**	'You (pl) wanted'
	téhén-ø-**ú**	'He wanted'	téhén-**ɛyɛ**	'They wanted'

As mentioned earlier, tone and the **kv-** prefix are both used to distinguish between first and third person subjects in the irrealis perfectives. All of the irrealis perfectives have low tone **kv-** prefixes for first person subjects and high tone **kv́-** prefixes on third person subjects in addition to their appropriate suffixes. Examples of the subject prefixes with their corresponding tone will be given shortly.

There are no singular subject suffixes for the jussive and subjunctive moods. The main feature that determines person is the low or high tone on the **kv-** prefix. The person and number of the subject are fused together with the phrase final jussive suffix as discussed in section 4.6, but this does not happen with the subjunctive phrase final suffix. Most of the plural subject suffixes copy the final vowel of the verb root if it ends with a consonant. No plural subject suffix occurs if the verb root ends in a vowel but the tone of the suffix attaches to the last vowel of the verb root. The subject suffixes for the jussive and subjunctive moods are as follows:

Table 9. Jussive and Subjunctive Subject Suffixes

First Singular	-ø	First Plural Inclusive	-v́
		First Plural Exclusive	-tó[4]
Second Singular	-ø	Second Plural	-v́
Third Singular	-ø	Third Plural	-v

Example (46) illustrates how the **kv-** prefix, tone and suffixes indicate the subject for the jussive and subjunctive moods. Again, the low tone **kv-** prefix indicates a first person subject and the high tone **kv́-** prefix indicates a third person subject.

(46) a. JUSSIVE MOOD

áɲ[5] **ka**-ɗak-**ø** kono		'Let me hit the snake.'
áɲ ɗak-**ø** kono		'Let you hit the snake'
aɲ **ká**-ɗák-**ø** kono		'Let him hit the snake'
áɲ **ka**-ɗak-**á** kono		'Let us (incl) hit the snake'
áɲ **ka**-ɗak-**tó** kono		'Let us (excl) hit the snake'
áɲ ɗak-**á** kono		'Let you (pl) hit the snake'
aɲ **ká**-ɗák-**a** kono		'Let them hit the snake'

b. SUBJUNCTIVE MOOD

kééní **ka**-ɗak-**ø** kono		'I want to hit the snake.'
séni ɗak-**ø** kono		'You want to hit the snake'
sé **ká**-ɗák-**ø** kono		'He wants to hit the snake'
kéé **ka**-ɗak-**á** kono		'We (incl) want to hit the snake'
kééno **ka**-ɗak-**tó** kono		'We (excl) want to hit the snake'
séno ɗak-**á** kono		'You (pl) want to hit the snake'
se **ká**-ɗák-**a** kono		'They want to hit the snake'

The person subject suffixes in the perfective aspect are also deleted when another participant reference suffix occurs. The number suffixes **-ø** and **-t** are retained as seen in the following examples:

[4] The first plural exclusive subject suffix is phonologically conditioned by the plosive voicing and assimilation rules in section 2.6.

[5] The tone on the word **aɲ** dissimilates from the tone of the person prefix.

(47)

SINGULAR SUBJECT SUFFIX	PLURAL SUBJECT SUFFIX
wa ká-ɗák-ø-éɲ-ó	wa ká-ɗák-t-éɲ-ó
recent.past 1Su-hit.Pf-SiSu-2SiO-PFPf	recent.past 1Su-hit.Ipf-PlSu-2SiO-PFPf
'I just hit you.'	'We just hit you.'
wa ɗák-ø-aɲ-ó	wa ɗák-t-aɲ-ó
recent.past hit.Pf-2SiSu-1SiO-PFPf	recent.past hit.Pf-PlSu-PFPf
'You just hit me.'	'They just hit me.'

Any confusion as to who the subject is would be taken care of within the context of the sentence. In other words, if the object occurs on the verb, then the subject argument will probably be stated in the sentence or is already known. In (48), the subject **tɛrú** 'women' is stated in the first sentence, so there is no confusion as to who is doing the hitting in the second sentence.

(48) **tɛr-ú** hó-t-á-ní ná kóó **ɗák-t-ey-o**
woman-Pl come.Pf-PlSu-3PlNNa-! and then hit.Pf-PlSu-1PlO-PFPf
'The women came! And then they hit us.'

The anaphoric suffixes that indicate the object of a clause are the same in imperfective and perfective aspects. No suffixes occur for third person singular and plural objects.

Table 10. Object Suffixes[6]

1 Singular Object	-aɲ	1 Plural Object	-ey
2 Singular Object	-eɲ	2 Plural Object	-oŋ
3 Singular Object	-ø	3 Plural Object	-ø

Some examples of the object suffixes in imperfective and perfective aspects are as follows:

[6] Vowel assimilation and dissimilation rules also apply to the direct object suffixes as discussed in section 2.6.

(49) IMPERFECTIVE ASPECT

ógól-**aɲ**-ɛ-tɔ	'They beg me.'
k-ogol-**éɲ**-ø-tɔ	'We(incl.) beg you.'
k-ógól-**ø**-i-tɔ	'I beg him.'
ógól-**ey**-o-tɔ	'You (pl) beg us.'
k-ógól-**oŋ**-o-tɔ	'We beg you (pl).'
ógól-**ø**-o-tɔ	'You (pl) beg them.'

(50) PERFECTIVE ASPECT

wa íɓ-**aɲ**-ó	'He just grabbed me.'
wa k-íɓ-**éɲ**-ó	'I just grabbed you.'
wa k-íɓ-**ø**-ɓó	'I just grabbed him.'
wa íɓ-t-**ey**-ó	'They just grabbed us.'
wa k-íɓ-t-**óŋ**-ó	'We just grabbed you(pl).'
wa k-íɓ-t-**ø**-ó	'We just grabbed them.'

4.4. Valence Increasing Devices

Valence adjusting devices comprise the most common category of verbal morphology (Payne 1997:172). The valence of a verb can be either semantic, grammatical, or both. In this section we will be dealing with the grammatical valence of Tirmaga verbs. Grammatical valence is concerned with how many arguments a verb can take based on its morphology. Some valence adjusters increase the number of arguments while others decrease the number of arguments a verb may take. Four valence increasing devices found in Tirmaga verbs are causative, benefactive, direction/goal, and an -ɛ suffix.

4.4.1. Causative

The causative operation is approached here from a diachronic and a synchronic perspective. From an archaic perspective, some of the Surmic languages show signs of an historic ɪ/i- causative that is no longer productive in the languages (Unseth 1997:41-48). This is related to the Proto-Nilotic ɪ/i- causative prefix as described by Dimmendaal (1983 and 1988). In Unseth's (1997) article, examples of verbs with an ɪ/i- prefix are given from Me'en, Murle and Majang along with some possible evidence from Mursi and Koegu. There have been ninety-one vowel initial bi-syllabic verbs found in Tirmaga thus far. Of these

ninty-one verbs, thirty-three begin with an i-. The figures in (51) show that i- initial verbs are the most commonly found vowel initial bi-syllabic verbs in Tirmaga.

(51)

VERB INITIAL VOWEL	NUMBER OF VERBS
i-	33
u-	23
ɛ-	15
a-	6
e-	5
ɔ-	5
o-	4

A vowel initial verb usually begins with the same vowel as the second syllable in the verb.

(52) ulub 'hide' ɛbɛg 'blow' aɲa 'be afraid' eles 'lay out'
ugun 'push' icir 'yell' ɔgɔr 'fry' ogor 'steal'

However, the Tirmaga verbs that begin with i- do not usually have an i in the second syllable of the verb root. This provides further evidence that ɪ/i- was likely a productive Surmic causative in the past. The figures in (53) show the tendency of other vowel initial bi-syllabic verbs to copy the vowel of the second syllable in comparison with i- initial bi-syllabic verbs.

(53)

VERB INITIAL VOWEL	NUMBER OF VERBS	DIFFERENT FROM SECOND SYLLABLE VOWEL
i-	33	22
u-	23	2
ɛ-	15	0
a-	6	5
e-	5	1
ɔ-	5	0
o-	4	1

Example (54) is the only present day Tirmaga verb that may clearly show that the i- prefix alone was an historical causative.

(54) lalɛn 'be cold; become healthy, better' ilal 'comfort'

There is also a productive present day causative that may be traced to the archaic Surmic causative. The present day Tirmaga causative involves a verbal prefix and a suffix.

The causative prefix either reduplicates the [-low] vowel of the verb root or is an **i-** before a verb root with a [+low] vowel. The causative suffix **-ísí** also immediately follows the verb root. Therefore, the present day causative can be formalized as **v + verb root + ísí**. Koegu, another Southeast Surmic language, has the present day causative **-iʃe**, which is also a verbal suffix (Hieda 1998:365). Examples of the Tirmaga causative are as follows:

(55) a. bare ɓón-ø-á
yesterday leave.Pf-SiSu-3SiNNa
'He left yesterday.'

b. bare ó-ɓón-ísí-ø-áɲ-o
yesterday Cau-leave.Pf-Cau-SiSu-1SiO-PFPf
'He made me leave yesterday.'

(56) a. tɔ́k-ø beyo
herd.Ipf-3SiSu cows
'He is herding cows.'

b. ɔ́-tɔ́g-ísí-ø zugo beyo
Cau-herd.Ipf-Cau-3SiSu people cows
'He is making them herd the cows.' (getting a divorce)

(57) na méárɛ éré-ísí-éy-o-tɔ́ ɲa-hɔ́l-din-tá
and immediately ford.Ipf-Cau-1PlO-2PlSu-PFI Dm-white.Stv-Nlr-Nr

ɲaní tɔ́r-ɛ-í oy-ɲá-á g-áyo túndo-té
not.yet/still add.Ipf-VI-2SiSu rainy.season-Pl-SpRl PlPsd-1PlxPsr on.top.of-Sb
'And now you cause us to ford (cross) this day that you still add to our years.'

(58) a. alé bás-ø-tɔ
future heal.Ipf-3SiSu-PFI
'After a while he will be healed.'

b. Tumu í-bá-ísí-ø zugo
God Cau-heal.Ipf-Cau-3SiSu people
'God cures people.'

Examples (55), (56), and (58) demonstrate the reduplication of the verb root vowel or prefixation of **i-** before a [+low] vowel. There is no reduplication of the verb root vowel in example (57) because the verb root **eres** already has an initial vowel. Examples (57) and

(58) show the deletion of a verb final /**s**/ when the causative suffix is used. The verb roots for these examples are **eres** and **bas**.

In all of these examples, the valence of the verb increases. Examples (55) and (58) show a valence increase from intransitive to transitive. Examples (56) and (57) are increased from transitive to ditransitive. It is difficult to say how productive this causative is in the language. It is not found many times in my Tirmaga texts. Further research needs to be done to determine if it can be used with any verb.

4.4.2. Benefactive

Another valence increasing device found in Tirmaga is the benefactive suffix. The benefactive suffix is most commonly used to raise the valence of a transitive verb to ditransitive showing whom the action is being done for. A benefactive suffix also occurs in Me'en (Will 1989:142), and Didinga (Odden 1983:165). The benefactive suffix is essentially the same in both imperfective and perfective aspects. However, it seems to have a feature in the imperfective aspect that causes a preceding voiceless plosive consonant to be realized as voiceless rather than voiced in the intervocalic environment. We will refer to this feature as gemination although it does not actually cause the consonant to lengthen. When the benefactive suffix occurs on a perfective aspect verb, it does not have this geminate feature. In example (66) the verb final consonant of the verb **yok** 'tell' in imperfective aspect is realized as a [**k**]. However, in example (61) the /**k**/ is realized as a [**ɣ**] with the perfective aspect. Odden (1983:165) observed that the Didinga benefactive suffix also affects the verb root. A vowel assimilation rule must be applied to the Tirmaga benefactive suffix for first and second persons as discussed in section 2.6. It is also important to note that the tone on the benefactive suffix varies so there is no representation of tone on the suffixes in (59).

(59)

	IMPERFECTIVE BENEFACTIVE	PERFECTIVE BENEFACTIVE
1st person	-[G]ag	-ag
2nd person	-[G]ag	-ag
3rd person	-[G]ɛsɛ	-ɛsɛ

Some examples of the benefactive suffix are as follows:

(60) kɔm-a kɔ-gɔɗ-**ág**-eɲ-ø iɲe
knee-Pl 1Su-stab.Ipf-1/2Bn-2SiO-PlnSu you
'We bow to you.' (stab our knees to you)

(61) wo-ø yok-ø-**ág**-ey g-e
come.Pf-2SiSuJ tell.Pf-2SiSuJ-1/2Bn-1PlO PlCl-NSpRl

hín-**ag**-éy-ø-té
want.Ipf-1/2Bn-1PlO-2SiSu-Sb
'Come tell us things that you want for us.'

(62) ág-o tu-á gɛlém-i k-ín-t-**ɛsɛ** bi
go.Pf-3PlSuNa cattle.camp-SpRl Gelem-Gn 3Su-kill.Pf-PlSu-3Bn cow
'They went to Gelemi's cattle camp so that he(respect) might kill a cow for them.'

(63) hinde sé-ø ŋaŋá-te á lɔg-á g-ɛɲé.
when/if say.Ipf-3SiSu like.this-Sb is word-SpRl PlPsd-3SiPsr

iɲe ogol-**ésé**-ø tumu sɔ́ŋ.
you beg.Ipf-3Bn-3SiSu God only
'If he says like this, it's his problem. You just pray (beg God) for him.'

Examples (60)-(63) demonstrate the valence of a transitive verb being raised to a ditransitive verb. It is also possible for the valence of an intransitive verb to be raised although no examples are given. The valence of semantically ditransitive verbs may also be raised.

(64) k-áj-eɲ-ø tílá (Valence=3)
1Su-give.Ipf-2SiO-SiSu food
'I will give you some food.'

(65) k-áj-**ag**-eɲ-ø Bargólay tílá (Valence=4)
1Su-give.Ipf-1/2Bn-2SiO-SiSu Bargolay food
'I will give Bargola some food for you.'

The use of the benefactive suffix sometimes changes the meaning of a verb in ways other than one might normally think of as benefactive. In example (66a), the meaning of the

verb is 'mimic', but in (66b) it is 'tell'. The meaning of (67a) is changed from 'point' to 'show' in (67b).

(66) a. kó-yók-eɲ-ø-tɔ
1Su-tell.Ipf-2SiO-SiSu-PFI
'I am making fun (mimicing) of you.'

b. kó-yók-**ág**-eɲ-ø lɔgɔ
1Su-tell.Ipf-1/2Bn-2SiO-SiSu word
'I am telling you the situation (word).'

(67) a. kɔ́-ɗɔ́l-eɲ-ø-tɔ
1Su-show.Ipf-2SiO-SiSu-PFI
'I am pointing at you.'

b. kɔ́-ɗɔ́l-**ág**-eɲ-ø sar-í
1Su-show.Ipf-1/2Bn-2SiO-SiSu fence-Sg
'I will show you the fence.'

4.4.3. Direction/Goal

Although most of the time it does not seem to act as a valence raising device, the direction/goal suffix is included in this section because in some cases it allows a location to become a direct object. The direction/goal suffix is most obviously seen with intransitive motion verbs like 'fall' as in the following examples:

(68) kɔ́-ŋɔ́-**an**-ø-tɔ (Spoken by someone who might fall while walking)
1Su-fall.Ipf-MT-SiSu-PFI
'I will fall.'

