ASPECTS OF BANGIME PHONOLOGY, MORPHOLOGY, AND MORPHOSYNTAX

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I dedicate this dissertation to the Bangande for entrusting my ears and tongue with their language, my mind and heart with its meaning, and to Marshall Mathers for shining the light during the night so that I could write the words that were before only spoken.

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Preface

Research on Bangime is supported by National Science Foundation grant numbers PA 50643–04, BCS–0537435, DEL–0853364 “Dogon Languages of Mali”, Fulbright–Hays Doctoral Dissertation Grant “The Essentials of Language Documentation: The Pen is a Hoe and the Notebook is a Field”, the National Science Foundation Doctoral Dissertation Improvement grant BCS–1024347 “Doctoral Dissertation Research: Documentation of Bangime, a Language Isolate”, and the Indiana University International Enhancement Grant

Abbie Hantgan

ASPECTS OF BANGIME MORPHOLOGY, PHONOLOGY AND MORPHOSYNTAX

This dissertation provides a description of aspects of the phonology, morphology, and morphosyntax of Bangime. Bangime is a language isolate spoken in the Dogon language speaking area of Central Eastern Mali. Although the Bangande, the speakers of Bangime, self-identify with the Dogon, their language bears practically no resemblance to the surrounding Dogon languages. Bangime has limited productive morphological processes whereas Dogon languages are agglutinating, with productive morphemes to indicate inflectional and derivational verbal and nominal processes.

Bangime has a complex tonal system. General tendencies of the tonal patterns are described, with the many exceptions which frequently occur also outlined. Nominal tonal melodies are apparent in plural forms. Objects in verb phrases receive tonal agreement with tones on the verb in accordance with the subject of the sentence.

The tense, aspect, and mood system of the language is also complicated. Inflectional marking on the verb, auxiliaries, and the word order all contribute to the indication of the tense, aspect or mood of the sentence. An overview of these multifaceted phonological and morphological processes is provided in this dissertation with hypotheses as to how the language might have evolved.

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Procedure

The Human Subjects approval number is #08–13242. All the data included in this study were recorded using a Marantz PMD660 Professional Portable Digital Recorder with a Shure SM48S–LC Microphone and were analyzed using the program Praat. Microsoft Excel was used for plotting vowel formant values and storing lexical items. SIL Fieldworks was used to analyze texts. Transcriptions are either /phonemic/ or [phonetic] and are written in IPA format. Lexical items are listed in citation form unless otherwise noted. Long vowels are represented by the notation {vv}, with tone marked on both vowels of the sequence. Tones are marked with an acute accent for high {˝}, a grave accent for low {̀}, and a combination for rising {̌}. Morpheme boundaries are indicated with a dash { – } in between morphemes for suffixes and a equals sign { = } for clitics. The terms root and stem are defined by Aronoff (1994). A superscript {ⁿ} following a target vowel or approximant is used to represent nasality. When available, two examples are shown, otherwise the sole example found is shown. TAM markers are abbreviated and translated. Postpositions have varying meanings which do not translate directly so PP is used in lieu of a gloss. Hyperlinks are underlined and written in blue throughout the dissertation which lead to the section mentioned.

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Abbreviations

COMP	Complementizer
CPL	Completive
ˡCV	Downstep
FUT	Future
GP	Generic Present
GEN	Genitive
H	High
IMP	Imperative
IMPV	Imperfective
INC	Incompletive
IRR	Irrealis
L	Low
OBJ	Object
PRF	Perfect
PFV	Perfective
~2	Persons other than second
PP	Postposition
PROH	Prohibitive
RED	Reduplication
RV	Root Vowel
STAT	Stative
SBJ	Subject
T	Transitive

Chapter 1. Introduction to the Bangime Language and Speakers

1.1 Introduction

Bangime, [bàŋgímɛ̀] or [bàŋgíɛ̀], is a language isolate spoken in the mostly Dogon-inhabited area of Central-Eastern Mali. The language was recently separated from its classification as a Dogon language, an unclassified branch of languages within Niger-Congo. The estimated total number of Bangime speakers ranges between 1,200 (Lewis 2009) and 3,000 (Blench 2007). There are seven Bangime-speaking villages. The data are from my fieldwork done in the largest village, Bounou. There is no published description or documentation of Bangime other than Roger Blench's word list and language overview (Blench 2007).

The description of Bangime is a priority for West African linguistics primarily because of its status of an isolate or as a potential missing link to discovering the history of the Dogon people and their languages. While the purpose of this dissertation is to provide a description and analysis of aspects of the Bangime phonological, morphological, and morphosyntatical system, and not to justify its status as a language isolate, I posit that Bangime did have contact with the Dogon languages at a very early stage in the development of the Dogon languages. A possible source of that contact includes either the ancient Tellem people, remains from whom are found surrounding the Bangande villages, or another pre-Dogon group. Another option is that of integration with other ethnicities during the Trans-Atlantic slave trade in the 15th century. While I do not consider Bangime to be a Dogon language, it is important to note that there are similarities in the lexicon that are the the result of more than simple borrowings.

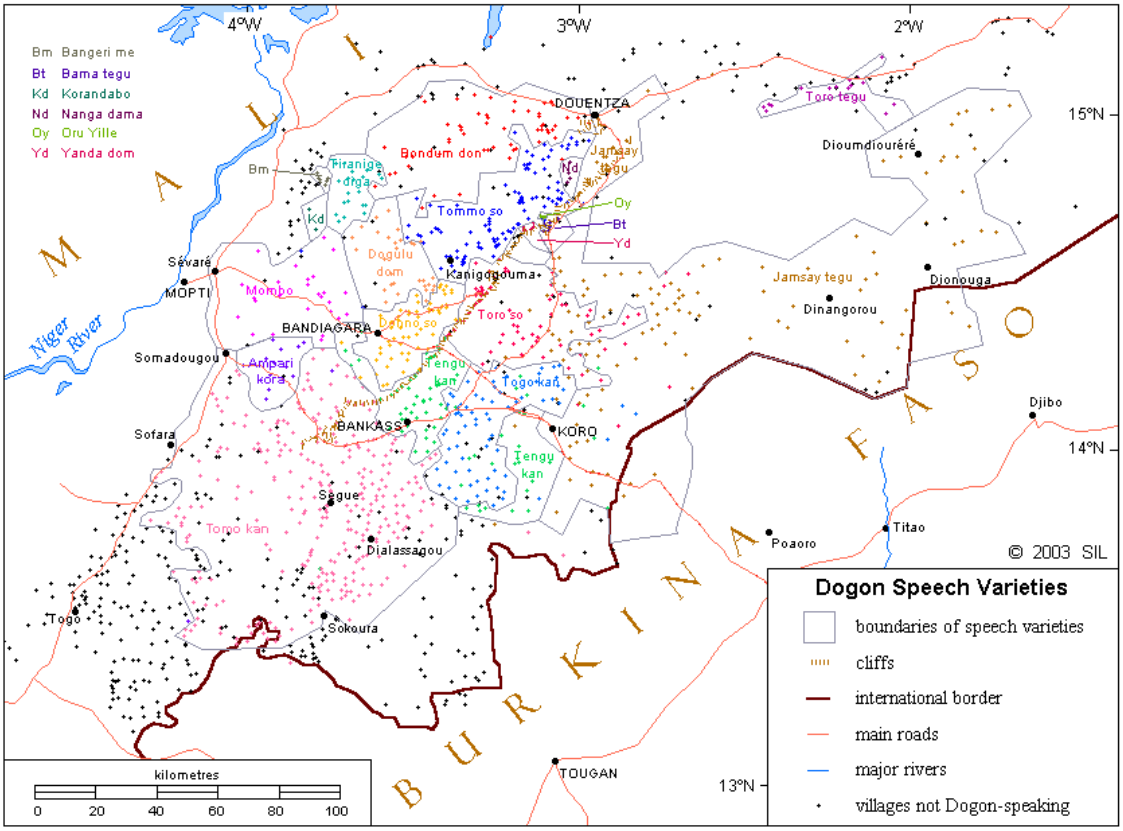
This introductory chapter is organized as follows, §1.2 - §1.6 present the Bangande, the speakers of Bangime, and indicate their location and demographics. Section 1.7 discusses the

language's previous classification as a member of the Dogon language family. Section §1.8 compares Bangime to surrounding languages, with special attention to differences from the Dogon language group. Section §1.9, the conclusion to the chapter, reveals 'deeper' aspects of Bangime and outlines hypotheses as to how Bangime became a divergent language. The information concerning the ethnography and history of the Bangande is extracted from texts which are cited throughout the chapter and included in their entirety in the appendices.

1.2 Location

The Bangande live in the cliffs among the Dogon and self-identify with the Dogon ethnicity. The area in which Bangime is spoken relative to other Dogon languages is illustrated in (1).

(1) Dogon Languages Map (Hochstetler, et al. 2004: 57)



As shown on the map, surrounding villages speak Tiranige, a Dogon language, Nionónkhe, a dialect of Bozo, one of the Mande languages, and Fulfulde, a language of the

Atlantic branch, all of which are in the Niger-Congo language phylum. The Bangande are familiar with each of these languages, but they mainly speak either Fulfulde or Bamana as the preferred method of communication between ethnic groups, including the Dogon. In addition, according to oral histories,[1] people of the Bozo ethnicity of the Mande group once lived where the Niononkhe speakers, also known as Jenaama, are found, although the Bangande are not familiar with any Bozo language.

The Bangande claim that they originated among the Dogon as far back as Mande origins. The Dogon claim a common ancestor with the Mande people and are estimated to have lived among the Mande between 1230 and 1430 AD (Mayor, et al 2005).[2] From there, according to the chief of Bounou, the largest of the seven villages, the Bangande came from a Dogon village called Kanugogina, near modern-day Sanga.[3] Bounou is considered to be the capitol of the seven Bangande villages.[4] From there, they moved as one clan and founded a village at a site atop the cliffs of their present location, known as Yege. It is estimated by the village elders that the Bangande moved from Yege at least five hundred years ago.[5] From there, they split into seven villages, which are now situated in the District of Goundaga, Commune of Kargue. There have been conflicts over the ownership of the valley, described in narratives (Chief 1.9).

These villages are listed and specifically located at the following coordinates (North/West): Bounou, the largest (14:47:50/ 3:45:40), Baraa (14:48:20/3:45:30), Nyana

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[1] Extract from Appendix VII: Text XIII: Tiga 3
[2] Appendix VI: Chief map (history of from where Bounou moved), Text: 'Bangande migration story'
[3] Appendix VI: Chief map (history of from where Bounou moved), Extract from text: 'Origins of Bounou'. Dieterlen (1941) describes a similar dispersal of the Dogon populations from a village called Kani-na.
[4] Appendix I: Chief III, Lines 4 - 6
[5] This estimate is based on oral histories of how and when colonialism and the slave trade in the respective villages began. (extracts from texts: 'Tiga story about People going to Tete', 'Chief 1 - 10') There are also a number of Tellem houses and cave paintings which the Bangande claim to have found in the area upon settlement; this requires the expertise of an archeologist to identify the age of the paintings and houses to discern when they were created.

(14:48:10 3:46:50), Digari (14:47:40/ 3:46:50), Doro (14:49:20/ 3:47:20), Dieni (14:47:10/ 3:45:50), and Due (14:48:20/ 3:47:00) (Hochstetler, et al. 2004: 59). The villages are geographically isolated. Access to the villages is gained by travelling on the single paved road, approximately 25km south-east of Konna, that stretches north-east from Bamako, the capitol of Mali, to the city of Gao. These villages are situated in the north-west of the Dogon plateau, and are reached by an unpaved road, located on the main road between Sevaré and Gao. Upon reaching Konna at approximately 660 kilometers north east of Bamako, one then travels on an unpaved path through the Jewol valley towards the Bandigara cliff range; during the rainy season, (June - September/October), however, this road can only be accessed by a five-hour donkey cart ride, due to the flooding of the valley. The path ends at the cliff face where the journeyer then ascends to the village of Bounou, the largest of the Bangime-speaking villages.

1.3 Previous Research on Bangime

Since research began on the Dogon languages and culture in the 1950's, linguists and anthropologists have noted the distinctiveness of Bangime, although it was classified within the Dogon language group. The Bangande self-identify with the Dogon people and their languages. Bangime was reclassified in 2009 as one of the world's fifty isolate languages; a language with no traceable connections to any other living language (Lewis 2009). This classification was due in large part to the work of Roger Blench (2005, 2007), Stefan Elders (2006), and Hantgan (2009).

Prior to my work, the most recent fieldwork on Bangime was done by the late Stefan Elders, who spent approximately six months in Bounou from 2006 to 2007.[6] Roger Blench (2005, 2007) gives an overview of the language, and it is to him that the 'discovery' of the

[6]Stefan Elders' notebooks are available at Leiden University library.

language is credited, although Plungian & Tembine (1994) and Calame-Griaule (1956) mention the language briefly in their overviews of the Dogon languages. In addition, three word lists have been published: Bertho (1953: 433 - 434) includes an 80 item word list under the language heading Yɛni, Durieux's (1988) 100 item list is included in Hochstetler et al. (2004: 99 -105), and Blench includes an extensive vocabulary list in his summary of the language.

Bangime has been mentioned briefly in the literature under various names, Dyɛni or Yɛni (a name of one of the Bangime-speaking villages) (Bertho 1953), Numadaw or Numa-daw (DNAFLA/DRLP 1981; Plungian & Tembine 1994), or Noumandan (Togo 1984) (a part of the Bobo greeting sequence),[7] Elebo (origin unsure, possibly referring to the word *lo6̀6o*, a Fulfulde word meaning 'beautiful') (Plungian & Tembine 1994), and most commonly, Banger–me, Bangeri–me, Bangeri me, or Baŋgi Me (Blench 2005, 2007; Calame-Griaule 1956; Hochstetler, Lee, & Durieux-Boon 2004; Plungian & Tembine 1994). The speakers call their language [bàŋgímɛ̀] and find the pronunciation [bàŋgérímɛ̀] unacceptable. However, similar pronunciations are found in one text, Chief 5, lines 5, 7.

The term the speakers use to refer to themselves, [baŋga], means 'hidden', 'furtive', or 'secret' in many Dogon languages, and the bound suffix [–mɛ], among other things, refers to languages, in Bangime. The speakers of the language refer to their ethnicity as Bangande [bàŋgà=ndɛ́] (the afore referenced [baŋga] plus the plural clitic), within the Dogon ethnic group.

I have chosen to use the endonym, Bangime [bàŋgímɛ̀][8] written without a space between 'Bangi' and 'me', to reference the language and Bangande for the speakers of the language. I translate the name of the language as 'secret language' in a combination of Dogon and Bangime.

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[7]It is common to name Dogon languages by their introductory greeting interjection; however this greeting is part of the Bobo language.

[8] The reason for the realization of /bàŋgérímɛ̀/ to [bàŋgímɛ̀] as an addition of a suffix [-rV] is explained in §3.2.7.

1.4 Methodology

My fieldwork to date includes an internship from June - August, 2008 in Bounou and Douentza funded by the Indiana University International Enhancement Grant, collection and analysis of data for the grammatical sketch and lexicon from May - August 2009 in Bounou and Sevaré supported by the National Science Foundation grant numbers PA 50643–04, BCS–0537435, DEL–0853364 "Dogon Languages of Mali"and dissertation research from June 2010 to January 2011 in Bounou and Sevaré, funded by the Fulbright–Hays Doctoral Dissertation Grant "The Essentials of Language Documentation: The Pen is a Hoe and the Notebook is a Field", and the National Science Foundation Doctoral Dissertation Improvement grant BCS–1024347 "Doctoral Dissertation Research: Documentation of Bangime, a Language Isolate", and from June 2012 - January 2013 in Burkina Faso with the support of the National Science Foundation grant numbers PA 50643–04, BCS–0537435, DEL–0853364 "Dogon Languages of Mali". My time was equally divided between Bounou the cities of Douentza and Sevaré. The Dogon and Bangime Linguistics Project base was situated in Douentza to better access the Dogon villages until the political situation caused the north of Mali to become unstable and we moved to Sevaré. My schedule is such that I spend two weeks in Bounou and two weeks in the city. Before acquiring a generator during my dissertation research, I did not have access to electricity and thus recorded sparingly and wrote all of my data by hand in notebooks which I re-transcribed into the computer during my time in the city.

Methods of fieldwork included direct elicitation for four hours each morning with one of two primary consultants. Elicitation sessions were conducted mostly in Fulfulde, but also in French and Bamana until such time as I was proficient in Bangime during my third research trip. Afternoons were spent gathering and recording texts and songs, finding and identifying flora and

fauna species, and visiting and photographing culturally significant sites with secondary consultants. Other methods included elicitation of lists such as recipes, inquiring about descriptions of events, and participating in conversational speech. The texts which were gathered during these sessions were transcribed, glossed, translated, and analyzed through the help of the primary consultants. I instructed two secondary consultants to write and read in Bangime and one was successful at transcribing his own tone. Data were gathered from the two primary consultants Ali Karambe and Tiga Baade during the three research trips spent in Bounou from (June - August) 2008, (May - August) 2009, (July - December) 2010, and from Adama Dicko #2 and Chief Soh Dicko in Burkina Faso in (June - December) 2012. Additional consultants included Adama Dicko #1, Adama Dicko #2, village Chief So Dicko, Ende Yalkwe, Baba 'Koori' Dicko, Kondi Baade, Samba Basiri, Sunko Bakoro, Fatimata Dicko, Telema Baade, Julde Koulibaly, Kadija Basiri and Bintu Dicko.

The lexical data used in the study are from the Bangime Dictionary, which can be found at the Dogon and Bangime Linguistics website, www.dogonlanguages.org. Lexical items for the dictionary were either elicited or are from texts. All lexical items are stored in the SIL Program FieldWorks which has been an invaluable resource for this project due to its ability to interlinearize narratives and add words to the lexicon. Many, but not all, of the narratives I collected are included in the appendices of this dissertation, interlinearized with FieldWorks.

Originally, 4,477 lexical items were obtained out of the 7,589 terms listed in the Comparative Dogon Lexical Spreadsheet. While each word in the spreadsheet was asked, the unattained items had no Bangime equivalents. However, the final version of the Bangime lexicon contains only 2283 items. The bulk of this was due to multiple entries for a lexical item which were merged into one entry with multiple meanings. Also, calque translations were

omitted. Some words referring to sacred practices or beliefs were omitted from the dictionary by request of the village elders. Flora and fauna were elicited by Stefan Elders and subsequently me using species lists and assistance from Jeffrey Heath. I collected specimens with the assistance of my language consultants and Fulani herders for the more unusual species which were identified or confirmed by either Dr. Heath or the botanists with whom he collaborates.

All the data used in this dissertation were recorded using a Marantz PMD660 Professional Portable Digital Recorder with a Shure SM48S–LC Microphone and were analyzed using the program Praat. Vowel quality, vowel and consonant length, nasalization, and tone were first transcribed impressionistically and subsequently recorded and analyzed digitally by plotting vowels, using pitch tracks, and measuring length.

Collaborations are underway with geneticists who have recently published information concerning the genetic uniformity of the Dogon people (Tishkoff, Reed, Friedlaender, Ehret, Ranciaro, Froment et al. 2009). Floyd Reed is a colleague of mine from college who made one exploratory trip to Mali while I was there in December 2010, and is in the process of making contacts to secure permissions and funding for this potential collaboration to continue.

1.5 Demographics

Some Bangande who practice Islam are found among the villages which were formerly situated atop the cliffs but have now moved down to the plains. Bounou remains atop the boulders due to the amount of water which inundates the surrounding canyon during the rainy season, and thus, probably because of its geographic isolation, villagers who practice animism are found there. This is of interest linguistically as some lexical items associated with traditional practices required the permission of the village elders or were forbidden to be recorded in any manner (written or oral) until they gained my full trust during my last field trip to Bounou in 2010.

The Bangande are mainly farmers, although many do perform some animal husbandry and hunting activities. Blench (2007: 3) states, “their distinctive names for crops suggest that they were farmers prior to the expansion of Dogon in their area”. This is of interest historically because it also implies that the Bangande may have lived among the Bandiagara cliffs before the Dogon occupied the area, as few Dogon loan words for agriculture items are found in Bangime. Examples of crop names are found in the lexicon, available at dogonlanguages.org.

1.6 Ethnography

The Bangande consider themselves and their language to be Dogon as well, despite the fact that there is no mutual intelligibility between Bangime and surrounding Dogon languages, and the Dogon people’s constant insistence that the Bangande are not Dogon. The Bangande dress similarly to the Dogon, such as the distinctive women’s indigo-dyed, hand-woven cotton fabric, silver earrings worn on the side of their noses and along their ears. The men, particularly the elders, all carry the leather hide and snake skin bag, unique to Dogon men.

Although Islam is beginning to become pervasive in the community, beer continues to be brewed, but not the commonly found Dogon millet variety. Among the Bangande, only sorghum beer is found. The Bangande do not have a tradition of using masks, unlike many of the Dogon people, and yet many Dogon in the north-western sections of the escarpment do not have any tradition of using masks. However, the cowry shell and leather uniforms which the Bangande men wear on certain occasions are reminiscent of Dogon-performance attire. Familiar from Dogon culture are carved locks; however, carved doors and statues are absent, perhaps due to Islamic influence. The caves surrounding the villages, remains of villages formerly inhabited by the Tellem, are used, although less and less frequently, for the storage of grains and as burial

grounds.[9] Otherwise, there is no evidence of additional traditional rites unique to the Dogon, and some of the Bangande customs seem particular to the Bangande themselves, such as a hunting ritual, [lɔ̀ɔ̀ŋgá],[10] performed when the rain has lapsed during the rainy season.

There are two classes among the Bangande, the royal and the slave class. According to oral histories,[11] many people of various ethnicities in Mali were kidnapped by Fulani enslavers during the time of the trans-Atlantic slave trade in the 15th century. Children were often taken when they wandered from the village or went out seeking water and wood for cooking, by placing a sack over their heads and carrying them on horses to a faraway place so that they could not find their way back home. Some of these captives would escape, and the Bangande are said to have allowed slaves of other ethnicities to integrate into their culture, and learn their language.

Although it is currently impermissible to buy, sell, or trade slaves in Mali, slaves are still owned by some Bangande families. Slave ownership follows the mother; it is compared to that of animal husbandry: If a Bangime has a male slave, he owns none of his descendants. Marriages are only between members of the slave caste. A female slave owner must pay a price to a male slave owner in order to allow her to marry him. All of their children belong to the owner of the female slave. If a slave owner has only male slaves and they die, he owns no more slaves, but if an owner owns a female and she has children, those children remain his slaves.

There are differences in the speech of descendants of the slave and royal classes. The 'true' Bangande, members of the culture who can trace their lineage back to the original settling of the clan in this area, claim that the reason is because they refuse to share authentic Bangime

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[9] Photographs of these areas and the cave paintings found within them as well as other relevant sites will be made available to the public in a future publication.
[10] This word is a non-integrated borrowing from Dogon (Bunoge).
[11] Appendix VII: Tiga Texts: Text XI: Tiga 1

with outsiders, members of the slave class included. For instance, the complexities in tonal patterns described in this dissertation are based on the speech of members of the royal class. The tonal patterns found in the speech of the descendants of the slave class are more regularized.

1.7 Classification

The classification of Bangime has been problematic for some time and for various reasons. Although Bangime was classified as a Dogon language within Niger-Congo (Gordon 2005; Williamson & Blench 2000), it has recently been classified as a language isolate (Lewis 2009). This is primarily because the Bangande self-identify with neighboring Dogon people and their language group. However, Bangime bears no resemblance to Dogon except in some vocabulary items and grammatical markers. Further, while some Bangime words are similar to words found in Dogon languages, there is no one language in which find all of these lexical similarities may be traced, nor are the similarities are found solely among the languages spoken in the Bangime-speaking area. The estimated twenty Dogon languages and sixty dialects have limited contact with one another and are each geographically isolated along the Bandiagara cliff range.[12]

Each of the researchers who has encountered Bangime since the 1950's has noted, even in his or her brief time investigating the language that Bangime clearly lies outside the realm of what constitutes Dogon. Bertho (1953: 413 - 414), one of the first to note variations among the Dogon languages, placed Bangime apart from them due to the lack of shared core vocabulary items.[13] Bertho also stated that Bangime is markedly different from the Mande or Fula languages spoken in the area. He hypothesized that, if Bangime is related to the Dogon languages, it split off at an early stage in the language's development. He thus writes,

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[12] See http://llmap.org/search.html?qs=Dogon for the exact coordinates of the areas in which each language is spoken.

[13] His comparative word list is included in Appendix II.

> "Le dialecte Dyéni ou Yéni des Dogon du canton de Leol-Géou est le plus aberrant ; néanmoins, il se distingue nettement du Bozo-Mandé et du Peul. Il possède d'ailleurs autant de radicaux Voltaïques que les autres dialectes Dogon ; mais ces radicaux ne sont pas les mêmes radicaux Voltaïques que ceux conservés par les autres dialectes Dogon, comme si le dialecte Dyéni s'était séparé d'ancêtre Voltaïque soit à une autre époque que les autres dialectes, soit en un autre point du groupe Voltaïque, lequel, comme on le sait, s'étend de Sikasso au Soudan jusqu'à la frontière de Nigéria."[14]

Blench (2005: 16) concurs that Bertho's word list is fairly accurate and does not show any evidence for cognates among the Dogon, or Gur, languages, since, at that time, the Dogon languages were considered to be part of the Gur, or Voltaique, group of languages.

Blench (2005: 15 - 16, 2007: 3) was the first to state that Bangime is an isolate, based on his own and Hochstetler's (2004: 99 - 105) comparative Dogon word lists showing that lexical similarities with Dogon are below ten percent. The lowest percentage of lexical similarities among the 20 Dogon languages is 40 percent (K. Prokhorov, p.c.). According to my own data, out of 262 core, or resistant to borrowing, lexical items, 30 Bangime words have, other than minor vowel and tonal differences, identical equivalents in Dogon languages, i.e. about 11%. The entire Swadesh list for Bangime compared with Dogon is given in Appendix I. Note from the representative comparisons in (2) that the Dogon languages listed are geographically dispersed (data from Heath 2013).

(2) Lexical Comparisons

	Gloss	Bangime Word	Dogon Word	Dogon Language
a.	father	bɔ́ó	bɔ́ɔ̀	Ben Tey, Bankan–Tey

[14] "The Dyeni or Yeni dialect of the Dogon from the Leol–Géol canton shows the highest deviation from the norm, nonetheless, it is clearly distinct from Bozo-Mande and Fulani. It also possesses as many Voltaic [Gur] roots as the other Dogon dialects; but these roots are not from the same Voltaic roots as those conserved by the other Dogon dialects, as if the Dyeni dialect had parted from its Voltaic ancestor either in a different period from the other dialects, or at a different location within the Voltaic group, a group which, as is well-known, extends from Sikasso in the Sudan up to the borders of Nigeria." (my translation)

b.	hair	kúɥì	kùjá	Bankan–Tey
c.	little	dágà+jɛ̀	dágáj, dáɣá	Nanga, Gourou
d.	braid	múnd–á	mùnd–ó	Nanga
e.	mouth	nɔ́ɔ̀	nɔ̀ɔ́	Nanga
f.	paper	dɔ́ɔ̀	dɔ́ɔ̀	Dogul Dom
g.	shave	kàá(–rà)	káá	Tommo–so
h.	garlic	túúmɛ̀	túmɛ̀, túmè	Najamba, Mombo
i.	forest	dúgú	dùgú, dògù	Tiranige, Bunoge
j.	slave	kɔ́mɛ̀	kɔ́mɛ́, kɔ́mbɛ̀	Tiranige, Bunoge

As I state in the introduction, I hypothesize that Bangime had contact with Dogon at an early stage in the development of the Dogon languages. This is because, based on my current study of Bangime phonology, I show that many of the core lexical items, shown in Appendix III, with representative examples in (3), actually do closely resemble those found in some Dogon languages, having undergone consistent sound changes.

(3) Lexical Comparisons

	Gloss	Bangime Word	Dogon Word	Dogon Language
a.	who	jéà	àjé, àà	various
b.	rain	jóɔ̀^{n}	jàrí, àjǎn	Ben Tey, Nanga, Najamba
c.	man	ɡóɔ̀^{n}	àr̃á	various
d.	tie	bàà	mɔ̀ɔ́	Bankan Tey
e.	wilderness	nàá	ɔ̀r̃ɔ́ɔ́	various

The suggested sound changes for the words in (3) are shown in (4) and the processes by which the Dogon words could have evolved into words in Bangime and vice versa are in (4).

(4) Suggested Sound Correspondences

	Dogon	Bangime
a.	j	j
b.	ɾ̃	g
c.	m	b
d.	n	ɾ̃

(5) Integration of Borrowings

	Gloss	Proposed Constraint	Example of Change
a.	who	*onsetless syllables	Dogon aje → jea Bangime
b.	rain	*nasalized low vowels	Dogon ajan → jaa^{n} → joɔ^{n} Bangime
c.	man	*sonorant onsets	Dogon aɾ̃a → ɾ̃aa^{n} → gaa^{n} → goɔ^{n} Bangime
d.	tie	*nasalized low vowels	Bangime baa → maa^{n} → mɔɔ^{n} Dogon
e.	wilderness	all rules:	Dogon ɔɾ̃ɔɔ^{n} → aɾ̃aa^{n} → ɾ̃aa → naa Bangime

Onsetless syllables, common among Dogon languages, are uncommon in Bangime. As in (5a), metathesis has occurred to form acceptable syllables in Bangime from those in Dogon. Bangime words do not have codas. The example (5b) would undergo metathesis to form an onset, and then the final nasal would become nasalization on the preceding vowel. Words with nasalized [a] are found in Bangime, but nasalization of vowels is restricted. A mid vowel becomes [–ATR] before a liquid, nasal, or nasalization. The example (5c) would undergo the same metathesis process of (5a) and (5b), but sonorant onsets, particularly [r], are not permitted in Bangime. The change in place and manner of articulation from [r] to [g] is unusual, triggered by the fact that the rhotic onset is impermissible, another instance is found in Bangime of a rhotic alternating with a velar stop. The augmentative marker [bɔɾ̃o] is derived from the adjective

[bogo] ‘big’.[15] Next, by a process of vowel lowering, mid back vowels in Dogon systematically appear as low in Bangime, and vice versa. As with (5b), the vowel raises to prevent a nasalized low vowel from emerging. The final two cases seem to reverse the process.

Many Dogon languages do not have any words with a phonetic final, nasalized, low vowel. Again, the change in manner of articulation in the initial consonant of the word is without explanation, but the vowels of the Dogon word are assumed to be nasalized, as the word begins with a nasal. Perhaps it is for this reason that the vowels could not remain as low. The final example (5e) incorporates all the proposed constraints. Again, it is proposed that the nasalization of the [r̃] spreads onto the subsequent vowels. Metathesis occurs to provide an onset, but a rhotic is not an acceptable onset, so the nasalized [r̃] becomes [n]. Since the change from nasalized [r̃] to a nasal [n] did not occur in (5c), it appears that different processes occurred in words which originated in Bangime and those which came from Dogon. Three different scenarios seem plausible from the lexical similarities: (1) Bangime could have borrowed words from a Proto Dogon language, (2) a Proto Dogon language could have borrowed words from Bangime, or (3) both a Proto Dogon language and Bangime could have borrowed words from a third source language.

Evidence for borrowing from Dogon also can be seen in plurals. In Bangime, many nouns have a frozen, diminutive suffix. In polysyllabic words with a lexicalized diminutive suffix, a root-final vowel changes its value when the diminutive suffix is followed by the plural clitic. For example, a root-final [e] in the word ‘star’ [tòrè–mɛ́] becomes [o], [tòrò–mì=ndɛ́].

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[15] The reason that the marker [bɔr̃o] is considered to be an augmentative, more closely bound to the noun than the adjective [bogo] is based on its tonal effects, specifically (a) its tonal effect on the noun it follows and (b) the effects of the noun on the marker. A curious example of the augmentative being reduplicated was found in a text [nnii kama ŋ kindu pɔriɛ bɔr̃o bɔr̃o], ‘they dug a very big well’. Otherwise, the behavior of the augmentative resembles that of a morpheme which is tightly bound to the noun stem.

I argue that the underlying form for ‘star’, and the other roots in which a change is observed, can be viewed in the plural form. In many Dogon languages, the word ‘star’ is [tóró]. The reason why the proposed underlying back vowel shifts front is one of identity harmony, as we see that a word which ends in [o], such as [dòrò] ‘Doro (village)’, does not front the root-final vowel to [e] before suffix [–ma] with a back vowel, [dòrò–má], ‘inhabitant of Doro’, not [*dòrè–má].

The word ‘onion’ [ʒágé–è], plural [ʒáɣá–mì=ndɛ́], shows a similar pattern. The word ‘onion’ may also be a borrowing as it is pronounced [ʤábà] in some Dogon languages and Bamana, as [gabu] in Fulfulde. The final vowel is apparent in the plural form.

Data documented by Roger Blench (2005, 2007), Stefan Elders (2006), Hantgan (2009) and my work in progress are beginning to show that, while Bangime is not a Dogon language, there is a hitherto unseen connection.

Indeed, as Calame-Griaule (1956: viii) states,

> “D’un autre point de vue, l’étude du petit dialecte appelé /báŋeri mé/, parlé par une petite fraction de Dogon à l’extrême Nord–Ouest du pays, et qui, bien que reconnu comme «dogon» par les autres, semble présenter des caractères totalement aberrants, serait fort utile pour établir des critères d’appartenance linguistique.”[16]

I am in accordance with the view that Bangime is not related linguistically to Dogon. The grammatical structure is almost entirely lacking in Dogon features, as shown in the following subsections, which provide an overview of the main features of Bangime. The estimated 20 Dogon languages and 60 dialects show clear linguistic correlates and geneticists have recently published information concerning the genetic uniformity of the Dogon people (Tishkoff, et al. 2009). In particular, one of the co-authors of this paper, Floyd Reed, states,

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[16] “From another point of view, the study of the little dialect called Bangerime, spoken by a small Dogon group in the extreme northwest of the Dogon-speaking area, which, although recognized by the others as ‘Dogon’, seems to have some totally deviant features, would be very useful in establishing criteria for the linguistic affiliation of Dogon.” (my translation)

"The Dogon (at least the samples from Bandiagara) have a very distinctive genetic signature compared to other West Africans, so I think there may be a lot of potential to learn more about the Bangande history from genetic studies" (p.c.). The following section provides comparisons between Bangime and Dogon in other areas of the language.

1.8 Language Overview

The goal of this section is to provide a comparison to the Dogon language group and to give an overview of the unique features of the language that support the classification of the language as an isolate. This section provides an overview of the features that distinguish Bangime from the Dogon languages and others within the Niger-Congo branch. The reader is encouraged to refer to this section throughout the work, as it gives a brief overview of some of the defining features of the language. The subsections include a comparison of the main aspects of the phonological, morphological, and syntactic system of the language compared with other area languages.

1.8.1 Phonology

Here I present the vocalic and consonantal inventory and alternations, and compare these to the Dogon languages. The full phonological system of Bangime given in §2.1.

Bangime has seven vowels /i e ɛ a ɔ o u/. The vowel inventory of Bangime is similar to the vowel inventories found in the Dogon languages. Vocalic processes differ in Bangime and Dogon in that the former has disharmonic sequences of [+ATR] and [–ATR] vowels within a word and even tautosyllabically. As shown above and in the comparative word list, words which are otherwise to Dogon have a disharmonic vocalic sequence in Bangime, whereas the Dogon word has a harmonic sequence of vowels. Although one would expect [ATR] vowel harmony to

be an active process in Bangime, as it is in most languages of West Africa, in Bangime it is not. Other than before a nasal, disharmony rarely occurs among Dogon languages.[17]

The lack of [ATR] vowel harmony is also unusual because most languages in area, those belonging to the Niger-Congo language family, are known for their widespread occurrence of [ATR] vowel harmony systems (Casali 2008).

The proposed consonant inventory for Bangime, compared with the most widely found sounds among the Dogon languages, is shown in (6). Allophonic variants are listed below their phonemes, and consonants which differ between the two languages, are in red and bold.

(6) Consonant Inventory

Bangime	/b	p	t	d	k	ɡ	m	n	ŋ	ɲ	r		s	ɕ	j	ʒ	ɥ	w/	(phonemes)
	[ʋ		ʧ			ɣ					ɾ̃		ʃ		ɟ̃	ʤ		w̃]	(allophones)
Dogon	/b	p	t	d	k	ɡ	m	n	ŋ	ɲ	r	**l**	s		j	**z**		w/	
			ʧ			ɣ					ɾ̃				ɟ̃	ʤ		w̃]	

As with the vocalic system, Bangime and the Dogon languages have similar consonantal phonemes. However, a difference between the two is the labial-palatal approximant, /ɥ/, and the alveolo-palatal fricative, /ɕ/, which are phonemes in Bangime. Neither occurs in Dogon and fricatives in general are rare, if not absent, among Dogon languages.[18] Examples show the alveolo-palatal fricative, /ɕ/, and the labial-palatal approximant, /ɥ/, occurring before vowels of various heights and degrees of backness, only not before the high front vowels, as would be expected if the segments were allophones of another phoneme. The voiced labiodental approximant, [ʋ], is an allophone of a voiced bilabial stop /b/ in Bangime that may also have an

[17] Many of the [–ATR] vowels in Bangime appear before nasals or nasalized segments in potential borrowings from Dogon languages.

[18] One phonological feature which is shared with the Dogon is the lack of the voiceless labiodental fricative /f/, though this could be a socio-linguistic phenomenon, since borrowed words are often pronounced with a [p], as the Dogon substitute, or [b/β].

intermediate fricative allophone [β], (instrumental phonetic study is needed on this point), and the voiced velar stop /g/ alternates with the voiced velar fricative [ɣ] intervocalically. This latter alternation is found among Dogon languages, although the former, /b/ ~ [ʋ], is not.

As shown in the phonemic inventory comparison, nasalization appears on approximants among the Dogon languages as well as in Bangime. In Bangime, a nasal stop cluster becomes a nasalized approximant via an aspectual change in verbs. The closest Dogon counterparts, according to Heath (p.c.), are cases of syncope of CVr̃V– to CVn– before a consonantal suffix, and, (in Toro Tegu only), of CVw̃V to CVm– in the same environment. These can be taken as consonant-cluster adjustment processes and do not have the more abstract transformational character of the Bangime alternations.

The syllable structure of Bangime is different than that found in Dogon. Codas are permissible in Dogon but appear as co-articulation or as secondary features on vowels in Bangime. Bangime has a set of labialized and palatalized consonants word-initially. Labialized and palatalized word-initial consonants ($C^{w}V$ and $C^{j}V$) may occur in free variation with syllabic CuwV and CijV sequences, respectively, as they do in some Dogon languages (e.g. Tomo Kan).

Nasals represent another area of differentiation. Nasals are typically homorganic with the following consonant. The many instances of homorganic nasal segments found in Bangime arise from phonologically occurring geminate segments, the genitive morpheme, the transitive marker for verbs, and person marking for non-second person subject and object.

As shown in (7), bisyllabic words which begin with a nasal are preceded by a nasal. This nasal is homorganic for alveolar and bilabial nasals, and alveolar for palatal and velar nasals. Word-internally, geminate nasals are either alveolar or bilabial.

(7) Geminate Nasals

	Word Initial			Word Internal	
	Stem	Gloss		Stem	Gloss
a.	nníjà	mother	aa.	mmìnná	door
b.	mmírò	bee	bb.	bìmmɛ̀	heart
c.	ŋ̀ŋànà	Niana (village)	cc.	*CVŋ.ŋV	
d.	nŋ̀àmbá	sheep	dd.	*CVŋ.ŋV	

Words which have a word-medial geminate nasal (7aa - bb) may have an initial geminate nasal. The word (7aa) [mminna] ‘door’ has an allomorph [mmiřa]. Both allomorphs permit initial geminate nasals. Bisyllabic words with word-internal nasal-stop sequences, such as (7d), permit initial geminate nasals. Additionally, words with a heavy initial syllable such as [nnìé–rɛ́] ‘woman’ permit initial geminate nasals. Most bisyllablic words have either a heavy-light or light-heavy combination with long vowels in either the first or second syllable, but not both. Trisyllabic words with initial nasals do not permit geminate nasals. Trisyllabic words do not permit heavy syllables.

Therefore, while Bangime and Dogon have similar underlying phonemic inventories, the surface phonetic representations of vowel and consonant phonemes differs due to differences in phonotatics and phonological processes.

1.8.2 Morphology

One of the main attributes of Bangime that differentiates it from the Dogon languages is its lack of segmental, bound morphology. Like many Niger-Congo languages, Dogon languages are agglutinating. Bangime is isolating. Although there are some semi-productive verbal suffixes and clitics, the only productive, segmental, bound suffix found in the language is a diminutive,

suffixed to nouns. Inflection on verbs is somewhat fusional, with only some verb classes having distinct inflectional suffixes. I present an overview of Bangime morphological marking on nouns and verbs in comparison with those in Dogon in this section.

Bangime has no evidence of noun class marking or any remnants of one other than the diminutive frozen suffix diminutive suffix and a frozen [–r] suffix, the latter is found on some nouns with an undetermined meaning. Residual noun class markers are found among most Dogon languages. With the exception of those that have undergone word-final phonetic attrition, all Dogon languages use suffixes to distinguish human (or animate) from nonhuman (or inanimate) in singular nouns, and either make a similar distinction in the plural, or avoid plural marking of nonhuman/inanimate nouns. Some Dogon languages also have class agreement suffixation between adjectives and nouns.

One exception to the lack of noun class markers in Bangime is the case of familial relations, where the suffix *–ru* occurs. In comparing the use of this suffix with Dogon kin terms, a peculiarity arises in that these nouns do not receive the human/animate singular suffix. The Dogon human/animate singular suffix *–nu (attested as *–r̃u*, *–nu*, *–n*) is generally (although not absolutely) avoided in Dogon kin terms (Heath, p.c.). It is reasonable to connect Dogon non-kin singular *–nu with Bangime kin plural *–ru* if the alveolar approximant lost nasalization. If so, Bangime borrowing a suffix and assigning it the opposite meaning provides an intriguing example of the language's tendency towards using elements which oppose features in other languages, further explored in the discussion below. Examples are shown in (8) of the kin term plural suffix [–ru] in Bangime.[19]

[19] The Dogon language Yanda sporadically uses the kin plural suffix *–jɛ̀* (Heath 2010), in examples *dèdé–jɛ̀*, 'fathers' *nìr̃á–jɛ̀*, 'father's sister', *nìì–jɛ̀*, 'mothers', *bàbá–jɛ̀*, 'grandfathers' and *sèzú–jɛ̀*, 'grandmothers', but this is

(8) Bangime Kin Terms Plural

	Noun	Gloss
a.	bɔ́ò–rú	fathers
b.	nníjà–rú	mothers
c.	gógó–rú	father's wives (borrowing from Fulfulde)
d.	tìndé–rú	grandfathers
e.	tíé–rú	grandmothers

(9) Bangime Demonstrative Plural

	Noun	Gloss
a.	kàà=rú	these things near the speaker
b.	méɛ́–rú	those things far from the speaker

Dogon languages are rich in suffixation, but none has been found with prefixation. Although Bangime shows very little of what could be considered bound morphology, there are what pre-clitics to indicate possession and definiteness. Dogon languages usually mark definiteness and possession as enclitics which follow a noun, but may also use a pre-clitic to indicate possession as well. Comparisons are shown in (10).

(10) Possession in Dogon and Bangime

	Dogon (Bondu–so)				Bangime	
a.	mí 1.S.POSS my dog	ŋgw–ɛ̀ɛ̀ dog–NCL3.L		aa.	máá= 1.S.POSS my dog	kúrɛ́+mɛ̀ dog+DIM
b.	ŋgw–ɛ̀ɛ́ dog–NCL3 my dog	mí 1.S.POSS	jɛ̀ DEF	bb.	kùrɛ̀+mɛ́ dog+DIM my dog	mɛ̀ 1.S.POSS

the only other parallel that could be found. Here, the fact that 'grandfather' and 'grandmother' are derived from the same root is interesting, but there are no other roots with the same connection.

In some Dogon languages, nouns agree in number and animacy with adjectives and demonstratives, and verbs agree with pronominal-subject categories. In Bangime, there is no agreement for plural except in complementizer phrases. Also, tonal agreement for subject is marked on a verb and an object where present. The plural in Bangime is a clitic [=nɛ] ~ [=ndɛ]. The homophonous marker [nɛ] is found as a singular in some Dogon languages, such as Yanda Dom.

Another difference in the noun phrase is that the tone-lowering found on possessed nouns, which is widespread among Dogon languages, is not found in Bangime. Although complex tonal patterns are found in the possessive pronoun-possessed noun paradigms in Bangime, tone lowering is not one of them. However, a tone-lowering process is triggered by the definite article in Bangime.

Compounding is a productive means of creating new lexical items in Dogon. While phrasal forms are common in lieu of one-stem lexical items, compounding as a process for forming new lexical items is absent in Bangime.

Particularly in verbs, Dogon languages express inflectional and derivational morphology through the use of multiple suffixes. Therefore, there is a significant difference morphologically in the formation of verbs in Bangime and in the Dogon languages.

Forms for the word ‘I write’ in two Dogon languages are compared with Bangime in (11). Shown in the examples, the negative imperfective and negative perfective aspect are formed through a combination of suffixes in Dogon languages; in Bangime, the only difference between the two sentences is the tone on the final vowel of the phrase. Note that the word for ‘write’ in each of the languages is similar, suggesting a borrowing if the whole Dogon word, including the negative marker, is considered.

(11) ‘I write’

Jamsay	(Heath, 2008)	
	tɔ̀ŋɔ̀–gó–m	tɔ̀ŋɔ̀–lú–m
	write–NEG.IMPV–1S	write–NEG.PRF–1S
	I do not write	I did not write
Tiranige	(Heath, 2012)	
	nɔ́nɔ́–rá–jⁿ	nɔ́nɔ́–ní–jⁿ
	write–NEG.IMPV–1S	write–NEG.PRF–1S
	I do not write	I did not write
Bangime	m bíè n ɲógɔ̀ndó	m bíè ɲógɔ̀ndò
	1S NEG T write.IMPV	1S NEG write.PRF
	I do not write	I did not write

Comparison of the forms for the word ‘write’ in Jamsay and Tiranige, two Dogon languages, with the form in Bangime (11), show that although the verbs are similar, the morphology differs. The examples from Jamsay are representative of typical Dogon morphology. Although negation and aspect are expressed through a portmanteau morpheme in the Jamsay verb, the stem is composed of three discernible morphemes, two of which are suffixes. In the sentence from Bangime, there are three separate morphemes, none of which has affixal properties.Also, the order of the constituents in the Dogon verb stem, person, tense, and negation, is to follow the verb root, whereas person and negation precede the verb stem in Bangime.[20] Tone in Dogon is a property of the verb root; although the lexical tone can be overridden by inflectionally or derivationally-controlled tone overlays. In Bangime, tone is an inflectional morpheme which interacts with the tone of the verb stem to indicate aspect.

[20] Person is proclitic/prefixed for 1st/2nd persons in western Dogon, e.g. Penange and Bunoge, and partially in Tiranige.

Bangime also differs from the agglutinating Dogon languages in that tense, aspect, and mood markers are unbound morphemes. Verbs in Bangime are divided into different classes based on transitivity, phonological shape, and semantic category, whereas verbs in Dogon mostly take the same inflection, with the exception of change-of-state verbs.

Among examples of derivational morphology, semi-productive bound morphemes on verbs in Bangime include the efferential and the afferential. The term efferential was coined by Newman (1983) to mean 'away from' referring to the Hausa marker which had been previously been termed the causative. Afferential is therefore, 'towards'.

The efferential in Bangime [–nd–], is reminiscent of a causative morpheme, [–nd–], found in some Dogon languages. However, as Heath (p.c.) points out, the most widespread causative among the Dogon languages is *–mV, although *–ndV and *–kV/–gV are also fairly widespread as secondary (archaic) causatives.[21] Additionally, Songhay, of the Nilo-Saharan family, has *–andi* causatives.

(12) efferential –nd–V (cf. Newman 1983)

	Gloss	Incompletive		efferential	Gloss
a.	eat	díj–à	aa.	dìj–à–nd–á	feed
b.	drink	nnìè	bb.	nníé–nd–ɛ̀	give to drink
c.	send	dɛ̀–ɾ̃–é	cc.	dɛ̀–r–ɛ́–nd–á	make send
d.	fear	pì–ɾ̃–á	dd.	pí–r–ú–nd–ú	make afraid
e.	run	tígì	ee.	tígí–nd–á	drive
f.	learn, study, read	káràà	ff.	kárá–nd–á	teach

[21] In Najamba (Dogon), causatives of this form include a limited set of verbs, including, *ìl–ɛ́*, 'go up', *ìlá–ndí* 'cause to ascend', *bɛ̀lí–yɛ́*, get up, *bèlá–ndí*, 'cause to get up', *tíŋg–ɛ́*, 'pass by', *tíŋá–ndí*, 'cause to pass by'.

The efferential morpheme is suffixed to the incompletive verb stem, which differs depending on the class of the verb. The fact that the derivational suffix is attached after the inflectional suffixes is unusual. This is discussed further in Chapter 9.

The afferential process in Bangime is initial-consonant mutation but it is not productive. The only neighboring language with initial-consonant mutation is Fulfulde. However, the Fulfulde does not have a process which resembles the afferential in Bangime. The most similar morpheme is the reversive which is a suffix [–t–] on the verb stem in Fulfulde.

(13) Bangime Afferential Initial Consonant Mutation

Mutation		T	Root	Gloss		T	Reversive	Gloss
t ~ d	a.	n	tìn–d–á	start	aa.	n	dìn–d–á	stop
m ~ b	b.	m	mùn–d–á	dress, enter	bb.	m	bùn–d–á	undress, exit
n ~ ɲ	c.	n	nàw	give	cc.	n	ɲàw	take
t ~ ʒ	d.	–	té–r–ò	sit	dd.	–	ʒé–r–ò	stand up

Note that among the alternations, the stem-intial consonant [t] (13a, d) alternates with [d] in (13a) and [ʒ] in (13dd). I propose that in the underlying forms (possibly a historical remnant), the initial consonants of these words differ, as there is evidence for this word-internally when comparing Dogon with Bangime lexical items in (14).[22] Although these verbs were the only ones found in the language in which a root was changed to adopt the afferential meaning by the change in the initial consonant, a process of nasalization of the final vowel of the verb root also creates the same change in meaning.

[22] If the Bangime words are borrowed from Dogon, [díndá] > [tɔ́rɔ́, túmnó] ‘stop’, [jíè] > [ínjè] ‘rise’, [dinda] > [íjɛ́] ‘stand’, but see [tíé] ‘sit’ > [tìjé] ‘stand’, would be reasonable suggestions since onsetless syllables are very rare word-initially in Bangime.

(14) Bangime Afferential Nasalization

	Gloss	T	Perfect	Perfective	Incompletive	Completive
a.	take out	m	bún–d–ì	bún–d–ì	bún–d–à	bún–d–à
b.	come from	m	báà	bú–r–àà	báà	bú–r–àà
c.	come out of	–	búù^{n}	búù^{n}	bú–r̃–à	bú–r̃–à
d.	exit (-hum)	–	bírè	bírè	bírè	bírè
e.	go in, enter	m	mún–d–ì	mún–d–ì	mún–d–à	mún–d–à
f.	come in	–	múú^{n}	múú^{n}	mù–r̃–á	mù–r̃–á
g.	enter (-hum)	–	míndè	míndè	míndè	míndè

Verbs which refer to movement ‘inwards’ or ‘towards’ the speaker are nasalized. The verb (14b) ‘come from’ is not nasalized, but (14c) ‘come out of’ is. The nasalized form is used in narratives, Text XI: Tiga 1.11, TEXT VIII: Chief 7.1, Text II: Chief 2.3, to refer to situations in which someone or something has come out of somewhere previously mentioned. Other examples of verbs with nasalization to indicate the afferential on verb roots without efferential counterparts are /ko^{n}/ ‘break’, /ku^{n}/ ‘gather, meet’, /mi^{n}/ ‘swallow’, and /pi^{n}/ ‘fear’. Verb classes are further examined in Chapter 8 - 9.

A nasal precedes transitive verbs, with examples shown in (17). A verbal suffix [–r] has not been precisely defined yet, since the suffix is found in different aspects depending on the verb. In some verbs which are preceded by the transitive nasal, the [r] becomes [d] after a nasal. Examples given in (15).

(15) –r–

	Gloss	T	Perfect	Perfective	Incompletive	Completive
a.	hit	n	dég–ù	dég–è	dég–è	dég–è
b.	put	m	píé	píé	pìè	pé–r–ò
c.	chew	n	téɛ̀^{n}	téɛ̀^{n}	tá–w̃–àà	tám–b–à
d.	halve	ŋ	gʷɛ̀n–d–ì	gʷɛ̀n–d–ì	gʷɛ̀n–d–è	gʷɛ̀n–d–è
e.	crouch	–	súm–b–ò	súm–b–ó–r–ò RED	súm–b–ó–r–ò	súm–b–ò
f.	return	–	kẃà ŋ kí	kɔ́–r–à ŋ kíì	kì ŋ kɔ́–r–ò	kɔ̀–r–ò ŋ kí
g.	dig	ŋ	kíndū	kíndū	kíndū	kíndū

Examples in (16) show a transitive suffix [–r̃], from Ibi-so, a dialect of Toro-so.

(16) Stative/Transitive Alternation in Ibi-so (Dogon)[23]

	Stative	Gloss		Transitive	Gloss
a.	sínn–í	carry on back	aa.	sínn–í–rṹ	put on (sbs) back
b.	íŋí–í	stand up, stop(person)	bb.	íŋí–í–rṹ	stop (sth)
c.	ìní–í	bathe	cc.	ín–ú–rṹ	bathe (sb)
d.	tùŋ–í	kneel	dd.	tùŋ–ù–r̃ú	make kneel
e.	dùw–í	carry on head	ee.	dú–ú–rú	put on (sbs) head
f.	díì^{n}	lie down	ff.	(íì) dù–nú	have lie down, put to sleep
g.	dèé^{n}	sit down	gg.	dàà–nú	have sit, seat
h.	tág–í	put ones shoes on	hh.	tág–á–$^{!}$rá	put shoes on (sb)
i.	pág–í	tie ones belt on	ii.	pág–á–rá	tie belt on (sb)
j.	bàŋ–í	hide (oneself)	jj.	bàŋ–á–r̃á	hide (sb, sth)

[23] Data are from the author and are available at dogonlanguages.org.

Not only is the Dogon transitive suffix homophonous with the [–r] suffix in Bangime, the vowel height harmony patterns are the same. It is likely that the [–r] suffix in Bangime was borrowed from the transitive suffix in Dogon, but that its usage is frozen and the meaning differs since the [–r–] suffix in Bangime appears with both transitive and intransitive verbs.

Shown in the examples in (17), transitive verbs are preceded by a nasal as in (17a - e), while intransitive verbs (17aa - ee) are not.

(17) Transitive Marker

	T	Verb	Gloss		Verb	Gloss
a.	n	túráà	wash (s.o.)	aa.	bírè	leave, go out
b.	ŋ	kɔ̀–r̃–ɔ̀	break	bb.	wòrè	go
c.	n	t^{w}áà	reach	cc.	bù–r̃–á	exit
d.	m	màà	build	dd.	jàà	die
e.	m	bàà	tie	ee.	bíjù	ripen

The verb stems listed in (17) are in the positive incompletive aspect. Shown in §9.8, there are few verbs which have transitive-intransitive counterparts.

1.8.3 Syntax

In the syntactic category of Bangime grammar, the attributes of the language which separate it from the Dogon languages are the word order changes based on the tense, aspect, or mood of the clause, and the tonal indexing of the subject on the verb and object if present.

As noted above, in some Dogon languages, nouns agree in number and animacy with adjectives and demonstratives, and verbs agree with pronominal-subject categories. In Bangime, there is no other form of agreement except that the plural clitic marks both an NP and the relative complementizer.

(18) Complementizer Plural Agreement

à	dìjà=nɛ́	mɛ̀=nɛ́	dá	ŋ	wí	gógɔ́ní	ŋ	kò
DET	village=PL	COMP=PL	INC	GEN	PP	Gogoni	GEN	PP

The villages which are in/at Gogoni.

One similarity between Bangime and the Dogon languages is the extensive use of postpositions to indicate locative, instrumental, and dative roles. Some examples from Bangime are shown in (19).

(19) Postpositions

locative

a.

nɛ̀	kóɔ̀	ŋ	wórè	à	gàrà	húⁿ
	CP					
1.PL	L	~2	go	DEF	station	PP

We went to the station.

b.

nɛ̀	kóɔ̀	wórè	à	kòò	ŋ	kó
1.PL	CPL	go	DEF	house	GEN	PP

We went to the house.

instrumental

c.

n	à	rádàʒò	táŋà	n	sɥɛ́è	hùⁿ
~2	DEF	radio	ear	~2	descend	PP

I listen to the radio. [lit. I put my ear on the radio.]

d.

n	dá	ɲógɔ̀nd–ó	bìkí	ŋ	kò
~2	INC	write–RV	pen	GEN	PP

I am writing with a pen.

dative

e.

n	dá	kéɛ̀	náw̃	à	wàj
~2	INC	thing	give.RV	2.S	PP

I am giving something to you.

f.

à	tèr–ù	kéɛ̀	ŋ	wàj
2.S	show–PRF	thing	~2	PP

You showed something to me.

The postpositions in Bangime do not have a single meanings that translate easily into Western concepts of container and figure. Both [hú^{n}] and [ko] may be translated as ‘to’ in (19a - b) yet as ‘on’ and ‘with’ in (19c - d), respectively. Further, English ‘to’ is represented with the postposition [waji] in (19e - f), but as ‘than’ in textual examples such as Chief 1.19. The example (19c) is of further interest as the verb is clause final; the unmarked tense is normally object final.

Although at the phrase level Bangime is head initial, with noun-postposition and noun-modifier word order (except DEF N and POSS N), at the clause level, the basic constituent order depends is either SVO, SOV, or OSV. The ordering of constituents in the sentence depends on the tense/aspect/mood of the clause. This is highly unusual, with surrounding languages of the Mande and Dogon language groups all being strict SOV languages and languages of the Atlantic group, such as Fulfude, being strictly SVO.