(69) kɔ́-ŋɔ́-**sɛn**-**ø**-tɔ (Spoken by someone standing on a cliff)
1Su-fall.Ipf-MA-SiSu-PFI
'I will fall (down there)'

The suffix indicating motion away from the scene inserts an **/s/** when preceded by a vowel final verb root. The directional suffixes are different for imperfective aspect than perfective aspect as seen in (70). The suffix **-ana** is used for third person singular and first person plural exclusive subjects in imperfective aspect.

(70)

	MOTION TOWARD SCENE	MOTION AWAY FROM SCENE
Imperfective	-an/-ana[7]	-ɛn
Perfective	-a	-ɛ

This suffix does not occur with all semantic motion verbs. For instance, the directional suffix does not occur on verbs like 'come' and 'go', but it is found with verbs such as 'return'. Most of the time the verbs are only marked when the direction of the action is toward the scene. Only a few verbs are explicity marked with the **-ɛn/-ɛ** suffix as seen in (70). If there is no directional suffix on the verb, the direction is assumed to be away from the scene of the action, as demonstrated by the following examples:

(71) rogono kó-wók-**an**-ø-tɔ
tomorrow 1Su-return.Ipf-MT-SiSu-PFI
'Tomorrow I will return (to here).'

(72) rogono kó-wók-**ø**-i-tɔ
tomorrow 1Su-return.Ipf-MA-SiSu-PFI
'Tomorrow I will return (to there).'

(73) rogono ká-yák-**an**-ø ɓéy
tomorrow 1Su-return.Ipf-MT-SiSu ax
'Tomorrow I will return the ax (to this place).'

(74) rogono ká-yák-**ø**-i ɓéy
tomorrow 1Su-return.Ipf-MA-SiSu ax
'Tomorrow I will return the ax (to a place where I am not standing).'

While (71)-(74) are elicited, examples (75) and (76) are taken from a text. The following examples may indicate that the location has been changed to a direct object when the direction suffix occurs on the verb. In (75), the direction suffix occurs on the verb and no locative marker is found on the location. However, (76) has no direction suffix on the verb, and the oblique case marker, which may function as a locative, occurs on the location.

(75) ké-zég-ø-**á-ú** dír cɔɔ dámbur
1Su-move.Pf-SiSu-MT-1SiM long.time even Dambur
I moved for a long time all the way to Dambur.'

[7] The suffix that indicates motion toward the scene of the action is phonologically conditioned by the Vowel Assimilation Rule in section 2.6.

(76) kí-zíg-ø-o cucugán-ɔ kó cogoɗóm-ɔ
1Su-move.Ipf-MA-PlxSu Cucugan-Obl Crd Cogodom-Obl
'We move to Cucugan and Cogodom.'

This same **-an** suffix, or the lack thereof, is used with other transitive verbs that indicate the goal of an action. In example (77), the direction/goal suffix determines whether the subject is buying or selling something.

(77) a. ká-tál-**an**-ø tɔŋ-ɔ
1Su-transact.Ipf-MT-SiSu goat-Sg
'I buy a goat.'

b. ká-tál-ø-i tɔŋ-ɔ
1Su-transact.Ipf-MA-SiSu goat-Sg
'I sell a goat.'

Most other transitive verbs are not so clearly understood for a non-native speaker as (77). Consider the following:

(78) ógór-ø-á-ú bi
steal.Pf-SiSu-MT-2SiM cow
'You stole a cow (and have it with you).'

(79) ógór-ø-ø-u bi
steal.Pf-SiSu-MA-2SiNa cow
'You stole a cow (but don't have it with you).'

(80) híná kú-ɗúm-án-í tɛr-í kú-gún-é-ø na kóó
when 1Su-get.Ipf-MT-SiSu woman-Sg 1Su-come.Ipf-VI-SiSu and then

k-ubur-aɲ-ø ʃán-ɔ́
1Su-spit.Ipf-1SiO-SiSu evening-Obl
'When I got my wife, I brought her so that I could be (ritually) spit upon in the evening.'

(81) kú-ɗúm-ø-i kɛ-nɔ ná kɔ-cɔg-é-ø go
1Su-get.Ipf-MA-SiSu tree-Pl and 1Su-burn.Pf-VI-SiSuJ fire
'I am getting wood so that I may burn it with fire.'

In example (81), the wood is being taken from the scene and piled up in another location. Examples (82) and (83) are found in the text in Appendix A, and demonstrate how the direction/goal suffix functions with ditransitive verbs. The object occurs before the

verb, probably to bring it into focus; therefore, the goal of the action is marked. Since this is a ditransitive verb, the goal occurs in the object slot.

(82) karí yel-á bay kó túm-ɔ́ ke-teris-**an**-t-éɲ iɲe kali
together love.Ipf-Nlr under Crd sky-Obl 1Su-sing[8].Pf-MT-PlxSuJ-2SiO you day

kali
day
'May we sing love to you (thank you) both down (on earth) and in the sky always.'

(83) kumúlo k-áj-**an**-eɲ-ø iɲe ɓɛ-á béré
all 1Su-give.Ipf-MT-2SiO-SiSu you place-SpRl long.ago

rɛs-ɛ-í kɛ-á ke-é-ø-ø maskél[9]
die.Ipf-VI-2SiSu tree-SpRl Psv-say.Pf-SiSu-3SiO cross
'All we give to you at the place where you died long ago, the tree called maskel (cross).'

The direction/goal suffix definitely needs more investigation but hopefully the above insights will help narrow the scope of possibilities.

4.4.4. -ɛ Suffix

The suffix -**ɛ** increases the valency of a verb from intransitive to transitive. I am not sure if it should be considered a type of causative or what, so I have simply termed it a valency increaser (VI). It is most easily recognized with the verbs **kɔ** 'go' and **kun** 'come' changing the meaning to 'take' and 'bring'.

(84) a. kɔ́-kɔ́-ø tuɓúŋ-ɔ
1Su-go.Ipf-SiSu Tubung-Obl
'I go to Tubung.'

b. kɔ́-kɔ́-**ɛ́**-ø bi tuɓúŋ-ɔ
1Su-go.Ipf-VI-SiSu cow Tubung-Obl
'I take the cow to Tubung.'

(85) a. kú-kún-i tuɓúŋ-ɔ
1Su-come.Ipf-SiSu Tubung-Obl
'I come from Tubung.'

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[8] This verb is used in reference to the Tirmaga style of music where one person sings a line of the song followed by everyone else answering him/her with another line of the song.

[9] This is a borrowed word from Amharic

b. kú-kún-ɛ-ø bi tuɓúŋ-ɔ
1Su-come.Ipf-VI-SiSu cow Tubung-Obl
'I bring the cow from Tubung.'

This same suffix is also used on the verb of a relative clause when a semantic oblique or possessive construction is relativized. This is discussed further in section 5.1.1 and examples are also given there.

4.5. Valence Decreasing Devices

Valence decreasing operations reduce the number of arguments that can occur in a given sentence by the addition of a verbal affix. For example, a transitive verb, which normally has two arguments, may be reduced to an intransitive verb with a subject argument only. The valence decreasing devices found in Tirmaga include reciprocal/progressive/habitual and passive affixes.

4.5.1. Reciprocal/Progressive/Habitual

The same suffixes are used to express reciprocity, progressiveness, and habitual actions in Tirmaga. This has also been observed in the closely related Me'en language (Will 1998:455). These suffixes occur immediately after the verb root and decrease the valency of the verb. The reciprocal/progressive/habitual (RPH) suffixes only occur in imperfective aspect. An epenthetic -i- is inserted between a verb root with a final [-son] consonant and the suffix. The reciprocal/progressive/habitual suffixes are as follows:

(86) -nɛn '1st and 2nd persons'
-nɛ '3rd persons and 1st person plural inclusive'

No distinction is made between the singular and plural persons because the subject suffix immediately follows the RPH suffix as seen in the following progressive examples:

(87) kɔ́-kɔ́h-**inén**-ø-tɔ
1Su-weed.Ipf-1/2RPH-SiSu-PFI
'I am weeding.'

kɔ-kɔh-**ínɛ**-ø-tɔ
1Su-weed.Ipf-3/1RPH-PlnSu-PFI
'We(incl.) are weeding.'

kɔ́-kɔ́h-**ínɛn**-ó-tɔ
1Su-weed.Ipf-1/2RPH-PlxSu-PFI
'We(excl.) are weeding.'

kɔ́h-**inén**-ø-tɔ
weed.Ipf-1/2RPH-2SiSu-PFI
'You are weeding.'

kɔ́h-**ínɛn**-ó-tɔ
weed.Ipf-1/2RPH-2PlSu-PFI
'You (Pl) are weeding.'

kɔ́h-**ínɛ**-ø-tɔ
weed.Ipf-3/1RPH-3SiSu-PFI
'He is weeding.'

kɔ́h-**ínɛ**-ɛ-tɔ
weed.Ipf-3/1RPH-3PlSu-PFI
'They are weeding.'

Examples of how the progressive suffix decreases the valency of a verb are seen in (88) and (89). Example (90) is ungrammatical.

(88) kɔ́-kɔ́h-i gu-ø (Valence=2)
1Su-weed.Ipf-SiSu garden-Sg
'I weed a garden.'

(89) kɔ́-kɔ́h-inén-ø-tɔ (Valence=1)
1Su-weed.Ipf-1/2RPH-SiSu-PFI
'I am weeding.'

(90) *kɔ́-kɔ́h-inén-ø gu-ø
1Su-weed.Ipf-1/2RPH-SiSu garden-Sg
'I am weeding a garden.'

For a Tirmaga speaker (89) could also have the habitual meaning of 'I am always weeding'. Habitual action can also be expressed by the use of adverbs.

(91) kɔ́-kɔ́h-inén-ø kali kali
1Su-weed.Ipf-1/2RPH-SiSu day day
'I am weeding every day (always).'

The RPH suffix is used in referring to actions still in progress or completed actions that happened long ago as seen in examples (92) and (93). Again, the understanding of these sentences could also be habitual.

(92) bargólay mád-**ínɛ**-ø ŋáa óy-ŋá sizzi (Progressive Action)
Bargolay teach.Ipf-RPH-3SiSu here year-Pl three
'Bargolay is teaching here for three years.'

(93) kɔ́-kɔ́h-ínɛn-ø idí-gie ŋoónu dír na (Completed Action)
1Su-weed.Ipf-1/2RPH-SiSu Idi-Obl there long.time and

ká-tál-an-ø tɔŋɔ
1Su-transact.Ipf-MT-SiSu goat
'I am weeding at Idi for a long time and then I buy a goat.'

Since the idea of reciprocity involves more than one participant, the progressive suffix of the plural persons is used for the reciprocal suffix.

(94) ka-ɗak-ínɛ-ø-tɔ 'We (incl) are hitting each other.'
ká-ɗák-ínɛn-ó-tɔ 'We (excl) are hitting each other.'
ɗák-ínɛn-ó-tɔ 'You (Pl) are hitting each other.'
ɗák-ínɛ-ɛ-tɔ 'They are hitting each other.'

4.5.2. Passive

Another valence decreasing device used in Tirmaga is the passive construction. A passive construction is marked by a low tone **kv-** prefix on the verb, and omission of the agent. For this reason the Tirmaga passive is considered to be an "agentless passive". Tenet, a Southwest Surmic language, also has an agentless passive (Randall 1998:244). In my data, the passive always occurs in perfective aspect. Although the agent is omitted from the sentence, the verb still has both a subject and a direct object suffix, which always agree in number. It seems that the suffix marking the number of the subject indicates the grammatical subject while the object suffix indicates the semantic object. In essence, both the subject and direct object suffix are referring to the same person. Examples (95)-(98) are taken from a story about a young Tirmaga man who had recently been through a customary rite of passage to be promoted to the next age grade.

(95) **ku-múk-t-ag-ey** ɓé ɗónɛ. **ka-ɗák-t-ey-o**
Psv-gather.Pf-PlSu-1/2Bn-1PlO place one Psv-hit.Pf-PlSu-1PlO-PFPf
'We were gathered together at one place.' 'We were hit.'

(96) **kɛ-sé-ø-ag-aŋ** mɛri-ø bi.
Psv-say.Pf-SiSu-1/2Bn-1SiO call.Pf-2SiSuJ cow.Sg
'I was told "Call (your favorite) cow".'

(97) **k-a-ø-áɲ** káll-í
Psv-give.Pf-SiSu-1SiO switch-Sg
'I was given a switch.'

(98) **ka-ɗák-ayɛ-ø** **ka-ɗák-ayɛ-ø** dɛmn-yoga
Psv-hit.Pf-3PlSuNa-3PlO Psv-hit.Pf-3PlSuNa-3PlO stubborn.one-Pl

ka-ɗák-ayɛ-ø
Psv-hit.Pf-3PlSuNa-3PlO
'They were hit, they were hit, the stubborn ones they were hit.'

The only other circumstances where a low tone **kv-** prefix is used are with first person plural inclusive verbs and first person jussive verbs. In both of these cases the additional use of the direct object suffix in a passive construction clearly distinguish it from an active clause as seen in the following examples:

(99) a. **ka-ɗák-t-ey-o** (Passive)
Psv-hit.Pf-PlSu-1PlO-PFPf
'We (excl) are hit.'

b. áɲ **ka-ɗak-tó** (Active)
Let 1SuJ-hit.Pf-1PlxSu
'Let us (excl.) hit (it).'

As Lucassen (1994:69) and Last (1995:32) observed in Chai, the passive of **sɛ** 'to say' is used quite often in referring to the names of things. It may be considered a frozen form because the /**s**/ is rarely heard in normal speech.

(100) kɛ-á **kɛ-é-ø-ø** maskél
tree-SpRl Psv-say.Pf-SiSu-3SiO cross
'the tree called(said to be) the cross.'

In all of the passive examples we have seen, the valency of the verb has decreased because a semantically transitive verb occurs without an agent. In other words, the grammatical subject and object are the same person.

4.6. Phrase Final Suffix

The Tirmaga verbs make use of a suffix on the end of a verb to indicate that no direct object will follow. I have called this a phrase final suffix. It is also found in Me'en if

"no other element is following in the clause" (Will 1998:443). Lucassen (1994:64) refers to the same type of suffix in Chai "when the verb is the final element of a sentence (unit)." In Tirmaga, the verb does not have to be the last element of a sentence, though it is commonly the case. It is possible for a locative, adverb, or adverbial phrase to follow a verb with a phrase final suffix. The object is the only item restricted from occurring post-verbally when the phrase final suffix is used. When a verb has a phrase final suffix, the sentence may have an overt direct object, but the direct object may only occur in the pre-verbal position. Only one phrase final suffix occurs with imperfective aspect, but three different types occur with the perfective. The phrase final suffixes are given in table 11.

Table 11. Phrase Final Suffixes

IMPERFECTIVE	JUSSIVE	SUBJUNCTIVE	OTHER PERFECTIVES	
-tɔ[10]	-a	-to	-o	'1st Singular'
-tɔ	-a	-to	-o	'2nd Singular'
-tɔ	-ø	-to	-o	'3rd Singular'
-tɔ	-yɛ	-to	-o	'1st Plural Incl.'
-tɔ	-ø	-to	-o	'1st PluralExcl.'
-tɔ	-yɛ	-to	-o	'2nd Plural'
-tɔ	-yɛ	-to	-o	'3rd Plural'

The only phrase final suffixes sensitive to person are the jussive phrase final suffixes. The jussive phrase final suffixes yield to the phrase final perfective suffix when a direct object occurs on the verb.

(101) áɲ ka-ɗak-**ø-a**
let 1Su-hit.Pf-**SiSu-PFJ**
'Let me hit (it).'
(No direct object, therefore phrase final jussive suffix occurs)

(102) áɲ ka-ɗak-ø-**eɲ-o**
let 1Su-hit.Pf-SiSu-**2SiO-PFPf**
'Let me hit you.'
(Direct object suffix on verb, therefore perfective phrase final suffix occurs)

[10] The imperfective and subjunctive phrase final suffixes are phonologically conditioned according to the plosive assimilation and plosive voicing rules in section 2.6.

(103) áɲ ka-ɗak-ø bi (Direct object follows the verb, therefore
let 1Su-hit.Pf-SiSu cow no phrase final suffix)
'Let me hit the cow.'

Examples of the imperfective phrase final suffix are as follows:

(104) NO DIRECT OBJECT
kú-dúrí-o ŋoónu na k-úŋús-o-tɔ
1Su-dance.Ipf-PlxSu there and 1Su-sleep.Ipf-PlxSu-PFI
'We dance there and we sleep.'

(105) VERB FOLLOWED BY A SUBORDINATE CLAUSE
kó nɔ lɔ́k-té més-é tɛr-ú-o-te més-ø-tɔ
Crd 3SiP word-NSpRl do.Ipf-3PlSu woman-Pl-PVS-Sb do.Ipf-3SiSu-PFI

húndé n-ɛ-té
T/C SiPsd-3PlPsr-Sb
'And she will do the things that women do as if she were one of theirs.'

(106) VERB FOLLOWED BY AN OBLIQUE
ké-ŋés-i ná k-úŋús-i-tɔ kɔcí-ø-ɔ tóyé
1Su-run.Ipf-SiSu and 1Su-sleep.Ipf-SiSu-PFI forest-Sg-Obl inside
'I run and sleep in the forest.'

4.7. Nominalization

There are four ways that Tirmaga verbs are nominalized. The monosyllabic verb roots are usually nominalized by means of an **-a** suffix on the perfective verb root and have a LH tone pattern.

(107)	cig-á	ɠín-á	ɓuh-á	ɓɔg-á	cay-á
	hear-Nlr	ask-Nlr	curse-Nlr	dig-Nlr	revenge-Nlr
	'hearing'	'question'	'curse'	'digging'	'revenge'

Examples of these in sentences are as follows:

(108) ɠín-á ki-ɠín-éɲ-ø iɲe kumúlo
ask-Nlr 1Su-ask.Ipf-2SiO-PlnSu you all
'Question/s we ask you all.'

(109) ká-gá-ø ɓuh-á
1Su-know.Ipf-SiSu curse-Nlr
'I know a curse (what a curse is/how to curse).'

In almost every case, a monosyllabic nominalized verb is also the same as the second person singular imperative. Compare the examples in (110) with the examples in (107).

(110) cig-ø-á gín-ø-á ɓuh-ø-á
hear.Pf-2SiSuJ-PFJ ask.Pf-2SiSuJ-PFJ curse.Pf-2SiSuJ-PFJ
'Hear!' 'Ask!' 'Curse!'

Nominalized polysyllabic verb roots have no suffix but usually have the LH tone pattern.

(111) ogól-ø ɛbɛ́k-ø busí-ø ɔgɔ́r-ø
beg-Nlr blow-Nlr cut-Nlr fry-Nlr
'begging' 'blowing' 'cutting' 'frying'

Examples of these in context are as follows:

(112) ogól-ø k-ogol-íɲ-ø iɲe
beg-Nlr 1Su-beg.Ipf-2SiO-PlnSu you
'Begs we beg you (we beg you begging things).'

(113) k-ímág-i cún-oy ɔgɔ́r-ø
1Su-ignorant.Ipf-SiSu greens-Sg fry-Nlr
'I don't know how to fry greens (green frying).'

As seen in example (113), a nominalized verb can also be used as an infinitive. The polysyllabic verb roots are also the same as the singular imperative except both syllables of the verb root usually have a low tone when used as an imperative.

The third method of nominalization only applies to a few verbs, and the imperfective verb root is used. The suffix used is **-e/-ise** depending if the verb root ends in a vowel or consonant. Examples are as follows:

(114) rɛs-é am-isé bas-é
die.Ipf-Nlr eat.Ipf-Nlr live.Ipf-Nlr
'death' 'food' 'life'

The examples in (114) are commonly used words that often occur as the object of a sentence.

(115) kí-hín-i am-isé
1Su-want.Ipf-SiSu eat.Ipf-Nlr
'I want food.'

(116) hín-i bas-é óó hín-i rɛs-é
want.Ipf-2SiSu live.Ipf-Nlr or want.Ipf-2SiSu die.Ipf-Nlr
'Do you want life or death?'

The fourth method of nominalization is the **-ɛn/inɛn** suffix. This suffix resembles the first/second person reciprocal/progressive/habitual suffix of section 4.5.1. However, I do not think they are the same because it does not seem plausible to use a first/second person suffix as a nominalizer. Also this nominalization suffix is probably phonologically conditioned as to when **-ɛn** or **-inɛn** is used although I have not yet been able to determine what that conditioning might be. If it is phonologically conditioned, then **-ɛn** is probably the base form which is different from the first/second person RPH suffix. The criteria for the use/non-use of the **-ɛn/-inɛn** suffix has not yet been determined, but it only occurs with verb roots that are used in imperfective aspect.

(117)

am-inén	may-inén	woc-én	cíg-ɛn
eat.Ipf-Nlr	drink.Ipf-Nlr	walk.Ipf-Nlr	laugh.Ipf-Nlr
'eating (Noun)'	'drinking (Noun)'	'walking (Noun)'	'laughter'

Some examples of these in sentences are as follows:

(118) tílá am-inén ká-gá-ø-tɔ
corn.porridge eat.Ipf-Nlr 1Su-know.Ipf-SiSu-PFI
'I know how to eat corn porridge.'

(119) ŋandá á kég-á may-inɛn-á
This is thing-SpRl drink.Ipf-Nlr-SpRl
'This is a drinking thing (thing that one drinks with).'

(120) té woc-én
exist.Pf-3SiSu walk.Ipf-Nlr
'Walking exists (It's time to go).'

(121) ád-an-ø cíg-ɛn
pretend.Ipf-MT-2SiSu laugh.Ipf-Nlr
'You are pretending to laugh.'

4.8. Tense

Tense is not nearly as important in the Tirmaga verb system as aspect, it does use certain words as tense markers. The tense markers may occur in conjunction with both imperfective and perfective verb roots. The tense markers most often used are seen in (123). Tone is not marked because the tone of the tense marker adjusts to the grammatical tone of the person, aspect, and mode of the verb root.

(122) ale 'future'
mɛa 'now'
wa 'recent past'
bere 'past'
bɔrɔ 'distant past'

Last (1995:28) points out that **wa** and **bere** are also found in Chai and are most likely indicative of tense rather than the completion of an action as Lucassen (1994:63) had proposed earlier. The tense markers in conjunction with imperfective aspect verbs are bolded in the following examples:

(123) **wa** ér-o **ɛ́lí-ø** na **ɛ́dɛ́**-ísí-nén-o
recent.past child-Pl **call.Ipf**-2SiSu and **be.content.Ipf**-Cau-1/2RPH-2PlSu

ŋáa karí
here together
'You just call the children and entertain each other here together.'

(124) n-á **beré** **íh**-í ŋa-kal-dá íh-í **alé** kíŋi
SiCl-SpRl past **exist.Ipf**-2SiSu Dm-day-Nr exist.Ipf-2SiSu future far.off

íh-í án-i iɲe sɔŋ
exist.Ipf-2SiSu is-2SiSu you only
'The one who exists(ed) in the past, exists today and will exist in the future is you only.'

(125) **mɛ́á** aɲe g-á g-aɲú **á** ŋa-gi-tá
now I PlCl-SpRl PlPsd-1SiPsr **is** these
'Now this is my story (these are mine).'

(126) aɲe g-á g-aɲú **bɔrɔ** kú-**dúm**-an-ɛ-i tɛr-í
I PlCl-SpRl PlPsd-1SiPsr distant.past 1Su-**get.Ipf**-MT-VI-SiSu woman-Sg

á ŋa-gi-tá
is these
'This is my story (these are mine) from long ago when I got a wife.'

Examples of the tense markers with perfective verb roots are as follows:

(127) g-á g-áyo gɛrs-á kumúlo **wa**
PlCl-SpRl PlPsd-1PlxPsr bad.Stv-SpRl all recent.past

k-**újúk**-t-ó
1Su-**throw.Pf**-PlSu-xNNa
'We have just thrown away all our bad things.'

(128) **mɛ́á tɛ́-ø** lɔ́g-á g-aɲú
now **be.Pf**-3SiSuNNa word-SpRl PlPsd-1SiPsr
'Now it has become my story (my words).'

(129) **alé** ba **tɛ́-ø** chal-í
future land **be.Pf**-3SiSuNNa good.Stv-Adj
'In the future the land will become good.'

(130) iɲe **bɛrɛ** híndé **ók-ø** kɔ́ci-ɔ ŋoónu-té lámí-ø ɔŋ?
you past when **go.Pf**-2SiSuNa forest-Obl there-Sb look.for.Ipf-2SiSu what
'Long ago when you went into the forest, what were you looking for?'

(131) **bɔrɔ** **dɔ́y-ø-ú** yagɔ
distant.past **absent.Pf**-SiSu-3SiNa empty
'It was left empty long ago.'

The idea of "tense" with these markers must be held very loosely, especially with the past tense markers. Sometimes the recent past word **wa** occurs in the context of something that happened a very long time ago. For example, the Tirmaga sing a song about Jesus Christ in which his death is referred to with the recent past word as seen in (132).

(132) **wa** ɛ́r-á 'He just died.'

When I questioned our language helpers as to why it is not **bɛrɛ** or **bɔrɔ** since Jesus died 2,000 years ago, they said it made no difference. At present, I am not sure what the criteria are that affect this variation.

4.9. Aspect

The Tirmaga verb operates on an aspectual system more than tense. This is also seen in other Surmic languages. The two main divisions are imperfective and perfective aspects. As mentioned in section 4.1, Comrie (1976:16-40) discusses the division of these two aspects defining imperfective as an ongoing process where a situation is viewed from within and perfective aspect as a "complete" situation viewed from the outside having a beginning, middle and end rather than a "completed" situation. This is seen in the use of Tirmaga jussives, which are a subcategory of the perfective aspect. Although the jussives occur in the perfective aspect, they are used to refer to an action that has not yet taken place. This will be discussed further in section 4.10 on mode.

Determining the aspect of a Tirmaga verb is more complicated than its Southwest Surmic neighbors. Didinga (Odden 1983:154), Murle (Arensen 1982:66), and Tenet (Randall 1995:32) all indicate perfective aspect by a verbal prefix, which reduplicates the first vowel of the verb root. This does not occur in the Southeast Surmic languages such as Me'en (Will 1998), Mursi (Turton and Bender 1976), and Chai (Last 1995). Me'en uses two verbal suffixes **-uwa** and **-aboy** to indicate perfective aspect (Will 1998:447). Turton and Bender (1976:547-52) indicate that the subject suffixes, some verb roots, and adverbs differ between perfective and imperfective aspect. Last (1995:26-33) and Lucassen (1994:62-67) did not have a lot of data using the perfective aspect available to them, but basically followed Turton and Bender's division of aspect into imperfective and perfective using the same criteria as used for Mursi. Tirmaga also follows the same basic division as found in Mursi, Chai, and Me'en of imperfective and perfective aspect. Figure 5 in section 4.1 gives an overview of the divisions of the Tirmaga aspectual system.

Although there is no one overt marker of perfective or imperfective aspect, there are five different indicators used to distinguish between imperfective and perfective aspects.

These five indicators are: a different verb root, different subject suffixes, a different phrase final suffix, use of an exclamatory particle, and use of tone in the perfective aspect to differentiate realis and irrealis modes. Since there are so many different indicators of aspect involved in Tirmaga, each verb in this paper has an additional gloss of imperfective or perfective aspect along with the meaning of the verb root.

As mentioned in section 4.1, approximately 20% of Tirmaga verb roots differ between imperfective and perfective aspects. These differences may involve a vowel change, loss or change of final consonant, addition of a **tv-** prefix, or suppletion. Some verb roots may undergo two of these changes (e.g., vowel change and addition of **tv-** prefix). Examples of verb roots that differ between imperfective and perfective aspects are given in (133) but other examples are also given in section 4.1.

(133)

IMPERFECTIVE	PERFECTIVE		
hin	tɛhɛn	'want'	(**tv-** prefix and vowel change)
ŋor	ŋar	'carry on back'	(Vowel change)
ɓons	ɓon	'leave'	(Loss of final consonant)
ih	te	'exist'	(Suppletion)

Some examples of the different verb roots are as follows:

(134) a. mɛnɛŋ-í-te **í-ø** tóyé-té
spirit-Sg-NSpRl **exist.Ipf**-3SiSu inside-Sb
'a spirit that exists inside'

b. méá **té-ø** lóg-á g-aɲú
now **exist.Pf**-3SiSu word-SpRl PlPsd-1SiPsr
'Now it has become my story (my words).'

(135) a. kó-**hóɲ-é**-o g-á gɛrs-á
1Su-**come.Ipf-VI**-PlxSu PlCl-SpRl bad.Stv-SpRl
'We (excl.) bring bad things.'

b. sini-si wa kó-**hó-é-t**-ó
heart-Pl recent.past 1Su-**come.Pf-VI**-PlSu-xNNa
'We (excl.) have just brought (our) hearts.'

The second indicator of aspect is that the suffixes specifying the person of the subject are different for each aspect. All subcategories of imperfective aspect take the same set of subject suffixes. However, a different set of subject suffixes is used for each subcategory of the perfective aspect. These subcategories include narrative, non-narrative, and jussive perfectives. The subject suffixes were explained in detail in section 4.3 but are summarized in table 12.

As mentioned in section 4.3, a low tone **kv-** prefix is also used to indicate first person plural inclusive subjects and a high tone **kv́-** prefix for all other first person subjects in the imperfective aspect as well as the non-narrative and narrative perfectives. The irrealis perfectives use a low tone **kv-** prefix for all first person subjects and a high tone **kv́-** prefix to indicate third person subjects. Refer to section 4.3 on participant reference for examples of the subject affixes in the aspects listed in table 12.

Table 12. Summary of Subject Suffixes Used in Imperfective and Perfective Aspect

Imperfective	Non-Narrative Perfective	Narrative Perfective	Irrealis Perfectives	
-i	-[G]á	-[G]a	-ø	'I'
-i	-ú	-u	-ø	'You'
-ø	-[G]á	-ú	-ø	'He/She'
-ø	-á	-vyɛ	-v́	'We(incl.)'
-[G]o	-ó	-o	-tó	'We(excl.)'
-[G]o	-ó	-o	-v́	'You (pl.)'
-[G]á	-á	-vyɛ	-v́	'They'

The third indicator of aspect is the phrase final suffix, which differs between imperfective and perfective aspects. This is discussed in greater detail in section 4.6. Imperfective aspect uses a **-tɔ** phrase final suffix and the realis perspectives use an **-o** suffix for all persons. Unlike the other phrase final suffixes, the jussive phrase final suffix is

different for each person. Refer to table 11 for a list of the phrase final suffixes used in imperfective and perfective aspects.