Person marking is optionally marked by pronouns, but is obligatorily indexed tonally on the verb and object when present. As is further elaborated upon in Chapter 13, the first and third singular person markers have three allomorphs, the morpheme [mi], a nasal, or tone on the verb and/or object noun, if present.

The perfect aspect requires a non-second person nasal that precedes the perfect clitic, labeled [~2], in addition to the pronominal subject. It is unclear why the subject is obligatorily marked before the perfect clitic [kéè], unless the marker means ‘finish’ and the sentence is taken to mean, ‘I drank cream; I finished it’. Second person is a short [a] and second person plural is a long [aa], both precede the completive morpheme.

The tonal alternations represent tonal agreement for person. The object noun is part of the tone alternations, which is interpreted to be a single tone contour for verb+object.

(20) Nasal as Non-Second Person Marker

mí	n	níé	H	bòɔ̀ⁿ	L	ŋ	kɛ́ɛ̀	n dɛ̀	n	níé	H	bòɔ̀ⁿ	L	ŋ	kɛ́ɛ̀
1.S	T	drink	1	cream	1	~2	PRF	1.PL	T	drink	1	cream	1	~2	PRF

a. I had drunk cream.

d. We had drunk cream.

á	n	nìè	L	bóɔ́ⁿ	H	á	kɛ́ɛ̀	áà	n	nìè	L	bóɔ́ⁿ	H	á	kɛ́ɛ̀
2.S	T	drink	2	cream	2	+2	PRF	2. PL	T	drink	2	cream	2	+2	PRF

b. You had drunk cream.

e. You (pl) had drunk cream.

mì	n	nìè	L	bóɔ́ⁿ	H	ŋ	kɛ́ɛ̀	n nìì	n	nìè	L	bóɔ́ⁿ	H	ŋ	kɛ́ɛ̀
3.S	T	drink	3	cream	3	~2	PRF	3. PL	T	drink	3	cream	3	~2	PRF

c. S/he had drunk cream.

f. They had drunk cream.

In sentences in the perfect aspect or those in another aspect with two clauses (21), the subject is marked twice. As before the perfect clitic, non-second persons (21a - c, f) are marked in the second clause by a nasal, and second person subject clauses (21b, e) are marked by [a] in the second clause. The subject and object pronouns are the same.

(21) Person Marking in Clauses

a.	Ø	kɔ́ó	wòrè	n	ɥáá	à	ŋámbá	kùùⁿ
	~2	CPL	go.1.S	~2	buy.1.S	DEF	sheep.1	market

I bought the sheep [at] market. lit. ‘I went, I bought the sheep, [at] market.’

b.	á	kɔ́ó	wórè	à	ɥàá	á	ŋámbà	kùùⁿ
	2.S	CPL	go.2.S	+2	buy.2.S	DEF	sheep.2	market

You (sg) bought the sheep [at] market.

c.	Ø	kɔ́ó	wòrè	à	ɥàá	á	ŋámbà	kùùⁿ
	~2	CPL	go.3.S	+2	buy.2.S	DEF	sheep.3	market

He bought the sheep [at] market.

d.	ndɛ̀	kɔ́ó	wòrè	n	ɥàá	á	ŋámbá	kùùⁿ
	1.PL	CPL	go.1.PL	~2	buy.1.P	DEF	sheep.1	market

We bought the sheep [at] market.

e.	àà	kɔ́ó	wórè	à	ɥàá	á	ŋámbà	kùùⁿ
	2.PL	CPL	go.2.pl	+2	buy.2.P	DEF	sheep.2	market

You (pl) bought the sheep [at] market.

f.	nnìì	kɔ́ó	wóré	n	ɥáá	ă	ŋàmbà	kùùⁿ
	3.PL	CPL	go.3P	~2	buy.3.P	DEF	sheep.3	market

They bought the sheep [at] market.

The person marker is a nasal (21a, c - d, f) for non-second persons and [a] for second persons singular (21b) and plural (21e). The nasal or [a] also precedes the second stem of reduplicated verbs. While a subject pronoun is obligatory, object pronouns may be omitted as shown throughout Text I: Chief I.

A feature which is not shared by any surrounding language to my knowledge is the use of tonal marking on the verb and object if present. Subject and TAM are marked by a combination of segmental and autosegmental features. Shown in sentences (22) - (26), the aspects perfect and perfective, and completive and incompletive, are marked by inflectional suffixation on the verb (Chapter 8 - 9), particles (Chapter 10), and the placement of the object in the sentence (Chapter 11). The subject is marked by a nasal or [a], and tone on either the verb, object, or both.

The verb given in the examples /deg/ ‘hit’ is a transitive verb in verb Class One. The perfective is an unmarked aspect in Bangime. The verb receives no inflectional marking other than the root vowel, and there are no verb particles. The word order for the perfective is SVO. Verbs in the perfective are not marked with the transitive morpheme, rather, as before the perfect particle, the verb is preceded by a nasal for non-second persons and [a] for second persons singular and plural. High tone marks the vowel of the verb stem in the first person and low tone for third person. When an object is present, it surfaces with a polar tone, the opposite tone, to the verb.

(22) Perfective

	First Person					Third Person				
a.	Ø	n	^{HL}[dég–é	nnìè–rè]	b.	Ø	n	^{LH}[dég–è	nníé–ré]
	~2	~2	hit–RV$^{.1S}$	woman		~2	~2	hit–RV$^{.3S}$	woman
	I have hit a woman.					He has hit a woman.			

The perfect aspect is differentiated from the perfective by the addition of the perfect clitic [kéè], and the high vowel suffix on the verb. The word order is not changed, and neither are the tones. The transitive nasal precedes the verb in the perfect aspect, but the secondary person marking precedes the perfect clitic.

(23) Perfect

	First Person							Third Person						
a.	Ø	n	^{HL}[dég–ú	nnìè–rè]	ŋ	kéè	b.	Ø	n	^{LH}[dég–ù	nníé–ré]	ŋ	kéè
	~2	T	$^{1.S}$ hit–PRF	woman	~2	PRF		~2	T	$^{3.S}$ hit–PRF	woman	~2	PRF
	I had hit a woman.							He had hit a woman.						

The incompletive aspect can be viewed as being complementary to the completive aspect. The incompletive /daw/ and completive /kamaa/ particles both follow the subject, and the verb has the default, root vowel as the suffix. The differences lie in the word order and, consequently, surface tone patterns. The verb precedes the object in an incompletive clause and the high tone associated with the first person and low tone for third person continues to be marked on the verb.

(24) Incompletive

	First Person						Third Person					
a.	Ø	dá	[nnìè–rè	n	dég–é]^{HL}	b.	Ø	ná	[nníé–ré	n	dég–è]^{LH}
	~2	IMPV	woman	T	hit–RV$^{.1S}$		~2	IMPV	woman	T	hit–RV$^{.3S}$
	I am hitting a woman.						He is hitting a woman.					

In the completive aspect, the object follows the verb and is marked with a low tone in the first person and a high tone in the third person on the suffix vowel. The tone is assigned at the clause, rather than word, level.

(25) Completive

	First Person						Third Person				
a.	Ø	kóɔ́	n	[dég–ɛ̀	nníɛ́–ré]^{HL}	b.	Ø	kóɔ́	n	[dég–ɛ́	nnìɛ̀–rè]^{LH}
	1.S	CPL	T	hit–RV	woman$^{1.S}$		3.S	CPL	T	hit–RV	woman$^{3.S}$
	I hit a woman.						He hit a woman.				

The future is formed in one of two ways depending on whether or not the sentence has an object. Even if the verb is transitive, if no object is specified (24a), the word order is subject-verb, followed by the secondary person marking (nasal or low vowel) and the incompletive particle. If an object is included, the future tense is formed with the object first, followed by the incompletive particle and the verb.

(26) Future

a.	àdámà	n	dég	–ɛ̀	n	náẁ.
	Adama	T	hit	–RV	~2	INC
	Adama will hit.					

b.	á	jám+bɛ̄	ná	n	dèg	–ɛ̀	–L
	DEF	child	INC	T	hit	–INC	3
	He will hit the child. (*the child is being hit by him) [á jámbɛ̄ mì ná n dèg–ɛ̀ àdámà ŋ kò]						

The future tense with an object is not to be interpreted as the passive, marked by the passive morpheme [mì].

Shown in (27), an object pronoun is not obligatory. The subject is indicated by the pronoun at the beginning of the sentence and by tone, high for first person and low for third person, on the pronoun and the verb suffix vowel.

(27) Person Tonal Marking on Verb with Object Pronoun

a.

mí	n	dég	–é	–H
1S	T	hit	RV	1

I hit him.

b.

mì	n	dég	–è	–L
3S	T	hit	RV	3

He hit me.

1.8.4 Greeting Sequences

A curiosity in Bangime are the greeting sequences shown in (28), or rather, lack thereof. Most, if not all, African languages are known for their lengthy call and response greeting sequences. Bangime has the normal question-type of greetings, but there are few responses which are not borrowings from Arabic, and many are simply intonational prolongations of the greeting itself.

(28) Greeting Sequences

Greeting	Gloss	Response	Gloss
dôó	morning greeting	dóòó	morning greeting
kʷɛ̌ hèrɛ́ n jɛ́w	did [you] wake in peace?	hámdùrùlájì	Praise be to God (Arabic)
tíjà	afternoon greeting	tìjáàá	afternoon greeting
kʷɛ̌ hèrɛ́ tùrú	did [you] spend the day in peace?	hámdùrùlájì	Praise be to God
à kóò n ɕíɛ̀=ndɛ́	your family (‘house owner’)	kí sè bínìjù	no problems
à pʷíɛ̀ nà jáá=ndɛ̀ (male)	wife and children	kí sè bínìjù	no problems
à kàndéé nàá jáá=ndɛ̀ (female)	husband and children	kí sè bínìjù	no problems
à nà náá	you and the field (greeting for sme returning from the fields)	náà dà ŋ wíì	field(s) are there

Since many of the speakers of the language are not Muslim, the clearly Arabic responses are curious. Note that, in addition to the relative simplicity of these greetings, there is no introductory [pòó] or final [tàárè] common to every Dogon language. The one similarity between the Bangime greeting sequence and those of Dogon languages is the afternoon introductory greeting [tija], which is also used in the neighboring Dogon language Tiranige.

Thus, the key grammatical aspects of Bangime which separate it from other languages in the area in which it is spoken in Central-Eastern Mali are (1) disharmonic sequences for the feature [ATR] tautosyllabically and tautomorphemically, (2) lack of bound morphology, (3) person agreement marking on objects in the verb phrase, and (4) word order specified by tense. Among the core vocabulary items, some lexical items bear strong resemblances with Dogon languages, and consistent sound changes are found between Bangime and potentially related Dogon words. The Dogon languages themselves vary extensively and lexical correspondences between Bangime and the Dogon languages are found in a geographically widely distributed area. Although Bangime is not a Dogon language, I hypothesize that the language had a connection to, or borrowed from, the Dogon languages at a time when the Dogon languages were more cohesive. Suggestions as to why the Bangime speakers drew so heavily upon the vocabulary of Dogon and not the grammar are outlined in the following subsections.

1.9 Bangime: ‘a secret language’

During the last few months of my second to last fieldwork trip, it became clear that elicited lexical items were not the same as those used in natural conversation. The elicited items were often loanwords. These contrast with the periphrastic expressions used in speech. For example, the word given for ‘fence’ [sáà^{n}], suggests a loan word from Bamana [saa^{n}], but in every day usage, the phrase [bùɲ́á míndé qùrúgí dóò à gòmè màá kɛ́rɛ́], translated as, ‘stick(s) put into the

ground so that people may pass next to the rice', is employed to describe, in this instance, a fence surrounding the rice fields. In fact, 'sáàⁿ' is unacceptable for any type of fencing if one is speaking the "true" language. Further examples of so-called "deep Bangime" are shown in (29).

(29) "Deep Bangime"

a. kóndʒɛ́ hà máà ŋàrìkí à dóó
beer until 3.S.POSS thoughts/spirit IRR pass
'drunk'

b. sííbíè n tàřàá ŋ kéè póóˡrɛ́
eye GEN hide GEN thing black
black things (to) hide (the) eye(s)
'sun glasses'

c. góòⁿ=nɛ́ kóò ŋ kò
men house GEN PP
men inside a house
'prison'

d. ʃĩíⁿ –ɕíèⁿ
strength AGENT/owner
strong person
'policeman'

e. bùùⁿ mɛ́ ná mì dɛ́ɛ́–rè
powder CONJ INC PASS sweet
powder which has been sweetened
'cake'

f. kíŋgèè bʷíɛ́ màà n ŋòɔ́ ŋʷìè
skin red 3.S.POSS meat oil
'banana'

The Bangande language consultants did not inform me of this "deep Bangime" language until the last two months of fieldwork, after a span of three years on three separate trips. They claim that the language is a means by which they can speak about others without them understanding. When outsiders inquire about the language, the Bangande adamantly refuse to reveal or discuss it.

Halliday (1976) discusses the concept of "anti-languages", languages which have been constructed by "anti-societies" based on the need for secrecy. As mentioned above, the name of the language and people, 'Banga', is literally translated as 'secret' by many (although curiously not neighboring)[24] Dogon peoples, meaning 'secret language'. Halliday describes anti-languages as involving either a partial or complete relexicalization of the established language, but that these languages usually adopt the same grammar with a substituted vocabulary. The substituted vocabulary pertains to the activities of the anti-society. Kennings, or periphrastic terms like those shown in (29) above, are very common among this type of language.

Secret or anti-languages are common throughout Africa, even among the Dogon (Lala 2000). "Langues spéciales" have been described for some time in Africa (Van Gennep 1908 in Moñino 1991). Hudson (1995) specifically notes how secret languages in Ethiopia either substitute vocabulary or alter syllable structures in order to confuse listeners. The Mau Mau fighters in Kenya also used metaphors to communicate in a secret language "Uma Uma", which in Kikuyu means "get out, get out" (William Kanyi Wamathai, p.c.). Childs (2003) gives further examples from a secret language used in the Kisi-speaking area of Liberia, known as "kpélɛ́ɛ́íyé" and a possibly related language, "lóndùé". The latter language is of unknown origin although the former not only transposes syllables, it also reverses meanings from its source language. The translation of "kpélɛ́ɛ́íyé" is 'garden leavings', 'the few things that are left after the plants are uprooted'. The meaning, 'garden scraps tossed away', is an ironic name as the language is of high importance to its speakers. The use of opposite meanings is a common feature of varieties of slang (Eble 1996) and languages spoken by elders in Burkina Faso

[24] Jamsay [báŋá], Togo Kan [báŋ], Yorno So [bàŋ–íí jéé], Tommo–So [bààŋí–jɛ́], Yanda Dom [bǎn–jɛ́\\bàn–jà–lí], Ben Tey [bàŋgì–jí] (see map above for the locations of these languages).

(Showalter, p.c.). Both of these techniques are found in "deep Bangime". For instance, the names for plants used in ritualistic ceremonies are often based on the opposite of the color of the bark or flower, i.e. a white barked tree is called, literally, 'black-eyed', while the black variety of the species is 'white-eyed'. It is here noted that Dogon initiates of the Sigui festival are known to speak a secret language.

The secret language hypothesis is based on a hierarchical social structure among the Bangande. As discussed in the introduction, among the estimated 1500 - 3000 speakers of Bangime, only about a fourth can trace their lineage to the original clan who settled the area. The others were, and are to this day, enslaved by the royal class within the Bangande and are of mixed races, ranging from Dogon to Mande, to unknown, as their ancestors were captured by Fulani and other ethnicities as young children and prevented from knowing from which village they came so as not to escape.[25]

How the slaves came into Bangande society remains a mystery. According to oral histories,[26] the Fulani enslavers at one point in time attacked a group of the Fulani slave caste, seeking to capture them. The Fulani slave caste asked the Bangande, who were at that time solely composed of the royal class, for help. The present-day chief's grandfather, Giyamo Maamani, was chief at the time. According to the story, the Bangande clan's last name was then changed from Banaande to Dicko as a result of their helping the Fulani slaves overcome the Fulani enslavers.

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[25] Tiga 3
[26] Chief 5

In Mali, last names are of the upmost importance as they indicate the ethnicity and the village of a person. Among the Dogon, the last name Dicko is not found. Most Dogon villages comprise of one last name. While Dicko is the most common last name in Bounou and the other Bangime-speaking villages, other last names are Bakoro, Baade, Basaga, Basseri, Koulibali, Konde, Karambe, Guindo, Samasekoro, and Yelkoye.

My hypothesis is that the Fulani enslavers actually captured the Bangande at this time and renamed them Dicko because slaves took the last name of their owners. To further this claim, there is no word in the language for last name, the Bangande either borrow the word from Fulfulde, [jamoore], or say, literally, 'second name'.[27] Given the importance of last names and their significance to ethnic identity in Mali, this is highly unusual in this geographic area.

A likely story for the etymology of the name 'Banaande' /bànáándɛ̀/ is that the name derives from 'Bangande' /bàŋgá=ndɛ̀/, nasals and intervocalic velar stops commonly delete in the language as has been shown. Thus, the people's true last name is unknown. The only name that is exclusively used for the Bangande is found among the 'royal class' people, 'Baade', which also likely comes from the same source. Certainly, enslavement would give cause for the Bangande to use a separate language from their captors. A fuller understanding of 'deep Bangime' could reveal the true roots of Bangime among the languages of Africa.

1.10 Conclusion

The classification of Bangime and the Dogon languages as a whole has been unreliable for several reasons. Based on the lack of lexical and grammatical similarities with Dogon languages or other languages within Mali or surrounding countries, the classification of the language remains as an isolate. The task now is to discover from where the language's speakers came, and

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[27] Even the word for 'name', [níì], is of interest as it is homophonous with the word for 'say'.

whether the people have any genetic relation to the Dogon as they claim. In the meantime, the description of Bangime set out in this dissertation provides the only description of the language thus far, and may help eventually in solving a greater mystery of the origin of the Dogon languages as well.

The Dogon language group had been misrepresented as one language (Bendor-Samuel, Olsen, & White 1989), but current research estimates 18 to 20 separate Dogon languages and over 60 dialects (Heath 2008; Hochstetler et al. 2004). This diversity and complexity is due to the Dogon peoples' geographic inaccessibility; they have until recently been confined to secluded, sometimes concealed, villages within the rocky Bandiagara escarpment and various isolated nearby mountains. Although Marcel Griaule, his team members Germaine Dieterlen and Michel Leiris and his daughter, Geneviève Calame-Griaule, have published studies on a variety of topics since the 1930s, including the Dogon languages, much of this work is widely criticized by those who dispute Griaule's methodology (van Beek 1991). Their generalizations about Dogon language and culture based on one language do not apply to the rest of the Dogon area. Even Leiris (n.d.) found Griaule's badgering of speakers inappropriate and unproductive, leading to incorrect data. Many of Griaule's Dogon language consultants have now admitted to playing games and misleading him. Publications on Dogon languages from Leiris and Calame–Griaule continue to be criticized for top-down elicitation techniques.

The classification of languages is critical to tracing cultural history and lineage (Blench 2006). The Dogon languages lack certain features, such as a full noun class system, that are common among languages of the Niger-Congo family, to which the Dogon languages have been assigned, causing some historical linguists to doubt their common ancestry (Williamson & Blench 2000). Further, the classification of the Dogon languages has fluctuated between the Gur

or “Voltaic” (Bertho 1953; Greenberg 1963) and Mande (Delafosse 1952) sub-branches, but since significant links with either remain inconclusive, they are now not linked with any subgroup (Gordon 2005), which makes determining their history difficult.

1.11 Organization

This dissertation provides a description of aspects of the morphophonology of Bangime. Since this is the first published description of the language, the first chapter is dedicated to providing an overview of all aspects of the language in comparison to surrounding languages, particularly those in the Dogon group since it is among them that the language is spoken. The phonetic inventory of the features found in the language is covered in 2.1. Chapter 3 illustrates noun stems and their underlying segmental and autosegmental representations based on their behavior with accompanying clitics. Nouns are divided into six segmental categories and six tonal categories. Evidence is inconclusive at this time as to the link between the segmental and autosegmental categories and there is at least one nominal suffix which has an undetermined meaning. Known nominal clitics and suffixes are presented in Chapter 4, and pro-clitics follow in Chapter 5. The tonal interactions between morphemes associated with the noun and nominal stems are thoroughly discussed. Word-formation processes that go beyond the stem are shown in 6.1. The main non-affixal word-formation process is the genitive construction. Compounding is not a means available in the language, thus two nouns are connected with the genitive morpheme, a nasal which takes the place of the initial consonant of the possessed noun. Genitive constructions can act as stems semantically in that they may be modified or affixed in a manner similar to stems. However, the phonology of the genitive construction acts as a phrase. Chapter 7 gives an overview of the modifiers found in the language. Adjectives must modify a noun; an adjective does not surface in isolation. Quantifiers act in the same way, but a difference lies in a

plural NP as the plural clitic follows the entire NP in the case of an adjective, but follows the noun and precedes a quantifier. There is only one negative marker, which may precede or follow an NP. Because the same negative marker negates a verb phrase, it and its tonal effects are presented in the final chapter, Chapter 14. An unusual attribute of the language is the fact that a noun as an object in a verb phrase is tonally affected by the subject of the phrase. The person marking is often not overtly marked but is marked tonally on the object noun. This is presented in Chapter 13.

The second part of the dissertation covers the verb phrase. Because the tense, aspect, and mood (TAM) system of the language is complex, it is broken up into three chapters. The verb root is introduced first in Chapter 8. Verb roots are abstract representations of an underlying form; a verb stem always emerges with tense, aspect, or mood and person tonal marking. Links between form and meaning of proposed underlying verb roots illustrate that verbs may have even more abstract underlying forms which indicate general senses, such as movement or types of actions. Verb roots are grouped into five basic classes based on the ways the inflectional affixes affect the verb phonologically and semantically. Chapter 9 presents the verb particles, which, along with the inflectional categories presented in the previous chapter, specify the tense and aspect of a sentence. In Chapter 11, the word order for each TAM category is presented. The derivational categories of verbs are presented in Chapter 9. Some verbs may be reduplicated and some must surface with an obligatory nominative accusative as an object. These verbs and the manner in which they appear with other constituents in a sentence are shown in Chapter 12. The tonal patterns on the verb phrase, the person marking on the verb and object nouns, are shown in Chapter 14.

Chapter 2. Phonological Features

2.1 Introduction to the Phonemic Inventory of Features

Because Bangime has very few productive, segmental morphological processes, allomorphy in the traditional sense is limited. There is extensive variation, much of which appears to be inconsistent. For this reason, the frequency of occurrence of each feature is given in the context of where it occurs. This chapter lists and provides justification for the postulated phonemic inventory of features in Bangime.

The vocalic inventory is illustrated in §2.2, followed by the consonantal inventory in §2.3. Phonological processes which affect vowels include mid vowel laxing or becoming [–ATR] before sonorants, front vowel raising in monosyllabic environments, and back vowel lowering in bisyllabic words. Long vowels, (two vowels of the same quality and height), are restricted to certain syllables in a word. In lieu of long vowels, diphthongs are common, especially ones consisting of combinations of front vowels. Contrasting [ATR] qualities may co-occur tautosyllabically to form a diphthong. Consonants undergo phonetically triggered lenition intervocalically and aspectually conditioned nasalization spreading.

Autosegmental features tone and syllable structure are presented in §2.5 and §2.6, respectively. A minimal word length prevents underlyingly short vowels from surfacing in monosyllabic words, but does not apply to clitics or affixes. Bisyllabic words have either two light syllables or one heavy and one light syllable, but, with few exceptions, do not have two heavy syllables. Trisyllabic words do not have heavy syllables. Geminate nasals are often found word-initially but seldom word-medially. Glides in the nucleus of a syllable are moraic, but not syllabic. Glides are tone-bearing in moraic position. The mora is the tone-bearing unit.

Most words, particularly nouns, begin with a high tone, and most suffixes (some of which are frozen or suffixal remnants) have a low tone; thus, most words have a falling tonal melody. Verbs do not surface without grammatical tone which interacts with the underlying tone of the verb root.

2.2 Vowels

Although minimal pairs are found based on vowel length, quality, tone, and nasalization, each of these values is largely predictable. That is, while each of these features can be contrastive, the contrasts may, and often are, neutralized in the contexts explained in this chapter. In some cases, only a single word may have the vowel quality listed. The number of words found in the lexicon for each feature is shown in the columns above the examples presented.

Phonetically, Bangime has a seven vowel system presented in (30).

(30) Phonemic Vowel Inventory

/i e ɛ a ɔ o u/

Vowel length and nasalization are predictable based on the length of the word. Values for [ATR] are also predictable. Combinations of vowels may occur without an intervening segment. Vowels which occur in the same syllable are considered diphthongs. The inventory of diphthongs is shown in (31).

(31) Diphthongs

[ie iɛ ɛe eɛ aɛ ɔo oɔ]

Diphthongs are pronounced as one vowel, or, in careful speech, may be pronounced separately, which raises the question as to whether or not there is a syllable break. The high front vowel may combine with a mid front [±ATR] vowel or the low vowel to form diphthongs but the high back vowel may not combine with any other vowel tautosyllabically.

2.2.1 Diphthongs

Vowels of different heights, backness, and [±ATR] values may co-occur tautosyllabically. Three diphthongs are found among front vowels: [ie], [iɛ], and [eɛ]. Examples in (32) illustrate that a monosyllabic word with front non-low vowels may have nine possible meanings based on tone and vowel quality combinations. The number of words with the vowel sequence is listed above each column, but the tones listed in the lefthand column only refer to the words shown.[28]

(32) Front Vowel Diphthong Minimal Pairs

		[ie]	(25 words)		[iɛ]	(73 words)		[eɛ]	(55 words)
LL	a.	nnìè	rainy season	aa.	nnìɛ̀	yesterday	aaa.	nnèɛ̀	sun
LH	b.	nnié	woman	bb.	——		bbb.	nnèɛ́	bean
HH	c.	——		cc.	nníɛ́	milk	ccc.	——	
HL	d.	nníè	drink.1S	dd.	nníɛ̀	greet.1S	ddd.	nnéɛ̀	four

Monosyllabic words may contrast solely on the basis of vowel quality. Those listed in (32) are divided into those with two low tones (32a - aaa), two high tones (32cc), or a combination of low-high (32b, bbb) or high-low (32d - ddd) tones. Further examples of monosyllabic words that contrast minimally for front vowel diphthongs are shown in (33).

(33) Front Vowel Diphthong Minimal Pairs

	Word	Gloss		Word	Gloss		Word	Gloss
a.	bʷìɛ̀	mosquito	aa.	bʷíɛ́	red	aaa.	bʷèɛ̀	leg
b.	ɥìɛ̀	ascend.3S	bb.	ɥíɛ́	moon	bbb.	ɥíè	water
c.	kíŋgéɛ̀	skin	cc.	kíŋgíɛ̀	room			

[28] Another possibility is that the consonant is palatalized before front vowels and labialized before back vowels and that the co-articulation appears on the vowel as well. This matter is left to further research.

d.	géŋgíè	salt	dd.	gěŋgíè	metal
e.	pɛ́ré̋ɛ̀	key	ee.	pé̋ɛ́rɛ́	a lot adj.

The diphthong [iɛ] is common in words which contrast solely on the basis of tone (33a - aa), (33b - bb). The examples (33aa) and (33bb) show another near minimal pair for monosyllabic words which begin with the consonant [bʷ] or [ɥ]. Bisyllabic words may also contrast for diphthong quality; this is in part due to the frozen suffix [ɛ] found on many nouns.

The low vowel also combines with the front [–ATR] vowel [ɛ] to form a diphthong in nouns and adjectives with the frozen suffix (26a - c), or the diminutive suffix (26d - e), but not tautomorphemically.

(34) Low Vowel Diphthong

	[aɛ]	(5 words)
a.	tìɣà+ɛ̀	peanut
b.	ʒáɣá+ɛ̀	onion
c.	dáɣá+ɛ̀	small
d.	páɣá–ɛ̀	container–DIM
e.	dʷà–ɛ̀	tree–DIM

The low vowel [a] does not to co-occur tautosyllabically with other vowels, except in the above listed words with the mid front frozen suffix following the low vowel.

Minimal pairs with back vowel diphthongs are also found but not to the extent of front vowel diphthongs. The high back vowel [u] may not combine with either of the mid back vowels tautosyllabically.

(35) Back Vowel Diphthong Minimal Pairs

	[ɔo]	(17 words)		[oɔ]	(50 words)
a.	bɔ́ó	father	aa.	bóɔ̀	border
b.	nŋɔ́ó	travel	bb.	nŋòɔ́	meat

In summary, among monosyllabic stems, three contrasts are found regularly in the distribution of diphthongs. Mid [+ATR] and [–ATR] front vowels co-occur tautosyllabically and contrast with mid and high front vowels, as shown in examples (32) - (33). The high front vowel may co-occur with a mid front [±ATR] vowel. The low vowel [a] may combine with the mid [–ATR] vowel as was shown in (34). Mid back vowels may co-occur tautosyllabically but the high back vowel (35) does not. Among bisyllabic stems, diphthongs occur typically in the final syllable (33) of nouns, but may also appear in the initial syllable of adjectives. Many nouns surface with final front vowel diphthongs, a consequence of a frozen diminutive suffix.

Because the distribution of long vowels of the same quality is limited, diphthongs form in cases where long vowels are not permitted, and therefore consist of two morae. While words may contrast on the basis of the vowel quality of the diphthong, in three cases, diphthong formation is predictable. As discussed in detail below, there is a minimal word constraint of two morae. Therefore, one instance in which diphthongs surface where long vowels would occur is in monosyllabic stems, due to a dispreference for long vowels, discussed in detail below.

The second case of predictable diphthongs is when the [ATR] quality of a vowel contributes to its ability to surface as either long or short. The high vowels [i u] do not have surface [–ATR] counterparts *[ɪ ʊ], and thus it is possible to for long high vowels to surface. However, this does not account for the lack of mid and high back vowels combining to form diphthongs.

The third situation which requires a diphthong is before a nasal or rhotic. Mid vowels become [–ATR] before a sonorant in many words, even if it creates a vowel quality difference tautosyllabically.

The vowels which may not combine tautosyllabically insert a glide. The intervocalic glide transcribed in the words in which there is a clear syllable break is not very prominent, either perceptually, or on a spectrogram, but words such as those in (36) are usually pronounced as two syllables rather than as diphthongs. Alternatively, words such as those listed in (28a - i) may be pronounced with palatalization or labialization on the initial consonant and loss of a vowel and its tone, with an additional vowel added to fulfil the minimal word requirement.

(36) Impermissible Diphthongs

	Vowels	Word	Allomorph	Gloss	Frequency
a.	i.a	dìjá	~ ɗʲáá	eat	15 words
b.	a.i	mmàjí	~ mààj	okra	4 words
c.	u.i	mmúwí	~ mʷíí	today	3 words
d.	u.iɛ	púwíɛ̀	~ pʷíɛ̀	wife	17 words
e.	u.eɛ	búwéɛ̀	~ bʷéɛ̀	red.	2 words
f.	u.ɔ	kúwɔ̀	~ kʷòɔ̀	shoulder, wing	5 words
g.	u.o	bùwó	~ bʷóó	herd	5 words
h.	u.a	nŋùwà	~ nnùŋà	prepare	1 word
i.	i.o	kìwó	——	metal fire-starter	5 words
j.	o.i	sógójì	——	toenail	2 words
k.	i.u	píjù	——	blow v.	8 words

The combinations [au], [ei], [ɛi], [ou], [ɔu] or [ui] do not occur, even with an intervocalic glide. This suggests that upgliding sequences, rising vocalic height and falling sonority, within a syllable or even across syllable boundaries, are not favored. Certain vowel sequences only occur with a small set of intervening consonants. The vowel sequences which are disfavored with the fewest number of allowable intervening consonants are [uCu] only when C = [r], [uCO] only when C = [w], [ECa] only where C [m], and [OCi] only when C = [nd]. The sequence [iCo] may be split when C = [r] or [j], [aCu] with C= [r] or [g], and [aCi] when C = [ŋg] or [j]. The remaining vocalic sequences seem to be split by almost any of the permitted, word-internal consonants.

Examples of vowel hiatus are shown in (37) using the diminutive suffix [–ɛ]. When the diminutive suffix is attached or is frozen to a noun with a mid front vowel in the root, such as [dɔ́ré+ɛ̀] 'bird', there is no need for an intervening consonant. However, if the final vowel of the root is a back vowel, the root is often separated by a consonant or a glide.

(37) Diminutive Suffix Consonant Insertion

	Stem	Gloss	Diminutive Stem	Gloss
a.	góò+mpá	step	góò+mbɛ̀	little step
b.	tótò	anvil	tótò–mɛ́	little anvil
c.	dúgú	forest	dúgú–wɛ̀	little forest
d.	kó–ró–gò	basket	kórógò–jɛ̀	little basket

Some words freely alternate between the segments which separate the final vowel of the stem and the diminutive, as seen in the name for the language [báŋgí–jɛ̀] ~ [báŋgí–mɛ̀]. Further, some permissible vowel sequences are separated by a glide between the noun root and the frozen diminutive suffix; this suggests that glide-insertion may not resolve hiatus, but rather lengthen a

word to two syllables. The glide insertion process can be observed in words that alternate between one and two syllables respectively such as [bìɛ́] ~ [bì.jɛ́] ‘baby’, [bì=ndɛ́] ‘babies’. In other cases, the allomorphs of the diminutive suffix may be used to emphasize a word; the sentence Magic Cat.26 uses two forms of the noun /tuŋu+mɛ/ ‘cat’ consecutively.

2.2.2 Length

Vowel length is largely predictable in Bangime, with few words contrasting on the basis of vowel length alone. The data in (38) illustrate the distribution of long vowels for each vowel found in the language. Examples of where short vowels surface are shown in the first column and long vowels in the second column. The first example of each pair of words shows monosyllabic environments, the second pair shows the first syllable of a bisyllabic word, and the third pair shows the second syllable of a bisyllabic word. Trisyllabic words only surface with short vowels, thus no examples are given. A bisyllabic word has, with only one exception, a long vowel in either the first or second syllable, but not in both. Asterisks indicate length combinations that are not attested in the corpus. The frequency of each type of vowel length is shown in the column next to the examples.

(38) Vowel Length Distribution

		Stem	Gloss	Frequency		Stem	Gloss	Frequency
i/ii	a.	mi	1/3.S	3 clitics/sfx, 0 words	aa.	píí	sauce	25 words, 2 clitics
	b.	mmírò	bee	29 words	bb.	síìbíɛ̀	eye	2 words
	c.	kùrí	dust	1 sfx, 121 words	cc.	*CCii	——	0
e/ee	d.	*Ce	——	0	dd.	téé	older sibling	2 words
	e.	térò	sit	126 words	ee.	*Cee.CV	——	0
	f.	sórè	know	171 words (58 [–re] sfx)	ff.	símèè	rock	2 words
ɛ/ɛɛ	g.	nnɛ́	1.pl	2 clitics/sfx, 0 words	gg.	*Cɛɛ	——	0
	h.	nnɛ́ré	uncle	5 words	hh.	*Cɛɛ.CV	——	0
	i.	gírímɛ̀	rabbit	1 sfx, 114 words	ii.	tùréɛ́	hyena	1 word
a/aa	j.	nà	particle	3 particles/sfx	jj.	nnàà	cow	17 words, 6 clitics/sfx
	k.	báréɛ̀	Acacia sp.	170 words	kk.	báákò	beautiful	1 word
	l.	mmìr̃à	door	1 sfx, 244 words (52 [–ra] sfx)	ll.	káráá	new	33 words
o/oo	m.	tò pó	only (‘one only’)	1 word	mm.	kóò	house	9 words
	n.	mmòré	sugar cane	318 words	nn.	póórò	cloud	1 word
	o.	mmírò	bee	1 sfx, 202 words (50 [–ro] sfx)	oo.	sígóò	week	3 words
ɔ/ɔɔ	p.	kò n nɔ́	doorway	1 word	pp.	*Cɔɔ	——	0
	q.	dɔ́réɛ̀	bird	201 words	qq.	*Cɔɔ.CV	——	0
	r.	bɔ̀ndó	alive	5 words, 1 sfx	rr.	*CV.Cɔɔ	——	0
u/uu	s.	–ru	familial plural	1 sfx	ss.	kúù^{n}	egg	15 words (14 nasalized)
	t.	bùr̃á	stick	386 words	tt.	pùùpá	bellows	6 words
	u.	píjù	blow	94 words (33 [–ru] sfx)	uu.	búrúù	seed, kind	1 word

Examples (38a - c, aa - cc) show the distribution of the vowels [i] and [ii]. The high front vowel [i] does not contrast with long [ii] in the initial syllable of a bisyllabic word (38b, bb). A counter-example to the generalization that there are no words with a long [i] in the initial position of a bisyllabic word is [sííbíɛ̀] 'eye', which is an unusual word in that it contains two heavy syllables. In the final syllable of a bisyllabic word (38c, cc), only the short mid front vowel appears.

The mid front [+ATR] vowel [e] and the [–ATR] mid front counterpart [ɛ] are limited in their distribution as long vowels.[29] Examples include [símèè] 'rock', [téé] 'older sibling' for the [+ATR] vowel and [tùréɛ́] 'hyena' for the [–ATR] vowel. No examples of mid front long vowels of the same [±ATR] value were obtained in the initial syllable of a bisyllabic word.

The low, back vowel [a] displays a contrast for length in all environments. The contrast for length in monosyllabic words is shown (38j - jj). The low vowel [a] may appear as long in either the first (38kk) or the second (38ll) syllable of a bisyllabic word. Words such as [ŋàmbà–rá] 'sheep' and [páɣá–rà] 'container' illustrate that [a] is permitted in trisyllabic and longer words, to the exclusion of [aa]. The low vowel [a] appears as long after [r] in bisyllabic words.

Similar to the front counterparts, the mid back [±ATR] vowels occur as long vowels infrequently anywhere except in a monosyllabic word (38mm, nn). An exception is [póòrò] 'cloud'. In all other environments, the mid back vowels appear as short (38m - r). Recall that the mid back vowel becomes [–ATR] in some words before a sonorant such as a nasal or rhotic.

The high back vowel [u], like the low vowel [a], appears in all environments (38s - u, ss - uu), and, like [a], is long in the final vowel of a bisyllabic word after [r] (38uu). Therefore, all vowels except mid front vowels may appear as short in any enviroment.

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[29] Whether the vowels are differentiated on the basis of advanced tongue root or tenseness is yet to be determined.

A minimal word consists of two morae, therefore, other than in grammatical markers; many of the permissible vowels are not appear as short in a monosyllabic word. Many words display identity harmony. The following table in (39) summarizes where long vowels frequently surface in each syllable of a word.

(39) Summary of Long Vowel Occurrence

Vowel	Monosyllabic	Bisyllabic First Syllable	Bisyllabic Second Syllable
ii	+	–	–
ee	–	–	–
ɛɛ	–	–	–
aa	+	–	+
oo	+	–	–
ɔɔ	+	–	–
uu	+	+	–

Mid vowels appear as diphthongs rather than long. One position where high front long vowels are common is in monosyllabic words. Long high front and mid vowels are in complementary distribution in monosyllabic stems. A raising rule applies; further predictions about vowel quality discussed below. For example, adjectives must follow a dummy noun [kii], derived from the noun [keɛ] 'thing'. I hypothesize the monosyllabic form of the noun is [kii] and the bisyllabic form [keɛ].[30] The adjective follows the dummy noun to form a binary foot.

(40) Vowel raising in monosyllabic stems

/EE/ → [ii] /#C__ #

Another instantiation of vowel raising in the dummy noun is before the diminutive suffix /ɛ/. The noun is represented as bisyllabic [kiri] 'thing' before the diminutive suffix [kiri–ɛ] 'little thing' not *[keɛ–ɛ]. We will see that some root vowels raise to [i] in the plural diminutive stem.

[30] The word [kéè] 'thing' is a clear case of a bisyllabic word rather than a diphthong, because it has a falling tonal melody in its surface form and because of the alternation with [kii]. Most words with two adjacent vowels, however, are not clear as to the distinction between one and two syllables. The matter is left to future research.

The mid back vowels are also in complementary distribution with [a]. The low vowel can be long in all environments, but mid back long vowels are almost entirely limited to monosyllabic words. Another instance of the low vowel [a] becoming mid [o] is seen in a verb paradigm. The verb [kẃa̱ ŋ kíi] 'able' becomes [kɔ́–ró–nd–ī] 'unable'.The appearance of either a diphthong or a low vowel instead of a mid back long vowel is attributed to the position in a syllable. It is possible as well that an underlying long /aa/ surfaces as [oo] in monosyllabic words; however, this is yet to be confirmed. These proposed phonological patterns have implications for the origins of lexical similarities with Dogon languages.

Next, we see from the additional data in (41) that [a] and, less frequently, [u] is long in the second syllable of a bisyllabic word after [r].

(41) Long Low Final Vowels

	Stem	Gloss
a.	báráá	Baara (village)
b.	báráà	remain
c.	mmàráà	like/want
d.	mmàràà	build
e.	páràà	amass
f.	síràà	horn
g.	kùráá	birth
h.	súràà	look
i.	túráà	bathe
j.	búrúù	seed, kind

I propose that the stems in (41) are underlyingly /CVrV/ and that the final vowel lengthens after [r]. The vowel lengthening rule would be prevented from applying to stems like [qùúr–á] 'kill–RV' because of the constraint against long vowels in both syllables of a bisyllabic word. Although long vowels do not appear in trisyllabic words, most trisyllabic words with [r] in the final syllable are parsable into a stem plus the [–r] suffix in both nouns and verbs.

The mid front and back vowels of both [+ATR] and [–ATR] values are in complementary distribution among monosyllabic stems. Long mid front vowels [ee] and [ɛɛ] are rare; long mid back vowels [oo] and [ɔɔ] occur more freely. This is examined in detail below.

2.2.3 Vowel Quality

As shown above, disharmonic sequences of vowels may co-occur tautosyllabically. The quality of vowels in polysyllabic words is often predictable. Particularly among verbs, vowels are homogeneous for height and backness throughout the stem, but not for the value [ATR].

There are few productive bound morphemes on nouns; the plural, augmentative, and diminutive do not trigger or undergo harmony. The vowel of the [–r] suffix undergoes backness and height harmony with root. Examples are shown in (42) suffixed with [–r] when permissible.

(42) Identity Harmony

	Stem	Gloss
a.	gíndí	gums
b.	kɛ́rénd–ɛ́	slide, slither
c.	pégɛ́–r–ɛ̀	lean
d.	báŋgá–r–à	carry on shoulder
e.	tɔ́ŋɔ́–r–ò	truth
f.	múgúnd–ú	make a fist

Some mid back vowels surface as [–ATR] before the alveolar nasal [n] and rhotic [r], demonstrated in the examples in (43). The mid front vowel also becomes [–ATR] in the same environments, but the tendency is not as robust.

(43) [+ATR] and [–ATR] effects before Sonorants

Rule	Gloss	UR	PR	Exceptions
/o/ → [ɔ]/_n	horse	/bòó/	ʋòɔ́=ndɛ̀	tégò=ndɛ́ ‘face’
/o/ → [ɔ]/_^{n}	scythe	/kóó^{n}/	kóɔ̀^{n}	kɔ̀ò^{n} ‘dry.PRF’
/o/ → [ɔ]/_r	bird	/dóré/	dɔ́ré+ɛ̀	tégó=rò ‘face’
/e/ → [ɛ]/_n	wind, air	/pébé/	péʋɛ̀=ndɛ́	dégé=ndɛ̀ ‘heads’
/e/ → [ɛ]/_^{n}	agent	/ɕeee^{n}/	ɕèɛ̀^{n}	pɛ́ɛ́^{n} ‘ladder’
/e/ → [ɛ]/_r	wind, air	/pébé/	péʋɛ́–rè	nnìé–rɛ̀ ‘woman’

The laxing process even occurs before nasalization, which partially explains why so many monosyllabic words are disharmonic for the feature [ATR]. In bisyllabic words, [r] and [n] are common intervocalic consonants, so the surface [ATR] value of the stem vowel(s) is often affected. There are few productive bound morphemes in the language, so the effects of root-affix vowel harmony are difficult to determine. The nasal-consonant sequence in the plural clitic triggers the change in vowel quality in mid vowels, but a stem-internal nasal-stop sequence usually does not, possibly due to the status of the nasal in various environments.

Additionally, the contrast between mid vowels may be neutralized before the velar plosive [g]. Minimal pairs are shown in (44).

(44) [+ATR] and [–ATR] effects before Velar Plosive

	Stem	Gloss		Stem	Gloss
a.	bɔ́gó	help	aa.	bógó	big, old
b.	kɔ́gó	rake (v.)	bb.	kógó	basket
c.	tɔ́gò	termite mound	cc.	tógò	carve (gourd)

The reason for some vowels being realized as [–ATR] before [g] and others as [+ATR] before [g] is yet to be determined, but may relate to the origins of the words. The words in the left column are similar to words which in Dogon had word-internal nasals or sonorants. Those in the right column relate to those which have obstruents. Examples of words which illustrate disharmony in [ATR] value of mid vowels after [g] are also found, particularly among verbs.

2.2.4 Nasalization

Nasalization of vowels is only found in monosyllabic words. Many monosyllabic words have nasalized vowels. Since monosyllabic words in isolation consist of long vowels by necessity, it is assumed that both vowels are nasalized although further phonetic measurements need to be performed.[31] Words with vowels of all qualities contrast on the basis of nasalization alone, but only one word with a long [uu] which was not nasalized was found; it is a borrowing from Bamana (44f). Many of the Bangime words in which nasalization is found have word-final or word-internal sonorants in Dogon.

(45) Minimal pairs: Nasalization

Alternation		Stem	Gloss		Stem	Gloss
ii/ĩĩ	a.	ʒíí	cry	aa.	ʒíiⁿ	blood
iɛ/ĩɛ̃	b.	pʷíɛ̀	wife	bb.	pʷíɛ̀ⁿ	leaf

[31] It is also possible that these vowels are not nasalized but rhotocized or exhibit some other autosegmental property, but measurments need to be performed to determine the quality of the vowels in question.

eɛ/ẽɛ̃	c.	kéɛ̀	thing	cc.	kéɛ̀^{n}	there
aa/ãã	d.	báá	tie	dd.	báá^{n}	monitor lizard
oo/õõ	e.	ʊòó	horse	ee.	bòó^{n}	powder
uu/ũũ	f.	kúù	yam	ff.	kúù^{n}	egg

The sole factor which predicts nasalization of vowels is word length: no polysyllabic words are found with nasalized vowels unless the word has an impermissible vocalic sequence such as [gàʒɛ́^{n}] ‘world’. It is likely that the reason for the lack of bisyllabic words with nasalized vowels is due to the underlying representation of nasalization. The nasalized vowels are underlyingly nasal consonants in coda position which are prevented from surfacing word-finally.[32] Word-internally, in polysyllabic words, nasals may surface in coda position as is discussed in §2.6 In verbs, a root with nasalized vowels spreads the feature to the [–r] suffix. Consonants, particularly sonorants [r̃ j̃ w̃], may be nasalized word-internally, but whether or not the nasalization is spread to the vowels is yet to be determined.

2.2.5 Vowel Inventory

Based on the above observations, the underlying vowel inventory includes seven short vowels: /i e ɛ a ɔ o u/. Mid vowels may become [–ATR] before nasals and rhotics. The distribution of the mid vowels and the high front vowel is limited. In monosyllabic, but not bisyllabic words, the high front vowel may appear long. Mid vowels become diphthongs consisting of different vowel heights or qualities in both monosyllabic or bisyllabic words. The low and the high back vowel appear as long in the final syllable of a bisyllabic word. It was shown in 2.3.1 that contrastively

[32] A secondary hypothesis is that the words with nasalized final vowels were originally bisyallabic and the nasalization represents the remnants of a lost syllable.

nasalized diphthongs and long vowels occur in monosyllabic words. Nasalization is limited to these environments and is not an underlying property of vowels.

2.3 Consonants

The phonemic consonantal inventory is presented in (46) with allophones shown in red and marginal phonemes (those which appear only in borrowings) in blue.

(46) Inventory of consonants

	Bilabial	Alveolar	Post-alveolar	Alveolo-palatal	Palatal	Velar	Labial-Palatal	Labio-velar	Glottal
Plos	p b	t d				k g			
Nasal	m	n			ɲ	ŋ			
Prenas Plos	ᵐp ᵐb	ⁿt ⁿd				ᵑk ᵑg			
Fricat		s	ʃ ʒ	ɕ		ɣ			h
Affric				ʧ					
Approx	ʋ	r			j		ɥ	w	
Nasal Approx		r̃			j̃			w̃	
Lateral Approx		l							

2.4 Labial Consonants

Labial consonant phonemes are /b p ᵐb ᵐp m/. The voiced labiodental approximant, [ʋ], is an allophone of a voiced bilabial stop /b/ that may also have an intermediate allophone fricative allophone [β]. The data in (47) illustrate the tendency for /b/ to become [ʋ] before the mid front, [–ATR] vowel [ɛ]. Especially in nouns, before the mid front [–ATR] vowel, the voiced bilabial stop becomes a voiced labiodental approximant. The differences in a prenasalized stop and a nasal-stop sequence are discussed in §2.6.2.

(47) b → ʋ/_ɛ

	Stem	Gloss		Stem	Gloss
a.	pɔ́bè–rɛ̀	hatch	aa.	píʋɛ́–rè	dove
b.	sábé–ré	heal	bb.	péʋɛ́–rè	wind
c.	tíbí–rí	fall	cc.	kéʋɛ́è	there

Other words which surface with an initial [ʋ], but may also be pronounced with [b], are [ʋòò] ‘field’ and [ʋòó] ‘horse’. An interaction appears between the rule stated here and the above stated rule that mid vowels become [–ATR] before nasals and rhotics. The word /pibe–re/ ‘dove’ may appear as either [píʋɛ́–rè] or [píʋè] in isolation. This suggests that the process which lenites the stop to the approximant before the [–ATR] vowel applies before the underlyingly [+ATR] vowel becomes [–ATR]. The laxing of the mid vowel occurs when the vowel precedes a rhotic or nasal. The [–r] suffix must be added before the vowel or consonant processes occur.

Bilabial stops contrast with prenasalized bilabial stops word-internally. The penultimate [ᵐb] found in many nouns is an allomorph of the diminutive suffix.

(48) [CVmbV] and [CVbV]

	Word	Gloss		Word	Gloss
a.	gɔ́mbíè	tunnel	aa.	gɔ́bíɛ̀	water lettuce
b.	tém+bíɛ̀	small rock	bb.	tébɛ́+rè	weigh down
c.	kárám+bɛ̀	monkey sp.	cc.	kárábá	calabash sp.

Examples (48b - bb) and (48c) are composed of two morphemes, a noun root and a frozen morpheme which is either altered or deleted in the plural stem. The words (48a - aa) and (48cc) are stems without any parsable morphemes.

The voiceless bilabial stop is commonly found word-initially, with 151 examples found in the corpus. Intervocalically, there are 110 words with [p], but only ten words with nasal-stop sequences (49aa, bb) or prenasalized stops [ᵐp] (49cc).

(49) [CVpV]

	Word	Gloss		Word	Gloss
	110 words			10 words	
a.	tòpáá	goat bag	aa.	tómpà	path
b.	dápàrí	machete	bb.	gómpà	push
c.	bèr̃ɛ́ n dìpòɔ̀	herb sp.	cc.	góòmpá	step

The word-internal bilabial nasal [m] alternates with a nasalized glide [w̃] through a phonological alternation (50) and through a morphological aspectual change (51). The bilabial nasal as a phoneme appears word-initially and word-internally with no restrictions. The bilabial nasal (50a - c) alternates a nasalized vowel (50aa - cc) in the words listed in (50).

(50) [m ~ j]

	Word		Allomorph	Gloss
a.	símà	aa.	síjɔ̀ⁿ	white adj.
b.	pímà	bb.	píjɔ̀ⁿ	smell v.
c.	túmá	cc.	tóɔ̀ⁿ	blacksmith n.

Examples of the alternation for the adjective ‘white’ are found in §7.4. As noted above, no polysyllabic words are found with nasalized vowels, unless, as in these examples, the word is prevented from surfacing with one syllable due to vowel haitus. Also, nasalization is not a property of vowels. The nasalized variants with word internal glides in (50aa - bb), therefore, are underlyingly monosyllabic but the vowel sequence [iɔ] is banned tautosyllabically. In (50c),

the labialization of the nasal spreads to the low vowel, causing it to become round. A similar process can be seen in the completive aspect particle and its allomorphs.

A nasal stop cluster alternates with a nasalized approximant via an aspectual change in verbs. Examples illustrating the alternation are shown in (51).

(51) [mb ~ w̃]

	Incompletive	Completive	Gloss
a.	tàm–b–à	tà–w̃–à	chew/bite
b.	kám–b–à	ká–w̃–à	age
c.	sàm–b–á	sà–w̃–á	spray

2.4.1 Coronal Consonants

Coronal consonant phonemes are /d t ⁿd ⁿt n r s ʒ/. Non-assimilated borrowings may contain [l]. Word-internally, the voiced alveolar stop [d] is usually preceded by a nasal. Examples of words which permit the voiced alveolar stop to appear without a nasal intervocalically are listed in (52) with near minimal pairs of prenasalized alveolar stops.

(52) [d ~ nd]

	Word	Gloss		Word	Gloss
	82 words			246 words	
a.	gàdá gádà	hobbles	aa.	gàndà	place
b.	pʷídò	stupid	bb.	pɔ́nd–ò	search–INC

As noted previously for prenasalized bilabial stops, prenasalized alveolar stops also alternate with nasalized alveolar approximants through an aspectual change. Examples are shown in (53). The inflectional process is explained in detail in Chapter 8.

(53) [nd ~ ɾ̃]

	Incompletive	Completive	Gloss
a.	mmún–d–á	mmú–ɾ̃–á	move into
b.	kɔ́n–d–ò	kɔ́–ɾ̃–ò	break (in half)
c.	pún–d–á	pú–ɾ̃–á	(plant) grow
d.	bɔ̀n–d–ó	bɔ̀–ɾ̃–ó	live

The voiceless alveolar stop rarely occurs in word-medial position. Words with word-medial [t] are listed in (54). One word was found with a nasal followed by a [t] (54e).

(54) [CVtV] : 5 words

	Word	Gloss
a.	bít–á	finish–INC
b.	mmótù	dull
c.	párátì	furtive
d.	tótò	anvil
e.	pántà	spotted

The voiceless alveolar stop [t] alternates with the affricate [ʧ] via a low-level phonetic rule. The affricate appears optionally word-initially before the high front vowel. Words such as [ʧĩé] ~ [tié] ‘grandmother’ and [ʧĩɛ̀] ~ [tíɛ̀] ‘one’ exemplify this process. In a similar manner, the voiceless postalveolar fricative [ʃ] occurs in free variation with the alveolar fricative [s] before the high front vowel as in [sííbíɛ̀] ~ [ʃĩíbíɛ̀] ‘eye’.

Examples in (55) show the distribution of the voiced postalveolar fricative [ʒ], the pre-nasalized voiced alveolo-palatal affricate [ⁿʤ], and the voiced palatal glide [j].

(55) [j ~ ʒ ~ ʤ]

	Stem	Gloss		Stem	Gloss
a.	jé–r–ò	get up.PRF	aa.	n ʒíè–wàj	1S stand up–STAT
b.	gàʒɛ́^{n}	world	bb.	gàndʒà	fonio
c.	kúgúʒá	crumple	cc.	kŭndʒàrá	old (adj. for trees)

The voiced postalveolar fricative never occurs before back, non-high vowels. A palatal glide in word-initial position becomes a postalveolar fricative before high vowels, so that [júmbá–r–à] ‘pull’ is pronounced [ʒúmbá–r–à], and [jìɛ́] ‘honey’ as [ʒìɛ́], but [jàá+mbɛ̀] ‘child’ is never *[ʒàá+mbɛ]. The palatal glide in word-initial position (55a) alternates with a postalveolar fricative after a nasal (55aa). Following a word-internal nasal, (55b - c), an affricate contrasts with the fricative (55bb - cc).

The alveolo-palatal fricative (56a - b) and labial-palatal approximant (56c - e) occur before non-low vowels, but the former also occurs before the low vowel.

(56) [ɕ] and [ɥ]

	Word	Gloss
a.	ɕùrí	fly
b.	–ɕèɛ̀^{n}	agentive
c.	kúɥì	hair
d.	ɥíè	water
e.	ɥá–ràà	buy.CPL

The liquid [l] is infrequently found in word-initial position and [r] never appears; the former only being found among non-assimilated borrowings such as [lɔ́ɔ̀ŋgá] from Bunoge (Dogon) [lɔ́wɔ́ŋgà], meaning ‘collective hunt’.

As a phoneme, the palatal nasal [ɲ] only occurs before mid back and low vowels [a o ɔ]. A geminate palatal nasal [ɲɲ] does not occur; instead a palatal nasal is preceded by an alveolar nasal [nɲ] if the word is no longer than two syllables (57d).

(57) [ɲ]

	Word	Gloss
a.	ɲɔ̀gɔ́mɛ́	camel
b.	ɲógɔ̀ndó	write
c.	ɲɔ́ⁿ–ɛ́ɛ̀ⁿ	vampire
d.	nɲáŋgò	soul
e.	nɲáẁ	take

2.4.2 Dorsal Consonants

In a manner similar to the voiced bilabial stop, the voiced velar stop (58a - b) spirantizes before [–ATR] vowels, however, unlike the bilabial stop, the velar stop becomes a fricative before back vowels (58aa - bb). The velar stop does not spirantize before a vowel which becomes [–ATR] before a nasal (58c), or an approximant (58d). Certain words, such as (58dd), spirantize the velar stop following a low vowel, but not before a mid vowel (58d). Alternatively, the spirantization could have been caused by the final [ɛ] via a long-distance effect.

(58) [g ~ ɣ]

	Stem	Gloss		Stem	Gloss
a.	tág–ú	agree–PRF	aa.	táɣ–á	agree–RV
b.	sóg–ú	close–PRF	bb.	sóɣ–ɔ́	close–RV
c.	mógɔ́–nd–ó	ferment	cc.	mòɣ–ɔ́	rot–RV
d.	kégɛ́–rɛ̀	mat	dd.	ʒáɣé+ɛ̀	onion

Verbs with roots which end in a velar stop, such as those shown in examples (58a - c), mark the perfect with a change of vowel for the final suffix rather than the stop-nasal sequence alternating with the nasalized approximant shown for the verbs above.

The velar nasal occurs both word-initially and word-internally, although it is usually followed by a stop word-medially. Word-internally, the voiced velar stop contrasts with the prenasalized voiced velar stop as shown in examples in (59).

(59) [g ~ ᵑg]

	Stem	Gloss		Stem	Gloss
a.	páɣá–rà	container	aa.	páŋgá–rà	cave
b.	tégɔ́–ró	face, front	bb.	téŋgɔ́–ró	wide
c.	máɣ–à	shake–RV	cc.	máŋgá–r–à	assemble.PRF

The voiceless velar [k] is restricted to word-internal position with exceptions given in (60). I do not consider compounding to be an active process, but the words in (59b - d) could be combinations of roots plus the word [kéɛ̀] ‘thing’, since the syllable structure of the word in (59d) is so unusual for the language. A nasal may precede a voiceless velar stop (59e - f).

(60) [CVkV]

	Stem	Gloss
a.	báákò	beautiful
b.	kòɔ̀kɛ́	shoe
c.	póɔ́kɛ́	soap
d.	ŋɔ́rkéɛ̀	leopard
e.	dɔ́ŋkà	skylight
f.	tɔ́ŋkà	hobble

The labio-velar approximant deletes in word-final position as shown in the allomorphs of the incompletive or copula particle /daw/ and the verb ‘take’ /ɲaw/ in (61).

(61) Deletion of /w/

a.	àà	dà	àá	n	túráà	you (pl) are washing (yourselves)
	2.PL	INC	2.PL	T	wash	
b.	múwí	nà̲	tìgé	à̲ẇ̲		today me and you (pl)
	today	CONJ	also	2.PL		
c.	dʷàà	bógò	dà	kèbé		there is a big tree there
	tree	big	COP	PP		
d.	sìmèè–bɔ́ɽ́ó		dà̲ẇ̲	kèbé		there is a big rock there
	rock=AUG		COP	PP		
e.	ɲàá	à	tèé	(bărà	ŋ kò)	take the tea (in the kettle)
	take/pick up	DEF	tea	(kettle	PP)	
f.	ɲàẃ	à	tòòpá			pick up the goat bag
	take/pick up	DEF	goat bag			
g.	dà	ŋá	n	dɛ́ɽ́ɛ́		he is grilling meat
	INC	meat	T	grill		
h.	dà	ŋà̲ẃ̲	dɛ̀ɽ́ɛ̀	ŋw̃ìɛ́ⁿ	ŋ kó	he is grilling meat with oil
	INC	meat	grill	oil	PP	

The sentence (61a) illustrates that the pronoun /aw/ [2nd person plural] deletes the final /w/ before both consonants. The /w/ remains phrase-finally in (61b). Also note (61a) that the incompletive particle /daw/ deletes its vowel unexpectedly before the following vowel. Examples (61c - d) show regular and apparent under-application of the glide-deletion process respectively in the copula, thought to be the same particle as the incompletive /daw/. The sentences (61e - f) are examples of over-application and regular, respectively since the /w/ in the second example is not expected to be deleted before the vowel. The final pair (61g - h) shows

another instance of under-application and regular application before a voiceless stop. Two of the examples above in which the word-final glide is deleted (61a, g) contain a syllablic nasal.

2.4.3 Glottal Consonant

Although the glottal fricative /h/ is included in the phonemic inventory of Bangime, it is generally found only in words borrowed from Fulfulde or Arabic.

(62) [h]

	Stem	Gloss
a.	hùⁿ	postposition
b.	háⁿ	irrealis particle
c.	há	until

2.5 Tone

Bangime is a tonal language. There are two privative tones, high and low. The tone-bearing unit is the mora. On monosyllabic words with two morae, level tones may combine to form rising or falling melodies. Rising tones may appear on monomoraic syllables in word-initial position. Rising tones on monomoraic words usually appear after a velar consonant. A phonetic mid tone which is the result of a non-automatic downstep predictably appears on the final syllable of a bisyllabic word when the initial syllable is heavy and carries a high tone. The mid tone represents a downstepped phonemic underlying high tone in this position (cf. péɛ́ˡrɛ́ (62b) versus déɛ́mɛ̀ (62a), and the absence of HH.H toned CvvCv indicated in (62)).[33]

Most stems in Bangime surface with a pitch change at the syllable or mora break; however, shown in (63), there are exceptions to this generalization. Verbs always surface with a

[33] The possibility that a mid or downstepped tone occurs in lieu of a high tone in other contexts has been explored in depth and I am still debating the issue as the data are variable and thus remain inconclusive. I leave this matter to further research.

grammatical tone so the generalizations about tonal contrasts are shown mostly on nouns. Some nouns surface with a tone that differs from their underlying tones, as shown in detail in Chapter 3. Stems which contrast solely on the basis of tone are typically found among monosyllabic stems (63a - e, aa - ee), but examples of bisyllabic words with the frozen nominal suffix which contrast for tone alone are shown in (63f - ff).

(63) Minimal Pairs: Tone

Contrast			Stem	Gloss		Stem	Gloss
Vowels	Tone		Monosyllabic				
éɛ̀/èɛ̀	HL/LL	a.	téɛ̀	straight	aa.	tèɛ̀	forge.3SG
íɛ́/ìɛ̀	HH/LL	b.	bʷíɛ́	red	bb.	bʷìɛ̀	mosquito
àá/àà	LH/LL	c.	nnàá	wilderness	cc.	nnàà	cow
òó/òò	LH/LL	d.	ʊ̀ó	horse	dd.	ʊ̀ò	field
ùúⁿ/úùⁿ	LH/HL	e.	kùúⁿ	hip	ee.	kúùⁿ	market
Vowels	Tone		Bisyllabic	Gloss		Stem	Gloss
CV.Cíɛ̀/CV.Cíɛ́	HHL/LHL	f.	ʒɛ́mbíɛ̀	bag	ff.	ʒɛ̀mbíɛ̀	road

Excluding grammatical and underlying tone, surface tonal contrasts are mostly found among monosyllabic stems. The reason for this is hypothesized to be that, in polysyllabic words, a change in tone usually occurs somewhere in the word. That is, a word with more than one syllable with an underlyingly /H/ tone emerges as [HL] rather than [HH].

2.5.1 Tonal Correspondences with Syllable Structure

Tone does not seem to correspond with the height or backness of the vowel but does show correspondances with the syllable structure of the word. Section 2.6 describes the syllable structures present in the language. Monosyllabic words may have high, low, or a combination of

high-low or low-high tones. Each mora bears a tone. The vowel [ɛ] which is found among many nouns is analyzed as being a frozen suffix bearing a low tone. Monosyllabic words which begin with a high tone are more common than those which begin with a low tone. An equal number of falling and high toned monosyllabic words are found; almost an equal number of rising and low toned words are found. Examples are shown in (64).

(64) Surface Tones on Monosyllabic [CVV] Words

Word	a. béɛ̀	b. bɔ́ó	c. ʊ̀ó	d. nnàà
Gloss	gerbil	father	horse	cow
PR	HL	HH	LH	LL
Frequency	17 words	17 words	4 words	5 words

Most monosyllabic words with nasalized vowels have level high tones. As with monosyllabic words with oral vowels, words with an initial high tone are more common than words which begin with a low tone. As mentioned above, all but one word with a long [u] is nasalized. Examples are shown in (65).

(65) Surface Tones on Monosyllabic Nasalized [CVV^{n}] Words

Word	a. túù^{n}	b. báá^{n}	c. bàá^{n}	d. nnìì^{n}
Gloss	ant	lizard	knife	mouse
PR	HL	HH	LH	LL
Frequency	9 words	12 words	6 words	5 words

There are few bisyllabic words with level tones. Bisyllabic words with level high tones are less common than those with level low tones. The most common tonal melody on bisyllabic words is a high-low sequence with a high tone on the first syllable and a low tone on the second syllable. Examples are shown in (66).

(66) Surface Tones on Bisyllabic [CV.CV] Words

Word	a. páɣà	b. téró	c. bùf̃á	d. nŋàrà
Gloss	container	show	stick	God
PR	HL	HH	LH	LL
Frequency	18 words	2 words	11 words	8 words

Bisyllabic words with a final long vowel have an overall preference for a high tone on the 'root' (the stem minus the frozen affix) and a low tone on the frozen affix, as shown in examples like (59b). Many bisyllabic nouns with long final vowels have a diminutive [+ɛ] frozen suffix which bears a low tone. Most bisyllabic nouns with final long vowels and trisyllabic words with the sequence [Vr] end with a low tone on the final syllable.

Tonal melodies which occur infrequently are shown in (67). No words with tones *[HHH], *[LLL], [*LLH], or *[HLH] were obtained among the words collected with the syllable structure [CV.CVV]. Since there are no bisyllabic words with long vowels without a contour melody, I suggest that these words must have at least one high and one low tone, and that words which are underlyingly /HHH/ emerge as [HH.^{l}H]. The locus of the tone or pitch change is at the syllable boundary for stems without frozen suffixes (67a, c) and at the morpheme boundary for words with a frozen suffix (67b, d).

(67) Surface Tones on Bisyllabic [CV.CVV] Words

Word	a. bíròò	b. bíréɛ̀	c. tòpáá	d. gùwíɛ̀
Gloss	shrub sp.	flame	goat bag	earth
PR	H.LL	H.HL	L.HH	L.HL
Frequency	1 words	13 words	1 word	2 words

The diminutive frozen suffix variants [+mɛ] and [+bɛ] typically occur in bisyllabic words with an initial long vowel that surfaces with the tonal melody [HHL]. This suggests that most monosyllabic roots (i.e. without the diminutive suffix) are high toned, as was shown for monosyllabic stems above in (64). One word was found with the tonal melody [HLH], [góòmpá] 'step'. The only all low toned word found was the number 'three' [tààrò]. Therefore, as with bisyllabic words with a long final vowel, those with a long initial vowel also have at least one high and one low tone. Similarly, the locus of the change in pitch is at the syllable boundary (68c) or the morpheme boundary for nouns with frozen suffixes (68a, e).[34]

(68) Surface Tones on Bisyllabic Words [CVV.CV]

Word	a. dɛ́ɛ́mɛ̀	b. pɛ́ɛ́ꜜrɛ́	c. kòɔ̀kɛ́	d. tààrò	e. nnìérɛ̀
Gloss	millet grain	a lot	shoe	three	woman
PR	HH.L	HH.M	LL.H	LL.L	LH.L
Frequency	10 words	3 words	3 words	1 word	2 words

Trisyllabic words are often suffixed with the frozen suffix [+rV] where [V] is an underspecified vowel. The frozen suffix is usually low (68a), but may also surface as high (68d). As with the stems presented thus far, most trisyllabic words begin with a high tone. Level low toned trisyllabic words are uncommon, with only one word found in the corpus, and level high toned trisyllabic words were not found. As with bisyllabic words, the tonal melody *[H.L.H] is not found among trisyllabic stems. The majority of trisyllabic words follow the same pattern as other stems: the locus of the change in pitch is either at a morpheme boundary (68a) or at the final syllable boundary (68b). The examples like (68d) are exceptions to these generalizations.

[34] The evidence for these nouns being interpreted as having frozen suffixes is shown in Chapter 2.

(69) Surface Tones on Trisyllabic Words [CV.CV.CV]

Word	a. gíwárà	b. ʒɔ̀ròɡú	c. tàɣàrà	d. tùkú–rú
Gloss	hat	chain	window frame	buttock
PR	H.H.L	L.L.H	L.L.L	L.H.H
Frequency	18 words	3 words	1 word	2 words

A bisyllabic word with an initial high tone and a long vowel or a word-internal nasal-consonant sequence often surfaces with a downstepped tone on the second syllable. The downstepped tone is analyzed as a process of tone lowering of an underlying H-tone after a heavy syllable, since word-internal nasals after consonants are treated as syllable codas in bisyllabic words. Non-derived downstepped tones are not found among trisyllabic words, but diminutive-plural noun stems often arise with a downstepped tone on the diminutive suffix.

(70) Predictable Downstepped Tone

	Stem	Gloss
a.	póɔ́ˡrɛ́	black
b.	bɛ́nˡdé	long
c.	dómˡbó	hole
d.	dámˡbá	fill

2.5.2 Tone generalizations

The tonal contours found among Bangime words are as follows: HL is very common and LH occurs but is less common. Words with level low and high tones which are not grammatical tones are most often found on monosyllabic words. The tonal melody [LHL] occurs often but *[HLH] is unattested, except in one word. Most words which have a high-low tonal melody in which the low tone is on the final mora have either the lexicalized diminutive or frozen [–r]

suffix, suggesting that the root of such words is underlyingly high, the suffix low. The tone of words without a frozen suffix is not predictable. If a word does not contain a frozen suffix, but does have a change in pitch, the locus of the pitch change is at final syllable boundary.

2.6 Syllables

Most content words consist of (1) one syllable with two morae, (2) two syllables with either a light-light, light-heavy, or heavy-light combination, or (3) three syllables, all of which are light. There is a minimal word constraint of two morae, and a maximal word constraint of three syllables. Onsetless syllables are uncommon and codas do not occur word-finally. Homorganic nasals which precede a word are pervasive in the language, both as morphological markers and as phonologically determined segments. Syllable onsets word-initially show a preference for less sonorous segments whereas onsets word-internally are more sonorous.

2.6.1 Minimal Word

Most words with only one mora are not permitted in isolation. Clitics, affixes, and certain verb stems may appear as monosyllabic with one mora.[35] All monosyllabic words, excluding particles and grammatical markers, have either long vowels or a vowel-glide combination in isolation. A monosyllabic word which has an underlying short vowel is compensated by lengthening or adding another mora in isolation. The underlying form of a monosyllabic word can be viewed when it is preceded or followed by a segment which contributes to the weight of the syllable or the word, such as the plural marker. The examples in (71) are all the words in the

[35] There are some verb stems with the [+ATR] mid, back vowel [o] which may surface as CV in the incompletive aspect. Examples include [so] ‘know’, [wo] ‘go’, and [no] ‘hear’. The fact that only [+ATR] mid, back vowels may surface in monomoraic environments likely has a correlation with the fact that mid, back vowel diphthongs are less common than front vowel diphthongs in that the mid, front vowels must arise as bimoraic diphthongs where mid, back vowels may arise as a single vowel.

language which were found to be underlyingly monosyllabic, as can be seen when the stem is followed by the plural clitic; these words surface with two morae in the singular.

(71) Minimal Words with Monomoraic Roots

	Singular		Plural	Gloss
a.	nnìì	aa.	nnì=ndɛ́	hand
b.	ʒíí	bb.	ʒí=ndɛ̀	root
c.	tíí^{n}	cc.	tí=ndɛ̀	tail
d.	kíí^{n}	dd.	kí=ndɛ̀	canoe
e.	bíí^{n}	ee.	bí=ndɛ̀	goat
f.	pɛ́ɛ́^{n}	ff.	pɛ́=ndɛ̀	ladder
g.	kóò	gg.	kɔ́=ndɛ̀	house
h.	tóɔ̀	hh.	tɔ́=ndɛ̀	ppl of Demangari (village)

Most of the underlyingly monosyllabic words in the language consist of high, front vowels (71a - e), many are nasalized (71c - f), and most have high tones (71a - f). The example (71g) shifts from [+ATR] to [–ATR] since, as noted previously, most mid back vowels become [–ATR] before a nasal (with the singular example in (71f) being an exception).

2.6.2 Syllable Structure

Many words in Bangime have identical vowels in each syllable, as discussed in detail previously. While sonorous consonants are rarely found word initially, non-sonorous consonants can be found both word-initially and word-internally.

(72) Frequency Consonant Distribution by Syllable Environment

	Word-Initial	Frequency	Word-Internal	Frequency
a.	#r	0 words	VrV	777 words
b.	#w	50 words	VwV	327 words
c.	#j	101 words	VjV	263 words
d.	#n	173 words	VnV	57 words
e.	#g	136 words	VgV	299 words
f.	#b	193 words	VbV	212 words
g.	#d	207 words	VdV	82 words
h.	#s	234 words	VsV	147 words

The following give examples of each type of syllable found in Bangime. The predictablity of vowel length indicates that many words, especially nouns, have long final vowels, and trisyllabic stems have short vowels.

Onsetless words are very uncommon in the language. The list in (73) constitutes all the words thus far found without onsets (aside from non-integrated borrowings from Arabic).

(73) Onsetless Syllables

Syllable Structure		Particle	Gloss
V	a.	à	DEF
	b.	á	CHAIN
	c.	á	2nd SG
	d.	áà	2nd PL
V.CV	e.	ímà	here

Many words which begin with a nasal are preceded by another nasal. The pre-word nasal can be either a grammatical marker or a predictably occurring segment. Monosyllabic words which begin with a nasal (74a - b) are preceded by a nasal. A velar nasal precedes most words which begin with the glide [w] (74c - d). Bisyllabic words having two light syllables and an initial nasal (74e - f) are preceded by a nasal. Bisyllabic words having heavy syllables with initial nasals have a preceding nasal (74g - h). Geminate nasals are possible word-internally (74i - j), but words with word-internal geminate nasals are not preceded by an initial nasal (74j).

Nasals which follow stops word-internally in bisyllabic words with short vowels are moraic (74k - l). But are prenasalized stops in bisyllabic words with long vowels in either syllable or trisyllabic words (74m - r). Trisyllabic words usually have word-internal prenasalized stops in the penultimate syllable. Initial nasals in trisyllabic words are not geminate nasals, for example [námbórò] ‘resources’. Despite the restrictions on an initial geminate nasal, the initial nasal seems to not contribute to the weight of the syllable since underlyingly monosyllabic words such as /nni/ ‘hand’ surface with a long vowel [nnii]. No nasals bear independent tones, i.e., if viewed on a spectrogram, it is clear that a nasal merely carries the tone of the preceding segment, which in all cases is a tone-bearing unit.

(74) Nasals

Syllable Structure		Word	Gloss	Frequency
N.NVV	a.	n.nìɛ̀	yesterday	13 words
	b.	n.nàá	wilderness	
ŋ.wV	c.	ŋ.wí.mà	twist	4 words
	d.	ŋ.wɔ́ⁿ	walk	
N.NV.CV	e.	m.mí.rò	bee	12 words
	f.	n.nó.rè	hear	
N.NV.CV	g.	n.nɔ̀ɔ̀.rɛ̀	bone	23 words

	h.	n.nìé.rɛ̀	woman	
CVN.NV	i.	ʊìm.mɛ̀	heart	2 words
	j.	m.mìn.ná	door	
CVN.CV	k.	tàŋ.kó	garden egg	30 words
	l.	dám.bá	fill	
CVN.CVV	m.	kán.dèè	husband	5 words
	n.	kíŋ.gèɛ̀	skin	
CVV.NCV	o.	jàá.mbɛ̀	child	2 words
	p.	góò.mpá	step	
CV.NCV.CV	q.	gú.mbá.rà	wasp	21 words
	r.	pɔ́.mbó.rò	ditch	

Glides are found in coda position. Monosyllabic words must surface as bimoraic with a mora being a vowel or a glide.

(75) Monosyllabic Words

Syllable Type		Stem	Gloss	Frequency
CVG	a.	káẁ	it	35 words
	b.	déẁ	mar	
CGV	c.	kẃà	throat	2 words
	d.	kẃà	able	
CVG^{n}	e.	gáẁ^{n}	good	1 word
CVV	f.	kéɛ̀	thing	73 words
	g.	ɥíɛ́	moon	
CVV^{n}	h.	bíì^{n}	goat	44 words
	i.	ʒóɔ̀^{n}	rain, sky	
C^{G}VV	j.	b^{w}èɛ̀	leg	45 words
	k.	d^{w}àà	tree	
C^{G}VV^{n}	l.	p^{w}íɛ̀^{n}	leaf	8 words
	m.	t^{w}íì^{n}	bud, flower	

The glide [w] often appears in moraic position. All the words with [w] in moraic position also contain the low vowel [a]. The reason for this may be because [w] is the surface form of [o/ɔ] since the low and mid back vowels *[ao], *[oa] do not combine to form diphthongs. The glide [j] does not often appear in moraic position, but the stative suffix, [–wɛ] ~ [–waj] is an exception. Co-articulation is noted above, but, like nasalization, most stems with labialization (75j - m) are monosyllabic.

Bisyllabic words have a long vowel in either the first (76a - b) or second syllable (76c - d). Two exceptions (76e - f) are found; the second is a diminutive form of [koa] 'fig'.

(76) Bisyllabic Words with Heavy Syllables

Syllable Structure		Stem	Gloss	Frequency
CV.CVV	a.	pɛ́.réɛ̀	key	23 words
	b.	bá.ráà	remain	
CVV.CV	c.	póó.rò	cloud	23 words
	d.	níí.rù	breathe	
CVV.CVV	e.	síí.bíɛ̀	eye	2 words
	f.	kɔ́à.bèɛ̀	agave sp.	

Some bisyllabic and all trisyllabic words have light syllables.

(77) Polysyllabic Words with Light Syllables

Syllable Structure		Stem	Gloss	Frequency
CV.CV	a.	bò.rò	tomorrow	57 words
	b.	dé.gè	head	
CV.CV.CV	c.	gí.wà.rà	hat	24 words
	d.	pá.gà.rà	container	

I hypothesize that all morphemes were originally maximally one syllable. This can be viewed in the limited morphology of the language; many polysyllabic words have frozen affixes.

Further, nasals serve to connect constituents, clitics, or a phrase, so the nasals found word-internally could have once been grammatical markers between two words.

2.6.3 Clitics and Affixes

The determining factors for discerning whether a morpheme is a clitic or an affix in Bangime are syllable structure and the ability of other morphemes to intervene. Content words which are unbound in Bangime include nouns and verbs. Adjectives must follow a 'dummy' noun [kíì], which is a monosyllabic allomorph of the bisyllabic [kéè]. On nouns, the plural is considered to be a clitic because it follows adjectives rather than a noun directly in a noun phrase. However, the segmental and tonal properties of the plural marker tie it closely to the noun root in the manner outlined in Chapter 4. Some nouns also are conjoined with frozen affixes shown in Chapter 4 as well.

Other inflectional morphemes which follow the noun in the noun phrase are the diminutive and augmentative. The diminutive is a suffix. The diminutive has segmental allomorphs which are determined by the noun root. The diminutive has a low tone which interacts with a noun root. The augmentative, on the other hand, is not a suffix or a clitic, but a bound word. Derived from the adjective [bogo], the augmentative [bɔr̃o] follows a noun directly and no morphemes may intervene between it and the noun root.[36] The augmentative morpheme does not contribute to the syllabicity of the noun root; it is toneless like the plural clitic and receives a polar tone to that of the noun root. The augmentative behaves similarly to an adjective in that it causes the genitive marker to be deleted in a genitive phrase.

The morphemes which are precede a nouns are the definite marker, a set of possessive pronouns, and the genitive nasal. If one of the possessive prefixes or the definite marker

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[36] The possible Dogon counterpart of this word is [gara], 'big', or [gànà-r̃á] 'to make smth bigger', from Jamsay.

precedes a noun which begins with an initial nasal-nasal sequence, the initial nasal deletes. Otherwise, the syllabicity of the noun stem is unaffected. Since none of these morphemes affect the syllabicity of the noun stem, none is considered a bound affix. These markers, save for the genitive nasal, have tones which interact with the noun in the manner shown in Chapter 5.

Associated with verbs are inflectional suffixes, described in Chapter 8, and derivational suffixes, analyzed in Chapter 9. Verb particles expressing tense, aspect, and mood distinctions, discussed in Chapter 9, are affected by the subject pronouns tonally and segmentally, but do not affect the verbs they precede.

As noted, a nasal precedes many nouns and verbs. The first and third person pronouns may be represented as a nasal preceding objects, verbs or verb particles. The pronoun nasal does not bear tone independent of the word it precedes. The pronoun nasal does not contribute to the syllabicity of a noun or a verb; however, it does appear to affect the verb particle in the manner outlined in Chapter 8. The pronoun nasal is considered to be more closely bound to the verb particle than it is to content words, nouns and verbs. The transitive marker, also a nasal, is shown to affect the syllabicity of the verb stem in Chapter 14.

The table in (78) summarizes the properties of the bound morphemes found in Bangime.

(78) Bound Morphemes

	Syllabicity	VH	Intervene	Deletes	Tone Bearing	Tone Effects	Type
GEN	no	no	no	yes	no	no	proclitic
POSS	no	no	no	no	yes	yes	bound word
DEF	no	no	no	no	yes	yes	bound word
AGENT	yes	no	no	no	yes	yes	suffix
DIM	yes	no	no (?)	no	yes	yes	suffix
AUG	no	no	no	no	yes	no	bound word
PL	yes	no	yes	no	yes	no	enclitic
ADJ	no	yes	yes	no	yes	no	bound word
TRANS	yes	no	no	no	no	no	prefix
Sbj–N/V	no	no	no	no	no	no	———

Sbj–TAM	yes	no	no	no	no	yes	prefix
INC	yes	no	yes	no	yes	yes	——
CPL	yes	no	no	no	yes	yes	———
NEG	no	no	yes	no	yes	yes	clitic

2.6.4 Generalizations about the Syllable

There is a minimal word constraint in Bangime: a word must have at least two morae. Disyllabic footing is binary, with most words consisting of a light-light, heavy-light or light-heavy combination. Trisyllabic syllables are limited to one mora per syllable.

The phonotactics of the language determine the available syllable types in Bangime, and many phonological processes occur at syllable boundaries rather than at morpheme boundaries, as the language has little affixal morphology.

2.7 Summary of Features

The vowel inventory of Bangime consists of seven vowels with length and nasalization being largely, but not entirely, predictable. Front vowels often combine to make diphthongs. Tense or [+ATR] mid vowels become lax or [–ATR] before sonorants. Due to the lack of affixal processes, most phonological effects are seen word-medially at syllable boundaries. Word-initially, syllable onsets are limited to the less sonorous consonants. Word-internally, or intervocalically, consonants may be lenited to become more sonorous. Onsetless syllables are very rare and syllable codas limited to syllable position. Consonants may be pre-nasalized, nasalized, or labialized. Tone is determined grammatically or by frozen suffixes.

Chapter 3. Nouns Types

3.1 Noun Roots

As shown in the previous chapter, the number of possible words in Bangime is limited by vowel quality, vowel length, syllable structure, and tonal melody. The first type of word to be examined in detail is nouns. The affixal and tonal patterns found on nouns are less complex than those found on verbs. Bare noun roots never surface without a tonal melody and, in some cases, are followed by a suffix or clitic. The noun stem, therefore, consists of a noun root plus a tonal melody, and sometimes a frozen or productive noun suffix or a clitic. The underlying tones and segmental forms of noun roots may be determined from their tonal and vocalic behavior in a stem. Permissible noun stems are shown in (79).

(79) Noun Stems

a. noun =ndɛ ~ =nɛ
ROOT PLURAL

b. noun +ɛ
ROOT frozen or productive diminutive

c. noun +mi =ndɛ
ROOT DIMINUTIVE PLURAL

d. noun –r
ROOT frozen suffix

e. noun ∅/*–r =ndɛ
ROOT PLURAL

f. noun –bɔr̃o
ROOT AUGMENTATIVE

g. noun –bɔr̃o =ndɛ
ROOT AUGMENTATIVE PLURAL

The derivational morphemes, the diminutive and the augmentative are expressed with a suffix and a bound morpheme respectively. The plural is an inflectional morpheme, which is a clitic. Noun roots may surface in the singular with either a frozen or lexicalized diminutive suffix (79b) or a semi-frozen [–r] suffix with an undetermined meaning (79d). These markers are mutually exclusive; a noun does not surface with both a lexicalized diminutive and the [–r] suffix. The plural marker can follow the diminutive (79c) or the augmentative (79g), but not the [–r] suffix (79d). The productive diminutive suffix has the same shape as the lexicalized diminutive in both the singular and plural.

Because the plural and augmentative stems show the underlying tone of a word, noun stems are examined in detail in this chapter. The plural clitic also shows the underlying vowel length. First, in §3.2, noun roots are shown with the plural clitic to illustrate the segmental behavior and categorization of underlying noun roots. Next, in §3.3, noun stems are examined again with the plural clitic so as to understand the underlying tonal melodies found on noun roots. Section 3.4 illustrates the noun root with the augmentative. Lastly, §3.5 gives a summary of noun root types before discussing noun suffixes in the following chapter.

3.2 Noun Stems

Noun stems are categorized into six types based on segmental and tonal attributes. Examples of each type are shown in the subsections below with further examples found in the appendix.

There is no agreement in nouns between the suffix or clitic it receives and other constituents in the noun phrase, except in two cases, the diminutive, and the plural in complementizer phrases. Nouns types do not seem to fit into semantic categories.[37/38]

(80) Segmental Categories of Nouns

Noun Type	Singular	Plural	Noun Type	Singular	Plural
I.	–Ø	=nɛ	II.	V^{n}	$=^{n}dɛ$
III.	ɛ	=nɛ	IV.	+ɛ	–mi=nɛ
V.	r	r=nɛ	VI.	–r	=nɛ

Noun Types III and V involve frozen or lexical [ɛ] or [r], so [r] deletion before the plural does not apply to category V. The diminutive suffix, frozen or productive, surfaces as [mi] before the plural clitic in noun type IV. The plural clitic depends on the final tone of the preceding morpheme for its tone; it is always the polar opposite.

3.2.1 Plural Allomorphy

The plural has two segmental allomorphs, [ndɛ] and [nɛ]. The two plural allomorphs seem to be in free variation, as most words were recorded pronounced with either form, even by the same speaker. The most common instance of the plural clitic is [ndɛ] so the forms which were given with [nɛ] are underlined or highlighted in blue throughout the manuscript, and are listed in (81).

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[37] The concept of 'animacy' is somewhat vague in Bangime due to the speakers' animistic heritage. Nouns are described as being either 'dead' or 'alive'. For example, shoes are merely dead animal's skins or a table represents a tree which was once alive. The only noun thus far found in the language that is specifically indicated as being inanimate, 'never alive', is a culturally unmentionable object for the Bangande and thus cannot be stated explicitly here.

[38] While there is no overt gender distinction in Bangime, all nouns are considered either male or female, husband and spouse, except 'sky', 'earth', and 'water' which consist of both genders. These relations are determined spatially; all male objects are above female ones. For example, even though 'breast' is inherently female, in Bangime [súụ̀ɛ̀] 'breast' is male with his wife being [kǒrɛ̀é] 'stomach'. More of these relations are found in the lexicon, available at http://dogonlanguages.org/.

(81) [nɛ] Plural in Nouns

	Singular	Plural	Gloss
a.	kíɛ̀	kíɛ́=nɛ̀	luggage, belongings
b.	ɗʷíɛ̀	ɗʷíɛ̀=nɛ́	clay
c.	ʒáà	ʒáà=nɛ́	death
d.	kóɔ́ⁿ	kóɔ́=nɛ̀	pestle
e.	gɔ́ɔ̀ⁿ	gɔ́ɔ̀=nɛ́	man
f.	kɔ́ɔ̀ⁿ	kɔ́ɔ́=nɛ̀	scythe
g.	bííⁿ	bíí=nɛ̀	goat
h.	ságì	ságì=nɛ́	eighth
i.	tàŋà	tàŋà=nɛ́	ear
j.	kúrí	kúrí=nɛ̀	dust
k.	kɔ́mɛ̀	kɔ́mɛ̀=nɛ́	slave
l.	kɔ́ɔ́rɔ̀	kɔ́ɔ́rɔ̀=nɛ́	fetish
m.	málpá	málpá=nɛ̀	rifle
n.	páŋgà	páŋgá=nɛ̀	cave
o.	kúndù	kúndú=nɛ̀	log
p.	sígòó	sígòó=nɛ́	day
q.	gŭʒéɛ̀	gùʒɛ̀ɛ̀=nɛ́	weed
r.	gɛ̆ŋgɪ́ɛ̀	gèŋgé=nɛ̀	metal
s.	gèŋgíɛ̀	gèŋgé=nɛ̀	crocodile

t.	déɛ́mɛ̀	déɛ́mɛ́=nɛ̀	seed	
u.	dúúgú	dúúgú=nɛ̀	forest	
v.	nnòɔ̀.rɛ̀	nnòɔ̀.rɛ̀=nɛ́	bone	
w.	góòmpá	góòmpà=nɛ́	step	
x.	gíwárà	gìwàrà=nɛ́	hat	
y.	táɣárà	táɣárà=nɛ́	Fulani house	
z.	kùrùbɛ́	kurubɛ=nɛ	guts, basket	
aa.	góòmpá	góòmpà=nɛ́	step	
bb.	gúmbárá	gúmbárá=nɛ̀	wasp	
cc.	nàmbàrà	nàmbàrà=nɛ́	trick	
dd.	kùwómbɛ̀	kùwómbɛ̀–mɛ́=nɛ̀	aardvark	
ee.	gúmbɛ̀ jágáɛ̀	gùmbɛ́=nɛ̀ jáɣáɛ̀	wild onion	
ff.	ʒèèja púr̃á	ʒèèjá púr̃á=nɛ̀	lazy	
gg.	gàndʒà	gàndʒà–bɔ́r̃ó=nɛ̀	fonio	
hh.	mmírò	mmíró=nɛ̀ m páɣá	bees’ hive	
ii.	ma–r̃a	mà=nɛ́	mermaid	
jj.	púndá–rà	púndì=nɛ́	weed	
kk.	tómbó–rò	tómbó=nɛ̀	dry place	
ll.	n nìé–rɛ̀	n nìé=nɛ̀	woman	
mm.	ŋàmbà–rá	nŋámbā=nɛ̀	sheep	
nn.	jàá+ mbɛ̀	jáá=nɛ̀		child
oo.	ʒìbɛ́ɛ́	jìbɛ̀=nɛ́		person

pp.	bámbàrà	bàmbàrá=nɛ̀		Bambara
qq.	bòndí	bòndì=né		Bondu
rr.	kòrò bòrò	kòrò bòrò=né		Songhai
ss.	púndà	púndé–è	púr̃à=né	Fulani
tt.	kɔ́mɛ̀	kɔ́mé=nɛ̀		slave
uu.	pɔ́ɔ́ˡré	kì pɔ́ɔ́ré=né		African
vv.	báŋgà, bàànʲí–jé	bàŋà=né		Banga
ww.	tùbàkú	tùbákù=né		Toubab
xx.	pùùtá	pùùtá=né		Fulani enslaver
yy.	púúndà	pʷándà=né		Fulani
zz.	tóò	tóó=né		Tommo

The plural clitic is one of many morphemes which alternates between a nasal and a nasal-stop sequence. Many of the nouns listed with the [nɛ] morpheme may also appear with the [ndɛ] allomorph. Many nouns, presented in §3.2.5 below, have a lexicalized diminutive suffix which, in the plural stem, surfaces as [mi]. The nouns which have a lexicalized diminutive suffix never surface with the [nɛ] plural, always with the [ndɛ] allomorph.

3.2.2 Segmental Type One (–Ø, =nɛ)

The first segmental type consists of nouns with no suffixation in the singular and either the suffix [=ndɛ] or [=nɛ] in the plural. The tonal alternations on the plural clitic are discussed below. Examples of nouns which are categorized into Type One are shown in (82).

(82) Segmental Type One: 281 Nouns

	Singular	Plural	Gloss
a.	tóɔ̀	tɔ́=ndɛ̀	ppl of Demangari (village)
b.	nnàà	nnàà=ndɛ́	cow
c.	kìwó	kìwɔ̀=ndɛ́	firestarter
d.	dóm$^{\text{l}}$bó	dómbɔ̀=ndɛ́	hole
e.	tòpáá	tòpáá=ndɛ̀	goat bag

Type one nouns are of any permissible word length, monomoraic and monosyllabic (82a), bimoraic and monosyllabic (82b), bisyllabic (82c), bisyllabic with word-internal nasal-stop sequence (82d), or bisyllabic with a long final vowel (82e). Trisyllabic type one nouns are less common. Mid vowels become [–ATR] before a nasal (82a, c - d) as discussed in detail in Chapter 2. All the final vowels of the nouns in Type One are oral vowels.

3.2.3 Segmental Type Two (V$^{\text{n}}$, =ndɛ)

Type Two nouns all have a nasalized vowel. There are no polysyllabic words with nasalized vowels. Although the plural clitic may appear as [=nɛ] or [=ndɛ] on most words, it appears as [=ndɛ] following nasalized nouns. The nasalization of the vowel is redundant before the plural clitic and is thus not marked.

(83) Segmental Type Two: 83 Nouns

	Singular	Plural	Gloss
a.	sòɔ̀$^{\text{n}}$	sɔ́=ndɛ́	shirt, clothing
b.	tóɔ̀$^{\text{n}}$	tóɔ̀=ndɛ́	blacksmith
c.	póɔ̀$^{\text{n}}$	póɔ̀=ndɛ́	meal
d.	pɛ́ɛ́$^{\text{n}}$	pɛ́=ndɛ̀	ladder

e.	tʷéɛ́ⁿ	tʷéɛ́=ndɛ̀	basket (small)
f.	nnììⁿ	nnìì=ndɛ́	mouse
g.	tʷíìⁿ	tʷíì=ndɛ́	flower

Recall that a minimal word requirement prevents a monomoraic word from surfacing, but before the plural clitic, a word may surface with one vowel, as in the examples (83a, d). The words in noun Type Two are organized together because these all have nasalized vowels. One explanation is that nasalized words are underlyingly /CVN/ but surface as [CVV] since codas are prevented from surfacing. The nasalization from the noun root spreads to the plural clitic which, instead of emerging with a geminate nasal, dissimilates to [nd].

3.2.4 Segmental Type Three (Cɛ, =nɛ)

Type Three and Type Four noun roots end in a sequence which is homophonous with the diminutive suffix. All stem lengths are possible in Type Three except monomoraic, monosyllabic stems.

(84) Segmental Type Three: 116 Nouns

	Singular	Plural	Gloss
a.	kíɛ̀	kíɛ̀=ndɛ́	branch
b.	bʷìɛ̀	bʷìɛ̀=ndɛ́	mosquito
c.	nníɛ́	nníɛ́=ndɛ̀	milk
d.	géŋgíè	géŋgíé=ndɛ̀	salt
e.	kɔ́mɛ̀	kɔ́mɛ́=nɛ̀	slave
f.	gĭméɛ̀	gĭméɛ̀=ndɛ́	watermelon
g.	déɛ́mɛ̀	déɛ́mɛ́=nɛ̀	seed
h.	sàgòmɛ́	sàgòmɛ̀=ndɛ́	letter

i.	ʊìmmɛ̀	ʊìmmɛ̀=ndɛ́	heart
j.	sííbíɛ̀	sííbíɛ́=ndɛ̀	eye
k.	dɔ́rómbíɛ̀	dɔ́rɔ́mɛ́=ndɛ̀	clay

Some nouns in both Type Three and Type Four delete one of the final vowels of the stem before the plural suffix. As noted above, nouns may alternate between the two plural clitic allomorphs [nɛ] and [ndɛ], in seemingly free variation. If an informant indicated that one variant was preferred to the other, it is marked with the preferred variant and is underlined.

Many nouns end with a long vowel or a diphthong. As noted above, the minimal word requirement that a word have at least two morae is not necessarily met before the plural clitic. Similarly, nouns with long vowels or diphthongs are often shortened before the plural marker. Minimal pairs in (85) show three possibilities: the high front vowel of the final diphthong deletes in the plural but the vowel quality is unchanged (a), the same vowel deletes and the vowel quality changes (b), or no deletion occurs (c). The reason for these differences is unknown at this time.

(85) Vowel Deletion

	Singular	Plural	Gloss
a.	gěŋgíɛ̀	gěŋgɛ́=ndɛ̀	metal
b.	gèŋgíɛ̀	gèŋgé=nɛ̀	crocodile
c.	géŋgíè	géŋgíé=ndɛ̀	salt

Further examples of vowel deletion (85a - c, f) or changes in vowel height (85d - e) in the plural form are shown in (86).

(86) Vowel Deletion or Raising before Plural

	Singular	Plural	Gloss
a.	bírɛ́ɛ̀	bírɛ́=ndɛ̀	fire
b.	kùɥɪ̀ɛ́	kùɥɛ́=ndɛ̀	calabash
c.	gùwɪ́ɛ̀	gùwɛ́=ndɛ̀	earth
d.	nnɛ̀ɛ̀	nnɪ̀ɛ̀=ndɛ́	sun
e.	pʷɪ́ɛ̀ⁿ	pʷɛ́ɛ́=ndɛ̀	leaf
f.	káráŋgɪ́ɛ̀	káráŋgɛ́=ndɛ̀	shroud, trap

The changes in vowel height before the plural clitic differ, compare (86d) with (86e), depending on whether or not the final vowel of the word is nasalized. The agentive suffix also changes the height of the vowels in the morpheme from /ii/ following words without nasalization to [iɛ] or [eɛ] following words with nasalization.

Consonants are also sometimes deleted before the plural clitic. Similar to Meinhof's law in Bantu, the sequence [mb] is sometimes (87a - b) but not always (87c - d) reduced before the [nd] of the plural suffix.

(87) Consonant Deletion

	Singular	Plural	Gloss
a.	dɔ́rómbíɛ̀	dɔ́rómɛ́=ndɛ̀	clay
b.	dúrúmbɛ̀	dúrúmɛ́=ndɛ̀	bracelet, ring
c.	dàŋàmbɛ́	dàŋàmbɛ́=ndɛ̀	zorilla (polecat)
d.	kárámbɛ̀	kárámbɛ́=ndɛ̀	patas monkey

The frequency of the words in (87a - b) compared to those in (87c - d) may be a reason why the first two were acquired with and without the deleted segments yet the other two were not. Other words which end in the sequence [bɛ] which are interpreted as having the lexicalized diminutive in a semi-productive manner include the following pairs: [jàámbɛ̀] 'child' ~ [jàà=ndɛ́] 'children', [góòmpá] 'step', [góòmbɛ̀] 'little step', [kóà] 'plant sp.', [kóàbɛ̀] 'small subspecies of koa', and [bóróm$^{!}$bɛ́] ~ [bóró$^{!}$mɛ́] 'young man', [bòró=ndɛ̀] 'young men'.

3.2.5 Segmental Noun Type Four (+ɛ, –mi=nɛ)

As in Type Three nouns, those in Type Four end in a mid front vowel. The difference lies in the behavior in the plural stem. Type Four Noun Roots end with a lexicalized, i.e. segmentable but obligatory, diminutive suffix, [ɛ], and an intervening consonant [w, m, b] after back vowels. In the plural, the diminutive suffix emerges as [mi]. Although the referents of the nouns in Type Four are not all small, the nouns in this group are all marked with what is considered to be a frozen or obligatory diminutive suffix. The nouns in this type are unable to be 'doubly' marked as being diminutive. That is, to indicate that a Type Four noun root is a small variety of the object, the adjective 'small' is used instead of another instantiation of the diminutive suffix.

(88) Segmental Type Four: 23 Nouns

	Singular	Plural	Gloss
a.	bì+ɛ́	bíɛ́+$^{!}$mí=ndɛ̀	baby
b.	wùrɛ́+ɛ̀	wùrɛ́+$^{!}$mí=ndɛ̀	karite tree
c.	gɛ́dɛ́+ɛ̀	gɛ̀dɛ́+$^{!}$mi=ndɛ̀	gecko (generic)
d.	sɛ́ŋɛ̀+ɛ́	sɛ́ŋɛ́+$^{!}$mí=ndɛ̀	watermelon
e.	dɔ́rɛ́+ɛ̀	dɔ́rɛ́+$^{!}$mí=ndɛ̀	bird (generic)
f.	ʒágɛ́+ɛ̀	ʒáɣá+$^{!}$mí=ndɛ̀	onion

g.	pɛ́rɛ̱́+ɛ̀	pɛ́rɛ́+ꜜmí=ndɛ̀	key
h.	kùrì+jɛ̀ɛ́	kùrì+mì=ndɛ́	dog
i.	dùdú+wɛ̀	dùdú+mí=ndɛ̀	bird (sp)
j.	ɲògɔ́+w̃ɛ́	ɲògɔ̀+mì=ndɛ́	fish (sp)
k.	pìé+mɛ̀	pìí+mì=ndɛ́	reed flute
l.	tòrè+mɛ́	tòrò+mì=ndɛ́	star
m.	gírímɛ̀	gírímɛ́=ꜜmi=ndɛ̀	hare (generic)
n.	gŭm+bí	gùmbí=ꜜmí=ndɛ̀	owl

The diminutive suffix may appear as simply [ɛ] (88a - g), with the nasal-vowel allomorph (88k - l), or the glide-vowel allomorph (88h - j). Some diminutive nouns lose a final root vowel in the plural, in addition to the final diminutive suffix becoming [ɛ], such as in (88b - g), possibly because these words have underlying [–ATR] vowels. When the augmentative follows nouns suffixed with the lexicalized diminutive, the frozen suffix may remain, such as in [ʒáɣá+è–bɔ́r̃ò] ‘big onion’, but the [mi] allomorph does not appear in the plural form of the noun-augmentative [ʒáɣá+è–bɔ́r̃ó=ndɛ̀] ‘big onions’.

3.2.6 Segmental Noun Type Five (rV, rV=nɛ)

Type Five and Type Six nouns are also similar to each other in that the nouns in these two classes have at least two syllables, one of which, usually the final syllable, has [r] as an onset. As with the nouns which end in the suffix vowel [ɛ] and its allomorphs, there are two types of nouns which end in a sequence [rV]: those which are a part of the root and appear in either singular or plural form, and those which are suffixes and do not appear in the plural form.

(89) Segmental Type Five: 119 Nouns

	Singular	Plural	Gloss
a.	bòrò	bòrò=ndɛ́	tomorrow
b.	mmírò	mmíró=ndɛ̀	bee honey bee
c.	búrúù	búrúú=ndɛ̀	seed kind
d.	póórò	póóró=ndɛ̀	cloud
e.	gíwàrà	gíwàrà=nɛ́	hat
f.	táɣárà	táɣárà=nɛ́	Fulani house
g.	nàmbàrà	nàmbàrà=nɛ́	trick
h.	kàràŋgó	kàràŋgɔ̀=ndɛ́	long hourglass-shaped drum
i.	kɔ́róŋò	kɔ́róŋɔ́=ndɛ̀	donkey

Some mid back vowels do not undergo laxing before the nasal of the plural (89a - b, d), while those in longer roots do (89h - i). The [–r] suffix in some words is not found in the final syllable (89h - i); this can be compared to the suffix shown for the Type Six noun (89i).

3.2.7 Segmental Noun Type Six (–r, =ndɛ)

As with Type Five nouns, Type Six nouns contain a sequence of [rV], usually in the final syllable. Unlike Type Five nouns, but similar to many verb stems, noun stems in Type Six have a suffix [–r]. Although it would be tempting to suggest that the [–r] suffix in Type Six nouns is a truncated form of the augmentative [–bɔr̃o], comparable to the diminutive suffix in Type Four Noun Roots, the nouns in Type Six may be made diminutive either without the [–r] suffix, such as [ŋàmbá–è], or with it as in [ŋàmbá–rà–è] ‘little sheep’. However, a counterexample is [bóŋgɔ́–rɔ̀] ‘belly button’ with diminutive [bɔ́ŋ–wíɛ̀] ‘little belly button’. Type Six nouns add the augmentative when qualified as being a large object.

(90) Segmental Type Six: 21 Nouns

	Singular	Plural	Gloss
a.	nnìé–rɛ̀	nnìé=ndɛ̀	woman
b.	pévɛ́–rɛ̀	pévɛ̀=ndɛ́	wind
c.	tégó–rò	tégò=ndɛ́	face, forehead
d.	súmbí–rì	súmbì=ndɛ́	nose
e.	páɣá–rà	páɣá=ndɛ̀	container (any)
f.	gúmbá–rà	gúmbà=ndɛ́	wasp
g.	kámbá–rā	kámbá=ndɛ̀	pliers
h.	ŋàmbà–rá	ŋàmbá=ndɛ̀	sheep
i.	kó–ró–gò	kógó=ndɛ̀	basket
j.	jí–rí–ŋgí	jíŋgí=ndɛ̀	fan

The [–r] suffix is a less productive suffix than the lexicalized diminutive suffix and it does not appear in the plural stem in any form. The only case in which the [–r] suffix may appear in the plural is if the diminutive is also suffixed to the noun, as in [ŋàmbá–rà–ꜜmí=ndɛ̀] 'small sheep.PL'. (The augmentative plural stem is [ŋàmbá–bɔ́r̃ò=ndɛ́]). Nouns in Type Six do not undergo laxing of the root-final vowel before the plural clitic. The tone of the vowel following the [–r] suffix is usually low when it appears at the end of the stem. The tone of the root undergoes a change after the [–r] suffix is deleted in the manner described in the following section. Another defining feature of Type Six nouns is an [mb] cluster found in many of the noun stems. The [rV] and [mb] sequences found among verbs are significant as well.

However, I am unaware of the specific meaning of the nominal [–r] suffix at this time.[39] Many, but not all, of the nouns in this category are verbal nouns, and some nouns may be derived from verbs using the [–r] suffix.

3.3 Tonal Melodies on Nouns

Noun stems are also organized into six categories, based on tonal patterns. The six tonal patterns do not correspond with the six segmental categories illustrated in the previous section; however, the tonal classification of the noun root is based on its realization in the plural form. In all cases the plural clitic has a tone opposite to that of the immediately preceding tone (tone polarization). The underlying tone of the noun stem is seen in the plural form, as demonstrated in (91).

(91) Tonal Categories found on Noun Stems

	UR Tone	Singular	Plural		UR Tone	Singular	Plural
I.	/H/	Cv́v́	Cv́v́=ndɛ̀	II.	/L/	Cv̀v̀	Cv̀v̀=ndɛ́
III.	/H/	Cv́Cv̀	Cv́Cv́=ndɛ̀	IV.	/L/	Cv̀Cv́	Cv̀Cv̀=ndɛ́
V.	/HL/	Cv́Cv̀	Cv́Cv̀=ndɛ́	VI.	/LH/	Cv̀Cv́	Cv̀Cv́=ndɛ̀

Most nouns in the first and second tonal classes are monosyllabic. Most roots with level tone melodies, those which are able to surface without a pitch change somewhere in the stem, are monosyllabic, but not all monosyllabic stems have level tone melodies.[40] All stems which surface with level tones in the singular also surface with level tones in the plural. Nouns of the third and fourth types have the same tones underlyingly as nouns in the first and second types but the stems are mostly polysyllabic. The underlying tones of nouns in the fifth and sixth types

[39] Some verbs exhibit a semantic relationship between a stem with and without a [–r] suffix. The same has not been found among most nouns. However a possible example could be argued for [níérɛ́ (hùⁿ)] 'dry season' and [níé (hùⁿ)] 'wet season'.

[40] Relating back to the question as to what constitutes a diphthong or as each vowel as its own independent syllable.

have high-low and low-high sequences, respectively, with an obligatory pitch change at either the syllable break in the singular or the morpheme break in the plural. Each tonal type is explained in detail in the following sections. Stems of each tonal type are listed in Appendix IV.

3.3.1 Tone Type One: High Stem

Monosyllabic noun stems may surface with a level tone melody, either high or low. Shown in (92) are examples of monosyllabic noun stems with high tones. The plural clitic is low-toned.

(92) Tone Type One: 39 Nouns

	Singular	Plural	Gloss
a.	ɕíí H	ɕíí=ndɛ̀ HH=L	food
b.	níɛ́ H	níɛ́=ndɛ̀ HH=L	milk
c.	bóɔ́^{n} H	bóɔ́=ndɛ̀ HH=L	millet porridge

Type One nouns which are not monosyllabic include [dúgú] ‘forest’, [túmí], ‘amulet (waist)’, [póɔ́$^{!}$kɛ́] ‘soap’, and [jí–rí–ŋgí] ‘fan’. The root tone is unchanged in the singular and plural forms among roots in the high tone stem type. The plural clitic takes a polar tone opposite that of the noun. Certain vowels become [–ATR] before the nasal of the plural clitic.

3.3.2 Tone Type Two: Low Stem

As with Tone Type One, the low tone stem is common among monosyllabic nouns, but there are six instances of low tone bisyllabic roots: [bìmmɛ̀] ‘heart’, [bòrò] ‘tomorrow’, [dèwò] (also [déẁ] ‘mar’, [gàndʒà] ‘fonio’, [ŋàmbà] ‘false sorghum’ and [tàŋà] ‘ear’. The tones on the noun root are the same in singular and plural. The plural clitic is high-toned.

(93) Tone Type Two: 29 Nouns

	Singular	Plural	Gloss
a.	ʊòò L	ʊòɔ=ndɛ́ LL=H	field
b.	ɕìɛ̀ L	ɕìɛ̀=ndɛ́ LL=H	termite
c.	tàŋà L	tàŋà=ndɛ́ L.L=H	ear

Therefore, most singular, monosyllabic nouns may surface with level tones. The underlying tone of the noun is seen before the plural clitic. Some bisyllabic nouns may surface with level tones in the singular and plural as well, but most have a contour tone in the singular surface stem.

3.3.3 Tone Type Three: High Stem

Noun stems such as those shown in (94) are underlyingly high, as shown in the plural form, but surface with a change in pitch at the (usually penultimate) syllable boundary in the singular form.

(94) Tone Type Three: 57 Nouns

	Singular	Plural	Gloss
a.	ɥíè HL	ɥíé=ndɛ̀ HH=L	water
b.	míròo H.L	míró=ndɛ̀ H.H=L	bee
c.	kɔ́róŋò H.H.L	kɔ́róŋɔ́=ndɛ̀ H.H.H=L	donkey

Although most nouns in this tone type are polysyllabic, exceptions are [béɛ̀] ‘gerbil’, [tɛ́è] ‘palm’, [kʷéɛ̀] ‘bark’, [kéɛ̀] ‘thing’, and [ɥíè] ‘water’. As noted above in §2.5, there is a possibility of interpreting these words as bisyllabic.

3.3.4 Tone Type Four: Low Stem

Low tone stems which consist of two or more syllables behave in the same manner as high tone stems. In the singular stem, Type Four Noun Roots emerge with a low-high tonal melody. However, the plural form reveals that the tones of the noun are underlyingly low.

(95) Tone Type Four: 54 Nouns

	Singular	Plural	Gloss
a.	bùr̃á L.H	bùr̃à=ndɛ́ L.L=H	stick
b.	dàmá L.H	dàmà=ndɛ́ L.L=H	hoe
c.	ɕùrí L.H	ɕùrì=ndɛ́ L.L=H	fly

The nouns with suffixes in segmental Type Six, such as [tùkù–rú], plural [tùkù=ndɛ́], are categorized in this tonal type since the root is low with a high tone on the suffix which is deleted with its tone in the plural. One exception is [ŋàmbà–rá], plural [ŋàmbá–ndɛ̀] which falls into Tone Type Five, as the rise tonal pattern appears in the singular and plural forms.

3.3.5 Tone Type Five: Falling-Tone Stem

Falling-tone stems appear, from the singular form of the noun, to be the same as high tone stems of Tone Type Three. However, as seen in the plural form, the noun stem has a falling melody in both the singular and the plural forms. The plural clitic is high-toned.

(96) Tone Type Five: 41 Nouns

	Singular	Plural	Gloss	
a.	nníjà H.L	nníjà=ndɛ́ H.L=H	mother	(or) nníjà–rú
b.	pévɛ́–rɛ̀ H.H.L	pévɛ̀=ndɛ́ H.L=H	wind	
c.	gúmbá–rà H.L	gúmbà=ndɛ́ H.L=H	wasp	

Examples in which the tone of the [–r] suffix and the plural morpheme differ provide further evidence for the underlying tones on the noun root. The [–r] morpheme is a suffix. The underlying tone of the noun root is overlaid onto the entire stem.

3.3.6 Tone Type Six: Rising-Tone Stem

The rising-tone stem is like Tone Type Four in the singular form. The difference is that, in the plural form of Tone Type Five nouns, the rising tonal pattern surfaces on both the singular and the plural, and the plural clitic is low toned.

(97) Tone Type Five: 30 Nouns

	Singular	Plural	Gloss
a.	ʋòó LH	ʋòɔ́=ndɛ̀ LH=L	horse
b.	gàʒɛ́^{n} L.H	gàʒɛ́=ndɛ̀ L.H=L	world
c.	bìrɔ̀ndɔ́ L.L.H	bìrɔ̀ndɔ́=ndɛ̀ L.L.H=L	corn

As with the falling tone melody stem, the rising tone melody may occur on stems of any length or syllable type but polysyllabic words are more common. The nouns in segmental Type Six, such as [nìé–rɛ̀], [nìé=ndɛ̀] ‘woman’, are in Tone Type Five. In these examples both the [–r] suffix vowel and the plural clitic are the opposite tone of the noun root, which has a rising tonal pattern. The sole environments where the underlying tone of the noun emerges are before the plural clitic and the augmentative.

3.4 Augmentative

The augmentative noun stem is segmentally formed with the addition of the bisyllabic morpheme [–bɔr̃o], which is related to the adjective [bogo], meaning ‘big’. Although the augmentative is considered to be a bound morpheme, morphologically between an affix and a clitic, it is found in

one instance in a text to be reduplicated, giving the impression that it may constitute a separate word. The example is found in TEXT VI: Chief VI .29, and the matter is left to future research. Autosegmentally, the augmentative stem surfaces with the same six tonal types as the plural stem, illustrated in (98).

(98) Augmentative Tonal Patterns

	UR Tone	Singular	Augmentative		UR Tone	Singular	Augmentative
I.	/H/	Cv́v́	Cv́v́–bɔ̀ɽ̃ò	II.	/L/	Cv̀v̀	Cv̀v̀–bɔ́ɽ̃ó
III.	/H/	Cv́Cv̀	Cv́Cv́–bɔ̀ɽ̃ò	IV.	/L/	Cv̀Cv́	Cv̀Cv̀–bɔ́ɽ̃ó
V.	/HL/	Cv́Cv̀	Cv́Cv̀–bɔ́ɽ̃ó	VI.	/LH/	Cv̀Cv́	Cv̀Cv́–bɔ̀ɽ̃ò

The augmentative, like the plural, adopts the opposite tone as the final tone of the noun root. As noted above, most polysyllabic stems have pitch contours rather than level tones. However, since the augmentative has two syllables, the locus of the pitch change fluctuates. That is, the pitch change may arise on either the initial or the final syllable of the augmentative, and the final tone from the noun variably spreads onto the initial syllable of the augmentative.