The fourth indicator of aspect is the use of a different exclamatory particle in the perfective than the imperfective. These two exclamatory particles are as follows:

(136) IMPERFECTIVE PERFECTIVE
-ci -ni

These particles are used to emphasize the certainty that something will happen or did happen. They have been glossed throughout this paper with an exclamation point (!). These are clitics that occur at the end of a sentence and may have some bearing on the evidentiality or truthfulness of an event. However, I do not know their true function or the criteria for their occurrence at the present time. Examples of these are as follows:

(137) a. méá gesó ŋa-kí-hín-i-o-**cí**
now beer Neg-1Su-**want.Ipf**-SiSu-NegPF-!
'Now I don't want beer!'

b. ká él-ø ŋoónu-**cí**
maybe **exist.Ipf**-3PlSu there-!
'It's possible that they are over there!'

(138) a. jo-né kó-ø-**ni**
mother-her **come.Pf**-3SiSu-!
'Her mother came!'

b. age ké-tél-t-o-**ni**
We 1Su-**exist.Pf**-PlSu-xNa-!
'We existed (hung out)!'

Because these exclamatory particles are optional, they cannot be relied upon to indicate aspect. However, they are good indicators in helping to determine the aspect of a given verb.

The fifth and final indicator of imperfective and perfective aspects is that of mode. While there is no differentiation of mode in the imperfective aspect, the perfective aspect distinguishes between realis and irrealis modes in Tirmaga. This is distinguished by the

tone of the verb root with realis mode having a high tone verb root and irrealis mode having a low tone verb root. Realis and irrealis modes are discussed further in the following section so no examples are given here.

4.10. Mode

Mode describes a speaker's attitude toward or belief in the reality of a situation (Payne 1997:244). Payne also writes: "A prototypical realis mode strongly asserts that a specific event or state of affairs has actually happened, or actually holds true. A prototypical irrealis mode makes no such assertion whatsoever" (1997:244). In Tirmaga the distinction between realis and irrealis modes is indicated by the tone of the perfective verb root. Realis mode is characterized by a high tone verb root and irrealis mode by a low tone verb root.

The modes as described by Payne are "protoypical" but do not apply to all languages in the same way. The major distinction that seems to be made in the Tirmaga verb system is not that of truthfulness but rather the completedness of a situation. One reason this distinction may be necessary in Tirmaga is because the subjunctive and jussive actions function within the realm of perfective aspect indicating a "complete" action. However, since subjunctive and jussive verbs typically refer to an action that has not yet taken place, a further distinction is needed to indicate the "completedness" of the situation. The use of the perfective verb root to express subjunctive and jussive actions has also been evidenced in Murle (Arensen 1982:69), Tenet (Randall 1995:33), and Me'en (Will 1998:439). Randall even points out that tone is often the only distinguishing factor between irrealis subjunctive forms and the other perfective forms of the verb in Tenet.

The Tirmaga irrealis mode is different from all other aspects in that an additional **kv-** prefix is used to indicate a third person subject as well as first person subjects. A **kv-**

prefix with low tone indicates a first person subject while a high tone **kv́-** prefix indicates a third person subject. Because of this tonal distinction, the low tone on the irrealis verb root assimilates to the tone of the subject prefix and changes to high tone when there is a third person subject. In other words, the tone that indicates subject takes precedence over the tone that indicates mode when the two occur simultaneously. Some irrealis mode verbs are given in the following examples:

(139) k-ógór-i cún-oy ná **k-us-ø-o**
1Su-fry.Ipf-SiSu greens-Sg and **1SuJ-eat.Pf-SiSu-PFPf**
'I fry the greens that I might eat (them).'

(140) **ké-té-ø** ŋáŋá húŋ
3SuJ-be.Pf-SiSu like.this only
'Just let it be like this.'

(141) g-e kɔ́-lɔ́m-o sini-si-té kumúlo
PlCl-NSpRl 1Su-have.Ipf-PlxSu heart-Pl-Sb all

toŋ-ó-ey-ó ká-gár-a-yc
wash.Pf-2PlSu-1PlO-PFPf 3SuJ-disappear.Pf-3PlSu-PFJ
'All things that we have in (our) hearts wash us so they may disappear.'

(142) na áŋ tumu **ké-té-ø** ciŋ-í ná **ke-te-ø** bu áŋó
and let God **3SuJ-be.Pf-SiSu** small and **1SuJ-be.Pf-SiSu** big I.PVS
'Then let God be small so that I may become big (important).'

The realis perfectives are marked by a high tone on the verb root and are divided into two subcategories. The subcategories are narrative and non-narrative perfective aspect. The narrative perfective aspect is generally used in narratives concerning an event that has already taken place. The non-narrative perfective usually occurs in non-narrative texts when perfective aspect is used. The non-narrative perfective is also used in greetings along with the use of tense markers.

(143) wa túŋ-ø-u? eee wa kú-túŋ-ø-ŋá
recent.past sleep.Pf-SiSu-2SiNNa yes recent.past 1Su-sleep.Pf-SiSu-1SiNNa
'Did you just sleep?' 'Yes, I just slept.' (typical morning greeting)

(144) wa kó-ø-u? eee wa kú-kó-ø-ú
recent.past come.Pf-SiSu-2SiNNa yes recent.past 1Su-come.Pf-SiSu-2SiNNa
'You have just come?' 'Yes, I have just come.' (typical greeting)

In examples (143) and (144), the question causes the last tone of the verb to be low instead of an expected high tone. However, the verb root has a high tone and all tones of the responses are high as expected. Example (144) is an irregular verb, which is why the first person subject suffix is different than usual with non-narrative perfective aspect.

One will notice that no narrative perfective forms are used in the text in Appendix A. It is a transcription of a public prayer and therefore not specifically describing a prior event. When perfective aspect is used, it is in the non-narrative form rather than the narrative as seen in the following examples:

(145) sini-si wa kó-hó-é-t-ó
heart-Pl recent.past 1Su-come.Pf-VI-PlSu-xNNa
'We (excl.) have just brought (our) hearts.'

(146) g-á g-áyo gɛrs-á kumúlo wa
PlCl-SpRl PlPsd-1PlxPsr bad.Stv-SpRl all recent.past

k-újúk-t-ó
1Su-throw.Pf-PlSu-xNNa
'We (excl.) have just thrown away all our bad things.'

The text in Appendix B is a narrative told by a Tirmaga man about his marriage. The perfective aspect is used twenty-eight times in this text and twenty-three of those are in the narrative perfective form. Some examples from that text are as follows:

(147) age ké-tél-t-o-ni
We 1Su-exist.Pf-PlSu-xNa-!
'We existed (hung out).'

(148) ké-té-ø-wa ɗúl
1Su-exist.Pf-SiSu-1SiNa permanently
'I did nothing but exist (I just was).'

(149) zugo ɗák-ø-ú hózzo góre
people hit.Pf-SiSu-3SiNa hunger very
'People were very hungry (hunger hit the people).'

The non-narrative and narrative perfective moods are distinguished from each other by the different subject suffixes that occur on each form. Some of the suffixes are differentiated by tone only. For a list of the narrative and non-narrative subject suffixes, refer to table 12 in section 4.9.

4.11. Auxiliaries

Auxiliaries are words that are often semantically bleached but occur in the position of a verb and carry at least some of the inflectional information associated with verbs in a given language (Payne 1997:84). Tirmaga has a set of auxiliaries that are used in conjunction with the subjunctive irrealis mode to express desire or intent. They may also be used with imperfective aspect to convey perception. The Tirmaga auxiliaries are derived from the imperfective aspect of the verb **se**, meaning 'to say', and resembles the conjugation of the imperfective aspect. The auxiliary verb 'to say' is given in (150).

(150) kéénî 'I want' Literally 'say'
sénî 'You want'
sé 'He/She wants'
kéé 'We(incl.) want'
kééno 'We(excl.) want'
séno 'You(pl.) want'
se 'They want'

These auxiliaries may be used with any subjunctive verb. The auxiliary expresses the person and number of the subject of the clause while the following subjunctive verb is fully inflected for the person and number of the subject of the subjunctive clause. The following verb may also take a direct object, or valence adjusting suffix.

(151) **kéénî** k-ok-ø árú-gie
say.1SiAu 1Su-go.Pf-SiSuJ Aru-Obl
'I want to go to Aru.'

(152) **kéénî** ok-ø árú-gie
say.1SiAu go.Pf-2SiSuJ Aru-Obl
'I want you to go to Aru.'

(153) **sé** ká-ɗák-ø-éɲ-o
say.3SiAu 3SuJ-hit.Pf-SiSu-2SiO-PFPf
'He wants to hit you.'

(154) **séno** ɗak-á-aɲ-o
say.2PlAu hit.Pf-2PlSuJ-1SiO-PFPf
'Do you all want to hit me?'

The auxiliary verb is used with imperfective aspect to indicate perception. When the imperfective is negated, it indicates negative desire. Examples of perception and negative desire are as follows:

(155) PERCEPTION
a. **kééní** án-i góla-y
say.1SiAu be.Ipf-2SiSu highland.Ethiopian
'I thought you were a highland Ethiopian.'

b. **séní** ɗák-éɲ-ɛ zugó
say.2SiAu hit.Ipf-2SiO-3PlSu people
'You thought the people were going to hit you.'

(156) NEGATIVE DESIRE
a. mɛnɛŋ-í-te í-ø tóyé-té... na **sé** lɔg-á
spirit-Sg-NSpRl exist.Ipf-3SiSu inside-Sb and say.3SiAu words-SpRl

g-uɲú ŋa-kí-cík-o-té
PlPsd-2SiPsr Neg-1Su-hear.Ipf-PlxSu-Sb
'a spirit that exists inside... and does not want us to hear your words.'

b. **kéeno** ŋa-kɔ́-ø
say.1PlxAu Neg-go.Ipf-2SiSu
'We don't want you to go.'

Turton and Bender (1976:552) mention that the verb 'to want', **ki-hin-i**, is used with the subjunctive in Mursi to indicate desire; however, they also wrote, "more research is badly needed here". It was also my first impression that the auxiliary verb in Tirmaga was a derivative of the verb 'to want' because it was indicating a person's desire. I wonder if further research in this area for Mursi may also reveal the use of the verb 'to say' in these auxiliary constructions. I have not found any evidence of this in other Surmic languages. The most closely related language, Me'en (Will 1998:451) often uses the subjunctive in

conjunction with the verbs 'want', 'do', 'send', 'ask' and others, but apparently not the verb 'say' as in Tirmaga. Lucassen (1994) and Last (1995) do not mention this in their Chai research either although several auxiliary constructions appear in the appended text.

4.12. Negation

Negation occurs with both imperfective and perfective aspects in Tirmaga. The constituent order usually changes in a negative sentence with the verb occurring at the end as mentioned in section 3.1. This is also found in Me'en (Will 1998:439). Negation is indicated by the use of the word **ŋani** before a verb in perfective aspect and the verbal prefix **ŋa-** in imperfective aspect. A phrase final suffix occurs at the end of a verb when it is negated. This suffix is the same for perfective and imperfective aspects and has a feature that causes a preceding consonant to geminate. When a back vowel precedes it, the geminate feature is realized as a [**y**]. The negative suffix is as follows:

(157) -[G]o

Negation of a verb in perfective aspect indicates that an event has not occurred. In this case, the word **ŋani** precedes the subjunctive perfective aspect verb root. The tone of **ŋani** dissimilates from the grammatical tones that mark person on the verb root. Examples of perfective aspect verb root negation in Tirmaga are seen in (158) and (159).

(158) ná tér-o **ŋani** **kú-dúrí-t-to**
and woman-Pl **not.yet/still 3SuJ-dance.Pf-PlSu-NegPF**
'And the women had not danced yet.'

(159) ná no kabar-í-ɔ **ŋání** **k-ar-ø-ró** aŋe
and but eye-Sg-Obl **not.yet/still 1Su-see.Pf-SiSu-NegPF** 1SiP
'But by eye I have never seen it.'

The word **ŋani** is glossed as 'not yet/still'. This is because it not only functions as a negative word but is also used with the imperfective aspect to indicate an ongoing process.

(160) ŋa-hól-din-tá **ŋaní** **tór-ɛ-í** oy-ɲá-á
Dm-white.Stv-Nlr-Nr **not.yet/still add.Ipf-VI-2SiSu** rainy.season-Pl-SpRl

g-áyo túndo-té
PlPsd-1PlxPsr on.top.of-Sb
'this day that you still add to our years'

(161) ɲágári-ø **ŋaní** **kɔ́-ø-tɔ**
airplane-Sg **not.yet/still go.Ipf**-3SiSu-PFl
'The airplane is still going.' (spoken while watching an airplane after take-off)

Whereas negation of perfective aspect tends to indicate that a situation or event has not yet taken place, negation of the imperfective aspect usually indicates that a situation will not transpire. An imperfective verb is negated by the verbal prefix **ŋa-** in conjunction with the negative suffix seen in (157). Examples of imperfective negation are as follows:

(162) méá gesó **ŋa-kí-hín-i-o-cí**
now beer **Neg-1Su-want.Ipf-SiSu-NegPF**-!
'Now, I don't want beer.'

(163) árú-gie **ŋa-kɔ́-kɔ́-ø-o**
Aru-Obl **Neg-1Su-go.Ipf-SiSu-NegPF**
'I am not going to Aru.'

(164) dórí-ø-á n-unú **ŋa-k-ór-i-o**
house-Sg-SpRl SiPsd-2SiPsr **Neg-1Su-see.Ipf-SiSu-NegPF**
'I don't see your house.'

The imperfective aspect is also used to give negative commands. When commands are negated, the phrase final negative suffix does not occur.

(165) árú-gie **ŋa-kɔ́-ø**
Aru-Obl **Neg-go.Ipf-SiSu**
'Don't go to Aru.'

(166) gesó **ŋa-hin-o**
beer **Neg-want.Ipf-2PlSu**
'Don't desire beer.'

Negation of the imperfective aspect is quite often used in rhetorical question form to indicate sarcasm or to emphasize a characteristic that one already possesses. Both of these

are accomplished by using the same constructions seen in (163) and (164). However, the negated verb occurs with a higher pitch than normal. Some examples are as follows:

(167) árú-gie **ŋa-kɔ́-kɔ́-ø-o**
Aru-Obl Neg-1Su-go.Ipf-SiSu-NegPF
'Am I not going to Aru?' (spoken while on the path to Aru)

(168) dórí-ø-á n-unú **ŋa-k-ór-i-o**
house-Sg-SpRl SiPsd-2SiPsr **Neg-1Su-see.Ipf-SiSu-NegPF**
'Am I not (able to) seeing your house?' (spoken while looking at the house)

(169) gulsá **ŋa-k-án-i-o** (Normal pitch)
leader **Neg-1Su-is-SiSu-NegPf**
'Am I not a leader?' (spoken by a leader to emphasize his authority)

(170) gulsá **ŋa-k-án-i-o** (High pitch)
leader **Neg-1Su-is-SiSu-NegPf**
'Am I not a leader?' (spoken sarcastically by one who is in no way a leader)

The negative word **ŋani** may be used in conjunction with a negative imperfective aspect verb to indicate that a particular situation will never happen.