3.4.1 Tone Type One

Type One nouns surface with a high tone in the singular, plural, and augmentative stems. The augmentative morpheme surfaces with a falling tonal pattern; the change of pitch occurs on either the final syllable (99a - b) of the noun-augmentative stem or the augmentative emerges with the opposing tone on both syllables (99c).

(99) Tone Type One with Augmentative

	Singular	Augmentative	Gloss
a.	ɕíí HH	ɕíí–bɔ́ř̃ò HH.H–L	food
b.	túúⁿ HH	túúⁿ–bɔ́ř̃ò HH.H–L	thorn
c.	sííⁿ HH	sííⁿ–bɔ̀ř̃ò HH.L–L	shadow

The noun either spreads its final tone to the first syllable of the augmentative morpheme (99a - b), causing it to emerge high with the final syllable of the augmentative low, or the augmentative morpheme surfaces with both tones low (99c), opposite the high tone of the noun.

3.4.2 Tone Type Two

A Tone Type Two noun root follows the same pattern as a Tone Type One root; the noun root's underlying tones are seen before the augmentative.

(100) Tone Type Two with Augmentative

	Singular	Augmentative	Gloss
a.	ʋòò L	ʋòò–bɔ́ř̃ó LL.H–H	field
b.	ɕìɛ̀ L	ɕìɛ̀–bɔ́ř̃ó LL.H–H	termite
c.	tàŋà L	tàŋà–bɔ́ř̃ó LL.H–H	ear

In most of the examples of low-toned nouns, the augmentative stem splits the tonal melody at the morpheme boundary between the noun and the augmentative, but it is possible for the locus of the pitch change to be on the first syllable of the augmentative.

3.4.3 Tone Type Three

Recall from the previous discussion concerning the plural clitic that plural stems with underlyingly high-toned noun roots and more than one syllable emerge with a falling melody in the singular stem but a high tone in the plural. The underlying form of the noun may also be seen in the augmentative stem.

(101) Tone Type Three with Augmentative

	Singular	Augmentative	Gloss
a.	dégè H.L	dégé–bɔ̀r̃ò H.H.L–L	head
b.	mírò H.L	míró–bɔ́r̃ò H.H.H–L	bee
c.	kɔ́róŋò H.H.L	kɔ́róŋó–bɔ́r̃ò H.H.H.H–L	donkey

The augmentative surfaces with the final high tone of the noun root spread on to the initial syllable, except (101a) where both syllables of the augmentative are low.

3.4.4 Tone Type Four

Underlyingly low stems surface in their underlying forms before the augmentative.

(102) Tone Type Four with Augmentative

	Singular	Augmentative	Gloss
a.	bùr̃á L.H	bùr̃à–bɔ́r̃ó L.L.H–H	stick
b.	dàmá L.H	dàmà–bɔ̀r̃ó L.L.L–H	hoe
c.	ɛ̀ùrí L.L.H	ɛ̀ùrì–bɔ̀r̃ó L.L.L–H	fly

Among the nouns shown, the final low tone of the noun is spread to the augmentative in each case except (102a). The underlyingly low toned noun roots tend to be more regular with respect to tonal assignment in the augmentative than the other tonal classes.

3.4.5 Tone Type Five

As seen in the plural stem, the falling tone stem has a high-low contour in the singular and before the augmentative, indicating that the underlying tonal melody of the nouns in this class is fall.

(103) Tone Type Five with Augmentative

	Singular	Augmentative	Gloss
a.	nníjà H.L	nníjà–bɔ̌ɽ́ó HL.H–H	mother
b.	dóɔ̀bɛ̀ H.L	dóɔ́bɛ̀–bɔ̌ɽ́ó H.L.H–H	adze
c.	pévɛ́–rɛ̀ H.H.L	pévɛ́–rɛ̀–bɔ̌ɽ́ó H.H.L.H–H	wind

In each of the examples, the tone of the noun root does not spread onto the initial syllable of the augmentative form, which is high, in opposition to the low tone of the root final mora.

3.4.6 Tone Type Six

The nouns in Type Six surface with a rising tonal pattern in the singular, plural, and augmentative stem.

(104) Tone Type Six with Augmentative

	Singular	Augmentative	Gloss
a.	vòó LH	vòó–bɔ̌ɽ̌ò LH.H–L	horse
b.	gèŋgɛ́ L.H	gèŋgɛ́–bɔ̌ɽ̌ò L.H.H–L	metal

c.	nnìé–rɛ̀ L.L.H	nnìé–bɔ́r̃ò L.L.H.H–L	woman
d.	ŋàmbà–rá L.L.H	ŋàmbá–bɔ́r̃ò L.H.H–L	sheep

Each of these noun roots spreads its final high tone to the augmentative morpheme, which then ends in a low tone, opposite that of the final high tone of the rise stem.

3.5 Summary of the Noun Stem

Noun stems fall into six categories based on segmental properties: words with oral vowels, monosyllabic words with nasalized vowels, and words with a final mid front vowel, (a lexicalized diminutive suffix), words with a sequence of [Vr], and words with a suffix [–r]. Nouns with lexicalized suffixes [–ɛ] and [–r] can be determine by their behavior in the plural form where the lexicalized diminutive appears as [mi] and the [–r] suffix is deleted. The function of the [–r] suffix is yet to be determined. Nouns also are organized into six tonal categories, but the segmental and tonal categories do not seem to overlap in any way.

A summary of the singular, plural, augmentative, and noun roots is shown in (105).

(105) Summary of Nominal Structure

	SING	PL	AUG	ROOT
a.	Cv́v́	Cv́v́=ndɛ̀	Cv́v́–bɔ́.r̃ò	Cv́v́
b.	Cv́.Cv̀	Cv́.Cv́=ndɛ̀	Cv́.Cv́–bɔ̀.r̃ò	Cv́.Cv́
c.	Cv́.Cv̀	Cv́.Cv́=ndɛ̀	Cv́.Cv́–bɔ́.r̃ò	Cv́.Cv́
d.	Cv́.Cv̀	Cv́.Cv̀=ndɛ́	Cv́.Cv̀–bɔ́.r̃ó	Cv́.Cv̀
e.	Cv̀v̀	Cv̀v̀=ndɛ́	Cv̀v̀–bɔ́.r̃ɔ́	Cv̀v̀
f.	Cv̀.Cv́	Cv̀.Cv̀=ndɛ́	Cv̀.Cv̀–bɔ́.r̃ó	Cv̀.Cv̀
g.	Cv̀.Cv́	Cv̀.Cv̀=ndɛ́	Cv̀.Cv̀–bɔ̀.r̃ó	Cv̀.Cv̀
h.	Cv̀.Cv́	Cv̀.Cv́=ndɛ̀	Cv̀.Cv́–bɔ́.r̃ò	Cv̀.Cv́

Tonally, noun roots are either /H/ (105a - b), /HL/ (105d - e), /L/ (105e - g), or /LH/ (105h). Most polysyllabic noun roots have a change in pitch at the syllable or morpheme boundary, but monosyllabic roots may surface with level tones. High (105a) and low (105e) toned monosyllabic roots differ with respect to tonal assignment in the augmentative stem. The high tone root spreads a high tone onto the first mora of the augmentative morpheme but the low tone root does not. In Tone Classes Three (105b - c) and Four (105f - g) two tonal assignment patterns are possible. Tone Class Five (105d) also has a different pattern of tonal assignment from that of Tone Class Six (105h). The underlying cause for the variation is the topic of future research.

Chapter 4. Nominal Derivation: Suffixation

4.1 Suffixes in Bangime

As shown in the previous chapter, the plural and augmentative markers are closely tied to the noun stem, but do not change the segmental characteristics of a noun stem. The plural marker is considered a clitic because modifiers may intervene between it and the noun. Morphologically, the augmentative behaves differently than the plural. For instance when modifiers follow a noun stem, the augmentative is more tightly bound to the noun stem than the plural clitic since the augmentative follows the noun directly but the plural follows the modifier. The augmentative and the plural morphemes, being underlyingly toneless, undergo tone polarity to adopt the tone opposite to that of the noun root.

Two derivational suffixes have been found in Bangime, the diminutive and its associated meanings, discussed in §4.2 and the agentive, covered in §4.3. The diminutive suffix has its own tone(s) which interact with the noun stem. The tone of the agentive is altered by the stem to which it attaches. The agentive, in most cases, derives nouns from verbs. The morphemes discussed in this chapter are considered suffixes due to the tonal effects caused and the inability to insert constituents between the noun and these markers. Also, the diminutive and the agentive morphemes interact with the segmental contect of the noun root at the morpheme boundary.

4.2 Diminutive

The diminutive suffix [–ɛ] may be attached to most nouns, and indicates that the referent is ‘little’. Three additional suffixes are homophonous with the diminutive suffix. These are a suffix which derives the name of a language from the people who speak it, an inhabitant of a village, and a suffix which gives the meaning ‘quality of X’.

As with the lexicalized diminutive, the productive diminutive has five allomorphs, shown in (106). Many nouns exhibit seemingly free variation among the allomorphs, especially [mɛ ~ jɛ ~ ɛ]; one noun may be pronounced several ways.

(106) Diminutive Allomorphs

	Singular	Gloss	Diminutive Stem	Gloss
a.	nàà	cow	nnà–ɛ́, nnɛ̀ɛ́	little cow, calf
b.	kóɔ̀^{n}	pestle	k^{w}éɛ̀^{n}	little pestle
c.	tótò	anvil	tótò–mɛ́	little anvil
d.	dúgú	forest	dúgú–wɛ̀	little forest
e.	kó–ró–gò	basket	kó–ró–gò–jɛ̀	little basket

Some monosyllabic words, such as (106a - b), may change both vowels of the stem to coalesce with the diminutive suffix. In longer stems (106c - e), the suffix appears with its own syllable onset. The final segment of the root noun determines the suffix allomorph. The underlying form of the suffix is proposed to be /–ɛ/, with either nasal (106c) or glide (106d - e) insertion as a strategy to prevent hiatus between vowels of different backness. It was shown in §2.2.1 that vowels of different backness values do not co-occur tautosyllabically. Although not all words with final [u] take the allomorph which begins in [w] (106d), it would be reasonable to suggest that the glide [w] usually follows the high back vowel to prevent hiatus with the suffix.

4.2.1 Plural Diminutives

The diminutive suffix always surfaces as [–mi] in the plural, and often has a high (107c) or downstepped (107a - b) tone.

(107) Diminutive Plural Stem

	Singular	Diminutive	Plural	Gloss
a.	nnàà	nnà–ɛ́	nnáɛ́–ˡmí=ndɛ̀	little cows, calfs
b.	ʊòó	ʊòó–mɛ̀	ʊòó–ˡmí=ndɛ̀	little horses, colts
c.	kɔ́róŋò	kɔ́róŋò–mɛ̀	kɔ́róŋò–mí=ndɛ̀	little donkey, foals

The diminutive suffix may indicate that a noun is ‘little’ or it may refer to the offspring of an animal. The tonal patterns on the diminutive suffix are discussed in §4.2.5 below.

4.2.2 Language

Names of languages are derived from the names of ethnicities or speakers using a suffix which is homophonous with the diminutive morpheme. The plural is then formed from the name for the speakers or ethnicity since the [mi] suffix is not used.

(108) Bangande Area Languages and Speakers/Ethnicities

	Speakers	Language	Plural	Gloss
a.	tómɛ̀	tómɛ̀	tómɛ́=ndɛ̀	Tommo
b.	píɛ̀ⁿ	píɛ́–ɛ̀ⁿ	píɛ́=ndɛ̀	Ampari
c.	bòndí	bòndì–j́ɛ́	bòndì=ńɛ́	Bondu (Dogon)
d.	sáw̃à	sáw̃á–ɛ̀	sáḿí=ndɛ̀	Kargue (Marka)
e.	púndà	púndɛ́–ɛ̀	púr̃à=ńɛ́	Fulani
f.	tóò	tóó–wɛ̀	tóó–wɛ̀=ndɛ́	Duleri
g.	bɔ̌wɔ́ɔ̀	bʷó–ɛ̀	bʷó–ɛ̀=ndɛ́	Bobo
h.	bámbá–rà	bámbá–ɛ̀	bámbá–rá=nɛ̀	Bambara
i.	bàŋgɛ̀–rí+mɛ̀	báŋgí–j́ɛ̀	báŋgá=ndɛ̀	Banga

j.	kɔ́mɛ̀	púndɛ́–è	kɔ́mɛ́=nɛ̀	Fulani (slave caste)
k.	kòrò bòrò	sɔ̀ŋɛ́–è	kòrò bòrò=nɛ́	Songhai
l.	sórógò	sáŋɛ́–è	sórógò=ndɛ́	Bozo

There is variation in the singular and plural patterns found in the names for ethnicities and languages. Some names of languages and their speakers are identical in form (108a). Others add the suffix [–ɛ] (108b - l) with consonant insertion to prevent hiatus (108c, f, i), in the manner described above. Certain names of languages differ slightly from the name of the speakers (108d - e), or have nothing in common between the two (108j - l). Recall that nasal-consonant sequences alternate with nasalized approximants in a variety of contexts. Just as the [–r] suffix and the diminutive are mutually exclusive, nouns of the type which have the [–r] suffix (108h - i), are shown to delete the [–r] suffix in the name of languages, but are inconsistent in the plural.

4.2.3 Inhabitant of Village

The suffix which indicates that one is an inhabitant of a certain village is also homophonous with the diminutive suffix when the stem is in the plural, although not in the singular form.

(109) Seven Bangime-Speaking Villages

	Village	Singular	Plural	Gloss
a.	ʒì́é	ʒɛ̌–mà	ʒɛ̌–mí=ndɛ̀	Dieni
b.	dʷí̲è	dʷè–má	dʷè–mí=ndɛ̀	Due
c.	bù̲ùⁿ	bù–má	bù–mì=ndɛ́	Bounou
d.	bárá̲à	bárá–mà	bárá–mí=ndɛ̀	Baraa
e.	ŋŋànà	ŋŋànà–má	ŋànà–mí=ndɛ̀	Nyana
f.	dòrò	dòrò–má	dòrò–mí=ndɛ̀	Doro

Bimoraic and monosyllabic words (109a - d) lose a mora in derived stems.

4.2.4 Quality of X

Only two stems have been found with this meaning; certain expressions, such as the beauty of a man, require use of the suffix [gɔ̀–mɛ̀ ~ gʷɔ̀ⁿ–jɛ̀ báákò] ‘beautiful man’. Others are given (110).

(110) Quality of Noun

	Noun	Gloss	Quality of	Gloss
a.	pààⁿ	friend	pà–mɛ̀	friendship
b.	gɔ́ɔ̀ⁿ	man	gɔ̀–mɛ̀	masculinity

As with the inhabitants of a village, the noun is lengthened in the non-derived stem.

4.2.5 Tonal patterns on the diminutive suffix

Unlike the plural and augmentatives illustrated above, the diminutive suffix does not adopt the opposite tone of the noun. The majority of nouns take a low tone allomorph [mɛ] of the diminutive suffix in the singular and a downstepped tone in the plural, as shown in (111).

(111) Diminutive Suffix [–mɛ̀] ~ [–ꜜmí]

	Noun	Singular	Diminutive	Diminutive=Plural
a.	mosquito	bʷìɛ̀	bʷíɛ́–mɛ̀	bʷíɛ́–ꜜmí=ndɛ̀
b.	mouse	nnììⁿ	nníí–mɛ̀	nníí–ꜜmí=ndɛ̀
c.	mongoose	sííⁿ	síí–mɛ̀	síí–ꜜmí=ndɛ̀
d.	lion	kíɛ́	kíɛ́–mɛ̀	kíɛ́–ꜜmí=ndɛ̀
e.	goat	bíìⁿ	bíí–mɛ̀	bíí–ꜜmí=ndɛ̀
f.	house	kóò	kóó–mɛ̀	kóó–ꜜmí=ndɛ̀
g.	bee	míròˇ	míró–mɛ̀	míró–ꜜmí=ndɛ̀
h.	stick	bùr̃á	búr̃á–mɛ̀	búr̃á–ꜜmí=ndɛ̀
i.	woman	nnìé–rɛ̀	nníé–rɛ̀–mɛ̀	nníé–rɛ́–ꜜmí=ndɛ̀
j.	donkey	kɔ́róŋò	kɔ́róŋò–mɛ̀	kɔ́róŋò–ꜜmí=ndɛ̀

Irrespective of underlying tonal distinctions, most monosyllabic nouns with surface low tones (112a - b), high tones (112c - d), or high-low tones (112e - f) emerge as high in the singular and plural diminutive stem, with the diminutive suffix surfacing as low in the singular and downstepped high in the plural. Bisyllabic words with high-low (112g) and low-high (112h) tones follow the same pattern, as do low-high-low trisyllabic nouns stems (112i - j).

Other noun stems, including certain bisyllabic nouns with long final vowels (112), take the diminutive suffix with a high tone in the singular stem.

(112) Diminutive Suffix [–mɛ́]

	Gloss	Singular	Diminutive	Diminutive=Plural
a.	person	ʒìbɛ́ɛ́	ʒìbi̱ɛ́–mɛ́	ʒìbi̱ɛ́–ꜜmí=ndɛ̀
b.	road	ʒímbɛ́ɛ̱̀	ʒímbé–mɛ́	ʒìmbé–ꜜmí=ndɛ̀

As noted above, the sequence [bɛ] is an allomorph of the diminutive suffix. However, it does not emerge as [mi] in the plural of these nouns unless the diminutive is specified. The fact that the final vowel of the noun root is deleted in (112b) but not in (112a) is curious.

Nouns which consist of only low vowels [a] may take the diminutive allomorph [ɛ]. Those shown in (113) have either low (113a) or high (113b) tones on the diminutive suffix.

(113) Diminutive Suffix [–ɛ]

	Gloss	Singular	Diminutive	Diminutive=Plural
a.	sheep	ŋàmbà–rá	nŋámbá+ɛ̀	nŋámbá–ꜜmí=ndɛ̀
b.	cow	nnàà	nnà+ɛ́	nnáɛ̱́–ꜜmí=ndɛ̀

Further, the example (113b) illustrates a case in which the diminutive suffix remains [–ɛ] rather than becoming [–mi] before the plural clitic. Also, note that the word-initial nasal is omitted in the noun stem (113a) since it has three syllables, yet it is not deleted in the diminutive

or the diminutive-plural stem. This is likely due to the fact that the plural clitic does not contribute to the maximal syllable count of three syllables.

Many nouns which are suffixed with the [–jɛ] variant of the diminutive have a high tone.

(114) Diminutive Suffix [–jɛ́]

	Singular	Diminutive	Gloss
a.	bòndí	bòndì–jɛ́	Bondu person
b.	kùrɛ̀+mɛ́	kùrì–jɛ́	dog

The noun [kùrɛ̀+mɛ́] ‘dog’ is a noun of the segmental Type Four. The diminutive stem is not doubly marked, but it does have a different allomorph of the diminutive suffix (114b).

The tonal data suggest that the diminutive suffix has a low tone which interacts with the noun root, and differs from the plural clitic and the augmentative bound word, presented in the previous chapter, which are toneless. As in many Dogon languages for which the diminutive is [ii], a grammaticalized form of the word for ‘child’ or ‘baby’ [ii], the diminutive in Bangime may be a grammaticalized form of the word ‘baby’ [bìɛ́]. The word [bi+ɛ] is a possible borrowing from Fulfulde *bi* ‘child’ or ‘baby’ with the lexicalized diminutive suffix.

4.3 Agentive

The agentive suffix is also a case of grammaticalization of a noun, /ɕiɛⁿ/ ‘owner’. The verb ‘herd’ (115a) and the noun ‘field’ (115b) are homophonous. These words are suffixed with the agentive to exemplify the difference tonally and segmentally between adding the agentive suffix and using the word from which it derives, ‘owner’.

(115) Agentive Suffix

	Phrase		Gloss
a.	ʊòwɔ́	–ɕèɛ̀ⁿ	herder
	herd v.	agentive	

b.	ʊòwɔ́	n	ɕéɛ́ⁿ	field's owner
	field n.	GEN	owner	

The difference between the stem (116a) and the phrase (116b) is the tonal contours. A stem, in general, has one contour melody, whereas a phrase is composed of separate words, all with their own melodies. The agentive attaches to simple verbs, verbs with object nouns, or even the complementizer, to create nouns.

4.3.1 Agentive with Verbs

After a simple verb, the toneless agentive suffix surfaces with a low tone. Verbs in the agentive construction are marked in incompletive aspect, which has the word order SOV.

(116) Verb–Agentive

	Agentive construction		Gloss
a.	ʒùɔ́ⁿ	–ɕèɛ̀ⁿ	
	sorcery	agentive	vampire
b.	ʒɔ́ɔ̀ⁿ	–ɕèɛ̀ⁿ	
	dance	agentive	dancer
c.	déɛ̀	–ɕèɛ̀ⁿ	
	cultivate	agentive	farmer
d.	síí	–ɕèɛ̀ⁿ	
	sew	agentive	tailor

The agentive suffix may also attach to a verb phrase with a direct object. The agentive suffix has a low tone after each verb, but a falling tonal melody in the final example (117). The change in tone could be due to this example being a low-toned verb.

(117) Noun–Verb–Agentive

	Phrase			Gloss	Translation
a.	nŋòó	ɕíín	–ɕèɛ̀n		
	meat/fish	take	agentive	fish taker	fisherman
b.	gìé	n dèg–é	–ɕèɛ̀n		
	cotton	T hit–RV	agentive	cotton hitter	weaver
c.	kóò	mmàà	–ɕéɛ̀n		
	house	build	agentive	house builder	mason

Since the word order is object-verb in the above examples, I suggest that the agentive, in a manner similar to the plural clitic, attaches to the verb phrase. However, I am unsure of the reason why the first example (117a) does not have the transitive nasal preceding the verb but (117b) does.

4.3.2 Other Morphemes with the Agentive and ‘owner’

The examples in (118) show alternate forms of the agentive suffix.

(118) Other–Agentive

	Phrase			Gloss	Translation
a.	sàbè–rè	ʒíè	–ɕíin		
	heal–rv	do	AGENT	doer of healing	healer
b.	kòòmbɛ̀	ɕíín	ɕéɛ̀n		
	beetle	tail	owner	beetle with a tail	sp. of scorpion with long tail

c.	mɛ̀	–ɕíín	kẃà	dígá	n	kîì	he who can		bard
	COMP	AGENT	voice	talk	GEN	thing	talk the talk		

example could be a case of dissimilation. The phrasal stem (118c) is an example of the agentive suffixing to the complementizer morpheme. In a manner similar to a modifier, the expected genitive nasal is omitted between the head noun and the possessed noun. The reciprocal, 'each other' has a similar form [siiⁿ], and may be related.

4.3.3 Grammaticalized Agentive

An example of a flora species which uses the word 'owner' rather than the agentive is (119).

(119) Phrases with [ɛeɛⁿ] 'owner'

	Phrase				Gloss	Translation
a.	dʷà+ɛ̀	ʒíiⁿ	céɛ̀ⁿ			
	tree	blood	owner		blood tree	bush sp.
b.	dʷà+ɛ̀	ʒíiⁿ	céɛ́ⁿ	=ndɛ̀		
	tree	blood	owner	PL	blood trees	bush sp. PL
c.	*dʷà+ɛ̀	=ndɛ	ʒíiⁿ	céɛ̀ⁿ	*blood trees	

This Euphorbia species emits a liquid (latex) when cut; therefore, it is described as 'blood tree' or '[the] tree with blood'. The genitive nasal is omitted, and the plural clitic, shown in (119b), illustrates that the tone of the agentive suffix is actually high. The phrase syntactically acts as a unit, the plural clitic may not be suffixed to the first noun (119c). The augmentative also follows the phrase [dégé–cèɛ̀ⁿ] 'chief' (lit. 'head owner'), [dégé–cèɛ̀ⁿ–bɔ̀r̃ɔ̀] 'a big chief' as does an adjective [dégé–cèɛ̀ⁿ báákɔ̀] 'a beautiful chief'.

Another flora species (120) employs the noun 'owner'. The genitive nasal is omitted.

(120) Phrases with 'owner' (cont)

Phrase			Translation	Gloss
béndì–bándɛ́ɛ̀	kúʒú	ɛ́ɛ̀ⁿ		
winding	hair	owner	winding (plant) with hair	vine sp.

In this flora species name, the head of the phrase is actually a verb, yet it describes the noun. The noun ‘owner’ has its own tonal melody, which makes it different from the agentive.

4.4 Summary of Nominal Suffixes

The nominal suffixes discussed include the diminutive [–ɛ] and the agentive [–ɕeɛⁿ]. The clitics illustrated in the previous chapter - the plural and the augmentative - differ from the diminutive suffix presented in this chapter by their tonal behavior. The afore mentioned plural and augmentative do not bear tone of their own and polarize to the tone of the noun or adjective they follow. The diminutive suffix in Bangime bears its own tone. The diminutive is proposed to have a low tone which interacts with the tone of the noun stem. Also, the vowel of the diminutive is often preceded by a consonant. The consonant insertion prevents certain vowels from coalescing. Another purpose for consonant insertion is to create a syllabic onset.

Another set of potential suffixes is found among possessives noted in the following chapter, but sufficient data has not yet been gathered to determine their prosodic status.

Chapter 5. Nominal Inflection: Proclitics

5.1 Proclitics in Bangime

In addition to the clitics and suffixes described in the previous chapters, Bangime also has the following nominal proclitics: the genitive, possessive, and definite. The genitive morpheme is a nasal which precedes a possessor noun. The genitive marker is an alveolar nasal /n/ which assimilates the place of the following consonant if that consonant is bilabial or velar. The possessive pronouns consist of the personal pronouns plus /a/. The definite marker is /a/. The possessive and definite proclitics are specified tonally and interact with the noun root. Although the definite and possessive pronouns affect the tone of the noun, these are considered proclitics rather than prefixes because the markers do not contribute to the syllable weight of the word. An overview is given in §5.2 of where a possessive proclitic or a genitive nasal is used. Then, §5.3 gives an in-depth presentation of the tonal patterns on the possessive stem with a concentration on the first and third persons, as the sole difference between these two forms is tone. The definite marker is introduced in §5.9. The tones on the definite marker are also discussed.

5.2 Nominal Possession

There are two ways to express possession in Bangime: the genitive nasal and a set of possessive pronouns. A possessive pronoun may substitute for the genitive nasal in most phrases, but a genitive nasal may not be used in lieu of a possessive pronoun.

The possessive pronouns are listed in (121). As noted above, the possessive pronouns are considered proclitics because the length of the possessive proclitics do not vary before a noun, as one might expect if they were part of the noun stem, since this would have consequences for the syllable structure. Each of the possessive pronouns has its own tone, which interacts with the

noun to which it precedes. This section topicalizationes on the tonal patterns of the singular possessive pronouns, as data for the plural pronouns is not as abundant.

(121) Possessive Pronouns

1.S	máá=	1.PL	ndɛ maa=
2.S	a=	2.PL	aa=
3.S	màà=	3.PL	nii maa=

Each of the possessive pronoun preclitics consists of the personal pronoun plus /a/. The tone of the persons other than first and third person singular have yet to be discerned. Discussed in this chapter, the manner in which the tone of the possessive pronoun interacts with the noun is complicated and differs for each noun in the paradigm.

There is a second set of possessive pronouns. Although I have very little data for this second set, they are listed in (122), with examples in (123) for descriptive completeness. Possessive pronoun suffixes follow a noun, the demonstrative [kaw] ‘that’, or the plural demonstrative [kaa–ru] ‘those’, and are used to describe alienable nouns and non-kin terms.

(122) Possessive Pronouns

Gloss	Pronoun		Gloss	Pronoun	
mine/my	muw̃ɛ ~	mɛ			
mine	mi muw̃ɛ	mi mɛ	ours	nɛ muw̃ɛ ~	nɛ mɛ
yours	a muw̃ɛ	a mɛ	yours (PL)	aa muw̃ɛ	aa mɛ
his/hers	muw̃ɛ ~	mɛ	theirs	nii muw̃ɛ ~	nii mɛ
his/hers	mi muw̃ɛ	mi mɛ			

The examples of the possessive pronoun clitic are shown in (123) illustrate that the morpheme may also surface with a low vowel and a nasal rather than a glide, word-internally.

The tones of the morpheme also vary. The predictability of the properties of this morpheme are left to further research.

(123) Possessive Pronoun Examples

a.	nù		ɲáẁ	múw̃ɛ̀	ŋ	kɛ́ɛ̀	
	come.PRF		take	POSS	~2	PRF	I came [to] take mine.
b.	à	ɲàẁ	à	múw̃ɛ́	à	kɛ́ɛ̀	
	2.S	take	2.S	POSS	2	PRF	You took yours.
c.	nù	á	ɲáẁ	múw̃ɛ̀	ŋ	kɛ́ɛ̀	
	come.PRF	CHN	take	POSS	~2	PRF	He came to take his.
d.	n dɛ̀	ɲáẁ		múw̃ɛ́	ŋ	kɛ́ɛ̀	
	1.PL	take		POSS	~2	PRF	We took ours.
e.	níí	ɲà	níí	mámɛ́	ŋ	kɛ́ɛ̀	
	3.PL	take	3.PL	POSS	~ 2	PRF	They took theirs.
f.	nù	ɲáẁ	à	mámɛ̀	~	máwɛ̀	
	come.PRF	take	2.S	POSS		POS	Come take yours (IMP).
g.	áá	ɲàẁ	áá	mámɛ́	à	kɛ́ɛ̀	
	2.PL	take	2.PL	POSS	2	PRF	You (pl) took yours.
h.	níí	nù	ɲáẁ	múw̃ɛ̀	ŋ	kɛ́ɛ̀	
	3.PL	come.PRF	take	POSS	~ 2	PRF	They came [to] take mine.

An example of the use of the use of this possessive pronoun preceding, rather than following, a noun in lieu of the common possessive proclitics was found in one text, Text VI: Chief VI, line 31. This was the only example of this type.

As shown in (124), a resumptive possessive proclitic is used when the possessor is a proper name, a pronoun, or inalienable. The genitive nasal can be used with a possessor that is a common name, and with inalienable items, such as kin terms or body parts. Both the possessive pronoun and the genitive nasal are omitted from the possessive phrase when a modifier follows an inaleianbly possessed noun, so the possessor is juxtaposed to the possessee, see (124b - c).

(124) Possessive Proclitics

Possessive Pronoun	Genitive Nasal
possessor is…	possessor is…
common name (126a - d)	common name (126aa - dd)
child (126b, d)	child (126bb, dd)
friend (126a, c)	friend (126aa)
proper name (127)	pronoun (Chief 1.8)
possessee is…	possessee is…
body parts (126f, 127a)	body parts (126e, ee, ff, 130)
child (126a, c)	child (126aa)
friend (126b, c)	friend (126bb, cc, dd)
modified (127d, deleted in 127b - c)	modified (deleted)
pronoun	

Sample possessive phrases are shown in (125) to illustrate the differences between the possessive proclitic and the genitive nasal. The tonal patterns on the possessive proclitic are discussed in §5.3.

(125) Possessive Proclitic and Genitive Nasal Examples

a.	máà	páàⁿ	máà	jàá+mɛ̀	aa.	máà	pááⁿ	n	jáá+mb̲ɛ̀
	1S.P	friend	3S.P	child		1S.P	friend	GEN	child
	my friend's child					my friend's child			
b.	màá	jáá+mɛ̀	máà	páàⁿ	bb.	máá	jáá+mɛ̀	m	pààⁿ
	1S.P	child	3S.P	friend		1S.P	child	GEN	friend
	my child's friend					my child's friend			
c.	màà	pááⁿ	máá	jáà=ndɛ́	cc.	màá	jáà=ndɛ́	m	páá=ndɛ̀
	1S.P	friend	3S.P	child=P		1S.P	child=PL	GEN	friend=P
	my friend's children					my children's friends			

d.	máá	já+mbɛ̀	màà	páá=ndɛ̀	dd.	máá	já+mbɛ̀	m	páá=ndɛ̀
	1S.P	child	3S.P	friend=P		1S.P	child	GEN	friend=P
	my child's friends					my child's friends			
e.	màá	ŋámbà	m	bʷèɛ̀	ee.	màá	ŋámbà	m	bʷèɛ̀=ndɛ́
	1S.P	sheep	GN	leg		1S.P	sheep	GEN	leg=PL
	my sheep's leg					my sheep's legs			
f.	màà	ŋámbárà	máà	bʷéɛ́	ff.	kàẁ màà	ŋámbárà	m	bʷèɛ̀=ndɛ́
	3S.P	sheep	3S.P	leg		3S.P	sheep	GEN	leg=PL
	his sheep's leg					his sheep's legs			

When the possessor is a pronoun, the possessive proclitic is used. Further, if the possessor is itself a pronominally possessed noun, either a resumptive possessive proclitic (125a - f) or the genitive nasal (125aa - ff) can be used. However, by comparing examples (125a - aa), we see that the inalienable noun 'child' is marked for possession by use of the possessive proclitic or the genitive nasal. This can be compared to the lack of differences between (125e - f, ee - ff) in which either the possessive proclitic or the genitive nasal may be used.

A proper name as a possessor uses the possessive proclitic rather than the genitive nasal.

(126) Possessors with Proper Name

	Phrase				Translation
a.	kàdíjá	màá=	dégè		
	Kadija	3SG.POSS	head		Kadija's head
b.	kàdíjá	dégè	síjɔ̀ⁿ		
	Kadija	head	white		Kadija's white head
c.	kàdíjá	bʷéɛ̀	síjɔ̀ⁿ		
	Kadija	leg/foot	white		Kadija's white foot
d.	kàdíjá	màá=	kòò	síjɔ̀ⁿ	
	Kadija	3SG.POSS	house	white	Kadija's white house

A proper name as a possessor (126a) does not take the genitive marker, but the resumptive possessive proclitic. As with the genitive phrases, a proper name as a possessor

(126b - c) omits the possessor proclitic when an adjective follows an inalienable possessed noun. An alienable possessed noun (126d) followed by an adjective does not omit the possessive morpheme.

Further, the genitive proclitic (127) - (128) is used to describe possession by animals and objects, while resumptive possessive proclitics (129) are generally used with humans.

(127) Genitive with Possessive Construction

tùrɛ́ɛ́	m	bíɛ́	m	pé
hyena	GEN	droppings	GEN	PP

Hyena's droppings in [the granary]. (Hyena and Hare 1: 66)

Described in detail in §6.1, a genitive phrase may function as a semantically cohesive unit, as in (128), a 'belt' is literally a 'pant's rope'.

(128) Inanimate Possessor

Genitive Phrase			Translation
táw̃áá	m	bɔ́jéɛ̀	'belt'
pant	GEN	rope	

In describing honey, a speaker said the phrase shown in (129). The inalienable noun 'hand' takes the genitive marker after the noun 'person'.

(129) Human Possessor

máà n dáẇ	[ʒìbìɛ̀	n	nìì	hùⁿ]^{L}
stick	person	GEN	hand	PP.3S

It sticks to a person's hand. (Texture Experiment, C1: 15.2)

Note that, if the lack of the gentive nasal is interpreted to indicate inalienability, 'hand' and 'foot' are considered less alienable than 'head', since 'hand' and 'foot' take the genitive nasal while 'head' does not.

5.3 Tonal Patterns on the Possessive Proclitic

The tone of the possessed noun affects the possessive morpheme and vice versa. The tonal patterns are very complex, and may involve a stress-tone interaction that will be the topicalization of future studies. Although the algorithm which derives the patterns has not yet been determined, data are listed here, organized by person and then by tonal properties. Most nouns act differently with respect to tone; there seem to be no nouns that represent an overall pattern, so as many nouns as are semantically possible as possessed nounsare shown with their various patterns.[41]

5.3.1 First and Third Person Possessive proclitics

The possessor pronoun proclitics are segmentally the same for first and third persons. The distinction between first and third persons is tonal. The first and third person possessive proclitics are both segmentally [maa]. The most productive tonal pattern on the possessive proclitic is a high tone on the first person and a high-low tonal melody on the third person. I posit the morpheme [maa] as being underlyingly toneless. First person is represented underlyingly with a high tone, third person with a low tone. The manner in which the tones are assigned to the possessive proclitic and subsequently to the noun stem are not completely clear, so the different patterns are shown in the following tables. (Underlying tonal melodies of nouns are listed in the left column with surface possessive tonal patterns on the right.)

[41] Many nouns which semantically would not make sense in English are commonly used as possessed nouns in Bangime due to the rich animacy properties of most nouns. For example, a person's 'life force' is 'his/her wind', and the 'sky's man/woman' are the sun/moon, respectively.

5.3.2 Tone Type One Nominals

Recall that noun roots are organized into six types based on tonal properties. Tone Type One nouns are underlyingly high and surface with high tones in both the singular and plural stems. Nouns which are underlyingly high and emerge as high are primarily found among monosyllabic stems.

(130) Tone Type One /H/ → [H]

	Noun	POSS	Stem	Person	Gloss
a.	shadow	máá=	síìⁿ	1.S	my shadow
	/sííⁿ/	máà=	sííⁿ	3.S	his shadow
b.	moon	máà=	ɥíɛ́	1.S	my moon
	/ɥíɛ́/	màà=	ɥíɛ́	3.S	his moon

With the possessive proclitic, two patterns were obtained. The possessive proclitic emerges high (130a) in the first person. This is expected since the first person is a high tone and the possessive proclitic is posited as being toneless. The first person singular possessive proclitic (130b) is an exception. The noun itself also emerges with a high tone on at least the first mora. The example (130b) has a contour melody on the proclitic, but a level high tone on the noun.

The third person singular possessive proclitic surfaces with either low tones (130b) or a high-low pattern (130a). As will be shown, most nouns appear with at least one low tone in the third person possessive construction. The two nouns shown in (130) are exceptions to the generalization, however, there were few nouns of Tone Type One that were obtained for the possessive paradigm.

5.3.3 Tone Type Two

Class Two nouns are underlyingly low and emerge as low in the unpossessed singular and plural. Possessed forms are shown in (131).

(131) Tone Type Two /L/ → [L]

	Noun	POSS	Stem	Person	Gloss
a.	mosquito	máá=	bʷíɛ́	1.S	my mosquito
	/bʷìɛ̀/	máà=	bʷíɛ̀	3.S	his mosquito
b.	leg	máá=	bʷéɛ́	1.S	my leg
	/bʷèɛ̀/	máà=	bʷéɛ̀	3.S	his leg
c.	mouse	máá=	nníiⁿ	1.S	my mouse
	/nììⁿ/	máà=	nníiⁿ	3.S	his mouse
d.	arm	máá=	nníí	1.S	my arm
	/nìì/	máà=	nníí	3.S	his arm
e.	field	máá=	ʊóó	1.S	my field
	/boo/	máà=	ʊóó	3.S	his field
f.	sun	máá=	nníɛ́	1.S	my sun
	/nèɛ̀/	màà=	nníɛ́	3.S	his sun
g.	termite	máà=	ɕíɛ̀	1.S	my termite
	/ɕìɛ̀/	màà=	ɕíɛ̀	3.S	his termite
h.	ear	máá=	táŋà	1.S	my ear
	/tàŋà/	màà=	táŋà	3.S	his ear
i.	heart	máá=	bìmmɛ̀	1.S	my heart
	/bìmmɛ̀/	màà=	bímmɛ̀	3.S	his heart
j.	sky	máá=	ŋàrà n dɔ̀gò	1.S	my sky
	/dògò/	màà=	ŋárá n dɔ̀gò	3.S	his sky

As shown above, the first person singular proclitic surfaces with high tones and the third with either high-low (131a - e) or low (131f - j) tones. The noun then emerges with all high tones (131a - f), or low in two words (131i - j), high-low in two words (131g - h). Nouns in the third person singular are not as uniform as the nouns in the first person. Some nouns emerge as high in both persons (131c - e), others as high-low in both persons (131g - h), and still others as high-low only in the third person (131i - j). The nouns in Type Two pattern more regularly than

those in Type One with respect to the possessive first and third person proclitics. Note that nouns with low tones also behave more regularly than those with high tones with respect to the tonal assignment in the augmentative stem.

5.3.4 Tone Type Three

Tone Type Three nouns are similar to those in Type One in that they have underlyingly high tones. In the unpossessed singular, however, they emerge with high-low tones. Possessed forms are shown in (132).

(132) Tone Type Three /H/ → [HL]

	Noun	POSS	Stem	Person	Gloss
a.	thing	máá=	kéɛ̀	1.S	my thing
	/kéɛ́/	máà=	kéɛ̀	3.S	his thing
b.	bee	máá=	mírò	1.S	my bee
	/míró/	máà=	mírò	3.S	his bee
c.	water	máá=	ɥìè	1.S	my water
	/ɥíé/	máà=	ɥìè	3.S	his water
d.	throat	máá=	kẃà	1.S	my throat
	/kẃá/	màà=	kẃà	3.S	his throat
e.	basket	máá=	kórógò	1.S	my basket
	/kó–ró–gó/	màà=	kórógò	3.S	his basket
f.	thigh	máá=	tóŋgò	1.S	my thigh
	/tóŋgó–ró/	màà=	tóŋgò	3.S	his thigh
g.	eye	máá=	sííbíɛ̀	1.S	my eye
	/sííbíɛ́/	màà=	sííbíɛ̀	3.S	his eye
h.	breast	máá=	súɥɛ̀	1.S	my breast
	/súɥɛ́/	màà=	súɥɛ̀	3.S	his breast
i.	beard	máá=	sámbò	1.S	my beard
	/sámbó/	màà=	sámbò	3.S	his beard

j.	hair	máá=	dègè kújù	1.S	my hair
	/dégé/	màà=	dégè kújù	3.S	his hair
k.	dove	máà=	píʋé	1.S	my dove
	/píbé–ré/	màà=	píʋè	3.S	his dove
l.	leaf	máá=	pʷìɛ̀ⁿ	1.S	my leaf
	/pʷíɛ́ⁿ/	màá=	pʷíɛ̀ⁿ	3.S	his leaf
m.	house	máá=	kòò	1.S	my house
	/kó/	màá=	kòò	3.S	his house
n.	scythe	máá=	kóɔ̀ⁿ	1.S	my scythe
	/kóóⁿ/	màá=	kóɔ̀ⁿ	3.S	his scythe
o.	milk	màá=	nníɛ̀	1.S	my milk
	/níɛ́/	màà=	nníɛ̀	3.S	his milk
p.	goat	màá=	bììⁿ	1.S	my goat
	/bííⁿ/	màà=	bììⁿ	3.S	his goat
q.	belly button	màá=	bɔ́ŋwíɛ̀	1.S	my belly button
	/bɔ́ŋgɔ́–ró/	màà=	bɔ́ŋwíɛ̀	3.S	his belly button

Like the preceding examples, the first person possessive proclitics emerge with high tones (132a - n), with exceptions (132o - q) only having high on the second mora of the possessive proclitic. Nouns from Type Three surface, like those in Type One, with high-low tones after the first person singular, although exceptions are found (132i - k, n). The third person possessive proclitic is low among stems of this class (132d - k), (132oo - q), but exceptions high-low (132a - c), and the unusual low-high (132l - n) are also found.

5.3.5 Tone Type Four

Nouns in Type Four are underlyingly low (when unpossessed) and surface with a low-high pattern in the singular and a low tone in the plural. Possessed forms are shown in (133).

(133) Tone Type Four /L/ → [LH]

	Noun	POSS	Stem	Person	Gloss
a.	pick axe	máá=	dáw̃á	1.S	my pick axe
	/dàmà/	máà=	dáw̃à	3.S	his pick axe
b.	stick	máá=	búr̃á	1.S	my stick
	/bùr̃à/	máà=	búr̃á	3.S	his stick
c.	stomach	máá=	kóríɛ̀	1.S	my stomach
	/kòrè/	màà=	kóríɛ̀	3.S	his stomach

As with nouns from Tone Class Two, it appears that the first person possessive proclitic and the noun stem receive high tones. The third person has a low tone on the second (133a - b) or both (133c), morae of the possessive proclitic. The noun is high (133b) or high-low (133a, c).

5.3.6 Tone Type Five

Unpossessed nouns in Class Five are like those in Class Three on the surface but, since they appear with the contour melody over the noun root in the plural, are underlyingly high-low. Possessed forms are in (134).

(134) Tone Type Five /HL/ → [HL]

	Noun	POSS	Stem	Person	Gloss
a.	roof support	máá=	kíɛ̀	1.S	my roof support
	/kíɛ̀/	màà=	kíɛ̀	3.S	his roof support
b.	lion	máá=	kíɛ̀	1.S	my lion
	/kíɛ̀/	màà=	kíɛ̀	3.S	his lion
c.	nose	máá=	súmbì	1.S	my nose
	/súmbì/	màà=	súmbí	3.S	his nose
d.	mouth	máá=	nnɔ́ɔ́	1.S	my mouth
	/nɔ́ɔ̀/	màà=	nnɔ́ɔ́	3.S	my mouth

Here we see that the tonal behavior of the possessive proclitic is quite regular: the first person is consistently high and the third person is low. The tonal behavior of the nouns,

however, fluctuates, but resembles that of the general patterns in Class One and Three, both of which also have high tones on the noun stem, again suggesting that a high tone on the stem interacts in a specific manner with the tone of the possessive proclitic. The specific ways in which it interacts are yet to be determined.

5.3.7 Tone Type Six

Nouns in the final tonal class, Six, are underlyingly low-high. The patterns found among the possessive constructions for the nouns in Type Six are sporadic.

(135) Tone Class Six /LH/ → [LH]

	Noun	POSS	Stem	Person	Gloss
a.	horse	máá=	ʋóò	1.S	my horse
	/ʋòó/	màà=	ʋóò	3.S	his horse
b.	wilderness	màá=	nnáà	1.S	my wilderness
	/nàá/	máá=	nnáà	3.S	his wilderness
c.	earth	máá=	gùwíɛ̀	1.S	my earth
	/gùwìɛ́/	màà=	gúwíɛ̀	3.S	his earth
d.	woman	máá=	nníé–rɛ̀	1.S	my woman
	/nìé–rɛ́/	màà=	nníé–rɛ̀	3.S	his woman
e.	corn	máà=	bírɔ́ndɔ̀	1.S	my corn
	/bìrɔ̀ndɔ́/	màà=	bírɔ́ndɔ̀	3.S	his corn

The tonal patterns on the possessive preclitics are as expected for the first and third person in some of the possessive constructions (135a, c, d), and most regular pattern on the possessed noun is high-low (135a, b, d, e).

5.4 Plural Possessives

Only one example of a plural possessed stem was obtained. It is shown in (136) to indicate that, as with singular possessed nouns, the tone of the possessive overrides the tone of the citation form, which in turn affects the tone of the plural clitic.

(136) Plural Possessive: Hand

	[nnìì]	[nnì=ndɛ́]	
a.	máá= nníí	máá= nníí=ndɛ̀	my hand(s)
b.	màà nníí	màà nníí=ndɛ̀	his hand(s)

The tone of the possessive pronoun is spread onto the noun. The tone of the plural clitic becomes the opposite of the surface, rather than the non-possessed, tones of the noun stem.

5.5 Second Singular Possessive Proclitics

The second person possessive proclitic is a short [a]. The second plural possessive proclitic is long [aa] but the second singular pronoun may also lengthen to [aa]. The difference between the singular second person and the plural is then determined by tone. The tones of the noun are also altered. Nouns that acted alike for the first and third possessive pronouns are not necessarily linked in the same way in the second person. Further, whereas there is a tendency for the first person possessive proclitic to surface with high tones and the third person with low tones, the second person varies. Many possessed nouns surface with a high tone.

5.5.1 Tone Type One Nouns

Possessed Type One nouns are often expressed with a high tone on the proclitic and the noun.

(137) Tone Type One Nouns

	Gloss	Noun	POSS	Gloss
a.	moon	ɥíɛ́ /H/	áá=ɥíɛ̀ HH=HL	your moon
b.	milk	nníɛ́ /H/	áá=nníɛ́ HH=HH	your milk

Although the two nouns in (137) are in the same tonal class, their interaction with the possessive preclitics differ, suggesting an underlying segemental difference.

5.5.2 Tone Type Two Nouns

Nouns in Type Two also show a variety of tonal patterns after the possessive proclitic.

(138) Tone Type Two Nouns

	Gloss	Noun	POSS	Gloss
a.	sun	nnèɛ̀ /L/	áá=nnéɛ̀ HH=HL	your sun
b.	heart	bìmmɛ̀ /L/	áá=bímmɛ́ HH=HH	your heart
c.	ear	tàŋà /L/	áá=tàŋà HH=LL	your ear
d.	mouse	nnìì^{n} /L/	àà=nníî^{n} LL=HL	your mouse
e.	arm	nnìì L	àà=nníí LL=HH	your arm
f.	cow	nnàà /L/	áà=nnáá HL=HH	your cow
g.	mosquito	b^{w}ìɛ̀ /L/	áà=b^{w}íɛ̀ HL=HL	your mosquito
h.	leg	b^{w}èɛ̀ /L/	áà=b^{w}éɛ̀ HL=HL	your leg
i.	termite	ɕìɛ̀ /L/	áà=ɕíɛ̀ HL=HL	your termite

All of the nouns roots in Type Two have low tones. If the second person singular possessive proclitic is proposed to be high, as it appears in (138a - c), then the tonal behavior of the noun stems is inexplicable. It seems more likely that the second person singular possessive proclitic has a contour melody [HL] as it appears in (138g - i) that is overlaid upon the low-toned stems. This would leave (138d - e) as exceptions.

5.5.3 Tone Type Three

Type Three Nouns are those which are high underlyingly but surface with a high-low tonal melody. These nouns end in high tones after the second person possessive proclitic.

(139) Tone Type Three Nouns

	Gloss	Noun	POSS	Gloss
a.	throat	kẃà /H/	áá=kẃá H=HH	your throat
b.	belly button	bɔ́ŋwíɛ̀, bóŋgɔ́–rɔ̀ /H/	áá=bɔ́ŋwíɛ́ HH=HHH	your belly button
c.	beard	sɛ́mbò/sámbó /H/	áà=sámbó HL=HH	your beard
d.	nose	sùmbí, súmbí–rí /HL/	áà=súmbí HL=HH	your nose
e.	thing	kéɛ̀ /H/	áà=kéɛ̀ HL=HL	your thing
f.	water	ɥíè /H/	áà=ɥìè HL LL	your water
g.	eye	sííbíɛ̀ /H/	áà=sííbíɛ̀ HL=HHHL	your eye
h.	breast	súɥɛ̀ /H/	áà=súɥɛ̀ HL=HL	your breast
i.	thigh	tóŋgó–rò /H/	áá=tóŋgò HH=HL	your thigh

The proclitic surfaces as either high (139a - b, i) or high-low (139c - h). All of the nouns shown have at least one high tone. As with the first person singular possessive proclitic, the second person has a high tone that interacts with the high tone of the noun stem.

5.5.4 Tone Types Four - Six

The examples for the nouns in Tone Types Four to Six are sparse, but the second person possessive paradigm does continue to show that there is at least one high tone on the possessive proclitic and the noun stem.

(140) Noun Class Four

Noun	POSS	Stem
stomach	kóré+ɛ́	áà=kórí̱ɛ̀
	/HL/	HL=HHL

Although only two nouns from Class Five were available with the second person singular possessive proclitic, it is of interest that the homophonous nouns shown in (141b) appear the same with the proclitic, suggesting that the property affected is one of the features associated with the type of noun stem, rather than with a specific word.

(141) Noun Class Five

	Noun	POSS	Stem
a.	mouth	nnɔ́ɔ́	áá=nnɔ́ɔ́
		/HL/	HH=HH
b.	roof support	kíɛ́	áà=kíɛ̀
	lion	kíɛ́	áà=kíɛ̀
		/HL/	HL=HL

One example was found in which the possessive proclitic had a glide following the vowel (141b). As shown above, the [w] often deletes after the low vowel [a] among particles.

(142) Noun Class Six

	Noun	POSS	Stem
a.	wilderness	nnàá	áá=nnáà
		/HL/	HH=HL
b.	earth	gùwíɛ̀	áẁ=gúwíɛ̀
		/HL/	HL=HL

5.6 Plural Second Singular Possessive Stems

The examples given in (143) illustrate that, as shown previously, the tone of the possessive proclitic interacts with the noun stem, which in turn interacts with the plural clitic.

(143) Plural Possessives

a.	sun	Plural	2nd Possessive	2nd Possessive Plural
	nnèɛ̀	nnìɛ̀=ndɛ́	áá=nníɛ̀	áá=nníɛ̀=ndɛ́
	/L/	L=H	H=HL	HH=HL=H

b.	milk	Plural	2nd Possessive	2nd Possessive Plural
	nníɛ́	nníɛ́=ndɛ̀	áá=nníɛ́	áá=nníɛ́=ndɛ̀
	/H/	HH=L	HH=HH	HH=HH=L

In the plural possessed noun construction, the possessive pronoun first overlays its tones onto the noun stem. Then, the plural clitic takes a tone which is the opposite of the noun.

5.7 Genitive Nasal with the Second Singular Possessive proclitic

When the second singular possessive proclitic co-occurs in a phrase with the genitive nasal, as shown in (144), the possessed nouns are altered by the second person possessive proclitic. This differs from the first person possessive proclitic shown above in which only the first noun of the genitive phrase was affected.

(144) Genitive Possessives

	Singular			Gloss		2nd Singular Possessive			
a.	ŋárá	n	dɔ́gò		áá=	ŋárá	n	dɔ̀gò	
	God	GEN	roof	sky	2.POSS	God	GEN	roof	your sky
b.	dègè	ŋ	kúɥí		áà=	dègè	ŋ	kúɥì	
	head	hair	GEN	hair	2.POSS	head	GEN	hair	your hair

The first mora of the second noun (144a) and the second mora of the second noun (144b) are altered after the second person possessive proclitic.

5.8 Summary of Possessive Proclitics

The following underlying tones are posited for the singular possessive proclitics, and the most common tonal effects on nouns are summarized in (145).

(145) Tones of the Singular Possessive Paradigms

Proclitic	Tone	Gloss	/L/ Noun	/H/ Noun
maa	HH	1.S.POSS	H	HL
aa	HL	2.S.POSS	H	HL
maa	LL	3.S.POSS	LH	L

Although the details of the analysis are not completely clear, I posit the tones of the first and third person as being high and low, respectively. The tones which mark first and third person on verbs show the same patterns of adding a high for first person and a low for third person. The possessive morphemes are analyzed as clitics rather than affixes since two heavy syllables in a word are dispreferred. Further, I propose that the possessive proclitic is the low vowel /a/. The non-second person singular nasal precedes the possessive pronoun so that the possessive proclitics for the singular persons could be represented as [m–aa]. In general, the third person singular possessor is low-toned [màà] before an initial high tone on the noun, and rising tone [màá] before an initial low tone. A noun with underlying low tones acts differently than one with high tones, suggesting that the low toned words are perhaps better analyzed as toneless, with differences inter-tonal-type being segmental.

5.9 Definite Marker

The definite marker is a monosyllabic, monomoraic, low vowel [a]. Because the definite marker is affected by and affects a noun, but does not add to the syllabicity of the noun stem, it is, like the possessive pronouns, considered a proclitic on the noun stem and bears its own tone. Similar to the possessive pronouns, the definite marker precedes the noun. Also like the possessive pronouns, the definite marker involves a complex tonal interaction with the noun it precedes. In many cases, the tone of the definite marker either lowers the tones of the noun, or surfaces with the opposite tone of the noun root. Nouns with at least one high tone surface with a low tone on the definite marker, shown in examples in (146).

(146) Definite Marker [à]

	Indefinite	Gloss	Definite	Gloss	Tone Type
a.	géŋgíè	a salt	à=géŋgíè	the salt	3
b.	kóɔ̀ⁿ	a scythe	à=kóɔ́ⁿ	the scythe	3
c.	pʷíɛ̀ⁿ	a leaf	à=pʷíɛ́ⁿ	the leaf	3
d.	kóò	a house	à=kóò	the house	3
e.	kó–ró–gò	a basket	à=kògó	the basket	3
f.	gèŋgíɛ̀	a crocodile	à=géŋgíɛ̀	the crocodile	6
g.	góɔ̀ⁿ	a man	à=góɔ̀ⁿ	the man	5
h.	nníjà	a mother	à=nìjà	the mother	5

One exception to the generalization that the definite marker assumes a tone opposite to that of the noun root is (146e). The surface effects on the noun following the definite marker are yet to be resolved, as, similar to the possessive construction, each noun appears to be different. Some noun such as (146a) and (146f) above neutralize the noun roots' tonal differences in the

definite form. Although in words with initial geminate nasals (146h), one of the nasals is deleted after the definite morpheme, the definite is not considered to be a prefix because the initial nasal does not contribute to the syllabicity of the noun stem.

The definite marker may also surface with a high tone, as shown in examples in (147).

(147) Definite Marker [á]

	Indefinite	Gloss	Definite	Gloss	Tone Class
a.	ʒìbɛ́ɛ́	a person	á=ʒìbɛ̀ɛ̀	the person	2
b.	pívɛ́–rè	a dove	á=pívé	the dove	3
c.	kɔ́rógò	a donkey	á=kɔ́rógò	the donkey	3
d.	pévɛ́–rɛ̀	a wind	á=pévɛ́–rɛ̀	the wind	5
e.	ŋàmbà–rá	a sheep	á=ŋámbá–rà	the sheep	6
f.	bìrɔ̀ndɔ́	corn	á=bírɔ́ndɔ̀	the corn	6
g.	nnìé–rɛ̀	woman	á=nníé–rɛ̀	the woman	6

These nouns show that the tone of the definite marker is not always low, nor does it take the opposite tone of the noun in all cases. Neither the tonal effects nor the variation between the segmental forms such as the appearance or deletion of the [–r] suffix, as in examples (147b) vs. (147d) and (147e, g), are completely understood at this time, but there appears to be a tendency for the definite marker to assume a tone opposite to that of the tone of the initial syllable in the singular form, which in turn spreads onto the initial syllable of the definite noun. In other words, if a noun has an initial low tone in the singular, the definite marker emerges as high [á] as does the initial tone of the definite noun [á cv́.cv]. If the noun has an initial high tone in the singular, the opposite pattern surfaces: [à cv̀.cv]. The following syllables in the word are affected differently depending on the syllable structure of the word.