(171) aŋe **ŋání** **ŋa-kí-hín-i-o** cɔɔ ŋa-lɔ́g-tá bu
1SiP **not.yet/still Neg-1Su-want.Ipf-SiSu-NegPf** even Dm-words-Nr big

gesó-ŋ-té
beer-Gn-Sb
'I never want (anything to do with) this big situation that is beer's.'

(172) wólólo **ŋaní** **ŋa-kúdúrí-ø-o**
wedding **not.yet/still Neg-1Su-dance.Ipf-SiSu-NegPf**
'I will never dance the wololo part of a wedding.'

CHAPTER 5

CLAUSE COMBINING

This chapter will present the structure of several types of subordinate clauses as well as coordinate clauses. Tirmaga subordinate clauses are easily recognized because the clause always ends with a subordinating clitic. The subordinate clauses presented in this chapter are relative, temporal/conditional, subsequent time, reason, simultaneous, and a **hínaa** clause, which is a clause used to mark the main events of a story leading up to the peak. Of these six subordinate clauses, the relative and conditional clauses are the most common in my data. The coordinate clauses presented here are conjoined, contrastive, comparative and disjunctive clauses. The coordinate clauses have no overt marker at the end of a clause as the subordinate clauses do. Very little discourse analysis has been done in Tirmaga to date; therefore, the conclusions reached in this chapter should be considered preliminary. This chapter is an attempt to record the things that I have learned concerning sentence structure, but there are still many questions.

5.1. Subordinate Clauses

There are six different subordinating clauses found in Tirmaga. They are relative, conditional, time, reason, simultaneous and a **hínaa** clause. Although the subordinating clauses occur in different places of a sentence, each of them is identified by the subordinating clitic (Sb) **-te**, which occurs at the end of a subordinate clause. The relative and conditional clauses are the most pervasive in the language. The subsequent time and reason clauses always occur after the independent clause whereas the conditional, simultaneous, and **hínaa** clauses always precede it. The relative clause can occur in various parts of an independent clause.

5.1.1. Relative Clause

The Tirmaga relative clause is postnominal, occurring after the head which it modifies. The noun phrase modified by a relative clause functions the same way as a noun phrase modified by an adjective as discussed in section 4.2. In both cases the head is marked as well as the end of the phrase or clause. In relative clauses, if the head is non-specific (e.g., not known to the speaker), it is marked with a non-specific relator (NSpRl) suffix **-te**.[1] This is the same as the subordinate clause clitic **-te**, mentioned in section 5.1 that indicates the end of a subordinate clause. When the head is specific (e.g., known to the speaker), the noun phrase is a demonstrative and no relator suffix occurs on the head. Examples (1) and (2) show relative clauses with demonstrative head nouns. In each of these examples, the head is in bold print and the restricting clause is in brackets.

(1) DEMONSTRATIVE HEAD NOUN (NO RELATOR SUFFIX ON HEAD NOUN)
ŋa-kɔrɔ-ɲ-tá bu [k-ɛŋɛrés-ø kɔrɔ-té]
Dm-black.Stv-Nlr-Nr big 1Su-fear.Ipf-PlnSu black.Stv-Sb
'this big, black darkness that we fear'

(2) **ŋa-gi-tá** [kó-hóɲ-o ŋáa-té]
Dm-PlCl-Nr 1Su-come.Ipf-PlxSu here-Sb
'these of us who come here'

Examples (3)-(5) show how a head takes the non-specific relator suffix when it is unknown to the speaker (e.g., speaking in general terms). Again the head is in bold print and the restricting clause is enclosed in brackets.

(3) NON-DEMONSTRATIVE HEAD NOUN (HEAD NOUN HAS RELATOR SUFFIX)
mɛnɛŋ-í-te [í-ø tóyé-té]
spirit-Sg-NSpRl exist.Ipf-3SiSu inside-Sb
'a spirit that exists inside'

(4) **lóg-té** [més-é tɛr-ú-o-te]
words-NSpRl do.Ipf-3PlSu woman-Pl-PVS-Sb
'things that women do'

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[1] This suffix and the subordinate clause clitic are phonolgically conditioned by the Plosive Voicing and Assimilation rules in section 2.6.

(5) **tɔŋ-te** [ŋes-inɛn-té]
goat-NSpRl run.Ipf-Nlr-Sb
'a goat that is running'

Relative clauses commonly occur with a number clitic acting as the head. Some examples of this are seen in (6)-(9). Example (7) is a relative clause with several other embedded clauses.

(6) RELATIVE PRONOUN AS HEAD NOUN
in-te [ɲúg-ey-ø sabb-í-té]
SiCl-NSpRl shut.Ipf-1PlO-3SiSu head-Pl-Sb
'one that shuts us (our) heads'

(7) **in-te** [éséd-ag-ey-ø lɔg-á gɛrs-á
SiCl-NSpRl think.Ipf-1/2Bn-1PlO-3SiSu words-SpRl bad.Stv-SpRl

wó-ana-ø tum-ó ít-ana-na setén-i na sé
walk.Ipf-MT-3SiSu sky-Obl send-MT-?-3SiSu satan-PVS and say.3SiAu

lɔg-á g-uɲú ŋa-kí-cík-o-té]
words-SpRl PlPsd-2SiPsr Neg-1Su-hear.Ipf-PlxSu-Sb
'one that thinks bad things for us, that walks in the sky, that Satan sends and says your words we will not hear (does not want us to hear your words).'

(8) **g-e** g-áyo [k-éséd-o sinis-i-té]
PlCl-NSpRl PlPsd-1PlxPsr 1Su-think.Ipf-PlxSu heart-Pl-Sb
'our things that we think (in our) hearts'

(9) **g-e** [hín-ag-éy-ø-té]
PlCl-NSpRl want.Ipf-1/2Bn-1PlO-2SiSu-Sb
'things that you want for us'

The gap strategy is used to mark the relativized noun phrase in the restricting clause. This is demonstrated in the following examples where a 0 marks the location of the relativized noun phrase.

(10) RELATIVIZED SUBJECT
ŋa-kal-tá **ŋa-gí-tá** [0 kó-hóɲ-o ŋáa-té]
Dm-day-Nr Dm-PlCl-Nr 1Su-come.Ipf-PlxSu here-Sb
'Today these of us who we (excl.) come here'

(11) RELATIVIZED OBJECT
g-e **g-áyo** [k-éséd-o 0 sinis-i-té]
PlCl-NSpRl PlPsd-1PlxPsr 1Su-think.Ipf-PlxSu heart-Pl-Sb
'Our things that we think (in our) hearts.'

Keenan and Comrie (1977) observed that languages usually follow the noun phrase accessibility hierarchy seen in (10) when relativizing grammatical elements. So, if a language allows the relativization of indirect objects, for example, then the grammatical elements to the left (subject and object) may also be relativized.

(12) subject > direct object > indirect object > oblique > possessor

According to this hierarchy, Tirmaga allows the relativization of subjects and objects using the **-te** subordinating clitic. Examples of these are as follows:

(13) SUBJECT

a. ŋa-kal-tá **ŋa-gí-tá** [kó-hóɲ-o ŋáa-té] kó-hóɲ-ɛ́-o
Dm-day-Nr Dm-PlCl-Nr 1Su-come.Ipf-PlxSu here-Sb 1Su-come.Ipf-VI-PlxSu

g-á gɛrs-á
PlCl-SpRl bad.Stv-SpRl
'Today these of us who we (excl.) come here, we (excl.) bring specific bad things.'

b. **in-te** [ɲúg-ey-ø sabb-í-té]
SiCl-NSpRl shut.Ipf-1PlO-3SiSu head-Pl-Sb
'one that shuts us (our) heads'

(14) DIRECT OBJECT

a. wo-ø yok-ø-ág-ey **g-e**
come.Pf-2SiSuJ tell.Pf-2SiJ-1/2Bn-1PlO PlCl-NSpRl

[hín-ag-éy-ø-té]
want.Ipf-1/2Bn-1PlO-2SiSu-Sb
'Come tell us things that you want for us.'

b. **g-e** **g-áyo** [k-ɛ́sɛ́d-o sinis-i-té]
PlCl-NSpRl PlPsd-1PlxPsr 1Su-think.Ipf-PlxSu heart-Pl-Sb
'Our things that we think (in our) hearts.'

Tirmaga also relativizes semantic obliques by the use of an **-ɛ** suffix on the verb. This suffix seems to raise the oblique to direct object status when it is relativized because the oblique marker does not occur. Sometimes the oblique occurs pre-verbally for reasons of focus, resulting in a post-verbal subject. When this happens, the verb of the restricting clause takes the valence increasing (VI) suffix **-ɛ** and the singular subject suffix also occurs on the verb, which is unusual as explained in section 4.3.

(15) **ŋa-kɛ-tonú béré** ánda[2] [kú-gúɲ-o ágéó sábbo béré
Dm-tree-Fr long.ago TpP 1Su-look.Ipf-PlxSu we.PVS before long.ago

ɗérígis-**ɛ-i** íɲó béré kálágal-**ɛ-i** íɲó-té]
sweat.Ipf-VI-2SiSu you.PVS long.ago bleed.Ipf-VI-2SiSu you.PVS-Sb
'that tree from long ago, we look at it before (from the front), the one on which you sweat long ago, on which you bled long ago'

(16) kumúlo k-áj-an-eɲ-ø iɲe **ɓɛ-á** **béré** [rɛs-**ɛ-**í
all 1Su-give.Ipf-MT-2SiO-SiSu you place-SpRl long.ago die.Ipf-VI-2SiSu

kɛ-á ke-é-ø-ø maskɛ́l]
tree-SpRl Psv-say.Pf-SiSu-3SiO cross
'All we give to you at the place that you died long ago, the tree called maskel (cross)'

5.1.2. Híndé Clause

Temporal and conditional clauses (T/C) are indicated by the word **híndé** near the beginning of the subordinate clause. Sometimes **híndé** is also realized as **húndé**. The end of the conditional clause is signaled by the subordinating clitic **-te** as with the relative clauses. If all arguments are found in a sentence, the usual position of **híndé** is after the subject of the clause.

(17) aɲe **híndé** kɔ́-kɔ́-ø tubúŋ-ɔ-**té** ká-tál-an-ø bi
I T/C 1Su-go.Ipf-SiSu tubung-Obl-Sb 1Su-transact.Ipf-MT-SiSu cow
'When/if I go to Tubung, I will buy a cow.'

In a text, however, the subject of the clause is rarely seen, resulting in the sentence initial position of **híndé** much of the time. The word **híndé** conveys both conditional information as well as temporal (e.g., 'when' or 'at the time that X is done'). So, the understanding of (17) may be both, 'when I go to Tubung', or 'if I go to Tubung'. The interpretation is distinguished by the context in which the sentence is used. **híndé** is used quite often in narrative texts even though the event took place some time ago. By looking at

[2] I am not completely sure about the meaning of the word **ánda** but it seems to act as a sort of topicalizer. It has the indications of the singular clitic **n** as well as the specific relator suffix **-a**, but I am not sure about the other components. There are only two examples in my data and both of them occur with relative clause constructions.

the text in Appendix B, one can see that the subordinate conditional clause verbs are usually in imperfective aspect.

The **híndé** clause always precedes the independent clause. Examples (18)-(21) are from the text in Appendix B. Example (18) occurs at a point in the narrative where there is dialogue and conveys the hypothetical sense of a conditional clause. The other examples are understood as temporal because they maintain the sequential flow of the narrative.

(18) ale ká kó **híndé** kú-dúrí-ø wólólo-**té** ke-mes-ána-ø
future maybe Crd T/C 1Su-dance.Ipf-SiSu wedding-Sb 1Su-do.Ipf-MT-PlnSu

lɔ́g-te gɛrs-í
words-NSpRl bad.Stv-Adj
'If in the future I dance the wedding, we may do things that are bad.'

(19) **híndé** ɗák-ey-ɛ-**te** tɛr-í ŋé-ú kocí-ɔ
T/C hit.Ipf-1PlO-3PlSu-Sb woman-Sg run.Pf-3SiSuNa forest-Obl
'When they hit us, (my) wife ran into the forest.'

(20) **híndé** kálí-ɔ kó-wók-an-o-**te** aɲda ɗá kɔ́-ø-ni
T/C day-Obl 1Su-return.Ipf-MT-PlxSu-Sb Evd surprise come.Pf-3SiSu-!
'When we return at daytime, wow she came!'

(21) **híndé** kú-dúrí-o na té-ø ócá-**té** zugo
T/C 1Su-dance.Ipf-PlxSu and exist.Pf-3SiSuNa enough-Sb people

ɗák-ø-ú hózzo góre
hit.Pf-SiSu-3SiNa hunger very
'When we dance and it was enough, people were very hungry.'

When the conjunction **cɔɔ** 'even' occurs with **híndé**, it indicates a concessive conditional clause. Consider the following:

(22) **cɔɔ** guyɔ **híndé** ɗák-ø-**té** kɔ́-kɔ́-ø tubúŋ-ɔ
even rain T/C come.Ipf-3SiSu-Sb 1Su-go.Ipf-SiSu Tubung-Obl
'Even if rain hits (it rains), I will go to Tubung.'

5.1.3. Ko ɓɛ Clause

The **ko ɓɛ** clause is a subordinate time clause conveying the idea of the English word 'until'. This has been termed a "subsequent time margin" by Longacre (1970:786). The

subsequent time clause always occurs after the independent clause. The clause begins with the words **ko ɓɛ** and ends with the usual subordinating clitic **-te**. **ko** is a word that is normally used to coordinate nouns, and **ɓɛ** literally means 'place/portion'. But when these two words combine, their meaning becomes 'until'. Examples of the subsequent time clause are as follows:

(23) ɛ-á-ø-ey ná kɛ-tɛl-dí karí dír **ko ɓé**
help.Ipf-MT-2SiSuJ-1PlO and 1Su-exist.Pf-PlxSuJ together long.time Crd place

alé tɔr-ɛ́-í kɔrɔ́-ɲ-té ŋaní cag-té sɛgén
future add.Ipf-VI-2SiSu black.Stv-Nlr-Sb not.yet/still green.Stv-Sb again
'Help us so that we may exist together for a long time until you add darkness that is still green (another new night) again.'

(24) k-él-o karí dír **ko ɓé alé ba**
1Su-exist.Ipf-PlxSu together long.time Crd place future ground

ɗécíŋ-an-ɛ-ø-té
finish.Ipf-MT-VI--3SiSu-Sb
'We will be together until the ground (earth) finishes (is destroyed).'

(25) na ráko-y kɔ-ø ŋa-gɔr-tá wok-ána-ø-tɔ kɔ́-ø
and raven-Sg go.Ipf-3SiSu Dm-path-Nr return.Ipf-MT-3SiSu-PFl go.Ipf-3SiSu

ŋa-gɔr-tá wok-ána-ø-tɔ **kó ɓɛ ɗɔ́rɔ́gɔ́s-ɛ́-ø ba-té**
Dm-path-Nr return.Ipf-MT-3SiSu-PFl Crd place dry.Ipf-VI-3SiSu ground-Sb
'Then the raven went this way and returned, went this way and returned (back and forth) until the ground dries.'