5.9.1 Definite Plural Nouns

Plural nouns may be made definite with the addition of the definite proclitic.

(148) Definite Plural Nouns

	Plural	Gloss	DEF Plural	Gloss
a.	ʒìbɛ̀=n(d)ɛ́	people	á=ʒìbɛ̀=ndɛ́	the people
b.	kɔ́rɔ́ŋɔ́=ndɛ̀	donkeys	á=kɔ̀rɔ̀ŋɔ̀=ndɛ́	the donkeys
c.	nníjà=ndɛ́	mothers	à=nìjà=ndɛ́	the mothers

As with the possessive construction, the tones of the definite marker overlay the noun stem before the plural clitic is added. Examples (148a) 'the people' and (148c) 'the mothers' show that the singular and plural definite stems may have the same tones, but (148b) 'the donkeys' diverges. Numerous examples of the definite morpheme are found throughout Text V: Chief V in Appendix I. In the narrative, the definite morpheme appears to block the polar tonal process of the plural clitic. Since in all the elicited examples the plural clitic adopts the opposing tone to the noun stem, the cause of the blocking of the polar tone in the text is unknown.[42]

5.9.2 Definite Objects

An object noun in a verb phrase (149) may appear as indefinite (149a) or definite (149b). The examples in (149c - d) illustrate the use of the definite marker with the demonstrative.

(149) Definite Marker with Objects

a. nè méɛ̀ kúrú+bɛ̀ .
give 1.S basket

Give me a basket.

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[42] The definite plural construction is another possible instantiation of the downstepped high tone. Examples such as 'road' [jɛ̀mbíɛ̀] [à ꜜjémꜜbɛ́=ndɛ̀] and 'bag' [jémꜜbɛ̄] [à jɛ̀mbɛ̀=ndɛ́] were elicited with either a high or a downstepped high depending on the speaker. This matter is left to future research.

b. nè mɛ́ à= kùrù+bɛ̀ .
give 1.S DEF basket

Give me the basket.

c. nàẁ à= kùrù+bɛ́ káẁ nɔ̀ .
give DEF basket DEM bring

Give that basket to me.

d. nà(w) á= kùrù+bɛ́ káẁ (nɔ̀) wàj .
give DEF basket DEM bring PP

Give that basket to me.

The demonstrative [kaw] is glossed ‘it’ when used alone and ‘that’ when used in combination with the definite marker. The demonstrative follows the noun, the definite precedes it. The singular, indefinite tones for the noun ‘basket’ are seen in the sentence in (149a). The definite marker causes the noun to surface with low tones when clause-final (149b), but with low tones on all but the final mora if the noun precedes the demonstrative morpheme (149c - d).

5.9.3 Definite Marker and Demonstrative

If a noun phrase contains a definite noun and is followed by the demonstrative [káẁ], the tone(s) of the noun lower, and the demonstrative remains with its lexical tones, as shown in (150).

(150) Definite Demonstratives

	DEF	Noun	Demonstrative	Gloss	Noun Root
a.	à=	bʷèɛ̀	káẁ		bʷèɛ̀
	DEF	leg	DEM	that leg	/L/
b.	à=	kòòrèɛ̀	káẁ		kóréɛ̀
	DEF	stomach	DEM	that stomach	/HL/
c.	à=	dègè	káẁ		dégè
	DEF	head	DEM	that head	/H/
d.	à=	ʒìbèɛ̀	káẁ		ʒìbɛ́ɛ́
	DEF	person	DEM	that person	/LH/

The noun ‘person’ (150d) has a low-high toned root which remains low after the definite marker in the singular, (compare with the plural (148a)).

Similar to the quantifier clitic (§7.10), the demonstrative follows the plural clitic, and takes its own plural marker. Recall that the demonstrative takes a plural marker that differs from the nominal marker. The examples in (151) illustrate the tonal effects of the noun and the demonstrative in plural noun phrases.

(151) Plural Definite Demonstratives

	DEF	Noun	DEM	PL	Gloss	Noun Root
a.	à=	ʒìbèɛ̀	káẁ	–rú		ʒìbɛ́ɛ́
	DEF	person	DEM	PL	these people	/LH/
b.	à=	kòò	káẁ			kóò
	DEF	house	DEM		that house	/H/
c.	à=	kòò=nɛ́	kàà	–rú		
	DEF	house=PL	DEM	–PL	these houses	

The example (151a) shows the same noun ‘person’ as (150d) above. The tones on the noun are the same, lowered by the definite marker, and the demonstrative is unaffected by the definite marker. Next, compare (151b - c). Although the tonal scope of the definite marker only consists of the noun (151b), and does not include the plural clitic (151c), the tone on the demonstrative is low following the plural clitic (151c), and surfaces with long vowels rather than a vowel and the glide.

5.9.4 Obligatorily Definite Nouns

Many animal and plant species are obligatorily preceded by the definite marker. The effects of the definite marker on the noun stem seem to be more regular when it is obligatory than when it is added to mark the noun as being definite.

Bird species are often genitive or adjectival phrases. Nouns in such phrases illustrate the scope of the tone of the definite marker. The first examples (152a - b) are genitive phrases showing the tone-lowering of the initial nouns, 'woodpile' and 'rain', respectively, which possess the noun 'bird', occurring tonally in citation form. Contrast the singular, indefinite form of 'bird' [dɔ́ré+è] (152a - b) with the low-toned definite form (152c - d).

(152) Bird Species: Citation Tone-Lowering

	Definite	Noun Stem			Translation	Gloss	Noun Root
a.	à= DEF	sàndʒà woodpile	n GEN	dɔ́ré+è bird	the woodpile's bird	warbler	sándʒà /H/
b.	à= DEF	ʒòɔ̀^{n} rain	n GEN	dɔ́ré+è bird	the rain's bird	cuckoo sp	ʒóɔ̀^{n} /HL/
c.	à= DEF	dɔ̀rè+è bird	bíríbɛ̀ thin		the thin bird	golden sparrow	dɔ́ré+è /H/
d.	à= DEF	dɔ̀rè+è bird	dáá INC	m bɛ́ndè T long	the long bird	hoopoe	

Each of these examples undergoes tone lowering after the definite proclitic. The scope of the pitch-lowering is limited to the initial noun stem, shown by the examples in (153), illustrating that words that follow the noun are not considered part of the noun stem.

(153) Beetle Species: Agentive

	Definite	Noun	Modifiers	Agentive	Gloss	Noun Root
a.	à= DEF	kòòmbɛ̀ beetle	bíríbɛ̀ɛ̀ thin		beetle sp.	kóómbɛ̀ /H/
b.	à= DEF	kòòmbɛ̀ beetle	ɕíí^{n} tail	–ɕéɛ̀^{n} AGENT	water scorpion	
c.	à= DEF	kòòmbɛ̀ beetle	bírɛ́ fire	–ɕéɛ̀^{n} AGENT	firefly	

No matter what the underlying tone or syllable length of the noun, the noun which is marked with the obligatory definite in a name of a species of insect or animal is lowered after the definite marker. Other constituents in the noun phrase are not lowered, as shown in (154).

(154) Ant Species

	Definite	Noun	Modifiers		Gloss	Noun Root
a.	à= DEF	tùmbɛ̀ ant	kúúⁿ hip	jèngì+jéɛ̀ thin	ant sp.	túmbɛ̀ /HL/
b.	à= DEF	tùmbɛ̀ ant	póɔ́ˡrɛ́ black		ant sp.	

Although (154a) is a genitive phrase, the genitive nasal has been deleted because a modifier follows the noun. Only the tones on the noun are lowered. The example (154b) shows an adjective directly following a noun but the modifier's tones are not affected.

5.9.5 Definite with Diminutive and Augmentative Morphemes

Whereas words which follow a noun are not part of the noun stem and are thus unaffected by the tone-lowering effects of the definite, bound morphemes are part of the noun stem, and thus are affected. As shown in examples using the noun 'beetle', the effects of tone-lowering from the definite marker which were observed above in (152) are blocked by the addition of the diminutive or the augmentative. The plural clitic has the opposite tone of the final suffix of either the diminutive suffix or the augmentative.

(155) Diminutive and Augmentative with Definite and Plural

Beetle	Plural	Diminutive	Augmentative
kóómbɛ̀	kóómbɛ́=ndɛ̀	kóómɛ̀–mɛ̀	kóómbɛ́–bɔ́rɔ̀

	Definite Phrase			Gloss
a.	à= DEF	kóómɛ̀ beetle	–mɛ̀ DIM	the little beetle

b.	à=	kóómb̲ɛ́	–bɔ́ɽ̃ò		
	DEF	beetle	AUG		the large beetle
c.	à=	kóóm̲ɛ́	–ˡmí	=ndɛ̀	
	DEF	beetle	DIM	PL	the little beetles
d.	à=	kóómb̲ɛ́	–bɔ́ɽ̃ó	=ndɛ̀	
	DEF	beetle	AUG	PL	the large beetles

The definite marker is low but the tones of the noun are not lowered, these remain high, in each of these examples, whereas in the names of species in (153) above the same noun's 'beetle' tones were lowered. The reason for this is proposed to be because the tonal effects of the definite marker differ when it is obligatory, or because the effects of the morphemes which follow the noun. The tonal effects of the definite proclitic interact with bound morphemes, clitics, or suffixes. Note also that the [b] of the [mb] sequence of the diminutive allomorph is deleted when the diminutive suffix is attached (153c).

5.10 Summary of Nominal Proclitics

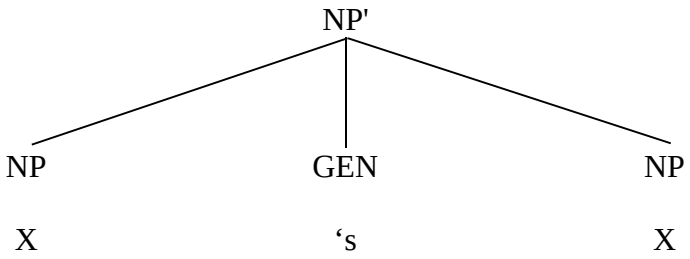
Proclitics found on nouns are the possessive pronouns and the definite marker. Because the possessive pronoun proclitics are affected by the tones of the person marker, the interactions of the proclitics shown in this chapter are not as consistent as with the plural and augmentative shown in the previous chapter. The tonal interactions of the proclitics affect the noun stem, but not unbound words which follow the noun. Clitics and suffixes which follow the noun intereact with the tone of the definite proclitic, though not those of possessive proclitic, suggesting that the definite is more closely bound to the noun root than the possessive pronouns. Because most elements in the noun phrase follow rather than precede the noun, it is difficult to draw further conclusions about the boundedness of the proclitics.

Chapter 6. Genitival Referring Expressions

6.1 Nominal Derivation

As shown in the previous two chapters, there are only two productive derivational suffixes on nouns, the diminutive [–ɛ] and the agentive [–ɕiɛⁿ]. There is one derivational suffix [–bɔr̃o] and one inflectional clitic, the plural [=ndɛ]. There is also a set of productive inflectional proclitics: possessive pronouns and a definite marker. Although all these processes are available in the language, Bangime does not use affixation or cliticization as a primary resource to create new lexical items. In the previous chapter the genitive marker was shown to be a means to express possession. In addition to this, many noun phrases are formed by the conjoining of constituents with the genitive marker. Such genitive phrases function semantically to refer to a single object. The syntactic structure of the genitive phrase is represented using the tree diagram in (156).

(156) Genitival Construction



We find an exceptional array of genitive constructions which can be observed especially in the names of flora and other descriptive or ‘deep Bangime’ terms.[43] As shown in the previous chapter, a genitive construction begins with the possessor noun and is followed by the noun which is possessed, connected by a nasal. Examples are shown in (157) using the insect ‘bee’.

[43] The reader is encouraged to review the Bangime dictionary available at http://dogonlanguages.org/bangime.cfm for the exact glossing of the flora and fauna terms used in this chapter.

(157) Genitive Expressions: ‘bee’

Possessor	Possessed Nouns			
mírò	páɣá–rà	táárè	kóò	bʷìɛ̀
/H/	/H/	/H/	/H/	/L/
bee	container	wax	house	leg

	Stem	Gloss	Translation
a.	mírò m bʷìɛ̀	bee’s leg	bee’s leg
b.	mírò m páɣá	bee’s hive	beehive (man-made, wooden)
c.	mírò n táárè	bee’s wax	beeswax
d.	mírò ŋ kóò	bee’s house	beehive (natural) or honeycomb

The head noun ‘bee’ is a high tone stem, Tone Type Three, the noun surfaces with a falling tonal melody in the singular and a high tone in the plural and the augmentative. By comparing the root tones of each possessed noun with the tones in the genitive phrases, we see that there is no tonal change. The fact that the tones are not changed from their root form, just as in adjective phrases, shown in §7.2 below, indicates that the elements of genitive phrases function phonologically and syntactically as separate words in a phrase, rather than as one stem. Semantically, however, these constructions typically refer to one object. The reason for the lack of the [–r] suffix in (157b) is unknown.

6.2 Plural Genitive Constructions

To further illustrate the syntactic properties of the genitive phrase, we examine the interaction of the plural clitic in the gentive phrase in (158).

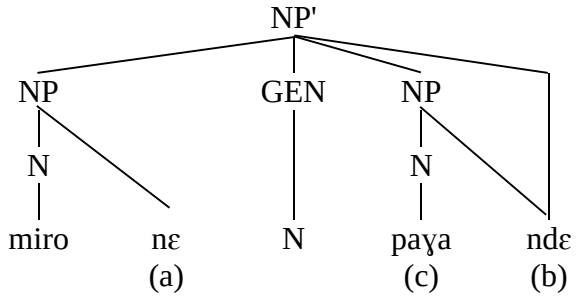
(158) Plural Genitive Phrases

	Stem	Gloss	Translation
a.	mírò m bʷìɛ̀=ndɛ́	bee's legs	
b.	míró=ndɛ̀ m bʷìɛ̀=ndɛ́	bees' legs	
c.	míró=nɛ̀ m páɣá	bees' hive	
d.	mírò m páɣá=ndɛ̀	bee's hives	beehives, bee's hive
e.	mírò n táárέ=ndɛ̀	bee's wax(es)	beeswax(es)
f.	mírò ŋ kóɔ́=ndɛ̀	bee's houses	beehives

Example (158a) shows that when the possessor is singular, and the possessed noun plural, the plural marker follows the noun which is possessed. If the possessor is plural (158b), the plural clitic can also occur following the both the possessor and the possessee. The phrase (158c) can be compared to the phrase (158d). The possessor noun in the phrase (158c) is plural and marked as such. The phrase (158d) could be translated as indicating that there are many beehives, or one bee having multiple hives. The last two examples (158e - f) are also ambiguous in that they can either indicate one bee having many waxes and houses (hives), or multiple bees having multiple waxes and multiple hives. As with possessive and definite constructions, the plural clitic takes a tone opposite to the final tone of the phrase-final noun stem.

The diagram shown in (159) illustrates the syntactic difference between a genitive phrase which refers to many bees with one hive (159a), one which indicates many bees with many hives (159b), and a phrase which is translated as one bee with many hives (159c).

(159) Plural Genitive Phrase



In all cases, the plural clitic takes the opposite tone of the noun to which it attaches in the manner outlined in (160), which illustrates the use of genitive constructions for names of flora.[44]

(160) Flora Species

	Genitive Expression					Gloss	Translation
	Possessor			Possessee			
a.	kɔ́rɔ́ŋɔ́	=ndɛ̀	n	tàŋà	=nɛ́		
	donkey	=PL	GEN	ear	=PL	donkeys' ears	
b.	kɔ́rɔ́ŋò		n	tàŋà			
	donkey		GEN	ear		donkey's ear	aloe
c.	kɔ́rɔ́ŋò		n	tàŋà	=nɛ́		
	donkey		GEN	ear	PL	donkey's ears	aloes
d.	jáá	=nɛ̀	n	tópàà			
	child	PL	GEN	goatskin bag		children's goatskin bag	plant sp.
e.	jàà	=nɛ̀	n	tópàà	=ndɛ́		
	child	PL	GEN	goatskin bag	PL	children's goatskin bags	plant sp.PL

[44] Further examples show the expected nominal tonal patterns in genitive phrases:
ɕùrí ŋ kúɥì fly's wing
ɕùrì–ndɛ́ ŋ kúɥì flies' wing
ɕùrí ŋ kúɥí–ndɛ̀ fly's wings

The first example (160a) is a regular genitive phrase, referring to the ears of multiple donkeys. The second genitive phrase (160b) is the name of a species of aloe which resembles the ear of a donkey, or it could simply refer to the ear of a donkey. The plural marker following the second noun of (160c) indicates either multiple ears (i.e. one donkey and its ears) or multiple plants. The third phrase (160d) is the name of a plant species which is small, and looks like a bag. It is marked with the plural on both of the nouns, as the bag belongs to children (160e). The phrase is homophonous with 'children's goat bag', many children with one bag.

6.3 Gender Marking

The genitive construction is also used to indicate the gender of animals, as shown in (161).

(161) Animal Genders

Possessors	Possessed Nouns				
ŋàmbà–rá	nnàà	ʊòó	gɔ́ɔ̀ⁿ	nnìɛ́–ré	bìɛ́
sheep	bovine	horse	man/ male	woman/ female	baby/ young
/LH/	/L/	/LH/	/HL/	/LH/	/H/

	Singular	Plural	Gloss	Translation
a.	ŋàmbà–rá ŋ gɔ́ɔ̀ⁿ	ŋàmbà–rá ŋ gɔ́ɔ̀=ndɛ́	male of sheep	ram
b.	ŋàmbà–rá n nìɛ́–ré	ŋàmbà–rá n nìé=ndɛ̀	female of sheep	ewe
c.	nnàà ŋ gɔ́ɔ̀ⁿ	nnàà ŋ gɔ́ɔ̀=ndɛ́	male of cow	bull
d.	nnàà n nìɛ́–ré	nnàà n nìé=ndɛ̀	female of cow	cow
e.	ʊòó ŋ gɔ́ɔ̀ⁿ	ʊòó ŋ gɔ́ɔ̀=ndɛ́	male of horse	stallion
f.	ʊòó n nìɛ́–ré	ʊòó n nìé=ndɛ̀	female of horse	mare

The fact that the noun which indicates gender follows the noun referring to the animal specifies that the entire noun phrase is marked as being male or female, not the specific noun.

The second noun, which specifies the gender of the animal, is not considered an adjective since the genitive nasal is not deleted. Although it was shown in §4.2.4 that certain nouns may take a suffix to derive the meaning 'quality of X', the nouns shown here do not have the suffix [–ɛ]. The reason for this may be due to semantic denotations such that the examples above can be translated as 'the gender *of* an animal'.[45] Switching the order of the two nouns, [gɔ́ɔ̀ⁿ ŋ ŋàmbàrá], gives the reading 'a man's sheep', showing that the head of a genitive phrase is the initial noun, followed by a nasal to link the second noun.

With gendered phrases for animals, we see that the plural may only be attached to the second noun. Hence, these phrases refer to a single, gender specified, noun.

6.4 Diminutive Genitive Constructions

Another example of a genitive expression is that referring to young animals. The diminutive morpheme is obligatorily suffixed to a possessor noun which is followed by the genitive nasal and the word [bì+ɛ́] 'baby' or 'young'. The constructions shown in (162) are interpreted as meaning either 'offspring of animal' or 'young animal'.

(162) Animal Offspring

	Genitive Expression			Gloss	Translation
a.	ŋàmbàrà–è	m	bì+ɛ́		
	sheep–DIM	GEN	baby	sheep's baby	lamb
b.	nnà–ɛ́	m	bì+ɛ́		
	cow–DIM	GEN	baby	cow's baby	calf
c.	bú–wɛ̀ ~ ʊòó–mɛ̀	m	bì+ɛ́		
	horse–DIM	GEN	baby	horse's baby	colt

[45] The augmentative morpheme is also not permitted to intervene in these phrases: [ŋàmbárà ŋ gɔ́ɔⁿ=bɔ́ɽò] but [*ŋambara bɔɽo ŋ gɔ́ɔⁿ]. The plural clitic and diminutive suffix are [ŋàmbá–rà m bíɛ́=ndɛ̀ mí=ndɛ̀ n nìɛ́–rè] 'sheep's ewes'.

The tonal behavior of the diminutive suffix differs from that of the plural in that the diminutive carries its own tone and does not adopt a tone opposite that of the noun root. Shown with the possessor noun, the diminutive has allomorphs [ɛ] (163a - b) ~ [wɛ ~ mɛ] (163c), and is usually low toned but sometimes emerges as high (163b). The tone of the possessed noun is unchanged. The tone of the diminutive is unaltered by the genitive or the noun possessor.

The distribution of the diminutive suffix in the genitive construction is similar to that of the plural clitic. As shown in examples of the usage of the plural clitic in a genitive phrase (161), the examples in (163) show that the diminutive suffix may attach to the first (163a), second (163b), or both (163c) nouns. However, the difference lies in the interpretation of the genitive construction as a phrase or as a stem. The diminutive, being a suffix, may only attach to a noun stem, not a noun phrase.

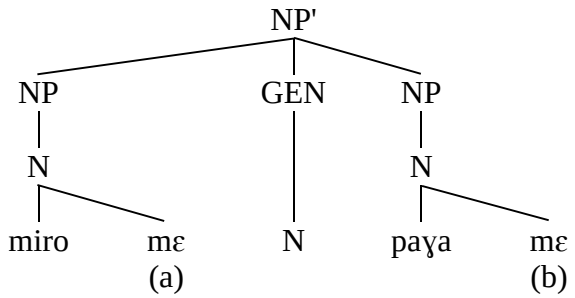
(163) Genitive with Diminutive

	Genitive Expression					Gloss
a.	mmíró bee	–mɛ̀ DIM	m GEN	páɣà container		a little bee's hive
b.	mmírò bee	m GEN	páɣà container	–mɛ̀ DIM		a little beehive
c.	mmíró bee	–mɛ̀ DIM	m GEN	páɣà container	–mɛ̀ DIM	a little bee's little hive
d.	mmíró bee	–bɔ̌rò AUG	mmírò bee	páɣà container	dágá+ɛ̀ small	a large bee's small beehive
e.	gɔ́ɔ̀ⁿ man	n GEN	tòpáá goatbag	–mɛ̀ DIM		a man's little goatbag
f.	gɔ́ɔ̀ⁿ man	n GEN	tòpáá goatbag	dágá+ɛ̀ small		a man's small goatbag

The example (164a) refers to the hive of a little bee, and (164b) marks the second noun as diminutive. To indicate that a little bee has a little hive, as (164c), each noun is marked with the diminutive and the nouns are linked with the genitive marker. To describe a large bee, using the augmentative, the noun is repeated. The second noun is followed by the adjective 'small' (which is obligatorily suffixed with the diminutive) rather than the diminutive suffix alone. Note that the genitive nasal is omitted after the augmentative (164d). In expressions that do not use the augmentative, (164e - f), the diminutive or the adjective are acceptable to qualify the second noun as being little or small.

The diagram in (164) illustrates that a diminutive suffix only attaches to noun stems.

(164) Diminutive within the NP



The plural clitic may attach to either the noun phrase as a whole, or a noun, as was illustrated in (159), but the diminutive suffix only attaches to nouns.

6.5 Augmentative Genitive Constructions

The examples of the use of the augmentative with genitive constructions (165) illustrate that the genitive nasal is deleted after, but not before, the augmentative morpheme. The genitive nasal precedes the noun, which in turn is followed by the augmentative (165c, f, h, k), but is omitted following the augmentative (165d, e, g, j). Other instances where the genitive nasal is deleted are in inalienable possessive constructions and when an adjective modifies a possessed noun in a genitive construction. The augmentative tonal effects in the genitive construction are shown.

(165) Augmentative and Genitive

	Augmentative	Gloss
a.	mmíró–bɔ́r̃ò	large bee
b.	páɣá–bɔ́r̃ò	large container
c.	mmírò m̲ páɣá–bɔ́r̃ò	bee's large hive, large beehive
d.	mmíró–bɔ́r̃ò páɣá	large bee's hive
e.	mmíró–bɔ́r̃ò bʷìɛ̀	large bee's leg
f.	mmíró n̲ bʷìɛ̀–bɔ́r̃ò	bee's large leg, large bee-leg
g.	mmírò–bɔ́r̃ò kúɥì	large bee's wing
h.	mmírò n̲ kúɥí–bɔ́r̃ò	bee's large wing, large bee-wing
i.	ɕùrí–bɔ́r̃ó	large fly
j.	ɕùrí–bɔ́r̃ó kúɥì	large fly's wing
k.	ɕùrí n̲ kúɥí–bɔ́r̃ò	fly's large wing, large fly-wing

As in the plural genitive phrases, the augmentative in the phrases in (165) may be attached to the first (165a - b), second (165c - d), or even both nouns, as in [dʷàà–bɔ̀r̃ó tíŋgá–bɔ́r̃ò] 'large tree's large branches'. Like the plural, the augmentative may refer to the nouns within the phrase (as being large), or may referred to the object which is represented by the entire genitive phrase (as being large). Some examples, such as (165c, f, h, k) are ambiguous as to the semantic scope of the augmentative. The genitive nasal is omitted after a noun which is followed by the by the augmentative; this does not correspond to the plural or diminutive patterns, but it does correspond to the modifier. The augmentative morpheme is morphologically in between a modifier and a clitic, so this is a somewhat expected pattern.

From the examples in (165) - (166), it is clear that the tone of the augmentative, like that of the plural, is unaffected by the phrase; it is the stem to which the augmentative attaches directly that gives the augmentative its polar tone.

Certain plants may employ the augmentative to indicate subspecies, as shown in (166). Although the genitive nasal is not used in these examples, they are included here to illustrate another means of word formation.

(166) Adjective Phrases

	Phrase			Translation	Gloss
a.	gàndʒà				fonio
b.	gàndʒà	=ndɛ́			fonio (PL)
c.	gàndʒà	bíríbíɛ̀		thin fonio	fonio sub sp.
d.	gàndʒà	bíríbɛ́	=ndɛ̀	thin fonios	fonio sub sp. (PL)
e.	gàndʒà	–bɔ̃ɾ̃ó		large fonio	fonio sub sp.
f.	gàndʒà	–bɔ̃ɾ̃ó	=nɛ̀	large fonios	fonio sub sp. (PL)

The examples (166a - b) show the species name for the grain ‘fonio’ in the singular and plural, accompanied by subspecies names (166c - f), which refer to ‘thin’ and ‘large’ varieties. The behavior of the augmentative does not differ when it is an integral part of a species name.

6.6 Genitive Constructions with Multiple Suffixes

As was shown in §6.4, the diminutive may be used in combination with the genitive morpheme in a noun phrase to refer to the offspring or animals. To show that the diminutive suffix and the plural clitic are combined in a genitive phrase in at least five different ways, the plural forms of animal offspring are shown in (167).

(167) Genitive Diminutive Plural Phrases

	Phrase	Gloss	Translation
a.	ŋàmbá=ndɛ̀ m bì+é	sheeps' (PL) baby	lamb
b.	ŋàmbà–rá m bí=ndɛ̀ mí=ndɛ̀	sheep's babies	lambs
c.	nnà–é m bíé–ꜜmí=ndɛ̀	cow's babies	calves
d.	nnàà=ndé m bíé–ꜜmí=ndɛ̀	cows' babies	calves
e.	bú–jɛ̀ m bíé–ꜜmí=ndɛ̀	horse's babies	foals

The plural clitic may follow the head noun of the genitive phrase (168a), with deletion of the [–r] suffix, indicating there are multiple sheep with one lamb. Whereas we saw previously that 'sheep' was marked with the diminutive when the phrase indicated 'lamb', with the plural diminutive construction, the diminutive marker is not attached to the head noun before the plural clitic, i.e. it is not [*ŋamba–mi=ndɛ m biɛ].

The example (168b) is also curious in that, not only is the word for 'baby' marked with the plural clitic, the [mi] allomorph of the diminutive–plural stem is also marked with the plural clitic. Each of the examples in (167) can be denoted as plural in this manner, that is, by doubly marking the stem for plural, as illustrated in (167d). When animal offspring are marked for gender, the constructions are also doubly marked for plural. For example, [ŋàmbá–rà m bíé=ndɛ̀ mí=ndɛ̀ nnìé–rè] means 'female lambs'.

The third example, (167c), illustrates that the plural marker is added to the end of the phrase when the diminutive is attached, such as in the word for a cow's calves. To indicate that there are multiple cows with multiple calves (167d), the plural clitic follows both nouns.

The final example (168e) is like that of (168c), and illustrates the allomorph for ‘baby’ with the diminutive suffix and the plural both attached to the final noun. The tones are unaltered from the uncombined plural and diminutive suffixes shown above (161).

The augmentative may also be combined with the plural, as shown in in (168).

(168) Genitive Plural Augmentative Phrases

Possessor	Possessed Nouns			
dʷàà	pʷíɛ̀ⁿ	kíɛ̀	tíŋgà	
/L/	/H/	/HL/	/HL/	
tree	leaf	branch	trunk	

	Genitive Expression					Gloss
a.	dʷàà	m	pʷi̱ɛ̀ⁿ			tree’s leaf
	tree	GEN	leaf			
b.	dʷàà	m	pʷe̱ɛ́	=ndɛ̀		tree’s leaves
	tree	GEN	leaf	PL		
c.	dʷàà	m	pʷíɛ́ⁿ	–bɔ̃rɔ̀		tree’s large leaf
	tree	GEN	leaf			
d.	dʷàà	m	pʷíɛ́ⁿ	–bɔ̃rɔ́	=ndɛ̀	tree’s large leaves
	tree	GEN	leaf			
e.	dʷàà	ŋ	kíɛ̀			tree’s branch
	tree	GEN	branch			
f.	dʷàà	ŋ	kíɛ̀	=ndɛ́		tree’s branches
	tree	GEN	branch	PL		
g.	dʷàà	ŋ	kíɛ̀	–bɔ̃rɔ́		tree’s large branch
	tree	GEN	branch	AUG		
h.	dʷàà	ŋ	kíɛ̀	–bɔ̃rɔ́	=ndɛ̀	tree’s large branches
	tree	GEN	branch	AUG	PL	
i.	dʷàà	n	tíŋgà			tree’s trunk
	tree	GEN	trunk			

j.	dʷàà	n	tíŋgá	=ndɛ̀		tree's trunks
	tree	GEN	trunk	PL		
k.	dʷàà	n	tíŋgá	–bɔ́ɔ̃̀ò		tree's large trunk
	tree	GEN	trunk	AUG		
l.	dʷàà	–bɔ̀ɔ̃́ó	=ndɛ̀	tíŋgá	=ndɛ̀	large trees' trunks
	tree	AUG	PL	trunk	PL	

The word 'leaf' has two allomorphs; a front vowel diphthong in the singular and a mid vowel diphthong in the plural. The root tones of the noun surface before the plural and augmentative in the manner described in Chapter 3 and are unaffected by the genitive construction. The plural clitic follows the augmentative (168d, h) and may follow each of the constituents in the genitive construction (168l). Note that, as with the augmentative genitive constructions above, the genitive nasal is omitted after the augmentative (168l).

6.7 Genitive Adjectival Constructions

Genitive constructions may act as a stem when they are modified by an adjective, in that the adjective follows the entire genitive construction and its affixes. The genitive marker follows the possessor noun (169a - b), and the possessee is modified by the augmentative. Recall that the genitive nasal is not deleted when the augmentative follows the second noun.

(169) Genitive Augmentative Plural Adjective Phrases

	Genitive Expression							Gloss
a.	dʷàà	m	pʷíɛ́ⁿ	–bɔ́ɔ̃̀ò	gŭjé+ɛ̀ (grass green)	káràà new)		
	tree	GEN	leaf	AUG				tree's large green leaf
b.	dʷàà	m	pʷíɛ́ⁿ	–bɔ́ɔ̃̀ò	gŭjé+ɛ̀ (grass green)	káràà new)	=ndɛ́	
	tree	GEN	leaf	AUG			PL	tree's large green leaves

As in a noun phrase which is not a genitive construction, the adjective follows the augmentative, and the plural clitic is attached after the adjective, at the end of the noun phrase. The plural clitic adopts polar tones to the noun that it follows. The tonal-syntactic implications of the the plural are discussed in detail in Chapter 4.

6.8 Combinations of Genitive Phrases

A series of possessed nouns may be linked by repeated insertion of the genitive nasal. Examples of a series of possessor-possessed nouns acting as stems are found among flora terms. Thus far we have seen possessive constructions where the plural or other suffixes may intervene. Among flora terms, such as those in (170), the genitive and plural clitic intervene within the 'stem'.

(170) Genitive Phrases: Flora Species

Possessors		Possessed nouns	
bíiⁿ	búwɔ̀	tìgàɛ̀	gìmà
goat	herd	peanut	fruit (sp)
/H/	n/a	/L/	/L/

	Genitive Expression							Gloss	Translation
a.	bíiⁿ	m	búwɔ̀						
	goat	GEN	herd	(v.)				goat's herder	goat herder
b.	bîi	m	bʷɔ̀	=ndɛ́					
	goat	GEN	herd	PL				goat's herders	goat herders
c.	[bíiⁿ	m	búwɔ̀]	n	tìgàɛ̀				
	goat	GEN	herd	GEN	peanut			goat's herder's peanut	
d.	[[bíiⁿ	=ndɛ̀	m	bʷɔ̀]	n	tìgàɛ̀]	=ndɛ́		
	goat	PL	GEN	herd	GEN	peanut	PL	goats' herder's peanuts	herb sp.
e.	[[bíiⁿ	m	bʷɔ̀	=ndɛ́]	n	tìgàɛ̀]	=ndɛ́		
	goat	GEN	herd	PL	GEN	peanut	PL	goat's herders' peanuts	herb sp.PL

f.	bíìⁿ	m	bʷɔ̀	=ndɛ́	n	tìgàɛ̀			
	goat	GEN	herd	PL	GEN	peanut		goat's herders' peanut	
g.	*bíìⁿ	m	bʷɔ̀	n	tìgàɛ̀	=ndɛ́		*goat's herder's peanuts	
h.	bíìⁿ	m	bʷɔ̀	=ndɛ́	ŋ	gìmà	~gìjɔ̀ⁿ		
	goat	GEN	herd	PL	GEN	fruit sp.		goat herders' fruit sp.	vine sp.
i.	bíìⁿ	m	bʷɔ̀	=ndɛ́	ŋ	gìjɔ̀	=ndɛ́	goat herders' fruit	
	goat	GEN	herd	PL	GEN	sp.	PL	sp.'s	vine sp.PL

The example (170a) is a simple genitive phrase like those shown thus far, with its corresponding plural stem (170b). The difference is that the possessed word is a verb 'herd, tend (a flock)', rather than a noun as has been shown thus far. The nominal form of the verb 'herd' is 'herder', formed with the agentive suffix. The example (170c) is a genitive phrase which possesses a second genitive phrase, and translates as shown. Unlike the genitive phrases shown thus far, the phrase (170d) includes the suffixed plural within the first NP. In fact, to make the herb species plural (170e), both nouns must be followed by the plural morpheme. The example (170g) shows that it is impermissible to make this construction plural by adding the plural morpheme only to the end of the phrase. Instead (170f), both the first and final nouns are followed by the plural clitic. The plural following the entire phrase (170g) is permissible only when it refers to the name of an herb species, but not acceptable with the sum of the individual word's glosses. A second flora species using the same 'goat herder' expression (170h) is shown with its corresponding plural (170i), and literal translation, as indicated below each phrase.

6.9 Agentive Genitives

The verb 'herd' is used with 'goat' in the name of a plant species which is often eaten by goat herders. Agentive constructions also productively employ the genitive construction as shown in (171), but the possessed noun is phrase-initial rather than final as has been presented in examples thus far.

(171) Agentive Genitive Phrases

	Genitive Expression					Gloss
a.	dégé	ɕéɛ̀ⁿ	n	díjá		
	head	owner	GEN	village		village chief
	head owner's village					
b.	búwó	–ɕèɛ̀ⁿ	m	bíí	=ndɛ̀	
	herd	AGENT	GEN	goat	PL	goat herder
	herder's goats					
c.	kéwɛ̀ɾ̃ɛ̀	–ɕèɛ̀ⁿ	kéwɛ̀ɾ̃ɛ̀	máá=	kóɔ́kɛ̀	
	steal.NOM	AGENT	steal	POSS	shoe	shoe thief
	stealer of shoe					
d.	kɔ́ŋgé	n dógɔ́	–ɕèɛ̀ⁿ	náá	kɔ́ŋgé	
	drum	T beat	AGENT	INC	drum	drum beater
	drum beater is druming					

The initial example (171a) utilizes the noun 'head' with the agentive as a stem, which in turn possesses the noun 'village'. The phrase may also be stated with the nouns reversed so that the village, in effect, possesses the chief: [díjà n dégé ɕéɛ̀ⁿ], with the genitive nasal, but not with the possessive proclitic *[dégé ɕéɛ̀ⁿ máá=díjá]. The second example (171b) creates the noun 'herder' from the verb 'herd', which in turn acts as a stem to possess 'goats'. The plural marker may not be interpreted to to mark 'goat' or the entire phrase in this example. To indicate multiple herders, 'herders of goats', both nouns would be denoted as plural.

Example (171c) is unusual since the language already has a nominalized verb for the word 'steal'. However, the term for a 'thief' is rendered with the agentive (171c). The genitive alternative is impossible here [*kúùⁿ/kéwɛ̀ɾ̃ɛ̀–ɕèɛ̀ⁿ ŋ kóɔ́kɛ̀]. The example (171d) also repeats the word 'drum' and seems to topicalization on the action of the drummer beating a drum rather than possessing one since the incompletive particle is used rather than the genitive nasal.

6.10 Genitive with Postposition

Although postpositions typically do not co-occur with the genitive, one postposition, [ŋ kò], glossed as 'inside', is always preceded by it. I analyze this as the root of 'stomach' [kò+ríɛ́], preceded by the genitive marker, as the use of 'stomach' to refer to 'inside' is an areal feature for West African languages and it is is shown in its full form in certain narratives (Tiga 1.150).

(172) Postposition as Genitive Construction

à=	bɔ̀jéɛ̀	sɥɛ́è	máà=	tópàà	ŋ	kò .
DEF	rope	descend	1.S.POSS	goat bag	GEN	PP

The rope descends into my goat bag.

Other postpositions (and the completive particle) are preceded by a secondary personal pronoun which agrees with the subject of the clause.

6.11 Definite Genitives

As shown in §5.9.4, certain flora terms are obligatorily denoted as being definite.

(173) Genitive Definite Phrase

à=	tùbàkú	n	wúré+ɛ̀
DEF	foreigner	GEN	Shea tree

The foreigner's Shea tree (tree sp.)

Recall that the definite marker often lowers (at least) the initial tones of the noun it precedes, especially when it is obligatory. In (173) we see that the tone-lowering only spreads to the penultimate syllable of the initial noun of the genitive phrase.

Multiple phrases are shown in (174) with 'tree' and 'head' plus the adjective 'white' in order to illustrate the loss of the genitive marker with adjective phrases, and the fact that the definite marker does not induce the loss of any segment in the phrase. The phrases (174a - c) are simple phrases while the phrase (174d) is the name of an herb species with a white flower.

(174) Inanimate Definite Possessor Subject

	Genitive Expression				Gloss	Translation
a.	(à)	dègè	síjɔ̀^{n}			
	DEF	head	white		the white head	
b.	d^{w}àà	n	dégè			
	tree	GEN	head		tree's head	
c.	à	d^{w}àà	n	dégè		
	DEF	tree	GEN	head	the tree's head	
d.	à	d^{w}àà	dègè	síjɔ̀^{n}		
	DEF	tree	head	white	the tree's white head	Amaranthaceae sp.

The example (174a) shows that the definite marker affects the noun tonally. The phrase (174b) is like those presented thus far in that an inanimate possessor with an inalienable possessed noun may be marked with the genitive nasal. The phrase (174c), the definite counterpart phrase to (174b), shows again that the definite marker does not affect any word beyond the noun stem it precedes. Even though the genitive marker is absent when the possessed noun is followed by the adjective 'white', (174d) the scope of the tone-lowering of the definite is confined to the noun stem.

As was indicated in examples of the augmentative in a genitive phrase, certain types of genitive phrases do not employ the homorganic nasal. Several more such phrases were obtained that do not contain the nasal marker, as shown in types of flora species in (175).

(175) Genitive Phrases with Omitted Nasal

gúmbɛ̀	gúmbɛ́=ndɛ̀	gúmbɛ̀ dáɣá+è	gúmbɛ́–bɔ́rɔ̀
baboon	baboon	small baboon	large baboon
jáɣá+è	jáɣá–mí=ndɛ̀	jáɣáɛ̀–bɔ́rɔ̀	
onion	onions	large onion	

	Genitive Expression			Gloss	Translation
a.	gúmbɛ́ baboon	jáɣá+è onion		baboon's onion	plant sp.
b.	gúmbɛ́ baboon	jáɣá–mí onion–DIM	=ndè =PL	baboon's onions	plant sp.PL
c.	gúmbɛ́ baboon	jáɣá+è onion	dáɣá+è small	baboon's small onion	plant sp. small
d.	gúmbɛ́ baboon	jáɣá+è onion	–bɔ́ɽ̃ó AUG	baboon's large onion	plant sp. large

First, the nouns 'baboon' and 'onion' are shown with suffixes and modifiers to illustrate that there are no idiosyncrasies with these words in isolation. However, when paired to form the word for the plant species (175a), which literally translates as 'baboon's onion', [*gúmbè n jáɣá+è] is not permitted. Additionally, combinations of 'baboon' as a possessor of other objects such as 'peanuts', are not grammatically correct, although they are semantically understood. The reason for the lack of the genitive marker in the phrases above is unknown. Most flora species do use the genitive nasal between constituents. Other flora species with the noun 'baboon' as the head of the phrase and do employ the genitive marker include [gúmbɛ́ m pɔ́ɔ̀ⁿ] 'baboon's meal', [gúmbɛ́ ŋ kárà̰ŋgò] 'baboon's vine', [gúmbɛ́ n kà m bò], and [gúmbɛ́ n tò], (my assistant is unaware of the meaning of the final components of these final two phrases).[46]

In (176) we find another example of a phrase which is interpreted with a possessive meaning, yet lacks the genitive morpheme, possibly because the possessed noun is in an

[46] Further, the omission of the nasal in genitive phrases does not seem to be an indicator of inalienable possession as two flora species, literally [ŋàmbárá súmbí] 'sheep's nose' and [pùndà n tójí] 'Fulani man's penis', are inconsistent with this hypothesis. The fact that peanuts are a taboo plant may contribute to the idiosyncrasy.

inalienable relationship with the possessor noun. The final vowel and tone of the possessor noun root differs between the examples (176a) and (176b).

(176) Genitive Phrases with Omitted Nasal (cont)

a.	tùrɛ́+ɛ́	bɔ́ó	síŋgí+ɛ̀		
	raised bed	father	sorghum		
	A raised bed's father (is) sorghum.				herb sp.
b.	túrɛ̀+ɛ̀	bɔ́ó	síŋgí	=ndɛ̀	herb sp. PL
	raised bed	father	sorghum	PL	

Further, a subtle semantic distinction can be made with the presence or absence of the genitive nasal, as shown by the contrasting examples in (177).

(177) Adjective and Genitive Distinction

a.	gòɔ̀^{n}	bógó	aa.	gòɔ̀^{n}	m	bógó
	man	big		man	GEN	big
	an important or old man			a tall or fat man		
b.	nìè	bógó	bb.	nìè	m	bógó
	woman	big		woman	GEN	big
	an important or old woman			a tall or fat woman		

An expression commonly found among West African languages refers to a person who is important or old as 'big', (177a - b). To distinguish this meaning from the adjective's meaning as describing a person as 'big', 'tall', or 'fat', the genitive marker is used (177aa - bb).

6.12 Modifying Phrases as Stems

Thus far we have seen that, despite the phonological and syntactic behavior of various terms referring to flora, fauna, and domesticated animal species, semantically compound-like elements are possessive phrases, which use the genitive marker to connect two or more elements in a

phrase. Now we see that not only genitive case marking, but also possessive proclitics, adjectives and complementizers may be used for cultural and botanical terminology.

A possessive pronoun is used instead of the genitive nasal to form stems in (178).

(178) Possessive Phrases

	Possessive Phrase				Gloss	Translation
a.	mún–d–ì enter–PRF	màà= 3.S.POSS	ʒìɛ́ smoke		its smoke entered	torch
b.	jáá child	=ndɛ̀ PL	máá= 3.S.POSS	súɥíɛ̀ chicken	children's chicken	butterfly
c.	máà= 3.S.POSS	nɔ́ɔ́ mouth	mún–d–à enter–RV	míndà enter	entering its mouth	border, limit

The initial clause (178a) has an unusual word order, given that the verb is marked as being in the perfect aspect, which is normally SVO. The second example (178b) is a noun phrase in which a plural noun possesses another noun. The second noun is preceded by the possessive proclitic, whose tonal allomorphs and effects are described in Chapter 5. The example (178c) may be contrasted with that of (178a) in terms of word order and inflectional marking. The possessed noun may be the subject of the clause (178a), or the object (178c).

6.13 Genitive Phrases with Adjective

As has been shown, many names of plant species are formed using a genitive phrase (179). The subspecies may be differentiated with modifying adjectives (180b - c).

(179) Genitive Phrases with Adjective

	Genitive Expression					Gloss	Translation
a.	kùʒɛ́ dassie	n GEN	níí hand	n GEN	tɛ́è palm	dassie's hand's palm	herb sp.

b.	kùʒɛ́	n	níí	n	tɛ́è	téŋò		
	dassie	GEN	hand	GEN	palm	wide	dassie's hand's wide palm	herb sub sp
c.	kùʒɛ́	n	níí	n	tɛ́è	téŋò	=ndɛ̀	
	dassie	GEN	hand	GEN	palm	wide	PL	plural of wide variety of herb sp.

Among the flora subspecies' names which are formed with an adjective, the adjective may be interpreted as following the possessed noun (179b) or the genitive phrase as a whole (179c). The plural of the subspecies is (179c). The plural clitic follows the adjective, which modifies the entire phrase, as was mentioned previously in describing the examples shown in (169). Even though adjectives usually suppress the genitive nasal, the genitive nasal is not omitted (179b - c) even though the adjective [téŋgó–rò] 'wide' is present.

Color adjectives may also be used to differentiate fauna sub-species. The word [kɛ́réndɛ́ kéɛ̀] 'a slithering thing' refers to any type of snake, while modifying it as 'black' restricts the stem to only the viper.

(180) Adjective Phrase

Phrase			Gloss	Translation
kɛ́réndɛ́	kéɛ̀	póɔ́ˈrɛ́		
slither	thing	black	a black slithering thing	viper snake

While an argument could be made that the example in (180) is one exception to the generalization that compounding is not an active process in Bangime, I do not analyze it as such. The phrase could be considered a compound. The noun 'thing' follows the verb 'slither' rather than preceding it, [kéɛ̀ n kɛ́réndɛ́], which would be the expected way to indicate that a thing is being pulled. Alternatively, this could also be due to word order fluctuation. Further, note that if there was a genitive nasal between the constituents, it would be omitted because of the adjective which follows the noun.

6.14 Complementizer

The complementizer [mɛ] is productively used to join two phrases in a sentence. The example in (181) shows that the complementizer is yet another means to in create names of flora items.

(181) Complementizer Phrase

	Complementizer Phrase						Gloss	Translation
a.	à	gùʒèɛ̀	mɛ́	=nɛ̀	píjɔ̀ⁿ			
	DEF	weed	COMP	PL	smell		the weeds which smell	herb sp.
b.	à	gùʒèɛ̀	=nɛ́	mɛ́	=nɛ̀	píjɔ̀ⁿ		
	DEF	weed	PL	COMP	PL	smell	the weeds which smell	herb sp. PL

While the the plural clitic follows the complementizer morpheme (181a), the name of the plant is translated as shown to refer to a single plant. The complementizer is denoted as plural when it modifies a plural noun. To make the noun plural (181b), the noun is followed by the plural clitic in addition to that which follows the complementizer.

6.15 Phrases

Throughout this description, we have seen that phrases can be, and often are, used as a means of creating new lexical items by describing the lexical item, rather than by creating an arbitrary term. In fact, fully formed sentences may also be used for lexical reference.

(182) Sentence

Sentence					Gloss	Translation
déẁ	n	ɥíɛ̀	náẁ	tígí–rí		
pond	GEN	water	INC	run–INC	pond's water is running	river

In (182) we see a fully-formed, grammatically intact and correct phrase understood to be a lexical item. The sentence 'a pond's water is running' refers to a 'river'.

6.16 Summary of Word-Formation processes

The most productive means of creating new lexical items is to employ the genitive morpheme, a nasal which precedes the possessed noun. The genitive is an alveolar nasal which assimilates the place of a bilabial or velar initial consonant of the following noun since all nouns are vowel-final. The genitive morpheme may connect most nouns to create new lexical items. Genitive constructions may be modified by adjectives and may be made plural. A genitive construction acts as a stem (183a), in that it is modified by one adjective and makes up the noun phrase before the verb, in (183b) the plural clitic follows the genitive phrase, and in (183c) the plural clitic follows the genitive construction and the modifier.

(183) Role of the Genitive Construction in an NP

a.	n	náà	nnáá	m	bìɛ̀	síjɔ̀ⁿ	dég–ɛ̀	bùr̃á	ŋ	kò
	~2	INC	cow.1S	GEN	baby	white	hit–RV	stick	GEN	PP

I am hitting a white calf with a stick.

b.	n	náà	nnɛ́ɛ́	m	bíɛ́	=ndɛ̀	dég–ɛ̀	bùr̃á	ŋ	kò
	~2	INC	cow.DIM.1S	GEN	baby	PL	hit–RV	stick	GEN	PP

I am hitting calves with a stick.

c.	n	náà	nnɛ́ɛ́	m	bìɛ̀	síjɔ́=ndɛ̀	dég–ɛ̀	bùr̃á	ŋ	kò
	~2	INC	cow.DIM.1S	GEN	baby	white=PL	hit–RV	stick	GEN	PP

I am hitting white calves with a stick.

Syntactically, the plural attaches to the noun phrase, but phonologically, the plural clitic only depends on the tone of the last word in the phrase.

6.17 Genitive Constructions as Stem and as Phrase

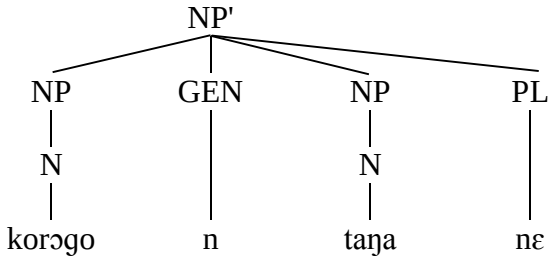
Bangime has no way to create a compound. The genitive phrase is considered a derivational process because it creates lexical items that refer to what, in English, we refer to as compounds. This is the primary strategy for creating new lexical items. Because Bangime has so little bound

morphology, it follows that this is a syntactic process rather than a morphological one. The fact that both nouns can be pluralized makes it more like a phrase. In essence, Bangime uses phrases to refer to what English refers to using compounds.

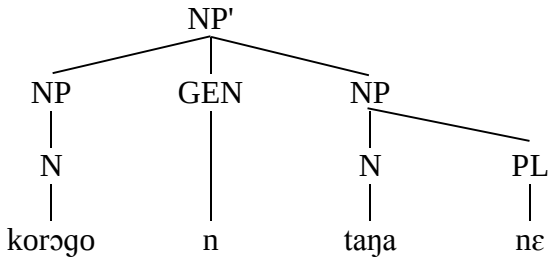
Whereas semantically there is no difference between a genitive construction that acts like a 'phrase' and one that is glossed as a 'stem', syntactically the difference is represented as shown in the tree diagrams in (184).

(184) Genitive Constructions as Stem and as Phrase

a. Phrase



b. Stem



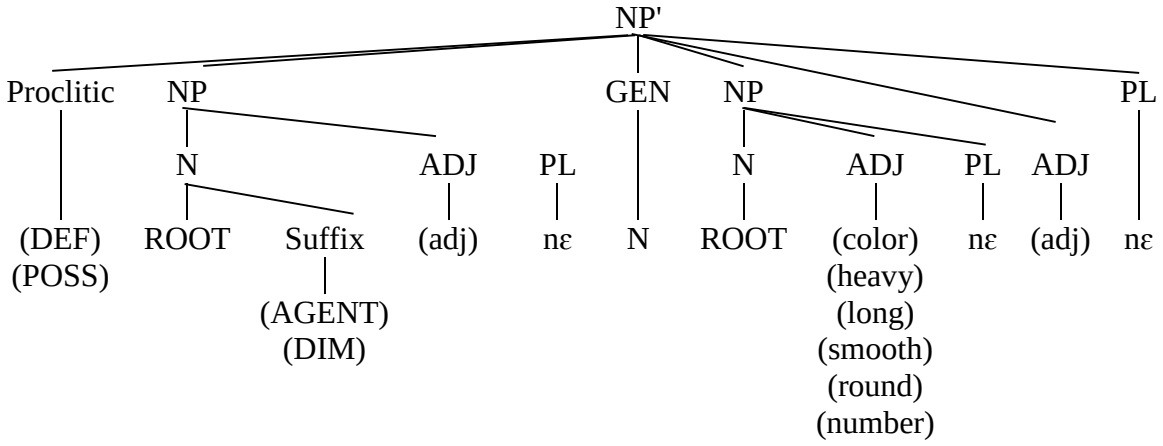
When the genitive phrase represents what we, in English, refer to as a compound meaning 'aloe' or in Bangime 'donkey's ears' (184a), the plural is attached at the level of the entire noun phrase. When the phrase is represented as referring to a donkey's ears (184b), the plural attaches directly to the second NP node in the phrase, but not the entire NP. Tonally, however, there is no difference between the two phrases.

Chapter 7. Nominal Phrases

7.1 The Noun Phrase

As illustrated in the previous chapters, a noun may appear with proclitics, suffixes, the genitive marker, and/or the plural clitic. The plural clitic may follow the noun directly in the noun phrase. Modifiers, introduced in this chapter, with some examples of the type of modifiers found in the language listed in the diagram, follow a noun, but precede the plural clitic. The syntactic structure of the noun phrase is represented in the diagram in (185).

(185) Noun Phrase



In a genitive phrase, the genitive nasal is deleted either when an adjective or the augmentative follows the noun. An adjective may modify the possessor noun in a genitive phrase, the possessed noun, or the entire noun phrase, similar to the plural clitic. An adjective phrase consists of a head adjective and any additional modifiers. An adjective must follow a noun; it may not be pronounced in isolation. If no noun is formally indicated as being modified, the word ‘thing’ [kîì] (derived from are [kiri] with allomorph [keɛ]) is substituted for a noun.

7.2 Tone on Adjectives

In an adjective phrase, the tone of adjectives are not changed, nor do adjectives change, the tone of the noun being modified. Thus, each noun was elicited with every adjective in (186), but the examples are not duplicated for each noun-adjective combination. All nouns operate in the same manner; there is no difference based on the tonal or segmental category of the noun root.

(186) Noun Adjective Phrases

	N + ADJ			NOUN	Gloss	ADJ	Gloss
a.	gúmbá–rà	mɛ̀r̃è	<	gúmbá–rà	wasp	mɛ̀r̃è	heavy
b.	ŋàmbá–rá	pɔ́ꜜrɛ́	<	ŋàmbá–rá	sheep	pɔ́ꜜrɛ́	black
c.	mmírò	bʷíɛ̀	<	mmírò	bee	bʷíɛ̀	red
d.	kɔ́róŋò	símà	<	kɔ́róŋò	donkey	símà	white
e.	nníjà	bógó	<	nníjà	mother	bógó	big
f.	ʒìbɛ́ɛ́	dáɣà+ɛ̀	<	ʒìbɛ́ɛ́	person	dáɣà+ɛ̀	small

Even though an adjective is not an independent word in the sense that it cannot stand on its own without a noun or the ‘dummy’ noun [kii], an adjective is neither affected nor does it affect the tone or the segmental properties of the noun it follows.

7.3 Plural Modified Nouns

The plural clitic normally follows the entire noun phrase, similar to the genitive, as shown in the examples in (187). Because all noun phrases with modifiers take a low-toned plural clitic and the final tone of the adjective surfaces as high, the plural clitic shows that the tone of most adjectives is high-low phrase-finally but underlyingly the tone on most adjectives is high.

(187) Plural Clitic on Adjective Phrases

	Noun:	rope	stick	road
	Adjective	bɔ́jéɛ̀	bùr̃á	ʒímbéɛ̀
a.	long	bɔ́jéɛ̀ bɛ́nˡdé	bùr̃á bɛ́nˡdé	ʒímbéɛ̀ bɛ́nˡdé
b.	PL	bɔ́jéɛ̀ bɛ́ndé=ndɛ̀	bùr̃á bɛ́ndé=ndɛ̀	ʒímbéɛ̀ bɛ́ndé=ndɛ̀
c.	straight	bɔ́jéɛ̀ dínˡdá	bùr̃á dínˡdá	ʒímbéɛ̀ dínˡdá
d.	PL	bɔ́jéɛ̀ díndá=ndɛ̀	bùr̃á díndá=ndɛ̀	ʒímbéɛ̀ díndá=ndɛ̀
e.	smooth	bɔ́jéɛ̀ míró–míròˡ	bùr̃á míró–míròˡ	ʒímbéɛ̀ míró–míròˡ
f.	PL	bɔ́jéɛ̀ míró–míró=ndɛ̀	bùr̃á míró–míró=ndɛ̀	ʒímbéɛ̀ míró–míró=ndɛ̀
g.	old	bɔ́jéɛ̀ síɛ́ndɛ̀	bùr̃á síɛ́ndɛ̀	ʒímbéɛ̀ síɛ́ndɛ̀
h.	PL	bɔ́jéɛ̀ síɛ́ndɛ́=ndɛ̀	bùr̃á síɛ́ndɛ́=ndɛ̀	ʒímbéɛ̀ síɛ́ndɛ́=ndɛ̀

Adjectives following singular nouns either surface with final downstepped tones (187a, c), because a bisyllabic word with a heavy initial syllable surface as downstepped after a high tone, or with low tones (187e, g). Before the plural clitic (187b, d, f, h), the tones of most adjectives are high. As noted above, an adjective must follow a noun. If no noun is present, the adjective follows the dummy noun [kii] derived from [keɛ] ‘thing’; the plural clitic always must come after the adjective so an example such as ‘wide things’ is [kíì téŋó–ndɛ̀], not [*kii–ndɛ teŋo].