Example (25) is an excerpt from a mother-tongue speaker's translation of the biblical flood story. Although translations may not always be good examples, (25) does exhibit most of the same characteristics as the preceding examples. The only difference between (25) and the previous two examples is that the word **alé** does not occur in the subsequent time clause. This is probably because (25) is a narrative so the future word **alé** would not likely be used. Examples (23)-(25) all have the valence increasing suffix **-ɛ** on the verb. This may be because the **ko ɓɛ** clause is a relativized semantic oblique since the

literal meaning of **ɓɛ** is 'place'. The **-ɛ** suffix also occurs on the verbs of the reason clause seen in section 5.1.5.

5.1.4. Simultaneous Clause

The subordinate clause expressing simultaneous action is indicated by the noun coordinate **kó** in the subordinate clause along with the usual clause final clitic **-te**. The idea conveyed is similar to the English words "while" or "as". Examples (26) and (27) demonstrate a Tirmaga simultaneous clause.

(26) aɲe **kó** kó-tówe-á-w sáy-ø ŋaŋá-**te** ah-a-te
1SiP Crd 1Su-display.Pf-MT-SiSuM leather.skirt-Sg like.this-Sb thing-Pl-NSpRl

anda ɗúmán-ɛ ná ŋoɲ-ɛ kú-gúɲ-i níŋgɛ
TpP get.Ipf-MT-3PlSu and grind.Ipf-3PlSu 1Su-look.Ipf-SiSu not.exist
'As I displayed the leather skirt like this, I saw that no things existed that they could get and grind.'

(27) **kó** n-a balá-ɲ kó-**te** dúrí-é-tɔ-ní
Crd SiCl-SpRl bala-Gn come.Pf-3SiSu-Sb dance.Ipf-3SiSu-PFI-!
'As (the people of) Bala's came, they were dancing!'

5.1.5. Reason Clause

Another subordinate clause found in Tirmaga expresses the idea of reason. The first word of a reason clause is the word **ɓɛ** meaning 'place/portion'. The literal meaning of the word used to mark a reason clause in Me'en is also 'place' (Will 1991c:107). The Tirmaga reason clause also ends with the subordinating clitic **-te**. However, the reason clause usually follows the independent clause as the **ko ɓɛ** clause in section 5.1.3. The verbs of both the independent clause and the subordinate clause have an **-ɛ** suffix if there is no object marked on the verb. This same suffix occurs when semantic obliques are relativized as seen in section 5.1.1 and the **ko ɓɛ** clause in section 5.1.3. The valence increasing suffix (VI), reason word **ɓɛ**, and the subordinating clitics are each bolded in examples (28)-(30).

(28) kí-cíg-ɛ-ø **ɓɛ** bargólay új-ɛ-ø ba-**té**
1Su-laugh.Ipf-VI-SiSu place Bargolay hit.Ipf-VI-3SiSu ground-Sb
'I laugh because Bargolay hit the ground.'

(29) ká-már-eɲ-ø **ɓɛ** ógór-ɛ-ø ahá-á gaɲú
1Su-refuse.Ipf-2SiO-SiSu place steal.Ipf-VI-2SiSu thing-Pl-Adj PlPsd-1SiPsr

kali kali-**té**
day day-Sb
'I refuse you because you always steal my things.'

(30) k-ógór-ɛ-ø **ɓɛ** ɗák-áɲ-ø hózzo-**té**
1Su-steal.Ipf-VI-SiSu place hit.Ipf-1SiO-3SiSu hunger-Sb
'I steal because I am hungry.'

If the reason clause is a relativized semantic oblique, the literal meaning of (28), for example, would be 'I laugh at the place where Bargolay hit the ground'. This makes sense because the word **ɓɛ** 'place' has many uses in Tirmaga. In example (31) it is used to indicate an opinion.

(31) **ɓɛ**-á n-unú-te k-án-i lɛsiyag-í
place-SpRl SiPsd-2SiPsr-Sb 1Su-is-SiSu stingy.Stv-Adj
'At your place, I am stingy (As far as you are concerned, I am stingy).'

5.1.6. Hínaa Clause

There is another subordinate clause found in Tirmaga, which probably functions on a discourse level. I will call it the **hínaa** clause, but it is also sometimes realized as **húnaa**. It only occurs in non-fiction narrative texts and then only in the first half of the text. It seems to mark the resolution of the conflicting (CR) events leading up to the peak of the story. Examples (32) and (33) are the only occurrences of **hínaa** found in the text in Appendix B. Example (32) occurs at the point in the story where the bride returns after she initially ran away from her marriage celebration.[3] A second conflict follows when the bride's mother comes and takes her away from the marriage celebration. Example (33)

[3] It is normal for a bride to run away from her marriage celebration because she is playing "hard-to-get" and her family can use her absence as a bargaining chip against the groom to get him to pay more cows.

occurs at the point in the story when the bride is accompanied back to the celebration by the local women, and the dancing portion of the wedding celebration is completed. As seen in these examples, the **hínaa** clause always precedes the independent clause and ends with the subordinating clitic **-te**. **Hínaa** is rendered as 'when' in the gloss and translations because it is probably related to the temporal/condition word **híndé** presented in section 5.1.2. **hínaa** might best be understood as a very important 'when' in the story. The examples are as follows:

(32) **hínaa** kun-ɔ-**té** age ké-tél-t-o-ni
CR come.Ipf-PFI-Sb we 1Su-exist.Pf-PlSu-x-!
'When she comes, we existed (we became).'

(33) **hínaa** kú-dúrí-ó-**té** té-ø ócá-ní
CR 1Su-dance.Ipf-PlxSu-Sb exist.Pf-3SiSu enough-!
'When we dance, it became enough.'

5.2. Coordinate Clauses

The four types of coordinate clauses discussed are conjoined, contrastive, comparative, and disjunctive clauses. The coordinate clauses are usually marked by the use of conjunctions rather than clause final markers like the subordinate clauses.

5.2.1. Conjoined Clause

Tirmaga independent clauses are combined by the conjunction **na**. The tone of **na** seems to dissimilate from the tone of the word that follows it; therefore, it should not be considered as having any inherent tone.

(34) ídóg-aŋ-ɛ húŋ **na** té-ø ócá-ní
scare.Ipf-1SiO-3PlSu simply and exist.Pf-3SiSu enough-!
'They simply scare me and it became enough.'

(35) húná k-ubur-aŋ-í **na** ɗák-áŋ-é zugó ɓé ciŋi
Evd Psv-spit.Ipf-1SiO and hit.Ipf-1SiO-3PlSu people place little
'I was spit on and (then) the people hit me a little bit.'

(36) ke-mes-ána-ø lɔ́g-te gɛrs-í **ná** k-ɛkɛɲán-nɛ **ná**
1Su-do.Ipf-MT-PlnSu words-NSpRl bad.Stv-Adj and 1Su-argue.Ipf-1/3RPH and

zugo kɔ́n-nɛ-tɔ
people fight.Ipf-1/3RPH-PFl
'We (incl.) will do bad things and we will argue with each other and people will stab each other.'

A conjunction that indicates a sequence of events is **kóó**. It is understood to mean 'then' or 'following'.

(37) na té-ø ócá-ní **kóó** kú-túŋ-t-o
and be.Pf-3SiSuNa enough-! then 1Su-sleep.Pf-PlSu-xNa
'And it was enough. Then we slept.'

(38) tɛr-ú hó-t-a-ni **kóó** ɗák-t-ey-o
woman-Pl come.Pf-PlSu-3Na-! then hit.Pf-PlSu-1PlO-PFPf
'The women came, then hit us.'

The conjunctions **na** and **kóó** may be combined to show a sequence of events. When indicating a sequence of events, both words have a high tone.

(39) **ná kóó** dígán-t-a tɛr-ú-o sɛgén
and then accompany.Pf-PlSu-3Na woman-Pl-PVS again
'And then the women accompanied (her) again.

(40) **ná kóó** kú-dúrí-t-o úŋ-te ɗónɛ sɛgén
and then 1Su-dance.Pf-PlSu-xNa sleep-NSpRl one again
'And then we danced one more night (sleep) again.'

The conjunction **na** often occurs with irrealis mood verbs to indicate subjunction or purpose.

(41) k-ɔ́gɔ́r-i cún-oy **ná k-us-ø-o**
1Su-fry.Ipf-SiSu greens-Sg and 1SuJ-eat.Pf-SiSu-PFPf
'I fry the greens that I may eat them.'

However, when **na** and **kóó** combine to show purpose, **na** has a low tone as seen in examples (42) and (43).

(42) k-ɔ́gɔ́r-i cún-oy **na kóó** k-us-ø-o
1Su-fry.Ipf-SiSu greens-Sg and then 1SuJ-eat.Pf-SiSu-PFPf
'I fry the greens in order to eat them (for when I travel).'

(43) kú-gún-é-ø **na kóó** k-ubur-aɲ ʃán-ɔ́
1Su-come.Ipf-VI-SiSu and then Psv-spit.Ipf-1SiO evening-Obl
'I bring (her) so that I could then be spit on in the evening.'

The difference between the **ná** purpose construction and the **na kóó** constructions in (42) and (43) is that **na kóó** indicates a more specific purpose than **ná** alone.

5.2.2. Contrastive Clause

Lucassen and Last (1998:417) identify **cíɛ** as the Chai word indicating contrast; however, no such contrast word exists for Tirmaga. Contrastive Tirmaga clauses are usually indicated by the use of **no** in the second independent clause.

(44) bargólay kɔ́-ø arú-gie barŋesín **no** kɔ́-ø négís-ɔ
Bargolay go.Ipf-3SiSu Aru-Obl Barngesin but go.Ipf-3SiSu Negis-Obl
'Bargolay is going to Aru but Barngesin is going to Negis.'

(45) més-é tɛr-ú-o dámbí-té n-nɛ ná **no** kabar-í-ɔ
do.Ipf-3PlSu woman-Pl-PVS ritual-NSpRl SiPsd-3PlPsr and but eye-Sg-Obl

ŋání k-ar-ø-ró aɲe
not.yet/still 1Su-see.Pf-SiSu-NegPF 1SiP
'The women do their ritual (wedding custom) but by eye I have never seen it.'

However, the above analysis of contrastive clauses is not conclusive. Although, I have no examples in my data, I have heard sentences with a personal pronoun immediately following the subject to indicate contrast as seen in example (46).

(46) súrí-ø lɔ́m-ɛ kalámcí-ɲá ná sú-ɲá **yɔ** kalámcí-ɲá níŋgɛ
Suri-Pl have.Ipf-3PlSu kalishinikov-Pl and Dizi-Pl they kalishinikov not.exist
'The Suri have kalishinikov rifles but the Dizi do not.'

This makes me wonder if contrast is sometimes indicated by the presence of a personal pronoun immediately following the subject of the second clause. Further research is needed in this area.

5.2.3. Disjunctive Clause

Disjunction is indicated by the word **óo** as seen in examples (47)-(49). Example (47) is taken from a traditional Tirmaga story where God gave man and the snake a choice between death and life.

(47) hín-i rɛs-é **óo** hín-í silóy-ø
want.Ipf-2SiSu die-Nlr or want.Ipf-2SiSu shed.skin-Nlr
'Do you want death or the shedding of skin (life)?'

(48) sé k-ók-ø tubúŋ-ɔ **óo** díma-gie
say.3SiAux 3SuJ-go.Pf-SiSu Tubung-Obl or Dima-Obl
'Does he intend to go to Tubung or Dima?'

(49) ka in-te kɔ́n-ø-te á súrí **óo** ka á súyé iŋgare-ní
maybe SiCl-NSpRl shoot.Ipf-3SiSu-Sb is Suri or maybe is Dizi I.don't.know-!
'Maybe the one that shot was a Suri or maybe he was a Dizi, I have no idea!'

Lucassen and Last (1998:416) analyze the word **ka** to mean 'whether', since it occurs in sentences with the disjunctive word **óo**. While this might be a proper understanding in relation to the occurrence of **ka** in disjunctive sentences like (49), I think **ka** is better understood as meaning 'maybe'. It is more of an evidentiality particle, and is used in many different constructions when there is speculation or doubt about the occurrence of an event or action.

The most obvious example of this is seen with interrogative sentences. There are two evidentiality words that may optionally be added to the end of a question. These words are **ka** and **ɗa**. **ka** indicates doubt while **ɗa** indicates a high probability.

(50) alé kɔ́-tɔ **ká?**
future go.Ipf-2SiSu-PFI maybe
'Will you go?' (speaker thinks it is unlikely that the addressee will go)

(51) kɔ́-tɔ **ɗá?**
go.Ipf-2SiSu-PFI probably
'Will you go?' (speaker is fairly certain that the addressee is going, but wants to know how soon he is going)

Examples (52) and (53) are taken from the text in Appendix B at a point in the story where the groom is speculating what might happen if they have the final wedding ceremony.

(52) ale **ká** kó híndé kú-dúrí-ø wólólo-te ke-mes-ána-ø
future maybe Crd T/C 1Su-dance.Ipf-SiSu wedding-Sb 1Su-do.Ipf-MT-PlnSu

lóg-te gɛrs-í
words-NSpRl bad.Stv-Adj
'If in the future I dance the wedding, we may do things that are bad.'

(53) ná k-ɛkɛɲán-nɛ ná zugo kón-nɛ-tɔ **ká** kó
and 1Su-argue.Ipf-1/3RPH and people fight.Ipf-1/3RPH-PFI maybe Crd

més-é kó ɔŋ
do.Ipf-3PlSu Crd what
'And we will argue with each other and people will stab (shoot) each other and maybe they will do whatever.'

5.2.4. Comparative Clauses

The standard of a Tirmaga comparative clause is marked by the word **ɓɛ**. It is followed by the subject of the clause, and the quality by which the two are being compared. There is no overt marker of a comparison between the two.

(54) **ɓɛ**-á dórí-ø-á n-unú dórí-ø-á n-anú á-ø
place-SpRl house-Sg-SpRl SiPsd-2SiPsr house-Sg-SpRl SiPsd-1SiPsr be.Ipf-3SiSu

ciɲi
little
'At the place of (compared to) your house, my house is small.'

An interrogative sentence can also be used to make a comparison. In this case a different type of construction is used. Throughout the sentence, the adjective precedes the noun phrase and there is a zero copula.

(55) bu ŋɔr-ø óo bu hóy? bu ŋɔr-ø
big elphant-PVS or big forest.pig.PVS big elephant-PVS
'(Is) the elephant big or (is) the forest pig big? The elephant (is) big.'

(56) cal-í éwó óo cal-í híndé éwó níŋgɛ-yé? cal-í
good.Stv-Adj debt or good.Stv-Adj T/C debt Neg.exist.Ipf-Sb good.Stv-Adj

híndé éwó níŋgɛ-yé
T/C debt Neg.exist.Ipf-Sb
'(Is) a debt good or (is) it good when no debt exists? (Is) good when no debt exists.'

CHAPTER 6
CONCLUSION

This thesis is a descriptive sketch of the Tirmaga language covering the word, phrase, clause, and sentence levels. Although many facets of the language have yet to be explained and discovered, this is a first step in presenting some of the morphological and syntactic phenomena found in the language. It has been a process of discovery for me as the thesis has progressed raising more questions for me to explore when I return to the Tirmaga area.