Because the adjective is unbound from the noun stem, the noun surfaces before the adjective with its singular, or citation, form tones. The examples in (188) show a variety of nouns in the singular, plural, augmentative, diminutive, and plural diminutive forms with adjectives to illustrate the contrast between the tonal effects of morphemes which are closely bound to the noun and those which are less closely bound.

(188) Tonal effects of Nouns on Adjectives

	Noun Phrase				Gloss
a.	nnàà				
	cow				cow
b.	nnàà	=ndɛ́			
	cow	PL			cows
c.	nnàà	–bɔ̃ɽ̃ó			
	cow	AUG			large cow
d.	nná	–è	dáɣà+è		
	cow	–DIM	small		small cow
e.	nnàá	–mí	=ndɛ̀	–mí	=ndɛ̀
	cow	DIM	PL	DIM	PL small cows
f.	nnàà	póɔ́ˈrɛ́			
	cow	black			black cow
g.	nnàà	bùɥíɛ̀			
	cow	red			red cow
h.	nnàà	bógò			
	cow	big			big cow
i.	nnàà	gɔ́ɔ̀ⁿ	bógò		
	cow	man	big		big bull
j.	nnàà	bɔ́ndò			
	cow	alive			alive cow
k.	nnàà	péɛ́rè			
	cow	many			many cows
l.	ŋàmbá	bógò			
	sheep	big			big sheep
m.	ŋàmbá	bógó	=ndɛ̀		
	sheep	big	PL		big sheep
n.	ŋàmbá	póɔ́ˈrɛ́			
	sheep	black			black sheep
o.	ŋàmbà–rá	póɔ́rɛ́	=ndɛ̀		
	sheep	black	PL		black sheep

The first noun, ‘cow’ (188a), is of the Type Two noun tonal pattern, as seen with the plural and the augmentative morphemes. The diminutive stem has its own tonal pattern. Compare the tonal behavior of the noun with suffixes and clitics (188a - e) to the same noun with adjectives (188f - k). The noun is unchanged from its underlying form in all cases except with the diminutive suffix. Further, when an adjective is followed by the plural morpheme, the underlying tone of the adjective surfaces, and the plural takes the opposite tone of the adjective, not that of the noun being modified. The noun ‘sheep’ (188l - o) is shown with the same adjectives to illustrate that the tonal behavior of the adjective remains unchanged with all nouns. The reason for the presence of the [–r] suffix in (188o), but not in (188l - n) is unknown.

7.4 Alternating Adjectives

Two adjectives have been found with segmental allomorphs, the colors ‘black’ and ‘white’. These two adjectives have cultural significance, as was discussed in Chapter 1 (§1.9). Also, among verbs in particular, there is a productive morpho-phonological alternation in words with word-internal nasalized sonorants, nasals, and nasal-consonant clusters. The adjectives ‘black’ and ‘white’ participate in a similar type of allomorphy except that the conditioning factor appears to be phonological rather than morphological. The nasalized allomorph of the adjective ‘white’ follows a polysyllabic word with non-low vowels, or a monosyllabic word with low vowels (189), while the form with the word-internal nasal follows nouns with low vowels (190) which also have nasals or nasalized segments.

(189) Black and White, Allomorphy 1

	Noun	White	Noun	Black	Gloss
a.	símèè	síjɔ̀^{n}	símèè	póɔ́ˡrí	rock
b.	nàà	síjɔ̀^{n}	nnàà	póɔ́ˡrí	cow
c.	d^{w}àà	síjɔ̀^{n}	d^{w}àà	póɔ́ˡrí	tree

(190) Black and White, Allomorphy 2

	Noun	White	Noun	Black	Gloss
a.	ŋàmbà–rá	símà	ŋàmbà–rá	póɔ́ˡrɛ́	sheep
b.	tàŋà	símà	tàŋà	póɔ́ˡrɛ́	ear
c.	dàw̃á	símà	dàw̃á	póɔ́ˡrɛ́	pick axe

The adjective white can be represented as /siV^{n}/ underlyingly, with the final vowel being determined by the harmony patterns of the noun which it modifies. The adjective 'black' is more opaque. Textual examples of the usage of the high front vowel allomorph of 'black' are seen in Text XII, Tiga 2.87.

7.5 Diminutive Suffix on Adjectival Phrases

In addition to marking nouns, the diminutive can also be used productively to mark adjectives. The diminutive suffix usually attaches to the adjective (191), but may also doubly mark both constituents in the adjective phrase (192).[47]

[47] The examples are excerpts from a texture experiment in which subjects were asked to put their hands into a box which contained an object that they could not see. They then described what they felt. The experiment was conducted by Brian Cansler in conjunction with the Max Planck Institute for Psycholinguistics in Nijmegen, The Netherlands. The transcriptions and glosses are my own.

(191) Diminutive with Nominalizer and Adjective

	UR Adj	Noun	Adjective		Gloss	Translation
a.	/míró míró/ smooth	kíì NOM	míró mírò smooth	–mɛ̀ DIM	small smooth thing	(it is) little (and) smooth
b.	/pɛ́gɛ́ pɛ́gɛ̀/ light	kíì NOM	pɛ́gí pɛ́gì light	–jɛ̀ DIM	small light thing	(it is) little (and) light
c.	/múgúlò/ round	kíì thing	múgùl round	–ìɛ̀ DIM	small round thing	(it is) little (and) round

Similar to the noun-adjective phrases denoted as being plural, the examples (192a - c) are interpreted to be suffixed with the diminutive on the adjective rather than on the noun phrase. This is due to the fact that ‘thing’ serves as a dummy noun in these noun phrases. The non-diminutive forms of the adjectives are shown to the left of the examples. The fact that the diminutive alters the underlying form of the adjective also demonstrates that the diminutive is suffixed directly to the adjective.

Whereas above (191) the diminutive was suffixed only onto the adjective, in (192c) below, it is also suffixed to the noun. Some adjectives, such as ‘small’ (192a - b) and ‘short’ (192c), obligatorily surface with the lexicalized diminutive suffix.

(192) Diminutive with Noun and Adjective

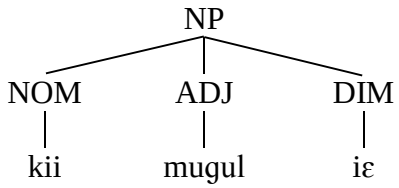
		Noun Phrase			Translation
a.	/bùr̃á/ stick	búr̃í–jɛ̀ stick–DIM	múgúlò round	dáɣá+ɛ̀ small	(it is) a small round stick
b.		káẁ DEM	búr̃í–jɛ̀ stick–DIM	dáɣá+ɛ̀ small	that (is) a small stick
c.		búr̃í–mɛ̀ stick–DIM	dúgí+jɛ̀ short		(it is) a short stick

Tones of the stem to which the diminutive is suffixed are altered in the manner described in §4.2, but the rest of the noun phrase is unaffected. The final vowel of the noun ‘stick’ /buɽ̲a/ is raised to [i] before the diminutive suffix.

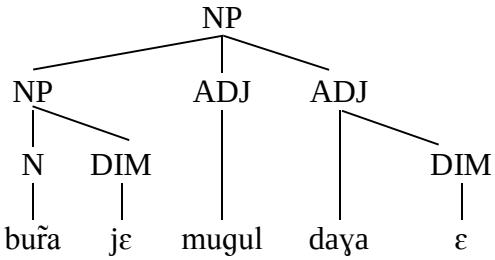
The diagrams in (193) illustrate the syntactic difference between the diminutive as a suffix on the noun phrase (193a) and on the adjective alone (193b).

(193) Diminutive Suffixation

a.



b.



The adjective phrase in (194) shows that even if there are two adjectives, the diminutive is suffixed only to the final adjective in the adjective phrase.

(194) Diminutive with Two Adjectives and Nominalizer

Adjective Phrase					Translation
kíí	síjɔ̀ⁿ	kíì	dérɛ́bì	–ɛ̀	
thing	white	thing	soft	DIM	(it is) white, (it is) little (and) soft

It is a small, soft, and white. (Text Exp, Consultant 1 Response: 5.2)

The behavior of the diminutive is different in an adjective phrase than in a genitive phrase. In the genitive phrase it was shown that the diminutive could not mark the phrase as being ‘little’, but was suffixed to each word in the phrase. In the adjective phrase, the diminutive may serve to mark either the noun, the adjective, or the phrase as a whole.

Verbs may also serve as modifiers. When a verb acts as a modifier, the nominalizer follows the verb. If the object is being described as being 'little' by the diminutive, the diminutive marks the final word in the phrase. In the example in (195), a form of the the noun 'thing' (functioning as a nominalizer) is suffixed with the [–r] morpheme.

(195) Diminutive with Verb and Nominalizer

Noun Phrase		Translation	Gloss
dáràà	kí–rí–jɛ̀		
be.slick	thing–DIM	a little slick thing	it is a little slick thing (10.3)

As shown in §4.2, the diminutive marker surfaces as [mi] before the plural clitic. Adjectives which have the lexicalized diminutive follow the same pattern. In referring to a small brush with one set of tines which are longer on one side than the other (196), the speaker adds both the diminutive and plural clitics to the final adjective in the phrase.

(196) Diminutive with Adjective and Plural

à	tàá	káẁ	bɛ́nˈdé	à	tàá	káẁ	kíì	dùgí–mí=ndɛ̀
DEF	half	DEM	long	DEF	half	DEM	thing	short–DIM=PL

the half that (is) long, the half that (is) a short thing

'The half, it is long, the (other) half of the thing, it (is) short.' (Tex Exp Consultant 2: 24.4)

One of the only nouns which elicits the 'quality of X' meaning of the diminutive suffix is shown in (197), because the adjective 'beautiful' requires its usage with the noun 'man'. This adjective phrase is glossed simply as 'a beautiful man'. The suffix seems to indicate the quality of a man's beauty because of the various interpretations of the diminutive.

(197) Diminutive as Quality of X with Adjective

Adjective Phrase					Translation
gɔ́ɔ̀	–mɛ̀	~	–jɛ̀	báákò	
man	DIM		DIM	beautiful	a beautiful man
'beautiful manliness'					

7.6 Proclitics on Adjective Phrases

Proclitics, the definite marker, and possessive pronouns affect the tone of the noun they precede, but not that of the adjective that follows. As a reminder, the tonal effects of the definite and possessive morphemes are shown in (198) with the noun 'sheep' /ŋàmbá/.

(198) Definite and Possessor Tonal effects

	Noun Phrase				Gloss
a.	à–	ŋàmbà	–rà		
	DEF–	sheep			the sheep
b.	à–	ŋàmbà	–rà	káẁ	
	DEF–	sheep		DEM	that sheep
c.	màà=	ŋámbá	–rà		
	POSS	sheep			his sheep
d.	àdámà	màà=	ŋámbá	–rà	
	Adama	POSS	sheep		Adama's sheep

The definite marker (198a - b) often lowers the tones of the noun it precedes, but not those of constituents which follow the noun, such as the demonstrative (198b). The third person singular possessive prefix (198c - d) often surfaces with a low tone, and in the case of 'sheep', the tones on the noun root emerge as high. A proper noun may precede the possessive pronoun (198d) but its tones are unaffected by the clitic. Further textual examples of the effects of the definite marker compared with that of the possessor are shown in Text XII, Tiga 2.32 - 34, 36.

The examples below illustrate that the possessive pronouns do not affect the tone of a numeral (199), the augmentative (200), or an adjective (201).

(199) Possessor with Numeral

	Noun Phrase		Gloss
a.	ŋàmbá–rá sheep	nnìɛ̀ four	four sheep
b.	àdámà Adama	màà ŋámbá–rà nnìɛ̀ 3.POSS sheep four	Adama's four sheep

(200) Possessor with Augmentative

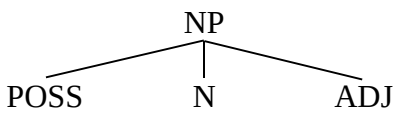
	Noun Phrase		Gloss
a.	ŋàmbá sheep	–bɔ́r̃ò AUG	large sheep
b.	àdámà Adama	màà ŋámbá–rà –bɔ́r̃ò 3.POSS sheep AUG	Adama's large sheep

(201) Possessor with Adjective

	Noun Phrase		Gloss
a.	ŋàmbá sheep	síjɔ̀ⁿ white	white sheep
b.	àdámà Adama	màà ŋámbá–rà síjɔ̀ⁿ 3.POSS sheep white	Adama's white sheep

By comparing the examples (a - b) in both sets, the first of each shows the noun phrase without a possessive pronoun. We see that the possessive pronoun only affects the noun it directly precedes. As with morphemes which follow the noun phrase, the possessive proclitic only affects the noun tonally but syntactically it has the entire noun phrase in its scope. This is shown in the diagram in (202).

(202) Possessive Pronoun with Adjective



While the above examples showed the tonal effects of the possessive on adjectives, numerals, and augmentatives, the ordering of these morphemes is shown in the phrases in (203) and (204). An adjective follows the augmentative, and the plural clitic follows at the end of the noun phrase (204b). The plural aquires a low tone, opposite that of the adjective's underlying high tone. A numeral may not directly follow a possessor–noun–augmentative–adjective phrase. Instead, a new noun phrase is added, using the nominalizer 'thing'.

(203) Possessor with Adjective and Augmentative

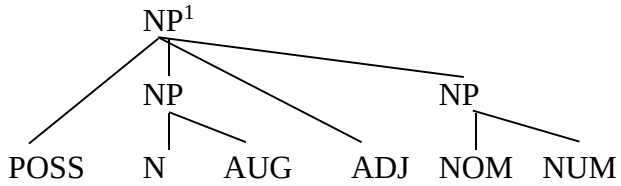
	Noun Phrase						Gloss
a.	àdámà	màà=	ŋámbá–rà	–bɔ́rɔ̀	síjɔ̀ⁿ		
	Adama	3.POSS	sheep	AUG	white		Adama's large white sheep
b.	àdámà	màà=	ŋámbá–rà	–bɔ́rɔ̀	síjɔ́	=ndɛ̀	
	Adama	3.POSS	sheep	AUG	white	PL	Adama's large white sheep (PL)

(204) Possessor with Adjective, Augmentative, and Numeral

Noun Phrase							Gloss
àdámà	màà=	ŋámbá–rà	–bɔ́rɔ̀	síjɔ̀ⁿ	kíí	nnìɛ̀	
Adama	POSS	sheep	AUG	white	NOM	four	Adama's four fat white sheep

The syntatic structure of (204) is shown in the diagram (205).

(205) Possessive with Noun Phrase and Modifiers



7.7 Reduplicated Adjectives

Some adjectives are reduplicated, with examples shown in (206).

(206) Reduplicated Adjectives

	Phrase			Translation
a.	kíí thing	gúní–gářì uneven	dáɣàɛ̀ small	It is a little bit uneven.
b.	kíì thing	kú–kàjì bumpy		It is bumpy.
c.	kíí thing	míró–míròˋ smooth		It is smooth.

As with other categories of reduplicants, the tonal melody is commonly high, with phrase-final lowering (206a, c), but certain words have a different melody (206b). Some reduplicants copy the root in its entirety (206c), others undergo segmental changes (206a - b).

7.8 Syntactic Processes in the Noun Phrase

Syntactic processes, such as conjunction and negation, are also found with nouns and adjectives.

7.8.1 Conjoined Nouns

Two nouns may be conjoined by the particle /daw/. The particle is homophonous with the incompletive marker and can be used to mean ‘and’ or ‘or’ depending on the context. As with the incompletive marker, the coordinating conjunction /daw/ has allomorphs [daw ~ naw ~ naa ~ da ~ na]. Examples are shown of the coordinating conjunction in sentences shown in (207) - (209), and the subordinating conjunction in (210) - (213).

(207) Conjunction [da]

tíndè	gíjɔ̀ⁿ	dá	ámíírí	wùròˋ .
grandfather	Giyon	CONJ	chief	Jewol

The chief’s grandfather Giyon and the chief of Jewol. (Chief 6.25)

(208) Conjunction [naa]

dínɛ̀	hù^{n}	náà	kó m pè .
morning	PP	CONJ	afternoon

Morning and night/afternoon. (Tiga 5.15)

(209) Conjunction [naw]

gìrìmɛ̀	náẁ	tùréɛ́	kɔ́ó	nìŋá	nnìì	á	wòré	bùndá	kíɛ́	m	bìɛ́ .
rabbit	CONJ	hyena	CPL	say	3.PL	CHN	go	out	lion	GEN	baby

The rabbit and the hyena said they will go make move out the lion's baby. (Adama.37)

Each of the sentences illustrates that two nouns may be conjoined with the particle /daw/. The reason for the allomorphy is yet to be determined. More examples of the coordinating conjunction are found in counting numerals, shown in Appendix VIII.

Examples of the use of the particle /daw/ to mean ‘or’ are shown in (210) - (212).

(210) Conjunction [na]

há	jáálà	ɥíè	ʤímbò	à	mmáá	ná	ɥíè	wàà	mmáà	?
IRR	whether	water	cold	2.SG	want	CONJ	water	hot	want	

Do you want cold water or do you want hot water? (Short Language Profile.21)

(211) Conjunction [daa]

jà	ɥáá–rà	mótò	Márìám	dáà	ɥùrù síjà	?
QU	buy	motorcycle	Maria	CONJ	Luisa	

Who bought a motorcycle, Maria or Luisa? (Short Language Profile.20)

(212) Conjunction [naa]

à	bòró+mɛ́	kàá–rú	nɛ̀	há	n	síɛ̀
DEF	boy	DEM–PL	PL	IRR	~2	firewood

nà	n	ɕíɛ́	nàà	nìì	ʒúmbà	náẁ	?
COOR	T	carry on head	CONJ	3.PL	pull	INC	

Are those boys carrying or pushing the log? (Topicalization Predicate.58)

The first example conjoins two noun phrases and the second example conjoins two nouns. The third example shows the conjunction of two noun phrases and that the conjunction is homophonous with the incompletive particle. Further examples of subordinating conjunctions are found in the Short Language Profile, Appendix I.

The phrase in (213) illustrates that each conjoined noun constitutes its own noun phrase as both nouns are marked with the plural clitic.

(213) Conjunction with Plural Clitic

kàà	–rú	tígè	nníí	jíè	–wàj	pʷìɛ̀	=ndɛ́	náẁ	bòró	=ndɛ̀
DEM	PL	also	3.PL	become	STAT	girl	PL	CONJ	boy	PL

Those also, they became young women and young men. (Tiga story about Tete.222)

Even though both ‘girl’ and ‘boy’ are plural, the plural marker may not mark them both at once, but must follow each noun separately.

7.8.2 Conjoined Adjectives

Adjectives, however, are not conjoined in the same manner as nouns. Nouns require the conjunction /daw/, but adjectives do not take an overt morpheme to express conjunction as shown in the adjective phrases in (214).

(214) Conjoined Adjectives

	Adjective Phrase				Translation
a.	kíì	dɛ́rébɛ̀	jímbō		
	NOM	soft	cold		(it is) soft (and) cold
b.	kíì	múgúl–éɛ́	mɛ̀rɛ̃̀	dáɣà+ɛ̀	
	NOM	round–DIM	heavy	small	(it is) round, heavy, (and) small

The first adjective phrase (214a) is a conjoined combination of an adjective and a verb. The verb is not describing the adjective. The second adjective phrase (214b) conjoins three adjectives. Note that all the adjectives are marked with the diminutive suffix except ‘heavy’.

7.8.3 Copula and Adjectives

There are no predicate adjectives; 'it$_{[noun]}$ is X$_{[adj]}$' and 'a X$_{[adj]}$ X$_{[noun]}$' are expressed the same. An adjective phrase may be ambiguous for tense or aspect, for an example see Chief 1.12. The verb [wo–re] 'go' can be used as a copula with adjectives, as shown in examples in (215).

(215) /wo/ as Copula

a.
á=	wáárì	wò	gáà^{n}
2.S.POSS	work	go	good

Your work is good.

b.
nìì	màá=	páá^{n}	–mɛ̀	wò	déɛ́
3.PL	POSS	friend	quality	go	sweet

Their friendship was sweet. (Tiga 5.1)

c.
múwí	hɔ́	wò	gáà^{n}	wàj
today	EMPH	go	good	STAT

Today is good. (Tiga's story: 77.1)

Another use of [wore] 'go' as a conjunction with verbs is found in a narrative, Tiga 3.15. In most examples, the stem appears in the root form [wo], but Tiga 1.29 represents an example of the stem with the [–r] suffix. Most adjectives do not use an overt copula. Shown below, verbs used as adjectives are preceded by the incompletive particle.

7.8.4 Incompletive /daw/ with Modifiers

The incompletive particle [daw] and its allomorphs may be employed as a copula as well.

(216) 'it is X'

	Adjective Phrase					Gloss	Translation
a.	n	dáẁ	kú kájì	kírì	–jɛ̀	it is an uneven	it is small and
	~3	INC	be.uneven	thing	DIM	thing	uneven
b.	há	níŋà	náẁ	mánàà	dérɛ́b–íɛ̀	one would say it	it resembles a little
	IRR	say	INC	plastic	soft–DIM	is a soft piece of small plastic	soft piece of plastic

(Texture Experiment: Consultant 1 Response: 34.2, 37.1)

The modifier ‘be uneven’ (216a) is a verb, while the modifier ‘soft’ (216b) is an adjective. The incompletive particle in the first phrase is used with the verb ‘be uneven’, but the incompletive particle (216b) is used with the verb ‘say’. A verb is distinguished from an adjective because the former does not necessitate the nominalizer [kii] and may follow the particle [daw]. For example the adjective ‘soft’, [kíì dérɛ́b–íɛ̀] ‘it is soft’ but *[daw derɛbɛ].

(217) Verb ‘squishy’

	Copular Phrase		Translation
a.	kíí thing	múgú–múgù squishy	it is squishy
b.	dáẁ INC	múgú–múgù be squishy	it is squishy
c.	náà INC	múgú–múgù be squishy	it is squishy

The stem /mugu/ ‘squishy’ may act as an adjective and follow the nominalizer [kii] (217a). The incompletive marker is not used with the nominalizer. The modifier translates as ‘it is (adjective) X’ when the particle (217b) or its allomorph (217c) is used.

Other examples of verbal modifiers may not modify a noun, nor are they used with the particle morpheme.

(218) Verb ‘slick’

	Modifier Phrase			Translation
a.	dáràà be.slick			it is slick.
b.	dáràà slick	kírí NOM	–jɛ̀ DIM	it is squishy

c.	n	sóré ŋ kíì	dáràà	
	~2	sure	slick	(I am sure) it is squishy

The first example (218a) illustrates that the word ‘slick’ may stand alone as its own phrase, without an overt noun to modify. This type of verb may precede a nominalizer (218b) or be used in a sentence (218c). A question arises as to whether the modifiers described in this section should be considered change-of-state verbs. These modifiers may not be used with the stative-completive suffix [-wɛ], as shown by narrative examples such as Chief 1.12.

7.8.5 Negated Adjectives

Adjectives are negated in the same manner as nouns, with the marker [bie]. Unlike an adjective without the negative marker, which must take [kii], there is no overt noun expressed in a negated adjective phrase. The tones of the adjective are unaffected by the negative marker, as shown in Chapter 14.

(219) Negated Adjectives

	Adjective Phrase		Translation
a.	bíè NEG	míró–mírò smooth	(it) is not smooth
b.	bíè NEG	mɛ̀r̃è heavy	(it) is not heavy

The negative marker is described in greater detail in Chapter 14. There it is shown that the negative marker also serves as a copula.

7.8.6 Complementizer with Adjectives

Complementizers may also be used to indicate that an adjective modifies a noun.

(220) COMP + adjective

	Noun Phrase			Gloss	Translation
a.	sóɔ̀ⁿ shirt	mɛ̀ COMP	dáɣàɛ̀ small	a shirt which is small	(it is) a small piece of fabric
b.	dóɔ̀ paper	mɛ̀ COMP	dáɣáɛ̀ small	a piece of paper which is little	(it is) a little piece of paper

c.	mɛ̀	dá	màà	á sìè	kîì	múgú–múgù	–mɛ̀	
	COMP	INC	COP	now	thing	squishy	–DIM	it is small (and) squishy

That which is here now is a small, squishy thing.

A noun may be modified by an adjective with the use of the complementizer located in between the noun and the modifier (220a - b). More complex phrasing may also be employed (220c), where the complementizer begins the phrase. Note that there is no diminutive agreement on the nouns in the noun phrase.

7.9 Noun in Place of Adjective

In certain instances, nouns may be used in a manner to express qualities commonly exprsessed in other languages with adjectives.

(221) Noun ‘hair’ as Adjective ‘hairy’

	Phrase		Gloss	Translation
a.	dúg–á have–RV	kúɥì hair	It has hair.	It is hairy.
b.	kúɥí hair	ɕèɛ̀ⁿ owner	It is a hair owner.	It is hairy.

A phrase which uses the verb ‘have’ (221a) or the agentive morpheme (221b) with the noun ‘hair’ expresses the object as being ‘hairy’. Additional examples appear in Appendix VIII.

The phrase in (222) illustrates another way to express ‘hairiness’ using the possession.

(222) Expressions with ‘hair’

Noun Phrase				Gloss	Translation
màá=	kɔ̀rɔ̀	ŋ	kúɥí	its stomach’s hair	(it has) a hairy inside
3S.POSS	stomach	GEN	hair		(Texture Experiment: Consultant 1 Response: 29.2)

The third person singular possessive pronoun is the subject, which possesses the noun, ‘stomach’, which in turn possesses the noun ‘hair’, to express that the inside of an object is has hair or is ‘hairy’.

7.10 Quantifiers

The quantifiers in Bangime are listed in (223) with extensive examples listed in Appendix X.

(223) Quantifiers

	Quantifier	Gloss
a.	=pàà^{n}	all
b.	=péɛ̀rɛ̀	a lot
c.	=péɛ̀^{n}	a lot
d.	=dám^{l}bá	a lot (for inanimates)
e.	=déwàj	a lot
f.	=jáá^{l}rí	very
g.	máà=	almost
h.	=pɔ̀ò	only or just

Each of the quantifiers listed is presented with examples in the following subsections.

7.10.1 All

As with adjectives, quantifiers must be preceded by a noun or the dummy noun [kii], ‘thing’. If quantifier ‘all’ is used with a noun other than ‘kii’, the noun must be preceded by the definite marker [a].

(224) ‘All’ with Nouns

ɥáá	támátí	ŋ	kíí	pààⁿ !
buy.IMP		GEN	thing	all

Buy all the tomatoes!

The nasal in the sentence (224) is the genitive marker so that the meaning is literally, ‘buy all *of* the tomatoes’.

Examples of plural nouns with quantifiers in (225) show that the plural clitic precedes a quantifier, whereas it follows an adjective.

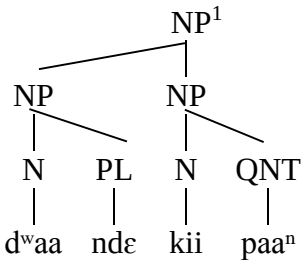
(225) Quantifiers with Plural Nouns

	Noun Phrase				Gloss
a.	dʷàà	=ndɛ́	kíì	pààⁿ	
	tree	PL	thing	all	all the trees
b.	ʒìbìɛ̀	=ndɛ́	kíì	pààⁿ	
	person	PL	thing	all	all the people
c.	kùɥɛ́	=ndɛ̀	kíì	pààⁿ	
	calabash	PL	thing	all	all the calabashes

The tone of the plural clitic is unaffected by the morpheme that follows it, in the case of a quantifier phrase, the nominalizer. The plural clitic may optionally mark both the noun itself and the quantifier as is illustrated in examples in (225). An example from a narrative of a possessed plural noun followed by a quantifier, Chief 7.10, illustrates that the tone of the possessive proclitic changes that of the possessed noun, but not the quantifier which follows the plural noun.

The diagram in (226) illustrates the relationship of the quantifier to the noun in the noun phrase.

(226) Quantifiers in the NP



Because the quantifier, in essence, constitutes its own phrase, it follows the noun phrase in which the plural is found. The plural follows the noun, and the quantifier follows a dummy noun, each in separate noun phrases within the larger NP.

7.10.2 A lot

The quantifying adjective ‘many’ [(kíì) péɛ́ˡrɛ́] is used to modify nouns. The noun which the quantifier modifies is not obligatorily marked for number. The following nouns represent examples with the modifier ‘many’ in (227).

(227) ‘many’ with Nouns

	Gloss	Noun	‘many’
a.	wasp	gúmbàrà	péɛ́ˡrɛ́
b.	bee	mmírò	péɛ́ˡrɛ́
c.	donkey	kɔ́róŋò	péɛ́ˡrɛ́
d.	mother	nnìjá	péɛ́ˡrɛ́
e.	person	ʒìbɛ́ɛ́	péɛ́ˡrɛ́
f.	sheep	ŋàmbá	péɛ́ˡrɛ́

The modifier ‘many’ does not change the tone of the noun it quantifies. The nouns above are assumed to be plural since they are modified with the quantifier ‘many’, but excerpts from texts illustrate the quantifier ‘many’ used with a noun explicitly denoted as being plural.

(228) ‘many’ with Plural Nouns

a.	nɛ́	kóɔ̀	sùrà	à	kíɛ̀=ndɛ́	péɛ́ˡrɛ́	à	kùùⁿ	káráá	ŋ	kò.
	1.PL	CPL	look	DEF	thing=PL	many	DEF	market	find	GEN	PP

We looked (at) many things in the new market. (Adama 2 -1 2010: 19)

b.	káráà	–L	bì	=ndɛ́	péɛ́ˡrɛ́
	receive	3.S	baby	PL	many

She received many babies. (Tiga story about People going to Tete: 109)

In this section we continue to see examples which show that quantifiers function in a manner slightly different from adjectives. These two examples illustrate that when a noun is denoted as overtly plural, the plural clitic is attached to the noun instead of the larger phrase.

A quanitifier may be used in a verb phrase if it is used to mark the object of a verb (229).

(229) ‘many’ in a Phrase

Phrase				Translation
n	díí	sʷíì	péɛ́ˡrɛ́	
~2	eat.PRF	food	many	I ate a lot (of) food.

The quantifier ‘many’ may be translated as ‘a lot’ in non-count nouns.

7.10.3 Small

The word [dáɣàɛ̀], with the obligatory or lexicalized diminutive suffix, functions both as an adjective meaning ‘small’ and as an adverb meaning ‘a little’, depending on what it modifies.

(230) A little bit ~ small

	Adjective Phrase			Translation
a.	bɔ́jéɛ̀	dáɣàɛ̀		
	rope	small		It is a small rope.
b.	kúɥìɛ̀	dáɣàɛ̀		
	calabash	small		It is a small calabash.
c.	kíí	gúní gáɾ̃ì	dáɣàɛ̀	
	thing	be.uneven	small	It is a little bit uneven.

When the word [daɣaɛ] modifies nouns such as ‘rope’ (229a) or ‘calabash’ (229b) it functions as an adjective. However, when it modifies a verb (229c), it functions as an adverb, although there is no segmental, or tonal change in the word.

7.10.4 Numerals

Numerals follow the noun they quantify. The numerals one to two thousand are listed in Appendix VIII. Plural nouns which are quantified by numerals are not marked with the plural.

(231) Numeral with Noun

máà	jòɔ́	há	n	dɛ̀w̃	bùú^{n}	tààró
PROH	respond	until	T	full	time	three

Do not respond until (you are called) three times. (Tiga 5.19)

The clause is object-final, however, in any word order, the numeral and noun act as a cohesive unit in the location within a sentence.

7.11 Adverb

Adverbs modify verbs and adjectives. An example adverb [jáár^{ǃ}ré] is shown modifying verbs (232) and adjectives (233).

(232) Adverb with Verb

	Sentence					Translation
a.	n	tígè	jáá$^{!}$ré			
	~2	run	a lot			I run a lot.
b.	n	ɲáẁ	n	dóó	jáá$^{!}$ré	
	~2	take	GEN	sleep	a lot	I sleep a lot.
c.	n	ʒìé	wáárì	jáá$^{!}$ré		
	~2	do	work	a lot		He works a lot.

The adverb, like other modifiers, follows the word to which it refers.

(233) Adverb with Verb

	Clause				Translation
a.	bógò	jáá$^{!}$ré			
	big/old	very			very old or big
b.	à	gúʒɛ̀	káráà	jáá$^{!}$ré	
	DEF	grass	new	very	very green
c.	à	wáárì	gáá^{n}	jáá$^{!}$ré	
	2.SG	work	good	very	Your work is very good.

Adverbs, like other modifiers, follow the word they modify. An adverb does not change the word it modifies, nor is it changed, either tonally or segmentally.

7.12 Summary of Modifiers

Adjectives are not stand-alone words in Bangime, they must modify a noun, even if it is a dummy noun such as [kii] ‘thing’. The plural clitic follows an adjective, which follows a noun. Quantifiers, on the other hand, act as clitics that follow a noun, singular or plural. Tones of nouns are unaffected by an adjective or a modifier. Certain nouns, such as flora and fauna species, are differentiated on the basis of modifiers alone. Verbs may also act to modify a noun, and adverbs may modify verbs or adjectives.

Chapter 8. Verb Types

8.1 Introduction to Inflectional Classes

There are 496 verbs in the corpus. Verb roots, like noun roots, do not surface without affixation and tonal overlays. Most verb roots surface with either an additional vowel to meet the minimal word requirement of two morae, or with morphological marking in the form of inflectional suffixes. The tone of the verb stem, discussed in Chapter 13, is determined by the tense/aspect of the clause, and the subject person marking of the verb phrase. Unlike the tone on noun stems, the tone on verb stems is not clearly discernible by the affixation or cliticization of elements in the verb phrase.

The inflectional morphology of the verb stem is based on the syllable shape of the verb root, i.e., the verb without any suffixes. Verb roots are grouped into five inflectional classes with the suffixation patterns for each type shown in the table in (234).

(234) Inflectional Classes

		Verb Particles and Inflectional Marking			
	Particles	INC	PRF	PRF	PRF
Class	Canonical Syllable Shape	daw	kɛ́ɛ̀/wɛ	kɔo	Ø
1	/CVC$_{velar}$/	–root vowel	–u	–root vowel	–rv
2	/CV$_{mid\ vowel}$/	ROOT	ROOT	–r–root vowel	ROOT
3	/CV^{n}/	–r̃–root vowel	ROOT	–nd–root vowel	ROOT
4	/CVn/	–nd–root vowel	–nd–i	–nd–root vowel	–nd–i
5	/CVm/	–mb–rv–r–rv	–mb–rv	–mb–root vowel	–mb–rv–r–rv

The verb particles, listed above each inflectional category and presented in detail in Chapter 9, signify the aspect of the clause. The particle /daw/ marks the incompletive aspects: the present and future tenses. The particle [kɔo] marks the completive tense which does not naturally occur outside the realm of oral histories and tales. The particles [kɛ́ɛ̀] and [wɛ] indicate the perfect for an activity verb, and the stative for change-of-state verbs, respectively. The final vowel of the stem is a high vowel in the perfect and perfective aspect (the latter in Verb Class 4 only) and a copy of the root vowel (which is subject to height harmony as described in §8.2) in the 'default verb stem', that which is used in all other tense and aspects. The [–r] and its allomorphs [r̃ ~ d ~ b] may mark purposiveness which occurred in a non-present time and is discussed in Chapter 9.

This chapter is devoted to giving a description of the different types of verb stems, how each of the verb classes patterns segmentally, and the affixes which follow each verb stem and their meanings. Here, I show that the differences in the inflectional patterns on verb stems are due to the underlying representation of roots. This idea is further developed in the next chapter where I propose that the form and meaning of the verb roots are related. Each of the following sections provides examples and lists verb roots for the five categories.

8.2 Verb Class One: /CVC$_{velar}$/ or /CVr/

Verb roots in Class One typically end in a velar consonant. The verb 'hit' /deg/ is a representative verb for VC1. The verb root always surfaces with a final vowel so that the syllable shape of the stem is [CV.CV]. The final vowel (RV) of the verb stem is determined by the TAM category and the height, backness, and [ATR] value of the root vowel. Verb stems in Class One are suffixed with either a vowel determined by the root vowel (235a - c) or the vowel

[u], as in (235d).[48] The transitive nasal marker precedes VC1 stems only in the incompletive (235a) and completive (235b). Examples using the verb 'hit' in phrases are shown in (235).

(235) Verb Phrases: /deg/ 'hit'

Incompletive

a. àdámá ná á nníɛ́ –ré –H n dèg –è –L
Adama INC DEF woman 3 T hit RV 3

Adama is hitting the woman.

Completive

b. àdámá kɔ́ n dég –é –H à nìɛ̀ –rè –L .
Adama CPL T hit RV 3 DEF woman 3

Adama hit the woman.

Perfective

c. àdámá dèg –è –L níɛ́ –ré –H .
Adama hit RV 3 woman 3

Adama has hit the woman.

Perfect

d. àdámá dèg –ù –L á níɛ́ –ré –H kɛ́è .
Adama hit PRF 3 DEF woman 3 PRF

Adama had hit the woman.

[48] The aspect which is glossed as being 'perfective' has been difficult to elicit and to translate accurately. Also, the verbs were given with both the high [u] and the mid [ɛ] vowel as acceptable in the perfective aspect. The tense 'completive' is mostly used in texts and is glossed here tentatively as such. Verbs may also vary in this tense/aspect for word order and inflectional marking without apparent changes in meaning. Both of these aspects will be examined in detail in future research.

A list of all the VC1 verb roots is shown in (236). The majority of verb roots in VC1 with the shape CVC end in a voiced velar segment (236a - n) or [–r] (236o - t). The [l] in (236s) is unusual in general for Bangime and is probably a non-integrated borrowing.

(236) VC1: 19 verbs

	Gloss	Root	Default	Perfect
		/CV$_{[MID]}$g/		
a.	hit	deg	dèg–é	dèg–ú
b.	close	sog	sóg–ɔ́	sóg–ú
c.	weave (a basket)	gog	góg–ɔ́	góg–ú
d.	beat	dog	dóg–ɔ́	dóg–ú
		/CV$_{[LO]}$g/		
e.	touch, light (a fire)	dag	dáɣ–á	dág–ú
f.	shake, jiggle	mag	màɣ–á	màg–ú
g.	cut, fix, set (the date)	jag	jàɣ–á	jàg–ú
h.	agree, grab	tag	táɣ–à	tág–ù
i.	ruin, bad	jaŋ	jáŋ–à	jáŋ–ù
		/CV$_{[HI]}$g/		
j.	have	dug	dùg–á	dùg–ú
k.	wash (smth)	pug	pùg–á	pùg–ú
l.	bury	mug	mùg–á	mùg–ú
m.	ask	sig	sìg–á	sìg–ú
		/CV$_{[MID]}$r/		
n.	scoop (off dirty things)	ger	gér–è	gèr–ú
		/CV$_{[LO]}$r/		
o.	remain	bar	bár–áà	bàr–ù
		/CV$_{[HI]}$r/		
p.	pierce (ear)	sur	súr–á	súr–ú
q.	kill	ɥuur	ɥùùr–á	ɥùùr–ú
r.	drip	bil	bíl–à	bíl–ù
s.	detach, unbutton	pir	pír–àà	pír–ù

As shown in the first column of stems (236a - e, o), the mid vowels in verb roots in VC1 undergo height harmony with the suffix vowel in the default stem. It was shown in §2.2.3 that some mid vowels become [–ATR] before the velar plosive, however each of these words shows that the [ATR] value of the suffix is always [–ATR] after [g]. Verb roots which contain low (236f - j, p) and high (236k - n, t) vowels are suffixed with a default [a] in the default stem. Here, we see a similarity to some Dogon languages in that only mid vowels have a [±ATR] surface alternation. I suggest that the mid vowels in verb stems undergo [ATR] harmony at some level in the derivational process and that [a] is a default vowel which is suffixed to the high and low vowels because they do not have [±ATR] counterparts. As has been shown, many stems are disharmonic for the feature [ATR].

Recall that a final low vowel is long after [–r] (236p, t). The final [a] is prevented from lengthening if the initial syllable is already heavy (236r) as two heavy syllables are uncommon in a bisyllabic word.

The perfect stems take the high back vowel [u] as the suffix. All the verbs found in the VC1 are transitive, except ‘drip’. The final vowel of the verb stem is the non-high allomorph in all forms except the perfect. The uninflected or chaining form which follows an inflected verb, such as shown in textual examples, Text VI: Chief VI.11, is also the non-high vowel. For this reason, I consider the vowel to be a default vowel which does not contribute to the inflectional marking on the stem.

An alternative analysis for the verb roots in VC1 is to suggest that the final [g], [ŋ], or [r] consonant is a suffix, since all the other verb classes are composed of a root plus a suffix [–r]. However, an instance of a Class One verb which is suffixed with [–r] is found in TEXT VI: Chief 6.30. The sentence is unusual in that the indirect object is in subject position.

8.3 Verb Class Two: /CV$_{[mid]}$/ Verbs

The verb roots in Class Two are vowel-final. Unlike verb roots in Class One, verb roots in Class Two may surface without suffixation. The minimal word constraint which was shown to apply to noun stems applies to verb stems as well, causing /pe/ to surface as [pie] in the verb stems not suffixed with [–r] (237a - c). The suffix [–r] precedes the root vowel (237d) which marks completive tense of Class Two stems. The meaning of the [–r] suffix itself has been elusive. The final vowel of the Verb Class Two stem agrees with the vowel of the verb root in height, but not in backness. The transitive nasal marker appears before a VC2 stem in all tenses, rather than just the incompletive and completive, as it did in VC1 verbs. Example phrases are shown in (237) using a representative VC2 root, /pe/ 'put/.

(237) Verb Phrases: /pe/ 'put'

Incompletive

a. kàdíjá ná á págá –H m pìè –L .
Kadija INC DEF pot, container 3 T put 3

Kadija is putting the pot down.

Perfective

b. kàdíjá m píé –H à pàgà –L .
Kadija T put 1 DEF pot, container 3

Kadija has put the pot down.

Perfect

c. kàdíjá m píé –H à pàgà –L ŋ kɛ́ɛ̀ .
Kadija T put 1 DEF pot, container 1 ~2 PRF

Kadija had put the pot down.

Completive

d.	kàdíjá	kɔ́ó	m	pé	–r	–ó	–H	à	pàgà	–L
	Kadija	CPL	~2	put	–r–	RV	1	DEF	pot, container	1

Kadija put the pot down.

The verb roots in Class Two are divided into two categories based on the underlying [ATR] value of the vowel of the verb root. Verb roots in the first group have [+ATR] vowels; the stems are shown in (238). The completive verb stem is formed with [–r] suffixed to the root followed by a non-high vowel that has the opposite front/back value to the root vowel. In the other tenses, verb stems with [+ATR] vowels emerge with a short vowel, if the root vowel is back (238a - b), and a high-mid vowel combination, if the root vowel is front (238c - d).

(238) VC2: 4 [+ATR] CV Verbs

	Gloss	Root	Completive	Default
		/CV[BK]/		
a.	hear	no	nó–r–è	nó
b.	know (a fact)	so	só–r–è	só
		/CV[FR]/		
c.	do, make, become	je	jé–r–ò	ʒíè
d.	put	pe	pé–r–ò	píè

The examples (238a - b) illustrate that the minimal word requirement does not need to be met for mid back [+ATR] vowels but it does for mid front [+ATR] vowels (238c - d). Discussed in Chapter 2, a preference for diphthongs over long vowels is common. All the short vowel roots in VC2 are [+ATR]. There are no roots with [+ATR] high vowels.

Verb Class Two roots with [+ATR] root vowels and those with [–ATR] root vowels behave slightly differently. The suffix vowel is predictable based on the vowel in the root.

The suffix is mid, and obtains its backness and [ATR] value from the root vowel. As with VC1 stems, a root with a low vowel copies the low vowel, but the high vowel emerges with [e].

(239) VC2: 8 [–ATR] CV Verbs

	Gloss	Root	Completive	Default
		/CV$_{[FR]}$/		
a.	drink	nɛ	nnìɛ̀–r–è	nnìè
b.	lick	dɛ	déɛ́–r–è	déɛ̀
c.	lose	tɛ	téɛ̀–r–è	téɛ̀
		/CV$_{[BK]}$/		
d.	respond	jɔ	jóɔ́–r–ò	jóɔ̀
e.	pass	dɔ	dóɔ́–r–ò	dóɔ́
f.	mix	sɔ	sóɔ́–r–ɔ̀	sɔ́ò
		/CV$_{[LO]}$/		
g.	reach	t^{w}a	t^{w}áà–r–à	t^{w}áà
h.	build	ma	mmàà–r–à	màà

There are no high vowel roots in Verb Class Two, possibly because high vowels do not have [–ATR] counterparts. Recall that a mid vowel becomes lax or [–ATR] before nasals and rhotics. Final low vowels do not lengthen after the [–r] suffix in roots with long vowels (239g - h) because of the dispreference for bisyllabic words with two heavy syllables. Most VC2 verbs are transitive.

To summarize thus far, Class One verbs have roots which consist of /CVg/ or /CVr/. The root vowel, the suffix for the default stem agrees in height, but not harmonic value, with mid root vowels, and [a] with high and low root vowels. The perfect stems are suffixed with [u]. Class Two verb roots are /CV/. The completive stem is formed with the suffixation of [–r] and the root vowel. Stems with [+ATR] root vowels are suffixed in the default stem with a vowel that has the same height, but the opposite backness value of the root vowel. Verb Class Two roots with

[–ATR] vowels are suffixed with a vowel which harmonizes to the backness and height of the root vowel but adopts the opposite [ATR] value.

8.4 Verb Class Three: /CVⁿ/

As with VC2 verb stems, those in Class Three are suffixed with [–r] in the completive aspect. Like verb Class One stems, but unlike verb Class Two stems, the completive and incompletive verb stems are grouped together, as are the perfect and perfective stems. In Verb Class Three, the incompletive and completive aspect stems are analyzed as consisting of a verb root plus the suffix [–r], with the nasalization from the root vowel surfacing as a nasal, so that the liquid [–r] assumes the place and manner of the final nasal and becomes a stop. Since low vowels are often associated with labials in Bangime, the example verb root /teⁿ/ 'bite, chew', shown in (240), is proposed to have allomorphs [taw̃] and [tam] when suffixed with [–r]. As with VC2 stems, each tense has the appearance of the transitive nasal.

(240) Phrases using VC3 verb stem /teⁿ/ 'bite, chew'

<u>Incompletive</u>

a.

dà	n	ŋóɔ́	–H	n	tá	–w̃	–à	–L
INC	T	meat	3	T	chew	–r–	RV	3

He is eating meat.

<u>Completive</u>

b.

kóɔ́	n	tám	–b	–à	–L	màá=	–H	bʷéɛ̀	–H
CPL	T	chew	–r–	RV	3	POSS	1	foot	3

It bit my foot.

Perfective

c. n téɛ́ⁿ –H n ŋòɔ̀ –L .
T chew 1 T meat 1

I have eaten meat.

Perfect

d. n téɛ́ⁿ –H n ŋòɔ̀ –L kɛ́ɛ̀ .
T chew 1 T meat 1 PRF

I ate meat.

All VC3 roots consist underlyingly of a consonant followed by one nasalized vowel, shown in (241).

(241) VC3: 35 CVⁿ Verbs

	Gloss	Root	INC	CPL	PRF
		/CV/	CVGⁿ		
a.	bite	taᵐ	tá–w̃–àà	tám–b–à	téɛ̀ⁿ ŋ kɛ́ɛ̀
b.	fill	daᵐ	déɛ̀(w)ⁿ	dám–b–á	déɛ̀ⁿ ŋ kɛ́ɛ̀
c.	cold, turn off	jiⁿ	jì–j̃–ɔ́	jím–ˡb–ó redup	dʒíìⁿ ŋ wɛ́ – it's cold/ dʒíìⁿ kɛ́ɛ́ – turn off
		/CV[MID]/	CVrⁿ		
d.	cook	deⁿ	dɛ̀–r̃–è	dɛ́n–d–è	déɛ̀ⁿ ŋ kɛ́ɛ̀
e.	break	koⁿ	kɔ́–r̃–ò	kɔ́n–d–ò	kɔ̀–r̃–ɔ̀ wɛ̀/kɔ́óⁿ wàj
		/CV[HI]/			
f.	meet	kuⁿ	kú–r̃–à	kún–d–à	kúúⁿ ŋ kɛ́ɛ̀
g.	move into	muⁿ	mù–r̃–á	mún–d–à	mùùⁿ wàj
h.	sprout	puⁿ	pú–r̃–à	pún–d–à	púúⁿ wàj ~ púw̃ɛ̀
i.	swallow	miⁿ	mí–r̃–à	mín–d–à	mííⁿ ŋ kɛ́ɛ̀
j.	send	tuⁿ	tú–r̃–à	tún–d–ò RED	tú–r̃–á ŋ kɛ̀ɛ̀
k.	lay smth down	biⁿ	bí–r̃–à	bín–ˡd–ó RED	bíiⁿ ŋ kɛ́ɛ̀

The incompletive and completive are suffixed with [–r]. The nasalization from the root vowel spreads to the [–r] suffix in the incompletive. An additional nasal or nasalization process changes the [–r] suffix to a nasal-consonant sequence in the completive aspect, but it is not clear from where the additional nasalization comes. The vowel which follows the [–r] suffix is either a default [a] for high (241e - i) and low (241a - b) root vowels, or a mid vowel for roots with mid vowels (241d - e). The root low-vowels (241a - b) raise to mid vowels in the perfective and perfect aspects, so it may be that all the root vowels in this class are [+ATR]. Three verbs with high vowels are suffixed with a mid back vowel in the perfect aspect and a reduplicated stem. As explained below for Class Five verbs, there is some variation among the final vowels of reduplicated stems.

Some variation is also found in the perfect and perfective in that the verb root surfaces without the [–r] suffix but with an additional vowel to meet the minimal word requirement (241a - d, f - h, j), or it surfaces in the same manner as the default stem (241e, i). In at least two verbs (241e, h), either form was acceptable with no reported change in meaning. An example of the verb /tun/ ‘send’ being used in the perfective aspect is found in Magic Cat.1 - 2.

8.5 Verb Class Four: /CVn/

The difference between verb roots in Class Three and those in Class Four is the presence of a nasal coda rather than a nasalized final vowel. Furthermore, whereas VC3 verbs are suffixed with [–r] in the incompletive and completive, but not in the perfective and perfect, verbs in VC4 are suffixed with [–r] in all categories, and the [–r] suffix becomes a stop after the nasal segment of the verb root. Similar to Verb Class One roots, the suffix vowel of the verb stem, shown in examples in (242), with the verb /g^{w}en/ ‘split,’ is a vowel predicted by the root vowel in the incompletive (242a) and completive (242b) aspects, or a high vowel [i] in the perfective (242c)

and perfect (242d) aspects. Therefore, like the verbs in Class Three and Class One, the verbs in Class Four pattern together in the incompletive and completive aspect and similarly in the perfect and perfective aspect.

(242) Phrases with VC4 /gʷɛn/ ‘split’

Incompletive

a. àdámá ná ŋóɔ́ –H ŋ gʷɛ̀n –d –è –L
Adama INC meat 3 ~2 split –r– RV 3

Adama is splitting meat (fish).

Completive

b. àdámá kɔ́ó gʷɛ̀n –d –è –L á ŋóɔ́ –H .
Adama CPL split –r– RV 3 DEF meat 3

Adama split meat (fish).

Perfective

c. àdámá gʷɛ̀n –d –ì –L á ŋóɔ́ –H .
Adama split –r– PRF 3 DEF meat 3

Adama has split meat (fish).

Perfect

d. àdámá gʷɛ̀n –d –ì –L ŋóɔ́ –H ŋ kɛ́è .
Adama split –r– PRF 3 meat 3 ~2 PRF

Adama had split meat (fish).

Similar to the process of determining the final vowels in VC1 - 4, the final vowel of the verb stem is the same as the root vowel, if the root vowel is mid and [+ATR] (242a, c), but is a default low vowel in [–ATR] mid vowel (242b, d), high (242e - f), and low (242g - h) roots. The perfect and perfective final vowel is also like the final vowel of the perfect in VC1 stems in that it is a high vowel, but for VC4 stems it is a front rather than a back vowel.

(243) VC4: 68 verbs

	Gloss	Root	INC/CPL	PFV	PRF
			V–nd		
a.	split	gʷɛn	gʷɛ̀n–d–a/ɛ̀	gʷɛ̀n–d–ì	gʷɛ̀n–d–ì ŋ kɛ́ɛ̀
b.	broken	gajɛn	gájɛ́n–d–à	gájɛ́n–d–ì	gájɛ́n–d–ì wàj
c.	make move into, enter	mun	mún–d–à	mún–d–ì	mún–d–ī ŋ kɛ́ɛ̀
d.	hide	dan	dán–d–à	dán–d–í mì	dan–d–i mi ŋ kɛ́ɛ̀
			r–$V_{[LO]}$–nd		
e.	fatigue	ban	bán–d–à	bá–r–án–d–à	bán–d–ì wàj
f.	weed	pun	pún–d–à	pún–d–á–r–à	pun–d–i ŋ kɛ́ɛ̀
			r–$V_{[MID]}$–nd		
g.	stretch	bɔn	mí bɔ́–r–ɔ̀n–d–a	bɔ́–r–ɔ̀n–d–ì mì	bɔ́r–ɔ̀n–d–ì mì ŋ kɛ́ɛ̀
h.	pick	pon	pɔ́–r–ɔ́n–d–ò	pɔ́–r–ɔ́n–d–ì	pɔ́–r–ɔ́n–d–ì ŋ kɛ́ɛ̀

The verbs in Class Four are all transitive, except /gajɛn/ ‘break’ i.e. ‘become broken’. There are two patterns of suffixation among the data for VC4: stems are the same in the perfective and perfect/stative (243a - e, h), or have the addition of another [–r] suffix in the incompletive and completive (243f - g). The reason for this is unknown but possibilities are explored in Chapter 9. Verbs with the addition of the morpheme [mi] (244d, h) are reflexive.

8.6 Verb Class Five: /CVm/

Verb stems in VC5 consist of a root with a bilabial nasal coda, which then causes the suffix [–r] to assimilate in place and manner. As with some VC6 verbs, an additional [–r] suffix is attached after a copy of the root’s final vowel in the incompletive and completive aspects. The perfective aspect is formed by reduplication of the default stem. Sentences in (244) illustrate that the [–r] suffix is associated with verbs in the incompletive (244a) and perfective (244b) in VC5 stems but not suffixed in the stative (244c) or completive (244d) stems.

(244) Phrases with VC5 /sum/ ‘crouch’

Incompletive

a. n dàá súm –b –ó –r –ò –H
– 2 INC crouch –r– RV –r– RV 1

I am crouching.

Perfective

b. súm –b –ó –r –ò –H
crouch –r– RV –r– RV 1

súm –b –ó –r –ò –H (RED)
crouch –r– RV –r– RV 1

I have crouched.

Stative

c. sùm –b –ò wàj
crouch –r– RV STAT

Adama crouched.

Completive-Stative

d. àdámá kɔ́ó sùm –b –ò wàj
Adama CPL crouch –r– RV STAT

Adama was crouched.

Most of the verbs in VC5 are change-of-state verbs. As shown by the verbs listed in (245), the final vowel of the verb stem is determined by the root vowel: underlying mid vowels receive a copy of the root vowel as the final vowel of the stem (245a - c), and the intersuffixal vowel in examples (245b - c), although not (245a). One root with a high back vowel (245d) patterns with the mid back vowels while another (245e) patterns with the high and low vowels. High (245e - f) and low (245g - h) vowels receive a default low vowel as in the other aspects.

(245) VC5: 35 verbs

	Gloss	Root	INC/PFV	STAT/CPL
		/CV[FR]/		
a.	lean, hammer	tɛm	tɛ́m–b–í–r–è	tɛ́m–b–è
		/CV[BK]/		
b.	pinch	kom	kɔ́m–b–ó–r–ò	kɔ́m–b–ó
c.	dent outward	ŋom	ŋɔ́m–b–ó–r–ò	ŋɔ́m–b–ò
d.	crouch	sum	súm–b–ó–r–ò	súm–b–ò
		/CV[HI/LO]/		
e.	pull	jum	júm–b–á–r–à	júm–b–à
f.	push downwards	tiŋ	tíŋ–g–á–r–à	tíŋ–g–ā
g.	cradle	baŋ	bá–ŋg–à–r–à	báŋ–g–à
h.	mash	kam	kám–b–á–r–ā	kàm–b–á

Another property of VC5 stems is their tendency to reduplicate. Shown in (246), the perfective aspect of a VC5 stem is a reduplicated form (246c) of the verb stem. The reduplicated form of the verb (246c) appears with the [–r] suffix, or with an intervening nasal, but not both, bearing on the question of timing discussed in Chapter 14. The correspondence between the nasal and the [–r] suffix is also seen in negative phrases. Examples (246d - e) and the sentences in (246) show that there is also a correlation between the incompletive marker /daw/ allomorphy and the nasal, which may appear between reduplicated stems.

(246) Tense and Aspect in VC5 Stems

	T/A	search	carry on shoulder	pull
a.	PRF	kúm–bò ŋ kɛ́ɛ̀	báŋgà(–ra) ŋ kɛ́ɛ̀	ʒúm–bá–rà ŋ kɛ́ɛ̀
b.	CPL	kɔ́ò ŋ kúm–bó–rò	kɔ́ò m báŋgà	kɔ́ò n ʒúm–bá–rà
c.	PFV	kúm–bó–ró kúm–bó–rò	báŋgá(–ra) (m) báŋgà(–ra)	ʒúm–bá–rá ʒúm–bá–rà

d. INC dáw̰ kúm–bó kúm–bò ——— dáà ʒúm–bá–rà

e. INC dáà kúm–bò ŋ̰ kúm–bò

These examples show that the contribution of the [–r] suffix differs depending on the verb. The perfective is formed with the completive marker [ŋ kɛ́ɛ̀] with all transitive verbs. The [–r] suffix, however, is optional in some verbs, as shown in (246a). For example, with the verb /baŋga/ ‘carry on shoulder’ the suffix is obligatory, while in others, such as /ʒum/ ‘pull’, it is optional. In still others, like /kum/ ‘search’, the suffix is absent. An example of variation in the [–r] suffix with /kum/ ‘search’ is seen in Tiga 1.14 - 16 in which the suffix is only used with the first person singular, not the third persons singular or plural.