At the word level, one area of focus is the number marking system for the count nouns. Nilo-Saharan languages are notorious for having complex number marking systems. Tirmaga uses four methods, which are singular unmarked-plural marked, singular marked-plural marked, singular marked-plural unmarked and suppletion. These four methods involve the use of eighteen different singular and plural suffixes. Tirmaga shows evidence that a noun may be marked for number according to the semantic group it is part of. This has been observed for another Surmic language known as Murle (Arensen 1992:105-140). The analysis presented here is only an initial attempt at deciphering the Tirmaga number marking system.

Tirmaga is a fairly polysynthetic language that has an agglutinative nature. Because of this the verb morphology is particularly interesting with the possibility of a total of seven affixes occurring on a verb root. Participant reference, valence adjusting devices, TAM markers, negation, and phrase final markers are all marked by affixes on the verb. The aspectual system is divided into imperfective and perfective. These divisions are marked by the use of different verb roots, subject suffixes, phrase final suffixes,

exclamatory particles, and tone in the perfective aspect to differentiate irrealis and realis modes. The perfective aspect has two major subdivisions of realis and irrealis modes. The realis mode verbs have a high tone on the verb root and are further divided into narrative and non-narrative moods, each mood having a separate set of subject suffixes. The irrealis mode verbs are marked by a low tone on the verb root and are further divided into the jussive/imperative and subjunctive moods.

There is no specific class of adjectives in Tirmaga, but most of the adjectives are stative verbs that have an -i suffix when used in a sentence. When these stative verb adjectives modify a noun, the head and the adjective are both marked with a specific or non-specific suffix depending on whether the head is known to the speaker or not. Attributive noun phrases work the same way as relative clauses. Relative clauses mark the head and the last word of the relative clause whereas the head and the adjective are marked in a noun phrase. There is no number agreement between the stative verb adjectives and the head as seen in some other Surmic languages. However, when one noun modifies another noun, number agreement does occur.

The way Tirmaga marks grammatical relations is also interesting because it sometimes has the appearance of a split ergative system. Most of the time Tirmaga exhibits the characteristics of a nominative-accusative system in which the subject and object are marked by constituent order only (SVO). Genitive and oblique cases are marked morphologically. However, occasionally a post-verbal subject is used to indicate a new episode in a story or a new topic. When this happens, the post-verbal subject is morphologically marked while the pre-posed object remains unmarked. This gives the appearance of ergative-absolutive marking. However, it is also possible for a morphologically marked post-verbal subject to occur with an intransitive clause therefore maintaining its nominative-accusative marking. More research needs to be done concerning

the role that tone plays in marking grammatical relations especially the morphologically unmarked nominative and accusative cases.

Tirmaga employs the use of several valence adjusting suffixes on the verb root allowing the number of arguments in a clause to increase or decrease. The valence increasing devices discussed are causative, benefactive, direction/goal, and an -ɛ suffix. More research needs to be done to determine how productive the causative suffix is. The direction/goal suffix indicates the movement of an action in relation to a particular scene. It indicates whether the action is going away from or toward the scene. More study is needed in this area because movement away from the scene is morphologically marked on some verbs but with other verbs it is assumed if the suffix does not occur. The valence decreasing devices discussed are reciprocal/progressive/habitual and passive affixes. The same suffix is used to indicate reciprocity, progressive and habitual actions. Tirmaga has an agentless passive that is formed by the use of a **kv-** person prefix and a direct object. A low tone also occurs on the prefix to indicate that it is passive. More research needs to be done in determining how the tone of the passive prefix affects other grammatical tones sometimes used to indicate person and mode.

Subordinate clauses are marked by a **-tɛ** clitic that occurs on the last word of the clause. The subordinate clauses discussed are relative, temporal, reason and a **hínaa** clause. The **hínaa** clause is found in true stories and marks the resolution of the conflicts leading up to the peak or climax. Relative clauses are also marked for specificity as the attributive noun phrases but in a different way. The **híndé** temporal clause serves a dual function in that it may mark the sequence of events or it may have a conditional meaning. More study is needed concerning the reason clauses because few of them are found in my data. The coordinate clauses addressed are conjoined, contrastive, comparative, and disjunctive clauses.

Although some discourse analysis was done while doing the research for this thesis, the discourse level is still an unknown realm in Tirmaga. As I do more research from a discourse perspective, I believe many of the questions that have arisen from this research will be answered.

APPENDIX A

A PUBLIC PRAYER

(1) babá-á n-áyo íh-í túm-ɔ́ komor-ú tumú
father-SpRl SiPsd-1PlxPsr exist.Ipf-2SiSu sky-Obl leader-Sg God

ŋa-kɔrɔ-ɲ-tá bu k-ɛŋɛrés-ø kɔrɔ-té
Dm-black.Stv-Nlr-Nr big 1Su-fear.Ipf-PlnSu black.Stv-Sb

ɓɛ́k-ø-ey-ó cɛ́ɛ́
guard.Pf-2SiSu-1PlO-PFPf well
"Our father you exist in the sky, leader, God, this big, black darkness that we fear, you guarded us (from it) well.'

(2) na méárɛ éré-isí-éy-o-tɔ́ ŋa-hɔ́l-din-tá ŋaní
and immediately ford.Ipf-Cau-1PlO-2PlSu-PFI Dm-white.Stv-Nlr-Nr not.yet/still

tɔ́r-ɛ-í oy-ɲá-á g-áyo túndo-té
add.Ipf-VI-2SiSu rainy.season-Pl-SpRl PlPsd-1PlxPsr on.top.of-Sb
'And now you cause us to ford this day that you still add to our years.'

(3) sará érí-á n-unú yesús kristós-i kɔ-ɗɔŋ-éɲ-ø
names child-SpRl SiPsd-2SiPsr Jesus Christ-Obl 1Su-raise.Ipf-2SiO-1PlnSu

góre
very
'By the names of your child Jesus Christ we lift you (praise you).'

(4) babá-á n-áyo íh-í túm-ɔ́ komor-u-á túmú-ɲ kó
father-SpRl SiPsd-1PlxPsr exist.Ipf-2SiSu sky-Obl leader-Sg-SpRl sky-Gn Crd

ba-ɲ n-á beré íh-í ŋa-kal-tá íh-í alé
ground-Gn SiCl-SpRl past exist.Ipf-2SiSu Dm-day-Nr exist.Ipf-2SiSu future

kíŋi íh-í án-i iɲe sɔŋ
far.off exist.Ipf-2SiSu be.Ipf-2SiSu you only
'Our father you exist in the sky, leader of the sky and the ground, the one who exists(ed) in the past, exists today and will exist in the future is you only.'

(5) kɔm-a kɔ-gɔɗ-ág-eɲ-ø iɲe
knee-Pl 1Su-stab.Ipf-1/2Bn-2SiO-PlnSu you
'We bow to you (stab our knees to you).'

(6) ogól-ø k-ogol-éɲ-ø iɲe
beg-Nlr 1Su-beg.Ipf-2SiO-PlnSu you
'Begs we beg you (We beg you begging things).'

(7) ǧín-á ki-gin-éɲ-ø iɲe kumúlo
ask-Nlr 1Su-ask.Ipf-2SiO-PlnSu you all
'Question/s we ask you, all.'

(8) ŋa-gí-tá méá ók-an-í jagar-ɛ na kó-hóɲ-o
Dm-PlCl-Nr now untie.Ipf-MT-2SiSu foot-Pl and 1Su-come.Ipf-PlxSu

gɔr-á n-unú-té karí yel-á bay kó túm-ɔ́
path-SpRl SiPsd-2SiPsr-Sb together love.Ipf-Nlr under Crd sky-Obl

ke-teris-an-t-íɲ iɲe kali kali sará érí-á n-unú
1Su-sing.Pf-MT-PlxSuJ-2SiO you day day names child-SpRl SiPsd-2SiPsr

yesús kristós-i
Jesus Christ-Obl
'These that you have untied feet and we have come down your road, may we sing love to you (praise you by answering with love) both down (earth) and in the sky always by the names of your child Jesus Christ.'

(9) babá-á n-áyo íh-í túm-ɔ́ ŋa-kal-tá ŋa-gí-tá
father-SpRl SiPsd-1PlxPsr exist.Ipf-2SiSu sky-Obl Dm-day-Nr Dm-PlCl-Nr

kó-hóɲ-o ŋáa-té kó-hóɲ-ɛ́-o g-á gɛrs-á
1Su-come.Ipf-PlxSu here-Sb 1Su-come.Ipf-VI-PlxSu PlCl-SpRl bad.Stv-SpRl
'Our father you exist in the sky, today these of us (excl.) who are coming here, we (excl.) bring specific bad things.'

(10) g-e g-áyo k-ésɛ́d-o sinis-i-té g-e
PlCl-NSpRl PlPsd-1PlxPsr 1Su-think.Ipf-PlxSu heart-Pl-Sb PlCl-NSpRl

g-áyo kó-lóm-o sabb-ícín-é-té g-e g-áyo
PlPsd-1PlxPsr 1Su-have.Ipf-PlxSu head-Pl-Obl-Sb PlCl-NSpRl PlPsd-1PlxPsr

kó-lóm-o-té kumúlo k-áj-an-eɲ-ø iɲe
1Su-have.Ipf-PlxSu-Sb all 1Su-give.Ipf-MT-2SiO-SiSu you

ɓɛ-á béré rɛs-ɛ-í kɛ-á ke-é-ø-ø maskél
place-SpRl long.ago die.Ipf-VI-2SiSu tree-SpRl Psv-say.Pf-SiSu-3SiO cross
'Our things that we think (in our) hearts, things that we have in (our) heads, all we give to you at the place that you died long ago, the tree called maskel (cross)'

(11) ŋa-kɛ-tonú béré ánda kú-gúɲ-o ágéó sábbo béré
Dm-tree-Fr long.ago TpP 1Su-look.Ipf-PlxSu we.PVS before long.ago

dérígis-ɛ-i íɲó béré kálágal-ɛ-i íɲó-té kumúlo
sweat.Ipf-VI-2SiSu you.PVS long.ago bleed.Ipf-VI-2SiSu you.PVS-Sb all

ít-ɛ-ø g-á g-áyo gɛrs-á-té
carry.Ipf-VI-3SiSu PlCl-SpRl PlPsd-1PlxPsr bad.Stv-SpRl-Sb
'That tree from long ago, we look at it before (from the front), the one on which you sweat long ago, on which you bled long ago, all those things, on which you carry our bad things.

(12) ŋa-kal-tá g-e kɔ́-lɔ́m-o sinis-i-té kumúlo
Dm-day-Nr PlCl-NSpRl 1Su-have.Ipf-PlxSu heart-Pl-Sb all

toɲ-ó-ey-ó ká-gár-a-yɛ sará érí-á
wash.Pf-2PlSu-1PlO-PFPf 3SuJ-disappear.Pf-3PlSu-PFJ names child-SpRl

n-unú yesús kristós-i
SiPsd-2SiPsr Jesus Christ-Obl
Today all the things that we have in (our) hearts, wash us so they may disappear.'

(13) komor-u-á túmú-ɲ kó ba-ɲ ŋa-kal-dá ŋa-ɲawá-á
leader-Sg-SpRl sky-Gn Crd ground-Gn Dm-day-Nr Dm-blood-SpRl

g-áyo-té mɛnɛŋ-í-te í-ø tóyé-té in-te
PlPsd-1PlxPsr-Sb spirit-Sg-NSpRl exist.Ipf-3SiSu inside-Sb SiCl-NSpRl

ɲúg-ey-ø sabb-í-té in-te ésɛ́ɗ-ag-ey-ø
shut.Ipf-1PlO-3SiSu head-Pl-Sb SiCl-NSpRl think.Ipf-1/2Bn-1PlO-3SiSu

lɔg-á gɛrs-á wó-ana-ø tum-ɔ́ ít-ana-na
words-SpRl bad.Stv-SpRl walk.Ipf-MT-3SiSu sky-Obl send-MT-?-3SiSu

setén-i na sé lɔg-á g-uɲú ŋa-kí-cik-o-té
satan-Obl and say.3SiAu words-SpRl PlPsd-2SiPsr Neg-1Su-hear.Ipf-PlxSu-Sb

sará-á yesús kristós-í aɲ ká-bán-á-ø k-ók-ø
names-SpRl Jesus Christ-Obl let 3Su-stand.Pf-MT-3SiSuJ 3Su-go.Pf-3SiSuJ

gó-gie ɓɛ-á béré k-ój-ɛsɛ-ø-ná
fire-Obl place-SpRl long.ago 3SuJ-put.Pf-3Bn-3SiSu-Nlr
'Leader of the sky and the ground, today this blood of ours, a spirit that exists inside, one that shuts us (our) heads, one that thinks bad things for us, that walks in the sky, that Satan sends and says your words we will not hear (does not want us to hear your words), by the name of Jesus Christ, let him stand up and go to the fire, the place that was put for him long ago.'

(14) babá-á n-áyo íh-í túm-ɔ́ wo-ø
father-SpRl SiPsd-1PlxPsr exist.Ipf-2SiSu sky-Obl come.Pf-2SiSuJ

yog-ø-ág-ey g-e hín-ag-éy-ø-té
tell.Pf-2SiSuJ-1/2Bn-1PlO PlCl-NSpRl want.Ipf-1/2Bn-1PlO-2SiSu-Sb
'Our father you exist in the sky, come tell us things that you want for us.'

(15) sinis-i wa kó-hóy-é-t-ó
heart-Pl recent.past 1Su-come.Pf-VI-PlSu-xNNa
'We (excl.) have just brought (our) hearts.'

(16) g-á g-áyo gɛrs-á kumúlo wa
PlCl-SpRl PlPsd-1PlxPsr bad.Stv-SpRl all recent.past

k-újúk-t-ó
1Su-throw.Pf-PlSu-xNNa
'We (excl.) have just thrown away all our bad things.'

(17) wo oy-éy sabb-í ná ki-cik-tó
come.Pf-2SiSuJ open.Pf-1PlO-2SiSuJ head-Pl and 1Su-hear.Pf-PlxSuJ

g-e g-úɲ-té
PlCl-NSpRl PlPsd-2SiPsr-Sb
'Come open us (our) heads that we may hear things that are yours.'

(18) kali ɓɛ-á bo tíí lug-éy-ø íɲó go-á
day place-SpRl big.SpRl continually fence.Pf-1PlO-2SiSuJ you.PVS fire-SpRl

n-unú iwó-éy-ø íɲó céé ziŋgó-te kumúlo
SiPsd-2SiPsr tend.Pf-1PlO-2SiSuJ you.PVS well work-Sb all

ɛ-á-ø-ey ná kɛ-tɛl-tí karí dír
help.Ipf-MT-2SiSuJ-1PlO and 1Su-exist.Pf-PlxSuJ together long.time

ko ɓé alé tór-é-í kɔró-ɲ-té ŋaní cag-té
Crd place future add.Ipf-VI-2SiSu black.Stv-Nlr-Sb not.yet/still green.Stv-Sb

sɛgén sará éri-á n-unú yesús kristós-i amɛn
again names child-SpRl SiPsd-2SiPsr Jesus Christ-Obl amen
'At daytime, fence us in a really big place with your fire, tend (lead) us well during all work, help us so that we may exist together for a long time, until you add darkness that is still green (another new night) again in the name of your child Jesus Christ. Amen.'

APPENDIX B

A TIRMAGA WEDDING STORY

(1) ééé méá té-ø lɔ́g-á g-aɲú g-á bɔrɔ́
yes now be.Pf-3SiSuNNa word-SpRl PlPsd-1SiPsr PlCl-SpRl distant.past

kú-ɗúm-án-é-í tɛr-i
1Su-get.Ipf-MT-VI-SiSu woman-Sg
'Yes, now it has become my words (story); the ones (about how) long ago I got a woman (wife).'

(2) híná kú-ɗúm-án-í tɛr-i kú-gún-é-ø na kóó
Evd 1Su-get.Ipf-MT-SiSu woman-Sg 1Su-come.Ipf-VI-SiSu and then

k-ubur-aɲ ʄán-ɔ́
1Su-spit.Ipf-1SiO evening-Obl
'(Truth) I got my wife, I brought her so that I could be (ritually) spit upon in the evening.'

(3) híná k-ubur-aɲ-í na ɗák-áɲ-é zugó ɓé ciɲi
Evd Psv-spit.Ipf-1SiO-SiSu and hit.Ipf-1SiO-3PlSu people.PVS place little
'(Truth) I was spit on[1] and (then) the people hit me a little bit.'

(4) íɗóg-aɲ-ɛ húŋ na té-ø ócá-ní
scare.Ipf-1SiO-3PlSu simply and exist.Pf-3SiSuNa enough-!
'They simply scare me and it became enough.'

(5) kóó kú-túŋ-t-o
then 1Su-sleep.Pf-PlSu-xNa
'Then we slept.'

(6) híndé k-úŋús-o-té ɓóroyo tɛr-ú hó-t-a bar-ɔ́
T/C 1Su-sleep.Ipf-PlxSu-Sb morning woman-Pl come.Pf-PlSu-3NNa night-Obl

ɓéley-ɔ n-á ɗá rɔk-ɛ-á kóbí-ɲá-ɲ
dawn-Obl SiCl-SpRl surprise make.noise.Ipf-3PlSu-SpRl chicken-Pl-Gn

tɛr-ú hó-t-a-ni
woman-Pl come.Pf-PlSu-3NNa-!
'When we sleep (had slept), at morning the women came, night, at dawn, (the time that is) the noise making (crowing) of the chickens, the women came!'

(7) kóó ɗák-t-ey-o
then hit.Pf-PlSu-1PlO-PFPf
'Then they hit us.'

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[1] Part of the Tirmaga marriage ceremony involves the bride and groom drinking a liquid made from a certain type of tree bark and spitting it out together. It is supposedly a very nasty tasting drink. Spitting on someone else is also seen as a sign of blessing among the Tirmaga people.

(8) híndé ɗák-éy-ɛ-te tɛr-í ŋé-ú kocí-ɔ
T/C hit.Ipf-1PlO-3PlSu-Sb woman-Sg run.Pf-3SiSuNa forest-Obl
'When they hit us, (my) wife ran into the forest.'

(9) na híndé ŋé-ø kocí-ɔ-te nɔ úlúguɲ-ø-ú ɗúl-ní
and T/C run.Ipf-3SiSu forest-Obl-Sb 3SiP hide.Pf-SiSu-3SiNa permanently-!
'And when she runs to the forest, she hid permanently (for good)!'

(10) aɲe ké-té-ø-wa aɲe sóŋ
1SiP 1Su-be.Pf-SiSu-1SiNa 1SiP only
'I became me only.'

(11) ná tɛ́r-o ŋani kú-dúrí-t-to
and woman-Pl not.yet/still 3SuJ-dance.Pf-PlSu-NegPF
'And the women had not danced yet.'

(12) ná age ké-tɛ́l-t-o-ni
and 1PlP 1Su-exist.Pf-PlSu-xNa-!
'And we existed (hung out)!'

(13) ɓo ár-ø-ú
outside clear.Pf-SiSu-3Na
'The outside cleared (clouds went away).'

(14) ká-lámí-t-o
1Su-search.Pf-PlSu-xNa
'We searched'

(15) ŋani ŋá-k-ór-o-o
not.yet/still Neg-1Su-see.Ipf-PlxSu-NegPF
'We still do not see (her).'

(16) gár-ú
disappear.Pf-SiSu-3SiNa
'She disappeared.'

(17) híndé kálí-ɔ kó-wók-an-o-te aɲda ɗá kó-ø-ni
T/C day-Obl 1Su-return.Ipf-MT-PlxSu-Sb Evd surprise come.Pf-3SiSu-!
'When we return at daytime, wow she came!'

(18) hínaa kun-ɔ-té age kɛ́-tɛ́l-t-o-ni
CR come.Ipf-PFI-Sb 1PlP 1Su-exist.Pf-PlSu-xNa-!
'When she comes, we existed (we became).'

(19) kóó ʃáɲ-ɔ́ kú-dúrí-o-ni kó tɛr-ú
then evening-Obl 1Su-dance.Ipf-PlxSu-! Crd woman-Pl
'Then at evening we dance with the women!'

(20) kú-dúrí-o kú-dúrí-o ŋoónu na k-úŋús-o-tɔ
1Su-dance.Ipf-PlxSu 1Su-dance.Ipf-PlxSu there and 1Su-sleep.Ipf-PlxSu-PFI
'We dance, we dance over there and we sleep.'

(21) na híndé k-úŋús-o na ɓo ár-ø-á ŋaŋá-te
and T/C 1Su-sleep.Ipf-PlxSu and outside clear.Pf-SiSu-3SiNNa like.this-Sb

jo-né kó-ø-ni
mother-her come.Pf-3SiSu-!
'And when we sleep and the outside cleared like this, her mother came!'

(22) kóó ɗígán-ø-ú tɛr-i
then accompany.Pf-SiSu-3SiNa woman-Sg
'Then she accompanied the woman (bride).'

(23) tɛri-á n-anú ɗígán-ø-ú
woman-Sg-SpRl SiPsd-1SiPsr accompany.Pf-SiSu-3SiNa
'She accompanied my woman (wife).'

(24) ɔ́k-ø-é
take.Pf-SiSu-VI
'(She) took (her).'

(25) na aɲe durí-ø-á n-anú gár-ø-ú-ní
and I dance.Ipf-Nlr-SpRl SgPsd-1SiPsr disappear.Pf-SiSu-3SiNa-!
'And my wedding was over.'

(26) ké-té-ø-wa ɗúl ná kóó dígán-t-a
1Su-exist.Pf-SiSu-1SiNa permanently and then accompany.Pf-PlSu-3Na

tɛr-ú-o sɛgén
woman-Pl-PVS again
'I (groom) existed permanently (sense of loneliness) and then the women accompanied (the bride) again.'

(27) ná kóó kú-dúrí-t-o úŋ-te ɗónɛ sɛgén
and then 1Su-dance.Pf-PlSu-xNa sleep-NSpRl one again
'And then we danced one more sleep (night) again.'

(28) hínaa kú-dúrí-ó-té té-ø ócá-ní
CR 1Su-dance.Ipf-PlxSu-Sb be.Pf-3SiSuNa enough-!
'When we dance, it became enough.'

(29) híndé kú-dúrí-o na té-ø ócá-té zugo
T/C 1Su-dance.Ipf-PlxSu and be.Pf-3SiSuNa enough-Sb people

ɗák-ø-ú hózzo góre
hit.Pf-SiSu-3SiNa hunger very
'When we dance and it was enough, people were very hungry.'

(30) té-ø ŋa-n-tá ɗák-ø-ú hózzo-te
be.Pf-3SiSuNa Dm-SiCl-Nr hit.Pf-SiSu-3SiNa hunger-Sb
'(It) became this (concerning) hunger hit.'

(31) aɲe kó kó-tówe-á-w sáy-ø ŋaŋá-te ah-a-te
1SiP Crd 1Su-display.Pf-MT-SiSuM leather.skirt-Sg like.this-Sb thing-Pl-NSpRl

anda ɗúmán-ɛ ná ŋoɲ-ɛ kú-gúɲ-i níŋgɛ
TpP get.Ipf-MT-3PlSu and grind.Ipf-3PlSu 1Su-look.Ipf-SiSu not.exist
'As I displayed the leather skirt like this, (Topic) things that they (could) get and they (could) grind, I look at their non-existence.'

(32) híndé kú-gúɲ-í ná áh-a ɗúm-án-é-á ná
T/C 1Su-look.Ipf-SiSu and thing-Pl get.Ipf-MT-3PlSu-SpRl and

ŋóɲ-ɛ-á níŋgɛ-nɛn-a-te hír-á kú dúrí-té
grind.Ipf-3PlSu-SpRl not.exist-Nlr-SpRl-Sb person-SpRl NCn dance-Sb

sé-ø-ú "k-ulal-t-ɛ́sɛ́ go húŋ ná hale
say.Pf-SiSu-3SiNa 1Su-perform.ritual.Pf-PlnSuJ-3Bn fire simply and slowly

ki-yik-té ale ká kó
1Su-convene.Pf-PlnSuJ-3Bn future maybe Crd
'When I look and there was nothing to get and grind, the dance man (wedding leader) said, "Let's simply perform the ritual on the fire for them and let's convene in the future maybe (to finish the celebration)".'

(33) na k-ulal-t-ɛ́sɛ́ go húŋ-ní"
and 1Su-perform.ritual.Pf-PlSu-3Bn fire simply-!
'"And let's simply perform the ritual on the fire!"'

(34) aɲe ŋaní ŋa-kí-hín-i-o cɔɔ ŋa-lɔ́g-tá bu
1SiP not.yet/still Neg-1Su-want.Ipf-SiSu-NegPf even Dm-words-Nr big

gesó-ɲ-té
beer-Gn-Sb
' I (groom) never want this big situation of beer's (don't want anything to do with beer).'

(35) cíg-ɛyɛ ale ká kó híndé kú-dúrí-ø wólólo-té
hear.Pf-2PlSuJ future maybe Crd T/C 1Su-dance.Ipf-PlnSu wedding-Sb

ke-mes-ána-ø lɔ́g-te gɛrs-í ná k-ɛkɛɲán-nɛ
1Su-do.Ipf-MT-PlnSu words-NSpRl bad.Stv-Adj and 1Su-argue.Ipf-1/3RPH

ná zugo kón-nɛ-tɔ ká kó més-é kó ɔŋ
and people fight.Ipf-1/3RPH-PFI maybe Crd do.Ipf-3PlSu Crd what
'"Listen! If in the future we (incl.) dance the wedding, we (incl.) will do bad things and we will argue with each other and people will stab (shoot) each other and maybe they will do whatever.'

(36) méá gesó ŋa-kí-hín-i-o-cí
now beer Neg-1Su-want.Ipf-SiSu-NegPF-!
'Now, I don't want beer.'

(37) á-ø ŋa-n-tá sóŋ kí-hín-í lɔ́g-á tumú-te
be.Ipf-3SiSu Dm-SiCl-Nr only 1Su-want.Ipf-SiSu words-SpRl God-Sb
'It's only this; I want God's words.'

(38) áɲ gesó ká-gár-ayɛ
let beer 3SuJ-disappear.Pf-3PlSuPFJ
'Let beer disappear.'

(39) ké-té-ø ŋaŋá húŋ
3SuJ-be.Pf-SiSu like.this simply
'Let it simply be like this.'

(40) nɔ cɔɔ ale á-ø tɛr-i-ci na áj-ey-ø
3SiP even future be.Ipf-3SiSu woman-Sg-! and give.Ipf-1PlO-3SiSu

tílá híndé ŋa-tɛr-ú-té-cí
corn.porridge T/C Dm-woman-Pl-Sb-!
'Even she will be a woman and give us corn porridge just as these women.'

(41) kó nɔ lɔ́g-té més-é tɛr-ú-o-te més-ø-tɔ
Crd 3SiP words-NSpRl do.Ipf-3PlSu woman-Pl-PVS-Sb do.Ipf-3SiSu-PFI

húndé n-nɛ-té
T/C SiPsd-3PlPsr-Sb
'And she will do the things that women do as if she were one of theirs.'

(42) aɲe g-á g-aɲú bɔrɔ kú-ɗúm-an-é-í tɛr-í
1SiP PlCl-SpRl PlPsd-1SiPsr distant.past 1Su-get.Ipf-MT-VI-SiSu woman-Sg

á ŋa-gi-tá sóŋ-ní
is Dm-PlCl-Nr only-!
'My things (story) from long ago (about how) I get a wife are only these.'

(43) wólólo ŋání ŋa-kú-dúrí-ø-o
wedding not.yet/still Neg-1Su-dance.Ipf-SiSu-NegPF
'I will never dance (the wololo part of) a wedding.'

(44) k-ulal-én-ø go sóŋ
1Su-perform.ritual.Ipf-MA-PlnSu fire only
'We (incl.) only perform the ritual on the fire.'

(45) més-é tɛr-ú-o dámbí-té n-nɛ ná no kabar-í-ɔ
do.Ipf-3PlSu woman-Pl-PVS custom-NSpRl SiPsd-PlPsr and but eye-Sg-Obl

ŋání k-ar-ø-ró aɲe
not.yet/still 1Su-see.Pf-SiSu-NegPF 1SiP
'The women do their (wedding) custom but by eye I have never seen it.'

(46) méá aɲe g-á g-aɲú á ŋa-gi-tá
now 1SiP PlCl-SpRl PlPsd-1SiPsr is Dm-PlCl-Nr
'Now, my things (story) are these.'

(47) té-ø ócá-ní
be.Pf-3SiSu enough-!
'It became enough.'

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LIST OF ABBREVIATIONS

Acc	Accusative
Adj	Adjective
Au	Auxiliary
Bn	Benefactive
Cau	Causative
Crd	Noun Coordinate
Dm	Demonstrative
Fr	Far
Gn	Genitive
I	Inherently Possessed
Ipf	Imperfective
J	Jussive
M	Motion
MA	Motion Away
MT	Motion Toward
n	Inclusive
Na	Narrative
NCn	Noun Connector
Neg	Negative
Nlr	Nominalizer
NNa	Non-Narrative

NSpRl	Non-Specific Relator
Nom	Nominative
Nr	Near
O	Object
Obl	Oblique
P	Pronoun
Pf	Perfective
PFI	Phrase Final Imperfective
Pl	Plural
PlCl	Plural Number Clitic
PFPf	Phrase Final Perfective
Psd	Possessed
Psr	Possessor
Psv	Passive
PVS	Post-verbal Subject
Rfl	Reflexive
Rl	Relator
RPH	Reciprocal/Progressive/Habitual
Sb	Subordinate Clause Marker
Sg	Singular
Si	Singular
SiSu	Singular Subject
SiCl	Singular Number Clitic
SpRl	Specific Relator
Su	Subject

T/C	Temporal/Conditional
VI	Valency Increaser
x	Exclusive
1	First Person
2	Second Person
3	Third Person
1/2	First and Second Person
3/1	Third Person and First Person Plural Inclusive

BIOGRAPHICAL SKETCH

The author earned his master of arts in linguistics at The University of Texas at Arlington in 1999. He graduated from Evangel College in 1986 with a bachelor of arts in biblical studies. In 1992 he became a member of the Summer Institute of Linguistics. He has worked for the Ethiopian Evangelical Church Mekane Yesus serving as the project coordinator for the Surma Translation Project since 1994. During this time he has been living among the Tirmaga people learning their language and culture, developing a Tirmaga-Chai orthography, producing literacy materials in the language, and starting literacy classes.