The completive aspect (247b) is marked by [kɔo] and the [–r] suffix, obligatorily with verbs /kum/ ‘search’ and /ʒum/ ‘pull’, but optional with /baŋga/ ‘carry on shoulder’.

Each stem represented in (247) may employ the [–r] suffix in the perfective, and each is reduplicated. The incompletive aspect, formed with /daw/ or its allomorphs, was not found for /baŋga/ ‘carry on shoulder’, but the [–r] suffix variation remains for the other two verbs. These examples make pinning down the exact function of the [–r] suffix quite difficult. In (247) we see the alternations for the verb /kum/ ‘stroll’ and the particles in the incompletive aspect.

(247) Timing in Sentences

a. mùwì n dáw̰ kúmbó kúmbò.
today ~2 INC stroll

Today, I am strolling.

b. nnìɛ̀ n dá kúmbò ŋ̰ kùmbò à gúʒɛ́ ŋ kò.
yesterday ~2 INC stroll DEF grass GEN PP

Yesterday, I was strolling in the grass.

The incompletive particle allomorphs are discussed in Chapter 9. The two sentences show that at least one determining factor of the allomorphy is prosodic timing. The reduplicated stem and the incompletive particle have the same number of syllables in both sentences.

8.7 Summary of Verb Classes 1 - 5

Most verb stems in Bangime can be categorized into five classes based on the behavior of the stem with inflectional marking. The table in (248) summarizes the verb stems which have been illustrated thus far.

(248) Summary of Verb Classes 1 - 5

VC	Root	INC	CPL	PRF	PFV	T/I
1	CVg	–ɛ, ɔ, o, a	–ɛ, ɔ, o, a	–u	–ɛ, ɔ, o, a	T
2	CV	root	–r–ɛ, ɔ, o, a	root	root	T
3	CV^{n}	–r̃–ɛ, ɔ, o, a	–d–ɛ, ɔ, o, a	root	root	Both
4	CVn	–d–ɛ, o, a	–d–ɛ, o, a	–d–i	r–a/–d–i	T
5	CVm	–b–i, o, a–r–ɛ, o, a	–b–i, o, a–r–ɛ, o, a	–b–i, o, a	–b–i, o, a(–r–ɛ, o, a)/ REDUP	I

The function of the [–r] suffix, what it contributes to the verb stem, is not known at this time, as it is associated with different tenses and aspects, depending on the verb class. Possible meanings for the suffix are explored in Chapter 9. The incompletive and completive are marked the same on the verb stem, except in classes One and Two and the addition of a nasal in Class Three, showing that the particles differentiate the tense. I hypothesize that the [–r] suffix has allomorphs [r̃ d b], in Verb Classes 3 - 5. The nasalization or nasal from the root accounts for the processes of [–r] assimilation in each case, except for the [d] in VC3.

8.8 Other Verb Types

Most verb roots that are not phrasal verbs, i.e. verbs consisting of more than one stem which are more compositional in nature, can be classified into the above five classes.

8.8.1 [kii] Verbs

Another type of verb has the dummy noun [kii] 'thing' as a direct object, much in the manner that adjectives cannot surface without the dummy noun. As indicated in Chapter 11, the direct object precedes the verb in present tense constructions and follows it in completive aspect constructions. Examples of verbs which necessitate the dummy object are shown in (249), with the inflectional patterns for this type of verb shown in (250).

(249) 'kii' Verbs: 15 Stems

	Stem	Gloss	Related Forms
a.	kɔ́rà ŋ kíì	return	kɔ́rɔ̀ > 'change'
b.	díjà ŋ kí	increase	díjà > 'eat'
c.	témbó ŋ kì	instruct	témbɔ̀ > 'learn'
d.	kʷáà ŋ kíì	able	kɔ́róndī > 'unable'
e.	sóré ŋ kíì	recognize	sórè > 'know'
f.	ségó ŋ kí	pass over, step over	/sege–ro/
g.	jágù ŋ kí	attack	jág–à > 'cut'
h.	búràà ŋ kíì	pay for	búráà > 'go out'
i.	à sáá wɛ̀ ŋ kì	remember	à sáá wɛ̀ > 'to descend'
j.	kɔrɔ a kii	transform	
k.	jémbɛ̀ à kí	flatter, glorify	
l.	dígá kíì nà kɔ́rò wàj	explain	dígà > 'say', kɔ́róndá > 'give advice'

m.	nìgùndù à kíí	console, rest	gúndú > ‘whisper’
n.	níŋù n dá à kì	pacify	nìŋà > ‘say’
o.	té wɛ̀ ŋ kí	forget	téré–wɛ̀ > ‘lost’
p.	dó ŋ kì	leave	dó > ‘bring’

The examples (249a - j) were given in citation form with a nasal preceding [kii] and those in (249j - n) with a vowel. Recall that the alternation between the nasal [ŋ] and the vowel [a] before the dummy noun [kii] is based on the subject; all persons are represented with the nasal except second persons, which require [a]. Certain examples especially that of (249c), lead me to believe that this form is the true causative expression (as compared to the ‘efferential’ discussed in the following chapter).

(250) Inflectional Paradigms : [kii] Verbs

	Gloss	PRF	IMP	INC	FUT	PRF
a.	return	kɔ́rá ŋ kíì	kɔ́rà á kí	dá ŋ kì n kɔ́rɔ̀	ná kí ŋ kɔ́rɔ̀	
b.	able	kẃà ŋ kíì	———	dá ŋ kì kẃà		kẃà ŋ kí ŋ kɛ́ɛ̀

	Gloss	CPL NEG	INC NEG
a.	return	bíé kɔ́rà ŋ kíì	bíé kíì ŋ kɔ̀rɔ̀
b.	able	bíè kẃá ŋ kì	bíè ŋ kí ŋ kẃà

The verbs which take [kii] as an obligatory direct object have the same inflectional marking in the incompletive aspects as in future and imperative mood because the ‘kii’ verbs’ TAM category does not depend on inflectional marking but on word order. The verbs with ‘kii’ can be compared to the verbs take obligatory cognate accusative direct objects, shown in Chapter 12, since those are verb/cognate noun stems. Examples of a verb with the [kii] morpheme is shown in Chief 2.1, 5 to utilize the [kii] morpheme even if an object is present. Further, the noun

phrase as an object is shown to appear after the verb stem and before the [kii] morpheme, which illustrates that the morpheme is not bound to the stem.

8.8.2 Unclassified Verbs

Although the majority of verbs pattern in one of the ways described above, other verb stems change in ways that are not consistent with any of the five categories. Some verbs, such as those listed in (251), do not change segmentally in any TAM category.

(251) Verbs with no Change

	Gloss	Incompletive	CPL/PFV	Perfect
a.	resemble	dógɔ̀nó	dógɔ̀nó	——
b.	look	súràà	súráà	——
c.	prepare, repair	ŋùwà	núŋà	núŋà ŋ kɛ́ɛ̀
d.	grill, burn	síwɔ̀	síwɔ̀	síwɔ̀ ŋ kɛ́ɛ̀
e.	blow	píjù	píjù	píjù ŋ kɛ́ɛ̀

Verbs (251a - b) cannot be used in the perfect aspect. The others are transitive, but have no morphological change on the verb stem in any aspect and are only differentiated by the particles used in the phrase. The verb (251c) changes the intervocalic consonant [ŋ ~ w] in seemingly free variation.

Two other stems, shown in (252), have a syllable shape similar to those in VC2 but without suffixation.

(252) Possible VC2 Stems

	Gloss	Incompletive	CPL/PFV	PRF/STAT
a.	go out	bírè	bírè	bírè wàj
b.	take	síè	síè	síè ŋ kɛ́ɛ̀

Examples of verbs which could be categorized as VC4 stems, although they do not take the same suffixation as those above, are listed in (253).

(253) Possible VC4 Stems

	Gloss	Incompletive	CPL/PFV	Perfect
a.	dig	kíndū	kíndū	kíndú ŋ kɛ́è
b.	wait	déŋˈgó	déŋˈgó	déŋgó ŋ kɛ́è
c.	enter	mínˈdé	mínˈdé	mínˈdé

Other verbs, with examples in (254) and (255), somewhat resemble those in VC1, but there are significant differences, such as the suffixation of [r] in the incompletive and completive aspects (254a) and in the perfect and stative forms (254b).

(254) Possible VC1 Stems

	Gloss	Root	INC/CPL/PFV	PRF/STAT
a.	run	tig	tíg–í–r–ì	tìg–è wàj
b.	shatter	pen	pɛ́n–d–ìɛ̀/ pɛ́n–d–ū	pɛ́n–d–ú wɛ̀
				pé–rɛ́–nd–ì ŋ kɛ́è

The intransitive verb ‘run’ can also be represented as [tigi] in the perfective aspect. Examples of the usage of the various forms of ‘run’ are found in Text XII, Tiga 2.94 - 97. The second example, /pen/ ‘shatter’, follows the suffixation patterns as those above, but is not [g] or [–r] final in the root. It is an intransitive verb.

Two verbs shown in (255) pattern similarly to the verbs in VC1 in that the suffix [a] or [u] appears in the incompletive and completive, and the root vowel appears with the default stem. These roots differ from those in VC1 in that they are vowel-final.

(255) Possible VC1 Stems

	Gloss	Default	PRF
a.	eat	díj–à	dìí ŋ kɛ́ɛ̀
b.	respond	kìj–á	kîì wàj
c.	ripe, ready	bìj–ú	bîì wàj
d.	give	náẁ	nìí ŋ kɛ́ɛ̀

The verbs are vowel-final as seen in the perfect aspect (255a) or stative (255b - c). These stems differ from those in VC1 in that the [a] or [u] suffix does not pattern in the expected manner shown above. The verb /bi/ ‘ripe’ or ‘ready’ is intransitive and /di/ ‘eat’ is transitive. Another vowel-final root is /ni/ ‘give’ (255d) with representative examples in Chief 7.12, 14, 30.

One verb is shown in (256) that patterns in a similar manner to those in Verb Class Three, but the roots differ. The verb is commonly used in the language, and it has multiple meanings, including ‘rub’ and ‘clean by scrubbing’, that pattern similarly to those found in VC3, but it is not nasalized on the final vowel. The verb /gija/ ‘scrub’ is transitive and appears with the [–r] suffix only in the incompletive.

(256) Possible VC3 Stem

Gloss	Incompletive	Default	Perfect
scrub	gíjá–r–à	gíjà	gíjà ŋ kɛ́ɛ̀

Other verbs with meanings that are similar to those in VC5, in that they are stative verbs, are shown in (257). These verbs also have roots which end in bilabial nasals, but they pattern differently than those shown above with respect to the suffixation of [–r]. The only verb among these that suffixes the [–r] is (258c), and then only in the incompletive.

(257) Possible VC5 stems

	Gloss	INC/CPL	PFV	PRF/STAT
a.	fold	dɛ́m–b–ìɛ̀	dém–b–ì	dém–b–ì wɛ̀
b.	roll, turn	góm–b–íè	góm–b–íè	gòm–b–è/i ŋ kɛ́ɛ̀
c.	search, wander	kúm–b–ó–r–ò	kúm–b–ó kúm–b–ò	kúm–b–ò ŋ kɛ́ɛ̀
d.	carry (child) on one's back	kúm–b–ò	kúm–b–ò	kúm–b–ò ŋ kɛ́ɛ̀

Most verbs are not homophonous in the same aspect, but 'search' and 'carry on one's back' is an exception.

8.9 Summary of Verb Types

Whereas noun stems have very little morphology, much of which is obligatory or frozen, verb stems in Bangime have elaborate morphological processes. However, as shown in the following chapter, not all of the morphological processes are easily parsable into form and meaning.

Chapter 9. Case Studies in Derivational Processes

9.1 Introduction

Most derivational processes in Bangime that affect verbs are no longer productive and are usually not transparent. Verb stems which are similar in shape and meaning are examined in this chapter with respect to their use of suffix [–r–]. We will see that deixis, place and motion salience, and valency are some relevant factors in understanding the role(s) of [–r–].

9.2 Motion Verbs

There are three sets of verbs with a similar shape: *bu*- stem verbs, *mu*- stem verbs, and *pu*- stem verbs, each with a bilabial consonant followed by a high vowel, all of which relate to motion.

(258) Perfective Stems for /bu/ Verbs (non-deictic)

a.	Intransitive	baa	go away
b.	Intransitive	bu–r–aa	move away from (salient motion)
c.	Intransitive	buu^{n}	move out of or away from; move into
d.	Transitive	m bun–d–a	take out
e.	Intransitive	bire	exit (culminative)

(259) Perfective Stems for /mu/ Verbs (deictic)

a.	Intransitive	muu^{n}	come in(side)
b.	Transitive	m mun–d–a	put in(side)
c.	Intransitive	minde	enter (culminative)

(260) Perfective Stems for /pu/ Verbs

a.	Intransitive	puu^{n}	sprout
b.	Transitive	m pun–d–a	weed, pull out

In the previous chapter, verb stems were organized into five main classes, largely based on the patterns of suffixation of an underlying /–r–/ with an unspecified meaning. The suffix [–r–] is found after vowel-final roots in the completive aspect. A nasalized allomorph [–r̃–] occurs after a root that ends in a nasalized vowel in the incompletive aspect but as [–d–] in the completive aspect. In roots which end in an alveolar or a bilabial nasal consonant, the

allomorphs [–d–] and [–b–] occur, respectively, in all TAM forms. The [–r–] suffix is not productive; most verbs in which [–r–] is found do not have stems with unsuffixed counterparts.

9.3 [–r–] Suffixation: Motion Salient

There is one verb which does have a basic stem and an [–r–] suffixed stem which can be used interchangeably, as shown in the sentences in (261).

(261) [baa] ‘go away’ vs. [buraa]

a.

n	níí	kɔ́ò	bàà	bóŋgɔ́–rò .
~2	PL	CPL	go away–RV	Bongoro

They went away from Bongoro.

b.

n	níí	kɔ́ò	bú–r–àà	bóŋgɔ́–rò .
~2	PL	CPL	go away–r–RV	Bongoro

They went away from Bongoro. (Chief map 13.1)

It was shown in §2.2.4 that there are no monosyllabic Bangime words with non-nasalized high back vowels. Thus, I analyze the stem [baa] as the counterpart of [bu–r–aa].[49] The same speaker gave both forms with the same translation, ‘go away from’. While the meaning of [–r–] is still not completely clear, with further examples shown in this chapter, I propose that the suffix contributes the meaning ‘salience of motion’. As shown in the sentences in (261), the forms [baa] and [bu–r–aa] are only interchangeable in the completive and incompletive aspects; in the perfective, only [bu–r–aa] is used, and neither is used in the perfect.

Another use of the non-suffixed form [baa] ‘go away from’ is [báámà], a coalesced form of the verb [baa] plus the word [ima] ‘here’, said to children or others to ‘go away from here’. Further examples of the use of [bu–r–aa] to mean ‘move away from’ are found in Chief 1.5, 13, Chief 7.8, Chief 7.52, and Tiga 1.1. The meaning of the stem [bu–r–aa] can also be changed to

[49] Historically, this was probably bu-a, which became bwaa > baa.

mean metaphorically ‘come from’, as shown in (262). In this case, the word order is S-LOC-V, as opposed to S-V-LOC in the previous examples.

(262) Sentence with [bu–r–aa] meaning ‘come from’

nníí	mmándé	m	bú	–r	–àà
3.PL	Mande	T	move	–r–	RV

They come from Mande. (Origins of Bangande)

In this sentence, the focus is on the place of origin rather than on the motion, as was the case for the sentences shown thus far.

9.4 Nasalization: Place Salient

A third verb related to *baa* and *buraa* is *buu*^{n}, which has a nasalized vowel. I propose that this nasalization found on some verb stems, those in Verb Class Three, was once a productive derivational process that has now become a lexicalized or frozen attribute of those stems. Just as [baa] and [bu–r–aa] appear to be used interchangeably to mean ‘go away’ in the completive aspect, the sentences in (263) ostensibly illustrate that [buu^{n}] may be exchanged for [bu–r–aa] in the perfective aspect. However, note that these two sentences are sequential in the text, suggesting a subtle semantic difference.

(263) [buu^{n}] ‘move out of, away from, into’

a.

n	níí	bùù^{n}	dàà^{n} .
~2	PL	move from	Daan

They have moved away from Daan.

b.

n	níí	bù–r–àà	dàà^{n} .
~2	PL	go away–r–RV	Daan

They have gone away from Daan. (Chief 7.14 - 15)

Although the speaker provided the same translation in both cases, I propose that a subtle difference actually exists; while suffix [–r–] appears to place salience on the motion of the action, nasalization appears to place salience on the place. Although both verbs denote motion away from a place, the first example (263a) places more salience on place or source of the motion, (263b) more salience on the motion itself. Thus, in this text, the first sentence could be translated as, "we came from *Daan*", and the second, "we *came* from Daan".

The form [buuⁿ] is a Verb Class Three stem, which means that it is suffixed with [–r–] in the completive aspect, shown in (264).

(264) Completive Aspect [–r̃–]

kàmá	–H	bú	–r̃	–à	ŋ	wí
CPL	3	move	–r–	INC	GEN	PP

He [the ancient king] moved away from *there*. (Chief 3.51)

Whereas both [baa] and [bu–r–aa] can be used in the completive aspect with the same translation, only the suffixed form of [buuⁿ], [bu–r̃–a] is used in the completive aspect. The difference between [bu–r–aa] and [bu–r̃–a] is that, in addition to the nasalization, a low vowel [a] often appears as long after [r], but not after nasalized [r̃].

Another difference lies in the use of the imperative. The form [báámà] means 'go away from here', but the imperative of [búúⁿ] means 'go into' if both speaker and listener are standing outside. Additional examples from narratives of [buuⁿ] are Chief 2.2, Tiga 1.9, 11.

9.5 Inflectional Paradigms

In Chapter 8, the inflectional verb category was shown to be predictable in its suffixation patterns within the TAM categories. I propose that the underlying verb root /bu/ surfaces as [baa] due to restrictions on high back oral vowels in monosyllabic words. The stem [baa] is the base to which [–r–] attaches and/or nasalization is applied. Because these processes are no

longer productive, the verb shape determines its inflectional patterns and therefore verb class. The paradigms for each stem related to [baa] are shown in (265) - (266).

(265) [baa] ‘go away from’, [bu–r–aa] ‘move away from’

Gloss	INC	CPL	PFV	STAT
go away from	báà	báà	báà	———
move away from	bú–r–àà	bú–r–àà	———	———

(266) Verb Class Three [buuⁿ] ‘move away from’

Gloss	INC	CPL	PFV	STAT
move away from	búùⁿ	bú–r̃–à	búùⁿ	búúⁿ–wàj

9.6 Root-Initial Consonant Nasalization: The case of [muuⁿ]

The examples in (267) illustrate that [muuⁿ] is always used deictically to mean ‘come in’ to where the speaker is located.

(267) Sentences with [muuⁿ] ‘come in’

a. múúⁿ
come in.IMP
come in! (when speaker is inside)

b. múúⁿ–wàj
come in–STAT
s/he came in

c. tùréɛ́ bíè mú –r̃ –á ímà
hyena NEG enter –r– RV here

Hyena does not come inside here (the village).
(Why Hyenas do not Come into Bounou.6)

The first sentence (267a) is the imperative form of the verb [mmuⁿ]. When the speaker is inside, s/he says [múúⁿ] to tell a person to ‘come in’. Because the verb is intransitive, the perfect aspect is formed with the stative suffix (267b), rather than the perfect particle [kɛ́ɛ̀]. In an incompletive sentence (267c), the suffix [–r–] is added to the verb root /muⁿ/. The nasalization from the verb root is spread onto the suffix so that it surfaces as [–r̃–].

9.6.1 Inflectional Paradigm for [muu^{n}]

As shown in Chapter 8, verb stems are organized into five main classes based on the inflectional marking on the verb stem. The stem [muu^{n}] is in Verb Class Three.

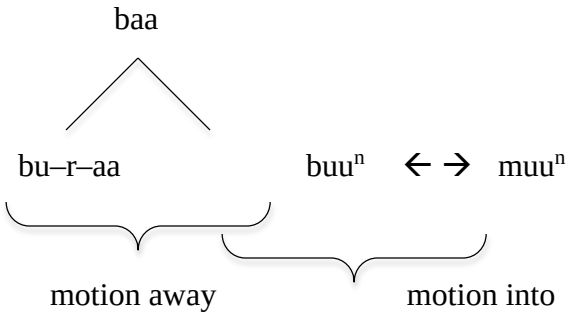
(268) Inflectional Marking on [muu^{n}]

Gloss	INC	CPL	PFV	STAT
come in(side)	mù–r̃–á	mù–r̃–á	múú^{n}	múú^{n} wàj

9.7 Summary of bu- and mu- verbs

We can summarize the differences between the *bu-* and *mu-* verbs seen so far in the following way. The *bu-* verbs are non-deictic. The verb *baa* is a neutral form meaning motion away. The verbs *bu –ra–aa* and *buu^{n}*, both derived historically from *baa*, also indicate motion away, but the former places salience on the source, the latter on the motion. The verb *muu^{n}*, which appears to be derived from *buu^{n}* via nasalization of the initial consonant, is deictic, denoting motion into and toward the speaker; *buu^{n}* is now its non-deictic counterpart. These are shown in (269).

(269) Motion Verbs



9.8 Transitive Nasal

In addition to the processes the suffixation of [–d–] and the nasalization of the verb root vowel, another way of changing the meaning of these verbs is to add a nasal to the beginning and to the end of the verb root. Class Four Verbs are transitive with final nasal segments. The Class Three stem [buu^{n}] has a Class Four counterpart [m bun–d–a], with examples shown in (270).

(270) [bun–d–a] ‘take out’

a. há jíí à búùⁿ
until blood CHN move out

Until blood had come out. (Chief 2.24)

b. n dàà kéɛ́ m bùn–d–à
~2 INC thing T take–r–RV

I am taking something out.

Shown in the sentence (270a), the verb [buuⁿ], in addition to ‘move out’, may also mean ‘come out’. The verb [buuⁿ] not only indicates motion away, it also indicates motion out of. The transitive counterpart of this verb (270b) means ‘take out’. Further examples are shown in (271).

(271) Sentences with Verb [m bun–d–a]

a. m bún –d –ī kìɛ̀ ŋ kéɛ̀
~2 take –r– PRF branch ~2 PRF

It [the tree] grew [caused to come out] took out a branch.

b. à gɔ́ndí+mɛ̀ m bún –d –ī màá súɥɛ̀ ŋ kɛ́ɛ̀
DEF caracal T take –r– PRF 3.POSS breast ~2 PRF

The caracal had taken off its udder. Chief 10 21:1

c. nnìɛ̀ ʒìɛ́ húⁿ mɛ́ =nɛ̀ dá à kàsó ŋ kò
yesterday night PP COMP PL INC DEF jail GEN PP

nníí m bún –d –ī n dégé ŋ kɛ́ɛ̀
3.PL T take –r– PRF ~2 himself ~2 PRF

Last night, those who were in jail took themselves out [escaped]. (Short Lang Profile: 38)

Recall that transitive verbs are preceded by a nasal. I propose that the transitive nasal is added to the verb [buuⁿ]. An additional nasal segment appears in the verb root. I propose that the initial nasal, the transitive nasal, spreads its manner to the nasalized final vowel of the stem so that the [uⁿ] becomes [n] and that [r] becomes [d] following the stop to form the transitive.

9.8.1 [m mun–d–a] ‘put in(side)’

Just as the transitive of [buu^{n}] is [m bun–d–a], the transitive form of [muu^{n}] is [m mun–d–a]. The verb [m mun–d–a] ‘put in’ is also a VC4 transitive stem. An argument is added so that the meaning of the verb changes from ‘come in’ or ‘move into’ to ‘put (something) in’.

(272) Sentences with [m mun–d–a] ‘enter, put in’

a.	à	tómpà	ŋ	kò	mɛ́	m	mún	–d	–à
	DEF	window	GEN	PP	COMP	T	enter	–r–	FV

The window through which he has entered. (Dahl 1985: 60.1)

b.	à	bíè	kʷáá kí	m	mún	–d	–ì	kòɔ̀kɛ́
	2.S	NEG	able	T	put	–r–	PRF	shoe

há	ɥíɛ́	kʷáá kí	ɥíɛ́	dʷàà	hù^{n}
IRR	ascend	able	ascend	tree	PP

You cannot wear shoes to climb a tree. (Adama 07: 3.1)

c.	nníí	kɔ́ò	m	mún	–d	–à	à	bíréɛ̀	à	síɛ̀	ŋ	kò
	3.PL	CPL	T	put	–r–	RV	DEF	fire	DEF	firewood	GEN	PP

They put the firewood in the fire. (Rabbit and Hyena 1: 40.1)

In the case of the verb root [muu^{n}], the transitive nasal is added to an intransitive verb and changes its meaning. Although both verbs [muu^{n}] and [mu–nd–a] are translated in the examples above to mean ‘enter’, the transitive stem may also mean ‘put in’ or ‘make enter’, suggesting a causative relationship.

Further examples from narratives of the verb stem [mun–d–a] translated as ‘put in’ are used to refer to installing gutters (How to Build a House: 11.1) and the storing of millet (Rabbit and Hyena 1: 11.1).

The inflectional affixation patterns for [buuⁿ] and [muuⁿ] differ from those for [m bun–d–a] and [m mun–d–a]. The nasalized roots are in Verb Class Three and the roots with nasal codas are in Verb Class Four, thus the suffixation differs. This further supports the hypothesis that the five verb classes were historically grouped according to the meaning of the verb stem, which was marked on the verb root through derivational consonant and vowel changes. Inflectional paradigms for these two stems are comparable, as shown in (273) - (274).

(273) Verb Class Four [bun–d–a] 'take out'

Gloss	T	INC	CPL	PFV	STAT
take out	m	bún–d–à	bún–d–à	bún–d–ì	bún–d–ì ŋ kɛ́ɛ̀

(274) Verb Class Four [mun-d-a] 'put inside'

Gloss	T	INC	CPL	PFV	PRF
put in(side)	m	mú–nd–à	mú–nd–à	mú–nd–ì	mú–nd–ì ŋ kɛ́ɛ̀

9.9 High Front Vowel: Culminatative Verbs

One further process derives a verb whose use and function can be considered 'culminative'.

(275) [bire] 'exit.CUL

à	nàà	kíɛ̀	=ndɛ́	nîì	bíré	–wàj
DEF	wilderness	thing	PL	3.PL	go out	STAT

The wild animals go out. (Movie 1.3)

This was the only example of the verb [bire] 'go out', but the verb stem [minde] 'enter' is an intransitive verb stem, which, similar to [bire], does not change its suffixation in any TAM category. The stem [minde] is found with animals (hyena and lion) as subjects entering a cave (Adama 07: 59), a human entering a forest (Chief 10: 18), a caracal entering among goats (Chief 10: 3), bees entering a beehive (Beehive: 44), a man entering a house (Tiga 2: 107), and a rabbit putting something inside his mouth (Rabbit and Hyena 1: 30). Since each of these examples

involves human and animal subjects, as do the examples shown thus far for [m mun–d–a], it would be tempting to suggest that it is the object or place being entered that determines the verb used. However, because the sentences in (276) refer to the same objects, the choice of verb must be based on something else.

(276) Sentences with [minde] ‘enter’

a.	ná	m	mún	–d	–ì	há	máá	níí	míndè
	COND	T	enter	–r–	PRF	IRR	3.S.POSS	hand	enter

Once it [the smoke] has entered [the apiary], they put their hands in [the apiary]. (Beehive: 11.1)

b.	ŋ	káẁ	náá	m	mún	–d	–á
	~2	able	INC	T	enter	–r–	INC

míndè	à	mìrò	m	páɣá	ŋ	kò
enter	DEF	bee	GEN	container	GEN	PP

We are able to put [our hands] inside the apiary. (Beehive: 44.1)

The verbs [bire] above and [minde] here are both used almost exclusively in combination with another verb, and always after an event has taken place. These verbs are considered to have a ‘culminative’ meaning; they conclude an action that has taken place.

The inflectional paradigms for these verbs are shown in (277) - (278).

(277) Inflectional Marking on [minde] ‘enter.culminative’

Gloss	INC	CPL	PFV	STAT
enter.CUL	míndè	míndè	míndè	míndè–wàj

(278) Inflectional Marking [bire] ‘exit.culminative’

Gloss	INC	CPL	PFV	STAT
exit .CUL	bí–r–è	bí–r–è	bí–r–è	bí–r–é–wàj

9.10 Root Initial Consonant Devoicing: Direction

The final set of roots to be examined comprises the verbs [puu^{n}] ‘sprout’ and [pun–d–a] ‘weed’. These are comparable to [buu^{n}] and [muu^{n}], but involve a slightly different type of motion.

9.10.1 [puu^{n}] ‘sprout’

The verb [puu^{n}] ‘sprout’ is an intransitive Class Three stem, like [buu^{n}] ‘move out’ and [muu^{n}] ‘come in(side)’. An example of its usage is shown in (279).

(279) Sentence with [puu^{n}] ‘sprout’

à	déémɛ̀	púú^{n}–wàj
DEF	millet	sprout–STAT

The millet sprouted.

As with the verbs above, the transitive, Verb Class Four counterpart of [puu^{n}] ‘sprout’ is [pun–d–a] ‘weed’.

9.10.2 [pun–d–a] ‘weed’

The same process of transitivization as shown above changes the valency of the verb. An example of the use of the transitive verb in the perfective aspect is shown in (280).

(280) Sentence with [pun–d–a] ‘weed’

àdámá	m	pún–d–à	gǔʒéɛ̀.
Adama	T	weed–r–RV	weed

Adama has pulled weeds.

An additional difference between the verbs of the [pu] set is in the inflectional marking.

9.10.1 Inflectional Marking

The verbs ‘weed’ and ‘sprout’ are in the inflectional classes Four and Three respectively. The verb ‘sprout’ (281a) follows the expected pattern for a Verb Class Three stem. The verb ‘weed’ (281b) has an additional [–r–] suffix in the perfect aspect.

(281) Inflectional Marking on [puuⁿ] and [pun–d–a]

	Gloss	T	INC	CPL	PRF	PFV-STAT
a.	sprout	–	pú–r̃–à	pú–nd–à	púùⁿ	púùⁿ wàj ~ púw̃è
b.	weed	m	pún–d–à	pún–d–ì	pún–d–á–r–à	pún–d–ì ŋ kɛ́è

Shown in §8.5 and §8.6, some verbs in Class 4 and 5 necessitate an addition [–r–] suffix. The reason for the additional [–r–] suffix is yet to be determined.

9.11 Summary of *bu-*, *mu-*, and *pu-* verbs

Three sets of verbs which relate to movement begin with a bilabial consonant and a high vowel. The most basic of these three sets of verbs is [baa] ‘go away from’. From examining the difference between (282a) [baa]’go away from’ and (282b) [bu–r–aa] ‘move away from’ I hypothesize that a once productive process derived a salience on motion by the suffixation of [r]. Another once productive process, nasalization of the final vowel of the verb root, focuses the salience on the place as the verb (282c) [buuⁿ] ‘move out of’ exemplifies. The fact that the verb which is considered a culmination of the previously described events (282d) does not alter its suffixation in any TAM category speaks to the once productive derivational properties of [r] and nasalization on the verb root. The transitive morpheme, (282e) [m bun–d–a] ‘take out’, is a somewhat productive process in which a nasal precedes and follows a verb root and adds an argument. The proposed reversive is more precisely analyzed as a change in deixis. The nasalization which changes the root-initial consonant to a nasal from a plosive (282f) [muuⁿ] ‘come in’, adds a deictic meaning to the stem. The culminative and transitive counterparts (282g - f) have changed the root-final nasalized vowel to a nasal coda. Finally, the initial consonant is devoiced (282i - j) and the direction of movement is one of up and down rather than in and out. Further, the fact that the root /mu/ indicates movement ‘to the inside’ and the root /bu/ ‘to the

outside’ could be significant since the locative prefix commonly found among Bantu languages /mu–/ means ‘into, inside’.

(282) Case Study One Verbs

	Gloss	T	INC	CPL	PFV	PRF-STAT
a.	go away from	–	báà	báà	báà	———
b.	move away from	–	bú–r–àà	bú–r–àà	———	———
c.	move out of	–	bú–r̃–à	búùⁿ	búùⁿ	bú–r̃–à
d.	exit.CUL	–	bírè	bírè	bírè	bírè
e.	take out	m	bún–d–à	bún–d–ì	bún–d–ì	bún–d–à
f.	come in(side)	–	mù–r̃–á	múúⁿ	múúⁿ	mù–r̃–á
g.	enter.CUL	–	míndè	míndè	míndè	míndè
h.	put in(side)	m	mún–d–à	mún–d–ì	mún–d–ì	mún–d–à
i.	sprout	–	pú–r̃–à	púùⁿ	púùⁿ	pún–d–à
j.	weed	m	pún–d–à	pún–d–ì	pún–d–á–r–à	pún–d–ì

Other verbs which encode deixis are verbs of ascending and descending as follows: [sɥèè] ‘descend’ (if both speaker and listener are above), and [sáàⁿ] ‘descend’ (if the speaker is below and the listener is above), ɥìɛ̀ ‘ascend’ (if both speaker and listener are below) náẁ ‘ascend’ (if the speaker is above and the listener is below). The verb [ɥìɛ̀] ‘ascend’ is used with the [r] suffix one time, in a text, Chief 8.7. Other verbs which could be considered to be related by the once productive processes described above are shown in (283).

(283) Verb Pairs

	Gloss	T	INC	CPL	PFV	PRF-STAT
a.	sit	–	tíè	té–r–ò	tíè	tíè
b.	get up	–	ʒíè	ʒé–r–ò	ʒíè	ʒíè
c.	start	n	tìn–d–á	tìn–d–á	tìn–d–á	tín–d–ì
d.	stand, stop	n	dìn–d–á	dìn–d–á	dìn–d–á	dín–d–ì
e.	cold	–	jím–b–ò	jím–b–ō RED	jíìⁿ	jím–b–ì
f.	cool, turn off	n	dʒì–ǰ–ɔ́	dʒím–b–ō	dʒíìⁿ	dʒì–ǰ–ɔ́

A change in initial consonant is seen between the forms (283a) [tie] ‘sit’ and (283b) [ʒie] ‘get up’. One verb expresses movement which is the opposite of the other, as are (283c) [tin–d–a] ‘start’ and (283d) [din–d–a] ‘stand, stop’. Further, the second pair are the transitive counterparts of the first pair. The final pair (283e - f) are in an intransitive and transitive relationship. The verb [ɛíéndɛ̀] ‘ignite’ which also means ‘turn on’ bears no relation to the verbs shown above in the manner described thus far.

9.12 Case study two: Causative or Efferential

Newman (1983) presents evidence for a morpheme in Hausa which had been interpreted as giving a causative meaning being better glossed as efferential, meaning "action away". The verb pairs he presents from Hausa have a relationship of action away from the referent.

In Bangime, a somewhat productive process derives the efferential from a verb stem in the completive aspect with the addition of [–nd–]. The addition of the efferential suffix resembles that of the addition of the transitive. A nasal precedes and follows the verb root so that the suffix, proposed to be also underlying [r], becomes [d]. The stem is then inflected following the Class Four pattern described above. It should be noted, however, that the verbs listed as inherent VC4 stems above are not analyzed as efferential stems derived from roots. Examples are given in the following tables based on the vowel of the verb root. Because the additional suffix is attached to the stem, rather than the root, the final vowel of the entire stem is determined, not by the root vowel, but by the stem final vowel.

(284) $CV_{[MID]}$

	Root	Class	Gloss	Incompletive		Efferential	Gloss
a.	ne	2	drink	nnìè	aa.	nnín–d–ɛ̀	give to drink
b.	gwe	—	move away	gúwɛ̀	bb.	gúwɛń–d–ɛ̀	separate, halve
c.	de	3	send	dɛ̀–r̃–é	cc.	dɛ́–r–én–d–à	cause to send

d.	pe	2	put	píè	dd.	pín–d–ò	put upon
e.	bi	3	lay	bí–r̃–á	ee.	bín–d–ò	lay out
f.	muwɔ	—	wet	mmúwɔ̀	ff.	mùwɔ́n–d–á ~ múwɔ́n–d–ò	soak
g.	tiŋgo	—	wake up	tíŋ!gó	gg.	tíŋgín–d–á ~ tíŋgón–d–ó	wake s.o. up

Roots whose final vowels are mid and front are suffixed with a mid front vowel as the root vowel (284a - b) and the final vowel of the stem (284aa - bb). Then, in words with longer stems, such as (284c), the vowel which follows the efferential suffix is a default low vowel (284cc). Verb Class Two roots with [+ATR] vowels were shown in §8.3 to take a root vowel which has the opposite value in backness as the root; the same is true for the efferential stem (284dd). The pattern (284e) is unexpected.

(285) $CV_{[HI]}$

	Root	Class	Gloss	Incompletive		Efferential	Gloss
a.	di	1–?–	eat	díj–à	aa.	dìj–àn–d–á	feed
b.	tig	1–?–	run	tígì	bb.	tíg–ín–d–á	drive
c.	pi	3	fear	pìr̃–á	cc.	pí–r–ún–d–ú	make afraid

The stems with high vowels (285a - c) suffix a default low vowel a vowel (285aa - bb) or a vowel with the same height and backness as the final vowel of the stem (285cc).

(286) $CV_{[LO]}$

	Root	Class	Gloss	Incompletive		Efferential	Gloss
a.	sa^{n}	3	descend	$sáá^{n}$	aa.	sàn–d–á ~ sáwɔ̀n–d–ò	drop
b.	kar	—	learn, study, read	káràà	bb.	kár–án–d–á	teach

Low vowel roots suffix a low vowel (286a - bb), unless the stem ends in a mid vowel as is a possible variation for (286aa).

Examples from narratives further illustrate the meaning of the stem. The examples (284d) ‘put’ and (284dd) ‘put upon’ with usage shown in the narrative Text XII, Tiga 2.106, show that the difference between the two verbs is one of valency. There is one example of the verb [diga] ‘say, talk’ as [diŋgi–nd–a], translated as ‘repeat’ (Tiga 1.156). Another, Text XII, Tiga 2.6 is an example of ‘eat’ marked with [nd] yet it does not translate as ‘feed’ as (285a) above, and in Line 52 of the same narrative the word [pɛre] ‘lead’ has the counterpart [pɛre–nd–i] ‘explode, shatter, burst, smash’. This semantic relationship is one of going out or away from. Further, the example above (284b) /guwɛ/ ‘move away’ is likely related to the VC1 root /guɥ/ ‘throw’, which provides further evidence for the difference in verb class being one of derivational affixation. Another example of the efferential morpheme is Tiga 1.34.

9.13 Case study three: Nouns from Verbs

The third use of a semi-productive suffix [–r–] is to derive verbs from nouns. It was noted in Chapter 3 that many nouns with [–r] suffixes could also be used as verbs. In (287) are verbs which are derived from nouns. It should be noted that all the verb stems have an [–r] suffix in them, or an allomorph of the [–r] such as [d] (287aa - bb).

(287) Nominal Verbs

	Stem	Noun		Stem	Verb
a.	kóɔ́–rì	war	aa.	kórón–d–à	make war
b.	gìè–nɛ́	broom	bb.	gìɛ̀n–d–í	sweep
c.	díɛ́+bíɛ̀	ax	cc.	díɛ́–rɛ̀	carve
d.	túm+bíè	message	dd.	tú–r̃–à	send

e.	tém+bìè	brick	ee.	tém+bí–ré	hammer
f.	kám–b–á–rā	pliers	ff.	kám–b–á–rā	pull out a splinter

Note that not all semantically related verbs have any segmental similarity, or that the similarity is the same as the above described patterns. Some related verbs are shown in (288).

(288) Other Relationships

	Stem	Gloss		Stem	Gloss
a.	bímbó	slightly	aa.	jímbò	slowly
b.	déɛ́–rè	sweet	bb.	déɛ́–rù	sour
c.	kágájà	scratch (by smth else)	cc.	kǒgɔ́ʒɔ̀	scratch oneself, rake, rub
d.	kúbújá	squeeze	dd.	kùgùjà	crumple (paper or clothing)
e.	kówɔ́n–d–ò	dry	ee.	mógón–d–ó	wet

While the changes in vowels and consonants seem to correspond with roots with similar meanings and form in the above verb stems, patterns are not productively found in the language.

9.14 Overview of Affixation on Verbs

It was shown in the previous chapter that verb stems are grouped into verb classes according to the suffixation patterns in inflectional categories. However, there are suffixes which have been difficult to accurately gloss. In this chapter, possible meanings of the [–r] suffix were provided. The [–r] suffix has been glossed as efferential following Newman's (1983) discussion of efferential meaning that so-called causatives in Hausa seem to indicate that an action away from the speaker. The same process of an action away from the speaker is found in the relationship between the verbs which are suffixed with [d], although not [r] (cf. the discussion of verbs of movement). The meaning of the [–r] suffix on nouns may also be related to the [–r] suffix on verbs since many nouns with the [–r] suffix are verbal nouns.

Chapter 10. Verb Particles

10.1 Overview of TAM Particles

In addition to inflectional suffixation based on verb category (shown in the previous two chapters), the TAM category of a clause is further specified by verb particles. As shown in the previous chapters, each tense and aspect particle is paired with inflectional marking on the verb stem, and each verb class has its own set of inflectional patterns. Most verb particles directly precede the verb except the perfect clitic and the stative suffix. The future marker is an allomorph of the incompletive, but follows rather than precedes the verb. The verb particles are listed in (289).

(289) Verb Particles

Tense	Aspect					Mood		
FUT	INC	CPL	PFV	PRF	STAT	IRR	PROH	IMP
=/daw/	/daw/=	/kama/=	∅	=kɛ́ɛ̀	–/waj/	ha=	maa=	∅

The verb particles that indicate tense is the future. The verb aspects indicated by particles are incompletive (INC), completive (CPL), perfect (PRF) and stative (STAT). The verb moods are the irrealis (IRR), prohibitive (PROH), and imperative (IMP). Examples of each verb particle are given in this chapter. The perfective is unmarked by any particles. Because the incompletive aspects and aspects are all marked with the verb particle /daw/, they are presented together in §10.3. In §10.4 the completive aspect and completive aspect markers are discussed. The modal categories are shown in §10.5. The copula is shown in §10.6. In the interest of descriptive completeness, question particles are presented in §10.7. Most of the examples used in this chapter involve the verb ‘cultivate’. Supplemental examples are from narratives.

10.2 Perfective Aspect

The simplest form of a sentence is tentatively glossed as the perfective aspect. The perfective is expressed solely by the verb stem and the placement of constituents within the phrase, without TAM auxiliaries.

(290) n déɛ́ déɛ̀ .
1.S millet seed cultivate

I have cultivated.

The verb /de/ ‘cultivate’ is a VC2 stem (Chapter 8) and takes ‘millet seed’ as an obligatory object (290). Certain verbs, such as /de/ ‘cultivate’, shown in Chapter 12, require a cognate accusative i.e. a noun derived from the verb. The perfective word order is SVO. Illustrated in Chapter 11, the word order of the sentence also changes based on the TAM of the clause. The reason the gloss of the aspect is tentative is that examples from narratives comparing the ‘perfective’ to the completive aspect such as Chief 7.2 and 4 make determining the exact definition difficult. The same verb is used, with the same suffixation on the verb, and may be even glossed the same. Thus, the term ‘perfective’ and ‘completive’ are used in this dissertation with the matter of refining the definition left to further research.

10.3 Incompletive Particle /daw/

All incompletive clauses are marked with the particle /daw/. The placement of the particle within the sentence helps to determine the tense or aspect of the phrase. The incompletive aspect or incompletive particle has several allomorphs: [n da] ~ [na] [naw] ~ [na] and [daw] ~ [da]. The incompletive particle allomorphy is based on the subject of the sentence so that /na/ becomes [da] after the non-second person nasal as in examples, [n da noo] ‘I am coming’, [a na noo] ‘you are coming’, but there are exceptions.

10.3.1 Incompletive Aspect

When the incompletive particle /daw/ precedes a verb, the clause is interpreted to be in the incompletive aspect. In an incompletive clause, the subject is marked by a phrase-initial nasal for non–second persons, and the transitive nasal marker precedes a transitive verb. The verb agrees with the subject for person by tonal marking. The inflection on the verb differs for each verb class; (291) is with a VC2 stem.

(291) n dàá déɛ́ n dèɛ̀ .
1.S INC millet seed 1.S cultivate

I am cultivating.

(292) n dáà n dèɛ́ .
1.S INC T cultivate

I cultivate.

The verb in (259) is not marked with the [–r] suffix, which, in VC2 stems, marks the completive aspect. Therefore, the particle /daw/ indicates that the clause is in the incompletive aspect, and the lack of [–r] suffix shows that the verb stem is also in the incompletive aspect. The presence of the object before the verb indicates that this sentence is in the incompletive aspect; the lack of it in (292) means that the sentence is in the completive aspect.

Some sentences in the incompletive aspect are ambiguous with respect to time. Temporal adverbials may be used in order to specify when the event took place. For instance, ‘always’ or ‘every day’ modifies the phrase as being habitual (293).

(293) n dàá (~ ná) déɛ́ n déɛ̀ bá píè .
1.S INC millet seed 1.S cultivate all the time

I am cultivating every day.

The temporal adverb ‘today’ (295) can be used to specify when the action is happening. The completive aspect may be differentiated from the incompletive by the addition of a temporal marker such as ‘yesterday’ (296), (297). The verb is preceded by the incompletive particle.

(294) n nàẁ kúmbó kúmbò .
1.S INC stroll

I am strolling.

(295) mùwì n dáẁ kúmbó kúmbò .
today 1.S INC stroll

Today I am strolling.

(296) nnìɛ̀ , náẁ kúmbó kúmbò .
yesterday INC stroll

Yesterday I was strolling.

(297) nnìɛ̀ , n dá kúmbó kúmbò à gúʒɛ́ ŋ kò .
yesterday 1.S INC stroll DEF grass GEN PP

Yesterday, I was strolling in the grass.

The completive/incompletive distinction may also be differentiated with the verb /wore/ ‘go’, accompanied by the incompletive particle (298) or alone (299).

(298) n dáà wòrè kúmbó kúmbò .
1.S INC go stroll

I am going strolling.

(299) n nnìɛ̀ wòrè kúmbó kúmbò .
1S yesterday go stroll

Yesterday I went strolling.

The incompletive particle marks a phrase with ‘go’ as something which is ‘going to happen’ in the future (300), while the completive aspect marker indicates that the event occurred in the completive (301).

(300) n dáẃ wórè n déɛ̀ .
I INC go T cultivate

I am going to cultivate.

(301) ŋ kó wórè déɛ̀ .
I CPL go cultivate

I went to cultivate.

The default word order for a declarative incompletive sentence is S-AUX-O-V. A definite direct object follows the incompletive particle, as shown in (302). An indefinite direct object (303) or a pronominal object (302) may also precede the incompletive particle.

(302) n nàẃ à bɔ̀ò kàẁ n dèɛ́ .
1.S INC DEF field DEM ~2 cultivate.RV

I am cultivating this field.

(303) bɔ̀ò ná n déɛ̀ .
1S.field INC ~2 cultivate.RV

I am cultivating a field.

(304) káẁ ná n déɛ̀ .
1S.DEM INC ~2 cultivate.RV

I am cultivating that.

Thus, the incompletive aspect is formed with a segmental subject pronoun and/or tonal marking on the verb and object, the particle /daw/ or its allomorphs, and the verb, which for most verb classes does not have suffixation. Modifiers follow the object noun but precede the verb.

10.3.2 Future Tense

The future tense in a sentence without an object, shown in (305), is formed in with the same constituents, in the same manner as the incompletive, except that the incompletive particle follows the verb and invariably [naw]. A transitive verb is preceded by the transitive nasal. The subject nasal may be differentiated from the transitive nasal when the subject is in the second person, illustrated above.

(305) n déɛ́ n náẁ .
T cultivate ~2 INC

I will cultivate.

When a sentence in the future tense has an object, the object may be inferred from the sentence as shown in (306), or the object may surface clause-initially as shown in (307). The incompletive marker then either follows the verb (306) - (308) or the object (309). Here, word order is OSV.

à	nníɛ̀–ré	nìŋá	àdámà	n	dég	–ɛ̀	n	náẁ.
DEF	woman	say	Adama	T	hit	RV	~2	INC

The woman said Adama will hit (her).

níí	máà=	jíbɛ́ɛ́	nɛ̀	gúu	–ì	náẁ.
3.PL	POSS	person	PL	throw	PRF	INC

Their people will be thrown. (Chief 3: 16.1)

(308)

sé	máà=	pàà^{n}	sɥɛ́è	nàá	jìɛ̀	hŭ^{n}	jáá	náẁ
COND	3S.POSS	friend	descend	wilderness	night	PP	die	FUT

If his friend goes to the wilderness at night, he will die. (Story 9:1)

á	já+m^{l}bɛ́	ná	n	dèg	–ɛ̀	–L
DEF	child	INC	T	hit	RV	3

He will hit the child.

10.3.3 Existential

The incompletive particle /daw/ may be combined with a postposition to express that an object is present or exists.

(310) /daw/ as Existential

ŋ	kámá	níí ŋà	[néè]	sé	sɥéè	n	dàẃ	màlʲpa	dá	ŋ	wì
3.SG	CPL	say that	COND	COND	descend	~2	INC	rifle	EXIST	GEN	PP

He said if you go down, there will be a rifle. (Tiga 5.13)

à	jàà=ndɛ́	péɛ̀rɛ̀	n	dóɔ̀ⁿ ~ daa	ŋ	wì	à	kɔ́ò	ŋ	kò.
DEF	child=PL	a lot	GEN	EXIST	GEN	PP	DEF	house	GEN	PP

There are a lot of children in the house. (Syntactic 17.1)

When the particle /daa/ is used to mean ‘exist’ it always appears with the postposition [wi] or [ko]. This expression is not marked for aspect or aspect, it can be used to indicate the incompletive aspect as shown in the second sentence, the future tense, shown in the first sentence, or the completive, shown in Chief 1.10.

10.4 Completive

The completive may be differentiated from the incompletive by the auxiliaries either preceding or following the verb. The completive aspects include the completive aspect, the perfect aspect, and the stative aspect. The completive aspect particle, like the incompletive aspect particle, precedes the verb. The perfect and stative aspect morphemes follow the verb stem.

10.4.1 Completive aspect

The completive aspect is marked by the particle /kamaa/ with allomorphs [kaw̃aa] ~ [kɔo]. It appears to be a grammaticalized form of the verb/adjective/noun meaning ‘become old’,‘older’, and ‘ancestor’, [kaw̃aa] with root [kɔo] (verbal inflection is discussed above). The completive aspect marker precedes a verb, which is preceded by the person agreement nasal.

(311) nîì kámàà n déɛ̀–r–ɛ̀ (m bít–ù)
3.PL CPL ~2 cultivate–r–RV T finish–PRF

They were cultivating (and they finished).

The completive aspect is used with a verb which is in the default verb stem in all verb classes save for Class Two. When there is only one clause, as in (311) above, the root vowel is suffixed to the verb which follows the completive aspect particle. If there is more than one clause, as in (312), subordinate clauses may have their own aspects.

(312) Completive aspect with Subordinate Clauses

kɔ́ó –H	ŋ	wórè	à	káràà	ŋámbà	tórè	bíè	nìì	m	túmbárì
CPL 1		go	CHN	find	sheep	one	NEG	3.PL	GEN	between

I went and found one sheep wasn't among them (Chief 10 16.1)

kɔ́ó	–H	púwɔ́nd	–ò	kɔ́ó	–H	m	wóré	ŋ	káràà	n	qúúr–ú	ŋ	kɛ́ɛ̀
CPL	1	search	RV	CPL	1S	~2	go	T	find	T	kill– PRF	~2	PRF

I was searching [and] I went [to] find he had been killed. (Chief 10: 35.1)

The completive aspect marker is used most commonly in texts. In the excerpt from the narrative which follows Dahl's TAM questionnaire, shown in (313), there is variation in the completive aspect particle.

(313) Completive Aspect Alternations

a. kóɔ̀ –L m póɣɔ́ kɛ́réndɛ́ kéɛ̀.
CPL 1 T step on slither thing

I stepped on a snake.

b. kóɔ́ –H n tám –b –à màá= bʷéɛ̀.
CPL 3 T bite –r– RV 3.POSS foot

He bit my foot.

c. kámá –H n ɲà –n –á à símèè.
CPL 1 T take –r– RV DEF rock

I picked up the rock.

d. kámá –H ŋ gúɥ –ú n ɥúùr –ù.
CPL 1 T throw PRF T kill PRF

I threw (it) (and) killed (it).

e. kɔ́ó –H ŋ gúɥ –ú n ɥúùr –ù.
CPL 1.S ~2 throw PRF T kill PRF

I threw (it) (and) killed (it).

Most speakers adamantly prefer one variation of the completive aspect marker to the other. However, this sample text was given by one speaker, who did vary between [kɔo] (313a - b), [kama] (313c - d), and back to [kɔo] again in (313e). Other instances of a speaker using both forms in a text are Chief 1.14 - 15, Chief 4.6 - 7, Chief 7.8 - 9,

The completive aspect particle may be used in combination with the stative suffix to indicate the completive aspect for change of state verbs. Examples comparing the completive aspect with the perfective aspect are found using the verb /baar/ ‘remain’: compare TEXT VI: Chief 6.17 with TEXT VII: Chief 7.11. Although sentences using the particle [kɔo] are translated as completive, one example has been found in which the clause was modified by the temporal adverb ‘now’ (Chief 1.7).

10.4.2 Perfect Aspect

The perfect aspect is marked as [kɛ́ɛ̀] following the verb, which is marked by the presence or, in this case, absence of suffixation as shown in (314) and (315). As shown below, the default perfect aspect word order is S–V–O–AUX, with either a nasal or [a] depending on the subject marked before the perfect clitic.

(314) n déé –H ŋ kéè .
1.S cultivate 1S ~2 PRF

I cultivated (and it's finished).

(315) n déé déé ŋ kéè .
~2 millet seed cultivate ~2 PRF

I cultivated (and it's finished since a long time ago).

Similar to the examples with incompletive particle /daw/, (291) - (292), the cognate nominative accusative occurred in the sentence which meant 'I am cultivating' but not in the sentence glossed as 'I cultivate'. The perfect marker may also be used with the presence or absence of the object with a slightly different meaning. The second sentence was interpreted as occurring in a time which was further in the past than the first. The verb occurs simply as [deɛ] in (314), but with the cognate accusative object in (315). This difference seems to be correlated with the temporal distance.

The perfect clitic appears to be a borrowing from Fulfulde, with the same form and meaning [kéè]. The nasal or [a] alternation which was shown to agree with the person of the subject of the clause is obligatory before the perfect clitic.

10.4.3 Stative Aspect

Change-of-state and intransitive verbs are marked for the perfect aspect with the suffix [wɛ] or its allomorph [waj]. Some change-of- state verbs may be marked with the perfect clitic, but no non-change-of-state verbs may be marked with the stative suffix [wɛ]. Evidence from texts, for example, Text XII, Tiga 2.8 shows that the stative morpheme is a suffix as it appears directly after the verb, even if an object is present in the clause. This is true of all tenses and aspects except the future tense. In the future, the incompletive marker precedes the stative marker. A list of change-of-state verbs is given in (316).

(316) Change-of-state Verbs

	Gloss	Stative Stem	Verb Class
		[–ATR]	
a.	descend	sáá^{n}–wɛ̀	———
b.	die	ʒáá–wɛ̀/jáá–wɔ̀	———
c.	lose	téɛ́–wɛ̀	———
d.	tear	pɛ́ró–wɛ̀	———
e.	try	wò kíá–wɛ̀	5
f.	lie down	túrú–wɛ̀	———
g.	broken	kɔ̃rɔ̃́–wɛ̀	3
h.	pass	dóó–wɛ̀	2
i.	awaken	téŋgó–wɛ̀	———
		[+ATR]	
j.	sit	tíè–wàj	2
k.	go out	bìré–wàj	———
l.	say	níŋá–wàj	———
m.	enter	míndè–wàj	———
n.	dry	kúwòndò–wàj	———

The vowel of the stative suffix alternates between [wɛ], if the verb has at least one [–ATR] (316a - i) vowel, and [waj], if the verb has all [+ATR] vowels (316j - n). This is of interest since other clitics and suffixes do not display these alternations, even the similar diminutive suffix, which takes the allomorph [wɛ] or the postpostion [waj].

The verb /ja/ ‘die’ is a change-of-state verb. The stem is not inflected with affixation of [r] or vowel changes. As shown in the following examples (317) - (319), the suffix [wɛ] follows a change-of-state verb in all aspects.

(317) jàá –wɛ́.
die STAT

He is dead/He died.

(318) ná jáá –wɛ́.
INC die STAT

He is dying.

(319) sírìì kɔ̀ò jáá –wɛ̀.
Siri CPL die STAT

Siri was dead. (Dingi ma: 20.1)

The verb ‘die’ may be used with animals or humans, with only the stative suffix [wɛ], it does not specify a time that the event. Temporal adverbs be used to indicate time of reference, as shown in examples (320) - (322).

(320) à bìì^{n} jáá –wɛ́
DEF goat die STAT

The goat died. (I don't know when)

(321) jàá –L –wɛ́ à díndà hùn
die 3.S STAT DET morning PP

He (a man) died this morning.

(322) jàá –L –wɛ́ há sáẁ
die 3.S STAT until a long time ago

He (a man) died (a long time ago).

A change-of-state verb is also marked with the stative suffix when describing the condition of a person. Shown in (323), in order to describe a person as being dead, the complementizer is used, followed by the verb ‘dead’ and the stative suffix.

(323) ‘dead’ Modifying a Noun

	Phrase				Gloss
a.	ʒìbɛ́ɛ́	jáá	–wɛ̀		
	person	die	STAT		A person died.
b.	ʒìbɛ́ɛ́	mɛ̀	jàà	–wɛ́	
	person	COMP	die	STAT	A person who died/a dead person.
c.	mɛ̀	jàà	–wɛ́		
	COMP	die	STAT		That which has died/a dead thing.

An intereting example of the verb /ja/ ‘die’ being used with the verb /ɋuur/ ‘kill’ and the perfect clitic to refer to killing someone is seen in TEXT VII: Chief 7.6.

Not all change-of-state verbs act alike. The verb /ti/ ‘sit’ is a VC2 stem. The verb may be interpreted ‘sit’, as in examples (324) - (325) or ‘live’, as shown in examples (324) - (325). The stative suffix was shown to follow the verb stem ‘die’ in all tenses and aspects except the future. The verb ‘sit’ is inflected for aspect on the stem and the stative suffix is not obligatory in all forms.

(324) tíè –wàj
sit STAT

He is sitting. (in the position)

(325) ná tí –rí
INC sit RV

He is sitting down. (moving to that position)

When the verb /ti/ is used to mean ‘live’, there is variation as to whether the stative suffix follows the verb or not, as shown in the sentences in (326) with further examples found in Appendix V, line 1, 5, 6, 15, Chief VII, line 10, 11 and Appendix VIII, Line 9.

(326) Stative Marker with Verb ‘sit’

a.

nníí	kɔ́ò	n	tíè	búúⁿ.
3.PL	CPL	T	sit	Bounou

They sat (lived) [in] Bounou. (Chief ma: 15.1)

b.

kɔ́ò	n	tíé	wàj	búúⁿ.
CPL	~2	sit	STAT	Bounou

They lived (sat) [in] Bounou. (Chief ma: 18.1)

c.

nníí	kɔ́ò	n	té	–rò
3.PL	CPL	~2	sit	–r–

They sat. (Maraka: 26.1)

(327) Lack of Stative Marker with Verb ‘sit’

a.

n	dɛ̀	màá	jìbɛ̀	=nɛ́		
~2	PL	POSS	person	PL		
nii	n	dá	nnò	–ò		
3.PL	~2	INC	come	RV		
tí	–rí	húⁿ	báráà	bíé	ŋ	wì.
sit	–r–	PP	Bara	NEG	~2	PP

At the time when our people were coming to reside there, Baraa was not there. (Chief 1.2)

b.

gíllá	à	n	wórè,	kɔ̀ó	té	–rɛ́	à	dwàà	hùn
since	2.S	~2	go	CPL	sit	–r–	DEF	tree	PP

He was sitting under the tree when I left.

I am unsure as to why the verb stem varies, as this does not occur with other verbs, or as to whether the variation in the stem impacts the presence or absence of the stative suffix.

10.5 Mood

The irrealis, imperative, subjunctive, and prohibitional moods are found in Bangime and are each marked by particles shown in this section.

10.5.1 Irrealis

The irrealis is marked by the particle [ha] and is used with a verb stem in clauses such as ‘I wish to do X’ or ‘in order to’ as in (328) - (329). Conditional phrases may also use the irrealis marker in the second clause (330). The hortative (331) may also be marked with the particle [ha].

(328) m máà hà n déɛ̀ .
1.S want IRR ~2 cultivate

I want to cultivate.

(329)

há	tíndɛ́	níì	ŋ	kʷéɛ́ⁿ	tóré	m	bòóⁿ	há	tíndɛ́	sɥɛ́è	ŋ	kò
IRR	put	hand	GEN	finger	one	G	powder	IRR	put	descend	GEN	PP

I will put one fingernail over the gun powder (in order to silence the rifle). (A friend: 15.1)

(330) sè n déɛ̀ , hà n túɥí wɛ̀ á démɛ̀
COND T cultivate IRR T pierce STAT DEF millet

When I have cultivated, I will plant the millet.

hà déɛ́ déɛ̀.
IRR millet seed cultivate

You should cultivate.

Another use of the irrealis marker [ha] is to introduce directions or recipes.

(33

há	nɛ́n	–d	–ì	páɣá	sà	páɣá	béè	pàⁿ
IRR	place	–r–	PRF	pot	COND	pot	boil	all

Place the pot on the rocks in order to a boil. (directions: 43.1)

A similar marker, [há], introduces ‘until’ clauses, as in (333).

(333) há n déɛ̀ .
until T cultivate

Until I cultivate...

The irrealis and the word ‘until’ are not thought to be related.

10.6 Copula

A particle which has arisen in texts but is difficult to elicit seems to act as a copula in some verb clauses, such as those listed in (334). The copula /maa/ can be used in a manner similar to ‘be’ in English. In the cases elicited, the copula serves as the perfective aspect. However, it has occurred in texts in other tenses as well. The copula [maa] is used with humans.

(334) [maa] as Copula

a. mí màà à dìjà màá= dégé n ɕéɛ̀ⁿ
1.S COP DEF village 3.S.POSS head GEN owner

I am the village’s chief.

b. mí màà à dìjà màà kárándà –ɕéɛ̀ⁿ
1.S COP DEF village 3.S.POSS teach AGENT

I am the village’s teacher.

c. n dɛ̀ máá à lèkòl n jáá=ndɛ̀
1.PL COP DEF school GEN children

We are the school’s children.

The copula [maa] may also be used in tenses other than the present, as shown in examples from various texts in (335).

(335) [maa] as Copula in other Tenses

a. sìríí máà dègè –ɕíɛ́ⁿ
Sirii COP head AGENT

Sirii was chief. (Magic Cat 12.1)

b. ŋ kásáⁿ tɔ́mɛ̀ máà mì n dí –jà
~2 at that time cowry COP PASS T eat INC

At that time, cowry shells were eaten (spent/used for money).
(Tiga story: 79.1)

c. nɛ̀(~ na) máá kɛ́vɛ̀?
QU COP DEM

What is that over there? (Topicalization Pr 32.1)

d. jìímɛ̀ n támàà n sígòò màá jàà
person GEN 300 COP die

Three hundred people will die. (Chief: 3.1)

The first sentence uses the existential particle in a noun phrase and the others before a verb. The verb phrases in (335c - d) were translated in the incompletive aspect and future tenses even though it is not clear from the word order or inflectional marking that there is a difference.

10.7 Question Particles

The structure of a question is Q–S–V. The question particles are phrase-initial, listed in the following question phrases using the same verb ‘cultivate’ in (336) - (341).

(336) kótè à n déɛ̀ ?
where 2.S T cultivate

Where are you cultivating?

(337) nè ná á n déɛ̀ ?
when COP 2.S T cultivate

When are you cultivating?

(338) né sà ní à n déɛ̀ ?
what conditional how 2.S T cultivate

What are you cultivating with?

(339) né à n déɛ̀ ?
what 2.S T cultivate

What are you cultivating?

(340) nnú mí à déɛ̀ ?
how PASS 2.S cultivate

How are you cultivating?

(341) bòɔ̀ ní à n déɛ̀ ?
field how 2.S T cultivate

How many fields are you cultivating?

(342) jà wó à n déɛ̀ ?
who go 2.S T cultivate

Who are you going to cultivate with?

In each of these questions, the question marker is clause-initial, the verb is last, with the exception of [nii] ‘how’ in (341) (notice the alternation between the two forms for ‘how’ if one compares the phrase in (340)).

The following examples in (343) - (336) illustrate a VC2 verb, /ji/ ‘do’, in questions. Note that the VC2 stem includes the [–r] suffix in each of these examples.

(343) nnîì jí–r–ó ŋ kàw
how do DEM

Why are you doing that?

(344) nɛ̀ ʃĩiⁿ à jí–r–ó (múwì) ?
what 2.S do today

What do you do today?

(345) nɛ̀ (~ nà) á jí–r–ó (múwì) ?
what INC 2.S do today

What are you doing today?

(346) kò tɛ́é à nɛ́ wò (múwì) ?
where 2.S what go today

Where are you to do what today?

(347) kò tɛ́è à wó–r–è múwì ?
where 2.S go today

Where do you go today?

The difference between the final two examples, why the first uses the verb without [–r] and the second uses [–r] in the verb is not known.

10.8 Summary of Verb Particles and TAM

Recall from the previous chapter that the inflectional patterns differ depending on the class of verb and that the class of verb may be a composition of the derivational properties of the stem. Now that the verb particles have been presented, the next chapter gives an overview of the how the categories of tense, aspect, and mood fit into the word order patterns.

Chapter 11. Word Order

11.1 Overview of Word Order

The previous chapters showed that the verb stem is inflected for aspect by vowels following derivational suffixation. The tense or aspect of a clause is indicated by word order and verb particles. The word order of a clause in Bangime, the placement of the subject, object, and verb, changes depending on the tense, aspect, or mood of the phrase. The attested word orders in the language are SVO, SOV, and OSV for untopicalizationed sentences. The incompletive aspects are usually SVO, the completive aspects SOV, and the future can be expressed with OSV word order. These word orders are the defaults, or most commonly expressed, for each TAM category. The table in (348) presents the default word orders with the particle associated with each TAM category. The verb particles are discussed in detail in the previous chapter

(348) Default Word Orders and Particles

a. SVO

TAM:	PFV	CPL	PRF	IRR
AUX:	none	kɔo=	=kɛ́ɛ̀/=wɛ	ha=

b. SOV

TAM:	INC	SBJ	IMP
AUX:	da(w)=	ha=	none

c. OSV

TAM:	FUT
AUX:	na(w)=

Each verb particle except for the completive precedes the verb stem. The particles which precede the stem are also more closely tied to the stem in that other words may not intervene. The object follows the verb directly in a perfective construction and the perfective particle appears clause-finally. The incompletive categories (348a) are usually in SOV order, and the completed categories are SVO (348b) and the future tense may be either SOV or OSV (319c). Some verbs may deviate from the default word order to indicate topicalization.

This chapter is organized by word order category: the tense, aspects, and moods which are expressed through the SVO word order are shown in §11.2. In §11.3, the SOV tense, aspect, and moods are discussed. Section 11.4 presents the future tense, which is indicated by OSV word order. The passive mood is indicated by the OSV word order and is mentioned in §11.5. Then, in §11.6 a brief discussion of the effect of topicalization on word order is presented.

11.2 Subject-Verb-Object

Forms denoting the completive aspects have subject-verb-object as the default word order. The irrealis mood also has S-V-O word order.

11.2.1 Perfective

Perfective aspect is marked by a verb suffix vowel and occurs with SVO word order, with the TAM marking and the person tonal marking on the verb.[50] The sentences in (349) - (351) are representative of the perfective aspect.

(349) jáà pùwɛ̀ n dég–ɛ̀ jáá bóróm+bɛ̀ .
young woman T hit–RV young man

A young woman has hit a young man.

[50] The following sentences have been extracted from the EUROTYP WORD ORDER QUESTIONNAIRE by Anna Siewierska.

(350) jáá bóróm+bɛ̀ n dég–è jáá pùwɛ̀ .
young man T hit–RV young woman

A young man has hit a young woman.

(351) à jáá bóró+mbɛ̀ n dèg–è à jáá púwɛ̀
DEF young man T hit–RV DEF young woman

The young man has hit the young woman.

The sentences illustrate that the choice of subject, whether indefinite or definite, does not affect the word order. The verb is marked inflectionally with the suffixation of [–u], which is the completive suffix for VC1. No auxiliaries mark the perfective aspect.

11.2.2 Completive aspect

The completive aspect also has SVO word order, with the completive particle [kɔo] or its allomorph [kama] preceding the verb.

(352) jáà bórómbɛ̀ kɔ́ò n dég–è à jáà pùwɛ̀ .
young man CPL T hit RV DEF young woman

A young man hit the young woman.

The sentence Tiga 4.10 shows an example of the verb /ni/ ‘give’ in the perfect aspect with two arguments. The direct object follows the verb, and the indirect object is clause-final, followed by the postpostion /waj/ ‘to’.

11.2.3 Perfect Aspect

In the perfect aspect, which is expressed by the back vowel suffix on the verb plus the particle [kɛ́ɛ̀], the word order is also SVO.

(353) jáá bórómbɛ̀ n dég–ù à jáá púwɛ̀ ŋ kɛ́ɛ̀ .
young man T hit–PRF DEF young woman ~2 PRF

A young man had hit the young woman.

The completive, perfective, and perfect all have the same word order, but the perfect has different inflectional marking for a VC1 verb. All verbs act the same for word order, but not for inflectional suffixation patterns.

11.2.4 Irrealis Mood

When the verb is in its irrealis or chaining form, as with the verb 'want' in (354) or 'go' in (355), the word order is S–V–V–O.

(354) jáà bórómbɛ̀ màà há n dég–ɛ̀ à jáá púwɛ̀
young man want IRR T hit–RV DEF young woman

A young man wants to hit the young woman.

The object remains final in an infinitive and the verb is inflected with the root vowel suffix. Another phrasal construction is used when the main verb is chained with another verb and the inflectional marking of the verb stem differs from the irrealis.

(355) jáá bórómbɛ̀ wórè á dég–ù à jáá púwɛ̀
young man go CHN hit–PRF DEF young woman

A young man went [to] hit the young woman.

When the verb 'go' is glossed as 'went', it precedes a verb and the word order is SVO.

11.3 SOV

The incompletive aspects, all of which also employ the particle /daw/, follow the word order SOV, except the future, which may have an OSV word order.

11.3.1 Incompletive Aspect

In the incompletive aspect the word order is S-AUX-O-V.

(356) jáà pùwɛ̀ náà n jáà bóróm+bɛ̀ n dég–ɛ̀
young woman INC T young man T hit–RV

A young woman is hitting a young man.

A sentence in the incompletive aspect utilizes the incompletive particle, the verb is phrase-final, and the verb is inflected with the [–ɛ] suffix.

Compare the phrase in (357) with that in (355). Both use the verb [wore] ‘go’ to indicate motion. The difference lies in the tense of the phrases and therefore the word order. The sentence above in (325) is in the completive aspect with SVO order, while the one shown in (357) is SOV; the ‘dummy’ verb [wore] is considered to be part of the auxiliary, so that the structure is S-AUX-V-O-V.

(357) jáá bórómbɛ̀ dáà wòrè à jáá púwɛ̀ n dég–ɛ̀
young man INC go the young woman T hit–RV

A young man is going [to] hit the young woman.

The completive and incompletive aspects are complementary in word order, SVO and SOV, respectively.

11.3.2 Subjunctive Mood

The subjunctive (358) and imperative (negative) (359) mood word order is also SOV.

(358) ha n jáá pʷìɛ̀ n dég–ɛ̀
IRR ~2 young girl T hit–RV

You should hit the girl.

(359) á nnìé–rɛ̀ kàmá nìŋ–à màà n dèg–é jáá–wɛ̀
DEF woman CPL say NEG.IMP T hit–RV die–STAT

The woman said do not hit it until [it] dies. (Tiga 5.58)

The imperative mood does not usually appear with any auxiliaries or marking other than the suffixation of a vowel on the verb stem, but the prohibitive is preceded by the particle [maa]. Another example of the prohibitive is Tiga 1.201. An example of the use of the first person plural imperative is Tiga 1.149.

11.4 OSV

The future tense can be formed in two ways: O-S-V-AUX or O-AUX-S-V. The incompletive particle /daw/ may follow the verb, shown in (360). The object precedes both the subject and the verb. The other common way of expressing the future when the subject is not a pronoun is to use a construction which is similar to the passive, shown in (361). The object is phrase-initial with the verb at the end of the phrase.[51]

(360)	à	nnìé–rɛ̀	nìŋá	àdámà	n	dég–ɛ̀	nnáẁ
	DEF	woman	say	Adama	T	hit–RV	INC

The woman said adama will hit (her).

(361)	à	nnnìé–rɛ̀	dáà/ná	àdámà	dég–ɛ̀
	DEF	woman	INC	Adama	hit–RV

Adama will hit the woman. (lit. 'the woman will be hit by Adama')

There is no alternative construction to indicate that a sentence with an object will occur in the future. The sentence in (361) is not considered to be in the passive mood since the passive construction differs as shown in the following section.

11.5 Passive

The passive morpheme (362) - (363) is homophonous with the first and third person pronoun [mi]. The subject is the first constituent in the sentence. The particle which indicates the passive follows the verb.

(362)	à	jàà+mbɛ́	mɛ̀	dég–ɛ̀	mì
	DEF	child	COMP	hit–RV	PASS

The child who was hit.

[51] The study of topicalization using questionnaires from the MPI für Evolutionäre Anthropologie, Leipzig is currently underway. Some of the findings are illustrated in this chapter.

(363) n dɛ̀ɛ́ⁿ mì há bìjù
~2 cook PASS until ready

It is cooked until it is ready.

Many more examples of the use of the passive construction are found in a text describing how beer is made, found in Text XXIII: Tiga 5. The default Verb Types of the verb is used in passive constructions; that which has no inflectional suffixation. Another examples of the passive from a narrative is Magic Cat.30.

11.6 Topicalization

Shown in examples[52] in the following sections, topic also shifts the word order. The sentence in (364) is in the incompletive aspect and does not have a direct object. An example of the verb 'write' without an object is shown in (364) to illustrate that the verb is transitive and is marked by the transitive nasal preceding the verb. The verb [ɲɔgɔndo] 'write' is an uninflected verb.

(364) n ná n ɲɔ̀gɔ̀ndó .
1.S INC T write

I am writing.

The particle /daw/ and the mid-vowel suffix on the VC4 stem indicate that the phrase is in the incompletive aspect. The phrases in (365) and (365) further illustrate the default word-order and inflectional marking for the declarative incompletive aspect with an object present is S-AUX-O-V.

(365) n dá dóɔ̀ n ɲɔ̀gɔ̀ndó
3.S INC book T write

He is writing a book.

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[52] These sentence types are extracted from Dahl, O. (1985). *Tense and Aspect Systems*. Oxford, UK: Basil Blackwell Ltd. PP. 198 - 205. The full questionnaire may be found in the appendix.

(366) n náá dóɔ́=ndɛ̀ n ɲɔ̀gɔ̀ndó
3.S INC book=PL T write

He is writing books.

The number of the subject does not change the word order, and the allomorphy on the incompletive particle is discussed in Chapter 9. Both sentences are in the default word order found for the incompletive aspects, S-AUX-O-V. In some cases, such as in texts, with examples found in Appendix I, Text II: Chief 3.4 - 5, it appears that the cause of the word order change is one of topic. Topicalization can also be differentiated by asking a question.

11.6.1 Topicalization on Verb

The first question, in (367), was meant to focus on the task the subject is performing, reading or writing. Four distinct answers are possible, given in the order listed below. The structure of questions is presented in 10.1.

(367) dóɔ̀ á n ɲɔ̀gɔ̀ndó ná káráá ŋ káràà ?
book 2.S T write CONN read.REDUP

Are you writing or reading a book?

The default answer, although not the default word order for an incompletive sentence, is with the object first, although the question posed referred to the action and not the undergoer of that action.

(368) dóɔ̀ n náà n ɲɔ̀gɔ̀ndó
book ~2 INC T write

I am writing a book.

The sentence is not translated as ‘it is a book that I am writing’ since the complementizer does not appear in this sentence.

The sentence in (369) is like that in (368), with a different noun. Both of these answers refer to one who is writing a letter or a book.

(369) sàgòmɛ́ n ná n ɲɔ̀gɔ̀ndó
letter ~2 INC T write

I am writing a letter.

Notice again that the object appears first, not the action, which would be expected if the response was one of topicalization to the question.

The sentence which appears in (370) is in the default word order for an incompletive sentence; as in (365) - (366) above, the object precedes the verb.

(370) n náà sàgòmɛ́ n ɲɔ̀gɔ̀ndó
1.S INC letter T write

I am writing a letter.

The default word order is when the particle follows the subject marker which in turn precedes both the object and the verb in an incompletive clause.

Unexpectedly, the incompletive aspect, marked by the /daw/ particle and the final non-high suffix in (371), is expressed using the SVO word order, which is normally used with the perfective aspect.

(371) n náà n ɲɔ̀gɔ̀ndó sàgòmɛ́
1.S INC T write letter

I am writing a letter.

The phrases thus far appear with the verb phrase-finally; however, the verb and object may also be reversed without an apparent change in meaning, as shown in the following subsection.

11.6.2 Topicalization on Object

When a question is intended to differentiate objects instead of actions, as in (372), the response in (372) is again the preferred answer, although not the default word order for an incompletive sentence, that of the subject phrase-initially, followed by the aspect marker, which is in turn followed by the verb.

(372) dóɔ̀ á n ɲɔ̀gɔ̀ndó ná sàgòmɛ́ ?
book 2.S T write INC letter

Are you writing a book or a letter?

(373) sàgòmɛ́ n ná n ɲɔ̀gɔ̀ndó .
letter 1 INC transitive write

I am writing a letter.

11.6.3 Topicalization Changes in other Tenses

Examples of the verb ‘step on’ (374), a verb not marked inflectionally for tense or aspect, illustrate the word-order variation for additional tenses. The default word order for an incompletive clause with an object is SOV, as shown in (374) as SOV.

(374) n dáà m póɣɔ̀
1.S INC T step on

I am stepping on.

(375) n dáá kéndɛ̀ kéɛ̀ m póɣɔ̀
1.S INC slither thing T step on

I am stepping on a snake.

The object ‘a slithering thing’, meaning ‘snake’ precedes the verb as expected in an incompletive clause.

The present tense is also shown to display variable word order in (376). The word order of the sentence above may not be changed if the aspect is incompletive [*n dáá póɣɔ̀ kɛ́ndɛ̀ kɛ́ɛ̀].

(376) kɛ́ndɛ̀ kɛ́ɛ̀ m pɔ́ɣɔ̀
slither thing T step on

I have stepped on a snake.

The subject of the sentence is tonally marked on the verb and noun. Aside from the lack of auxiliaries, the sentence in (376) is not marked for tense or aspect in the expected manner. The perfective aspect is normally formed with SVO word order. The perfective aspect is distinguished from the completive by the addition of the completive particle following the object noun but not by word order. However, as illustrated by (377), the default word order of the perfective aspect is used, that of SVO.

(377) m pɔ́ɣɔ̀ kɛ́ndɛ̀ kɛ́ɛ̀ (ŋ kɛ́ɛ̀)
T step on slither thing ~2 PRF

I had stepped on a snake (and it is finished, but my foot has still not left its head).

As expected for a perfect sentence, the object follows the verb and the completive particle follows the object.

Two clauses may be chained together before the perfective morpheme, as shown in (378).

(378) m pɔ́ɣɔ̀ kɛ́rɛ́ndɛ̀ kɛ́ɛ̀ , m búnd–í màà= bʷɛ́ɛ̀ ŋ kɛ́ɛ̀
1.S step on slither thing 1.S make move out–PRF POSS.3.S foot ~2 PRF

I have stepped on a snake, I had taken off my foot.

The second clause in (378) is specifically marked by the particle and the high vowel suffix on the VC4 stem as being perfect. The first clause is perfective. The perfect clitic could also be seen as marking the entire phrase because the word orders are both SVO. An example of three verbs being chained together without the use of the chaining particle is Chief 1.2.

The completive aspect default word order is SVO as in the phrases in (379) and (380); however the object may precede the verb, as shown in (379).

(379) kɔ́ɔ́ m póɣɔ̀ kɛ́ndɛ̀ kɛ́ɛ̀
CPL T stepped on slither thing

I stepped on a snake.

(380) kɔ́ɔ́ n tám-b–à màá= bʷéɛ̀
CPL T bite–r–-RV 1.S.POSS foot

It bit my foot.

(381) kɔ́ɔ̀ màà= bʷéɛ̀ n tám-b–à .
CPL 1.S.POSS foot T bite–r–-RV

It bit my foot.

That is, both of the sentences describing the consequences of the phrase ‘I stepped on a snake’ are possible, but the first response, that of SVO, is the default. The tone on the completive particle indicates the subject.

11.6.4 Verbs with no Word Order Variation

Not all verbs can alternate the word order.

(382) kɔ́ɔ́ n tám–b–à màá= bʷéɛ̀.
CPL T bite–r–RV 1.S.POSS foot

It bit my foot.

(383) ŋ kɔ́ɔ̀ tám–b–à màà= bʷéɛ̀.
3.S CPL bite–r–RV 3.S.POSS foot

It bit his foot.

(384) (kɔ́ɔ̀) màà= bʷéɛ̀ n tám–b–à.
CPL 3.S.POSS foot T bite–r–RV

It bit his foot.

The verb ‘take’ in (385) may only appear with SVO word order in the completive aspect.

(385) kámá n ɲà–r̃–á áà símè .
CPL T take–r–RV DEF rock

He took the rock.

Some unexpected word order changes are found in texts. For example, Chief 2, Line 5 illustrates an example of VOS word order.

11.7 Summary of Word Order and TAM

The default or underlying word orders for each tense and aspect category which was shown to undergo changes is shown in (386).

(386) Word Order Variation

OSV	INC			
SVO	INC	/CPL/	/PFV/	/PRF/
SOV	/INC/	CPL	PFV	PRF

The completive aspects are by default verb final and the incompletive aspects are by default object final. It appears that the concept of the action as relating to time of utterance is secondary to the undergoer of the action since the object is closer to the subject when the action is performed in the present and further away from the subject and the beginning of the sentence if the action has already occurred.

Chapter 12. Cognate Accusatives and Reduplication

12.1 Cognate Nominals as Obligatory Objects

Some verbs appear to be a reduplicated form of the stem. However, most seemingly reduplicated verbs in Bangime are actually a combination of a verb stem and a phonologically related nominal. This is particularly evident in the generic present tense. In a declarative statement in the generic present tense with a non-second person subject, the only difference between the verb stem and an indefinite noun stem is the tone. In the generic present tense, the word order is SVO.

12.2 Perfective

The verb /dé/ 'cultivate' emerges as [déɛ̀] in the perfective aspect. The noun 'millet seed' is also [déɛ̀] ~ [déɛ́+mɛ̀]. I hypothesize that these words are derived from the same root since millet is the primary cultivated crop. Therefore, the sentence 'I cultivate' is the same as 'I cultivate millet seed'; speakers do not perceive a difference between the two statements as shown in (387).

(387) 'cultivate'

a.

n	déɛ́	–H	dèɛ̀	–L	
T	cultivate	1	millet	1	

I have cultivated/I have cultivated millet.

b.

mí	–H		n	déɛ́	–H	bìrɔ̀ndò	–L
~2	1		T	cultivate	1	corn	1

I have cultivated corn.

Compare the phrases in (375a) and (375b). Segmentally, the verb and noun in (375a) are the same. Tonally, the verb is marked with a high tone for the first person and the object noun with a low tone in the manner described in detail in Chapter 13. The phrase in (375b) shows that

the object noun is in the same place as the proposed object in (375a). This illustrates that the verb and noun are separate words, not a reduplicated stem.

Other verb and cognate noun combinations differ by vowel quality, as shown by (388).

(388) 'sing'

n	ŋwíé	–H	ŋwìɛ̀	–L	
T	sing	1	song	1	

I have sung a song/I sung.

In the perfective aspect, the verb appears almost identical to the noun, making the distinction difficult to determine.

12.3 Completive aspect

The difference between the noun and the verb stem is most clearly seen when the verb stem is inflected for tense, such as in the completive aspect, and is contrasted with a verb stem which is clearly marked for the completive aspect.

(389) 'cultivated'

n	kɔ́ó	n	déɛ́	–r	–è	–H (à)	dèɛ̀+mɛ̀	–L		
~2	CPL	T	cultivate	–r–	RV	1	DEF	millet	1	

I cultivated/I cultivated (the) millet.

In addition to the verb being affixed with the [–r] suffix, the definite marker may intervene to mark the noun, clearly illustrating that the verb and object noun are separate stems and not part of a reduplicated verb stem.

Further examples of verbs which are marked with the [–r] suffix illustrate the differences between the verb and the cognate noun in the sentences (390) - (392).

(390) kɔ́ó n ŋwíɛ́ –r –è –H ŋwìɛ̀ –L
CPL T sing –r– RV 1 song 1

I sang/I sang a song.

(391) kɔ́ó n tɛ́mbè –r –ɛ̀ –H témbìè –L
CPL T hammer –r– RV 1 brick 1

I hammered/I hammered a brick.

(392) kɔ́ò ŋ kéɛ́ –r̃ –è –H kèɛ̀ⁿ –L
CPL T steal –r– RV 1 theft 1

I stole/I stole a (i.e. committed) theft.

In each sentence, the verb is inflected with the [–r] suffix and the noun has the object tonal marking. A stem from VC3 is shown in (393), illustrating the difference between an inflected verb and a noun. The noun is the same form as the verb root for VC3.

(393) 'dance'

kɔ́ó ʒúm–b–á –H ʒòɔ̀ⁿ –L
CPL dance–r–RV 1 dance 2

I danced/I danced a dance.

It is unclear why some noun-verb pairs are more closely related in stem form than others.

12.4 Perfect Aspect

Whereas the difference between a verb and a noun is overt in many cases in the perfective aspect, the segmental difference in a verb and a noun is sometimes neutralized in other forms, such as the perfect aspect, when a verb has no suffix. The tone, however, continues to follow the expected patterns of an object versus a verb marked for subject.

(394) gɔ́ɔ̀ⁿ ʒɔ̀ùⁿ –L ʒɔ́úⁿ –H ŋ kɛ́ɛ̀
man dance 3 dance 3 ~2 PRF

A man danced/a man danced a dance.

12.5 Definite Noun

Another property of the verb and cognate noun construction is seen when the noun is marked as being definite. Whereas an indefinite noun is not marked, a definite noun is preceded by the definite marker [a] after a second person subject and [n] after non-second person subjects (395). Pronoun placement is discussed in greater detail in Chapter 1.

(395) n gúj –ú –H gùjì –L
T throw PRF 1 throw 1

I have thrown/I have thrown a throw.

(396) áẁ gúw –ú à gùjì –L
2.pl throw PRF DEF throw 1

You.pl have thrown/you.pl have thrown the throw.

(397) kɔ́ò n gúj –ú –H ŋ gùjì –L
CPL T throw PRF 1 ~2 throw 1

I threw/I threw a throw.

Nouns in constructions like this, where the object nouns are derived from the same root as the verb, are often referred to as cognate accusatives; for example, in English ‘I dreamt a dream’ is no different from ‘I dreamt’.

12.6 Truly Reduplicated Verbs

Some verbs are truly reduplicated forms of the root in the perfective aspect. However, this is not clear unless one examines either a verb phrase with an object, or the completive aspect.

(398) mí m pífà pífà
1.S T fear fear

I am afraid

(399) pìr̃à –L pir̃á à tàŋà m bògò ŋ wáj
fear 3 fear DEF ear GEN big ~2 to

He is afraid of the elephant.

(400) kɔ́ó m pír̃à
CPL T fear

I feared.

The first example (398) appears to be no different from the verb/cognate noun constructions. The second sentence (399) illustrates the presence of the reduplicant even with an object. The third sentence (398) shows that the verb is not necessarily reduplicated, nor does the verb obligatorily take an object noun.

12.7 Nouns which are Segmentally Indistinguishable from Verbs

Still other verbs are indistinguishable by segmental alterations alone from their noun counterparts in any tense. It is by tone alone that one can differentiate them.

(401) kɔ́ó sáŋá –H sàŋà –L
CPL play 1 play 1

I play/I play a game

(402) jàà =ndɛ́ nìì n dá sáŋà n sàŋà –L
child PL 3.PL ~2 INC play ~2 play 3

Children are playing/children are playing a game.

12.8 Inflectional Paradigms for Reduplicated Verbs

The inflectional paradigms of a truly reduplicated verb, as shown in (403), illustrate that in addition to the suffixation of [–r] and the TAM particles, the fact that the verb itself is reduplicated also depends on the TAM of the phrase.

(403) ‘search, wander, stroll’

Irrealis	Imperative	
màá hà n kúmbò I want to stroll	kúmbò Stroll!	
Future	Completive	
kúmbó n náẁ I will stroll	kɔ̀ò ŋ kúmbò–rò I strolled	
Incompletive	Perfective	Perfect
n dá kúmbò ŋ kùmbò I am strolling	kúmbó–rò kúmbó–rò I have strolled	ŋ kúmbò ŋ kɛ́ɛ̀ I had strolled

Incompletive negative	CPL Negative
m bìé kúmbò ŋ kùmbò/bíé ŋ kúmbò I do not stroll	m bìé kùmbò ŋ kúmbò/bìé kúmbò I did not stroll

The imperative and irrealis moods do not reduplicate the stem. Neither the future nor the perfect involves reduplication of the stem. The verb has the same segmental content as VC5 stems. The forms which take the [–r] suffix are the perfective and completive forms. As we see that the completive and perfective have suffixation but the incompletive does not. Another example [dáà kúmbò] is translated as ‘has been searching’ (Tiga 1.72).

12.9 Phrasal Verbs

Many verbs in Bangime are phrasal in nature. As with the verbs that were shown to resemble reduplication but actually took obligatory nouns as objects, some verb collocations are composed of a verb plus an object noun. The examples in (404) use the noun ‘sleep’ with the verb ‘take’ to express the notion of sleeping or freezing.

(404) ‘sleep’ [dóɔ̀ ná ɲáẁ]

a. ɲàẁ –L dóò kɛ́ɛ̀
take.PRF 3.S sleep PRF

He is asleep.

b. màrìám dá dòò n ɲáẁ
Mariam INC sleep T take

Mariam is sleeping.

c. gìllà à n wóré dóó à ɲàẁ
since CHN ~2 go sleep CHN take

When I left, he was sleeping.

d. à ŋʷìɛ̀ ɲɛ́ n dòò ŋ kɛ́ɛ̀
DEF oil take ~2 sleep ~2 PRF

The oil (i.e. butter) is solid.

Eliciation of the verb ‘to sleep’ results in [dóɔ̀ ná ɲáẁ] ‘sleep is taken’. Note the changes in word order between (404a, d) and (404b, c). The SVO word order corresponds with the perfective aspect while the SOV order is found in the incompletive aspect clauses. The verb is marked in each case as the perfective form segmentally since this is a VC3 stem which takes the [–r] suffix in all incompletive aspects. The example (404d) illustrates the metaphorical use of the verb to include a change to a solid state.

12.10 Summary of Cognate Accusatives and Reduplication

It has been shown in this chapter that verbs which take an obligatory object, a cognate accusative, are often easily confused with those which are reduplicated verb stems. The difference can be seen in the tenses in which the [r] suffix is inflected on the verb stem, or if a direct object is specified in the verb phrase.

Chapter 13. Tonal Agreement Patterns for Person

13.1 Overview of Tonal Agreement Patterns

As was shown in Chapter 5, the first and third person singular possessive pronouns are differentiated by tone alone. The same is true of the subject pronouns. The first and third persons are the differentiated by tone alone or, as is often the case, are not marked segmentally. The segmental representations of the personal pronouns are listed in (405).

(405) Personal Pronouns

SG	PL
mí	ndɛ
a	aa(–ru)
mì	nnii

The first and third person singular pronouns optionally appear segmentally as [mi] or as a nasal which assimilates to the place of the initial consonant of the verb. I propose that the first person plural pronoun consists of the first person singular nasal plus the plural marker. As with the plural marker, the first person plural morpheme surfaces as either [ndɛ] or [nɛ]. The subject of a phrase is indexed tonally on both the verb and the object noun, if present. The subject is marked by a high tone in the first person singular on the pronoun if present, and also a high tone on the verb stem. The third person singular is marked by a low tone on the pronoun if present and a low tone on the verb root's vowel. The tone of a verb stem is not altered by either the TAM category or the inflectional category of the verb.

Shown in this chapter, the tonal patterns for person and number vary and are marked on the verb stem, the auxiliary, the object noun, or in some cases, all of the above. Although the determining factor causing the variation is not yet known, it appears to be dependent on the phonotactics and underlying tones of the verb stem. First, a verb is shown in the perfective aspect with a noun whose tones do not alternate to concentrate on the patterns of the verb stem.

13.2 Perfective

In the perfective aspect, the clausal structure is relatively simple. A clause consists of a subject or a pronoun, verb, and an object noun, in that order. The perfective aspect is not marked with any auxiliaries or verb particles. The tones on the verb differ depending on the number and person of the subject. Tonally, the first person is a high tone and the third person is a low tone on the verb. However, similar to the possessive pronoun paradigms, the surface realization of the tone on the stem depends on a variety of factors. An indefinite noun appears in each sentence in (406) with a high-low tonal melody, which differs from the noun's singular low-high melody [ŋàmbá].

(406) /pom/ VC3 /ŋàmbá/ 'sheep' NC6 indefinite noun

Ø	pómb	–ì	nŋámbà	ndɛ́	pómb	–ì	nŋámbà
1.S	lift	PRF	sheep	1.PL	lift	PRF	sheep
I have lifted a sheep.				We have lifted a sheep.			
àẃ	pómb	–í	nŋámbà	àà–rú	pòmb	–ì	nŋámbà
2.S	lift	PRF	sheep	2–PL	lift	PRF	sheep
You have lifted a sheep.				You.PL have lifted a sheep.			
Ø	pòmb	–ì	nŋámbà	nnìì	pòmb	–ì	nŋámbà
3.S	lift	PRF	sheep	3.PL	lift	PRF	sheep
He has lifted a sheep.				They have lifted a sheep.			

The table in (407) represents the tones shown thus far for the verb /pomb/ ‘lift’.

(407) Summary of Tonal Person Marking on Verb /pomb/ ‘lift’

SG	PL
HL	HL
HH	LL
LL	LL

The first persons singular and plural have a high-low tonal melody on the verb. The third persons singular and plural surface with a low tone on the verb. In Chapter 5, we saw that the possessive proclitics display similar tonal patterns. The second person singular is has high tones and second person plural has low tones in the on both syllables of the verb stem.

The same sentence with a definite object illustrates the same tonal patterns on the noun, but slight differences on the verb stem.

(408) /pom/ /à ŋàmbá/ ‘the sheep’ definite noun

0	pómb	–í	á	nŋámbà	ndɛ́	pómb	–ì	á	nŋámbà
1.S	lift	PRF	DEF	sheep	1.PL	lift	PRF	DEF	sheep
I have lifted the sheep.					We have lifted the sheep.				
àẃ	pómb	–í	á	nŋámbà	àà–rú	pómb	–í	á	nŋámbà
2.S	lift	PRF	DEF	sheep	2–PL	lift	PRF	DEF	sheep
You have lifted the sheep.					You.PL have lifted the sheep.				
0	pòmb	–ì	á	nŋámbà	nnìì	pòmb	–ì	á	nŋámbà
3.S	lift	PRF	DEF	sheep	3.PL	lift	PRF	DEF	sheep
He has lifted the sheep.					They have lifted the sheep.				

The summary in (409) shows that in two persons, first person singular and second person plural, high tones have been added.

(409) Summary of Tonal Person Marking on the Verb ‘lift’ with Definite Noun

Singular	Plural
HH	HL
HH	HH
LL	LL

Again, although no direct changes are seen on the object noun, the verb stems undergo slight tonal changes with a plural noun as an object in the sentences shown in (420).

(410) /pom/ [ŋàmbá=ndɛ̀] ‘sheep’ plural noun

0	pómb	–í	nŋámbá	=nɛ̀	ndɛ́	pòmb	–ì	nŋámbá	=nɛ̀
1.S	lift	PRF	sheep	PL	1.PL	lift	PRF	sheep	PL
I have lifted sheep.					We have lifted sheep.				
àẃ	pómb	–í	nŋámbá	=nɛ̀	àà–rú	pómb	–ì	nŋámbá	=nɛ̀
2.S	lift	PRF	sheep	PL	2–PL	lift	PRF	sheep	PL
You have lifted sheep.					You.PL have lifted sheep.				
0	pómb	–ì	nŋámbá	=nɛ̀	nnìì	pòmb	–ì	nŋámbá	=nɛ̀
3.S	lift	PRF	sheep	PL	3.PL	lift	PRF	sheep	PL
He has lifted sheep.					They have lifted sheep.				

First person plural is marked with low tones on the verb, third person singular, high.

(411) Summary of Tonal Person Marking on Verb ‘lift’ with Plural Noun

SG	PL
HH	LL
HH	HL
HL	LL

Similarly, the definite plural stem remains unchanged throughout the paradigm, but the verb is affected.

(412) /pom/ [à ŋàmbá=ndɛ̀] 'the sheep' definite plural noun

a. pómb –í –H á nŋámbá =nɛ̀ .
lift PRF 1 DEF sheep =PL

I have lifted the sheep.PL.

b. àẃ pómb –í –H á nŋámbá =nɛ̀ .
2.SG lift PRF 2 DEF sheep =PL

You have lifted the sheep.PL.

c. pómb –ì –L á nŋámbá =nɛ̀ .
lift PRF 3 DEF sheep =PL

He has lifted the sheep.PL.

d. n –dɛ̀ m pómb –ì –H á nŋámbá =nɛ̀ .
2.SG PL ~2 lift PRF 1 DEF sheep =PL

We have lifted the sheep.PL.

e. àà –rú à pómb –ì –L á nŋámbá =nɛ̀ .
2.PL DEM.PL 2.SG lift PRF 2 DEF sheep =PL

You.PL have lifted the sheep.PL.

f. nnii m pòmb –ì –L á nŋámbá =nɛ̀ .
3.PL ~2 lift PRF 3 DEF sheep =PL

They have lifted the sheep.PL.

In every person save for the third person plural, the verb stem has at least one high tone.

(413) Summary of Tonal Person Marking on Verb ‘lift’ and Definite Plural Noun

SG	PL
HH	HL
HH	HL
HL	LL

The tonal alternations for the verb /pom/ ‘lift’ are shown in (414).

(414) Summary of Perfective VC3 Stem /pom/ ‘lift’

V + N		V + DEF N		V + N PL		V+ DEF N PL	
SG	PL	SG	PL	SG	PL	SG	PL
HH	HL	HH	LL	HH	HL	HL	HL
HH	HL	HH	HL	HH	HH	HH	LL
HL	LL	HL	LL	LL	LL	LL	LL

As illustrated in the table, the verb stem has a high tone on both syllables in the first person in all instances with an object, except if the object is definite and plural, where a low tone is added to the final syllable. The second person singular is marked on the verb with a high tone on both syllables for all instances including an object noun. The third person singular shows variation between high-low with singular objects, and low-low with plural objects. The first person plural is marked with a high-low tonal melody on the verb with all objects save for the singular, definite noun. The second person plural is also high-low with a singular object, but high-high and low-low for the plural nouns, indefinite and definite respectively. The third person plural is the most stable pattern, low-low with all nouns.

13.3 Perfect Aspect

If a perfect phrase contains an object noun, the noun appears medially between the main verb and the auxiliary. The noun has a tone which is the opposite of the verb stem. A phrase with a first person subject has a high tone on the vowel of the verb root and a low tone on the object noun. A phrase with a third person subject has a low tone on the verb root and a high tone on the noun stem.

First, verbs without objects are presented to illustrate the effects of the tonal indexing of the first and third persons. Next, clauses with object nouns are introduced to show that they receive the opposite tone to the verb root.

The first and third persons are marked tonally on the vowel of the verb root. First person is marked with a high tone, and third person with a low tone, irrespective of the verb class.

13.3.1 Monosyllabic Verb Stems

In a monosyllabic stem verb (415) both morae surface with a high tone for the first person and with a low tone in the third person. It was shown in Chapter 8 that verb stems can be divided into types or classes based on the segmental and semantic alternations displayed with the suffixation of [–r]. The vowel which accompanies the [–r] suffix is determined by the root. Low vowels emerge as long after rhotics. Mid vowels form diphthongs. A verb may not surface without TAM and person marking so verb stems are listed in the simplest form possible; the imperative without an object.

(415) /ɥa/ ‘buy’ VC2 Buy

First Person			Third Person		
n	ɥáá	kɛ́ɛ̀	ɥàà	ŋ	kɛ́ɛ̀
~2	buy	PRF	buy	~2	PRF
I had bought.			He had bought.		

Recall that a minimal word consists of at least two morae. An underlyingly monomoraic verb such as ‘buy’ above or ‘drink’ in (416) surfaces with an additional mora in the stem. Further, mid vowels undergo laxing before rhotics. The verb ‘drink’ is a monosyllabic verb which follow the same pattern of the first person being marked with a high tone and third person with a low tone in the completive aspect. Note that unlike ‘buy’ the third person of ‘drink’ has a low tone only on the first vowel, not both.

(416) /ne/ ‘drink’ VC2

First Person			Third Person		
nníé	ŋ	kɛ́è	nnìé	ŋ	kɛ́è
drink	~2	PRF	drink	~2	PRF
I had drunk.			He had drunk.		

The examples in (417) - (418) illustrate a pattern of high-low and on the first person and low-high on the third person. Since the examples are from two different verb classes, it appears that the variation among tonal patterns between those shown thus far and these below is not due to verb class but rather to the underlying tone of the verb root.

(417) /ɕɛ/ ‘carry on head’ VC2

First Person			Third Person		
ɕìɛ́	ŋ	kɛ́è	nnìɛ̀	ŋ	kɛ́è
carry	~2	PRF	drink	~2	PRF
I had carried.			He had carried.		

(418) /kon/ ‘break’ VC3

First Person			Third Person		
kóɔ́ⁿ	ŋ	kɛ́è	kòɔ́	ŋ	kɛ́è
break	~2	PRF	break	~2	PRF
I had broken.			He had broken.		

Still other verbs such as the one in (419) emerge with the opposite pattern, low-high-low in the first person and high-low in the third person.

(419) /tʷa/ 'reach' VC2

First Person			Third Person		
tʷàá	ŋ	kɛ́ɛ̀	tʷáà	ŋ	kɛ́ɛ̀
reach	~2	PRF	reach	~2	PRF
I reached.			He reached.		

The table in (420) summarizes the tonal patterns shown thus far for monosyllabic verbs.

(420) Summary of Monosyllabic Verb Stems in the Perfect Aspect

	Verb Root	Gloss	1.S	3.S
a.	ɥá	buy	H	L
b.	ně	drink	H	HL
c.	ɕɛ́	carry	LH	LL
d.	kón	break	HH	LH
e.	tʷâ	reach	LHL	HL

Recall from §5.3 that the most common tonal pattern on the possessive third person prefix is also a low or a falling tone. The first person possessive proclitic emerges with at least one high tone. As with the tonal patterns on the possessive first and third person prefixes and the nouns they precede, the tonal interaction between the first and third person and the verb remains unresolved at this time. The first person contributes a high tone and the third person to add a low tone to a monosyllabic verb stem.

13.3.2 Bisyllabic Stem

Recall that certain verb types are suffixed with [–r] or an allomorph [–d] in the completive aspect. The example (421) is one of these verb stems. This verb stem emerges with the person marking agreement tone on the verb root vowel, high in the first person and low in third person.

(421) /bun/ 'move out of' VC4

First Person					Third Person				
m	bún–	d–	í	kɛ́ɛ̀	m	bún–	d–	ì	kɛ́ɛ̀
~2	move out of	–r–	PRF	PRF	~2	move out of	–r–	PRF	PRF
I had come out.					He had come out.				

Other bisyllabic verb stems such as those shown in (422) and (424) surface with the person agreement marking on the vowel of the verb suffix; high for the first person, and low tone for the third person. It is interesting to note that in the second verb, a reflexive verb, the tonal patterns emerge as the opposite of the expected pattern; first person is low and third is high.

(422) /pom/ 'lift, raise ' VC4

First Person						Third Person					
m	póm–	b–	í	ŋ	kɛ́ɛ̀	m	póm	b–	ì	ŋ	kɛ́ɛ̀
~2	lift	–r–	PRF	~2	PRF	~2	lift	–r–	PRF	~2	PRF
I had lifted.						He had lifted.					

(423) /dan/ 'hide' VC4

First Person							Third Person						
m	dán–	d–	ì	mí	ŋ	kɛ́ɛ̀	m	dán–	d–	í	mí	ŋ	kɛ́ɛ̀
~2	hide	–r–	PRF	~2	~2	PRF	~2	hide	–r–	PRF	~2	~2	PRF
I had hid myself.							He had hid himself.						

As noted above, the segmental verb root type does not seem to be the determining factor for predicting the tonal patterns of the verb stem. Both (424) and (425) are in the same verb category and are underlyingly and overtly very similar. However, with respect to the tonal patterns observed in a phrase the two verbs surface differently. The first verb emerges with similar tonal patterns to those observed above, the first person high tone surfacing on the suffix vowel and the third person low tone. The second verb shown does not display any tonal alternations. Rather, a nasal marks the first person and its absence signifies the third person.

(424) /ki/ 'respond' VC1

First Person			Third Person		
kíj	–à	wàj	kíj	–á	wàj
respond	FV	STAT	respond	FV	STAT
I responded.			He responded.		

(425) /di/ 'eat' VC1

First Person				Third Person		
n	dìí	ŋ	kɛ́ɛ̀	dìí	ŋ	kɛ́ɛ̀
~2	eat	~2	PRF	reach	~2	PRF
I had eaten.				He had eaten.		

The verb stem shown in (426) behaves in a manner similar to 'eat' in that the first person (427) is represented with a nasal preceding the verb while the third person omits the nasal.

(426) /guɥ/ 'throw' VC1

First Person					Third Person			
ŋ	gúɥ–	–ù	ŋ	kɛ́ɛ̀	gúɥ–	–ù	ŋ	kɛ́ɛ̀
~2	throw	PRF	~2	PRF	throw	PRF	~2	PRF
I had thrown.					He had thrown.			

Still other verb stems illustrate that it is possible to mark both the root vowel as well as the suffix vowel. The verb stem shown in (427) is in the same category as the verbs ‘eat’ and ‘respond’, but its underlying root form differs. In the first person, the initial vowel carries the high tone that signifies the first person and the third person has the low tone on the root vowel as well. In both cases, the suffix vowel takes the opposite tone to its root host. As with ‘throw’ a nasal precedes the verb stem only in the first person.

(427) /pug/ ‘wash’ VC1

First Person					Third Person			
m	púg–	–ù	ŋ	kɛ́ɛ̀	pùg–	–ú	ŋ	kɛ́ɛ̀
~2	wash	PRF	~2	PRF	wash	PRF	~2	PRF
I had washed.					He had washed.			

Recall that some verb stems do not alternate in any TAM category and are therefore difficult to classify. Also, some bisyllabic words emerge with a downstepped tone on the final syllable. The verb in (428) is an example of this type of stem. This verb has a downstepped tone on the final vowel in the first person and a high tone in the third person.

(428) /jendo/ ‘call’ unclassified

First Person				Third Person			
jén!dó	ŋ	kɛ́ɛ̀		jéndó	ŋ	kɛ́ɛ̀	
call	~2	PRF		call	~2	PRF	
I had called				He had called			

(429) Summary of Bisyllabic Verb Stems

	Verb Root	Gloss	1.S	3.S
a.	bûn	move out	N/HH	N/HL
b.	pôm	lift	N/HH	HL
c.	dăn	hide	HL	HH
d.	kĭ	respond	HL	HH
e.	dĭ	eat	N/LH	LH
f.	gûq	throw	N/HL	HL
g.	pŭg	wash	N/HL	LH
h.	jéndō	call	HM	HH

As summarized by the table in (429) bisyllabic stems display more variation than monosyllabic verb stems tonally. While all the verbs have at least one high tone in the first person, not all have at least one low tone in the third person, as would be predicted by the generalizations shown thus far.

13.4 Verb Phrase with an Object

A direct object follows the verb in a perfective phrase. The verb tones continue to follow the same pattern as described for clauses without objects; a phrase with the first person singular as the subject receives a high tone on the verb and a phrase with the third person singular as the subject surfaces with at least one low tone on the verb stem. A direct object is marked with a polar tone to that of the verb, irrelevant of the noun's tonal class. A direct object is marked with a low tone in a phrase where the first person singular person is the subject and with a high tone when the third person singular is the subject.

13.4.1 Monosyllabic Verb Root

The verb stem ‘buy’ was shown above to surface as a monosyllabic stem with a high tone on both vowels in the first person and low tones in the third person. The verb stem continues to display the same patterns with some objects. The underlying tones of the noun were shown in Chapter 3 to be visible by examining the plural stem. The noun in (430) has high tones underlyingly. The first person adds a low tone to the noun’s final vowel and the third person adds a high tone.

(430) párí / párí –ndɛ̀ /párí/ ‘spear’ ncl1
spear spear PL

spear/spears

First Person								Third Person						
n	ɥáá	–H	párì	–L	ŋ	kɛ́ɛ̀	.	ɥàà	–L	pàrí	–H	ŋ	kɛ́ɛ̀	.
~2	buy	1	spear	1	~2	PRF		buy	3	spear	3	~2	PRF	
I had bought a spear.								He had bought a spear.						

Some nouns seem to affect the tones of the verb stem. The noun in (431) is of the type that takes the [–r] suffix in the singular stem. As shown, the tones on the verb differ in that the stem now has a high-low pattern rather than all high, but the object noun has a low tone on the final vowel as did the previous object noun. The third person surfaces with the same tones on the verb stem and a high tone on the final vowel of the noun stem.

(431) ŋàmbá –rà / ŋàmbá =ndɛ̀ /ŋàmbá/ ‘sheep’ ncl6
sheep –r– sheep =PL

sheep/sheep

First Person								Third Person							
n	ɥáà	–H	ŋámbá	–rà	–L	kɛ́è	.	ɥàà	–L	ŋàmbá	–rá	–H	ŋ	kɛ́è	.
~2	buy	1	sheep	–rV–	1	PRF		buy	3	sheep	–rV–	3	~2	PRF	
I had bought a sheep.								He had bought a sheep.							

The verb ‘drink’ was shown above to emerge with high tones on both morae in the first person and with a high-low pattern in the third person. With an object noun (432), both morae are high in the first person and low in the third person. As with the nouns shown thus far, the final tone of the stem adopts the opposite tone of the verb stem.

(432) bóɔ́ⁿ / bóɔ́ⁿ =ndɛ̀ /bón/ ‘millet porridge’ ncl2
millet porridge millet porridge =PL

cream/creams

First Person								Third Person							
nníé	–H	bóɔ̀ⁿ		–H	kɛ́è			nnìè	–L	bóɔ́ⁿ		–H	ŋ	kɛ́è	.
drink	1	millet porridge		1	PRF			drink	3	millet porridge		3	~2	PRF	
I had drunk cream.								He had drunk cream.							

When the verb takes a different object, not only does the noun display different tonal patterns, but the verb stem also changes slightly. In both the first and third persons, with the noun ‘milk’ (433), the verb and noun show an alternation on the first vowel of the stem. While the verb does show the contrast of the high tone associated with the first person and a low tone associated with the third person, the noun does not have the opposite tone to the verb, in fact it appears to assimilate.

(433) nníɛ́ / níɛ́ =ndɛ́ /níɛ́/ ‘milk’ ncl3
milk milk =PL

milk/milks

First Person							Third Person						
nníé	–H	nníɛ́	–H	kɛ́è	.		nnìé	–L	nnìɛ́	–L	kɛ́è	.	
drink	1	milk	1	PRF			drink	3	milk	3	PRF		
I had drunk milk.							He had drunk milk.						

The noun stem ‘basket’ (434) is unusual in that the [–r] suffix is affixed within the stem. Above, without an object, the verb ‘carry’ displayed high-low and low-low patterns in the first and third persons respectively. Here we see that the verb has a high tone on both vowels in the first person and a low-high pattern in the third person. The tones of the noun are unaltered.

(434) kɔ́ –ró– gò / kógó =ndɛ̀ /kógò/ ‘basket’ ncl6
basket –rV– basket basket =PL

basket/baskets

a. n ɛíɛ́ –H kɔ́ –ró– gò ŋ kɛ́è .
~2 carry on head 1 basket –rV– basket ~2 PRF

I had carried a basket on head.

b. ɛìɛ́ –L kɔ́ –ró– gò ŋ kɛ́è .
carry on head 3 basket –rV– basket ~2 PRF

He had carried a basket on his head.

Even with a different object noun (435) the patterns are the same with the verb ‘carry on head’; the first person has a high tone and the third person has a low-high pattern.

(435) bɔ́roŋ́kò / bóróŋˈkɔ́ =ndɛ̀ /bóróŋkó/ ‘tied millet’ ncl5
tied millet tied millet =PL

tied millet/tied millets.

a. n ɛíɛ́ –H bɔ̀rɔ̀ŋkò –L kɛ́è .
~2 carry on head 1 tied millet 1 PRF

I had carried tied millet on (my) head.

b. ɛìɛ́ –L bɔ̀rɔ̀ŋkɔ̀ –H kɛ́ɛ̀ .
carry on head 3 tied millet 3 PRF

He had carried tied millet on (his) head.

The verb ‘break’ has the same tonal patterns with or without an object. The first person carries a high tone on both vowels and a low-high pattern in the third person. The object noun, however, is represented with opposing tones to the verb in one case (436), but not the other (437). The variation in object nouns with the verb ‘break’ in these examples is due to the addition of the tonal melody from the possessive proclitics.

(436) kùúⁿ / kù =ndɛ́ /kùⁿ/ ‘hip’ ncl2
hip hip =PL

hip/hips

a. kóɔ́ⁿ –H máá= –H kúùⁿ –L ŋ kɛ́ɛ̀ .
break (smth or smth break) 1 POSS 1 hip 1 ~2 PRF

I had broken my hip.

b. kòɔ́ⁿ –L màà= –L kúúⁿ –H ŋ kɛ́ɛ̀ .
break (smth or smth break) 3 POSS= 3 hip 3 ~2 PRF

He had broken his hip.

It was shown in Chapter 5 that the possessive proclitics, first and third person, affect the tone of the noun stem. The example sentences with ‘hip’ show that the object noun tone seems to override the tonal effects of the possessive proclitic, but not with the noun ‘leg’.

(437) bʷɛ̀ɛ̀ / bʷɛ̀ɛ̀ =ndɛ́ /bʷɛ̀/ ‘leg’ ncl3
leg leg =PL

leg/legs

a. ŋ kóɔ́ⁿ –H máá= –H bʷéé –H kɛ́è .
~2 break (smth or smth break) 1 POSS 1 leg 1 PRF

I had broken my leg.

b. kòɔ́ⁿ –L màà= –L bʷéé –H ŋ kɛ́è .
break (smth or smth break) 3 POSS= 3 leg 3 ~2 PRF

He had broken his leg.

The tones of the noun ‘leg’ as a possessed object differ from the underlying form and from the expected person marking tonal patterns. Therefore, it is suggested in this case that there is an interaction between the person marking tone and the possessor marking tone. There are not sufficient examples of this process to determine the underlying patterns.

The underlying and surface representations of the verbs with and without the noun objects thus far presented are shown in the summary in (438).

(438) Summary of Monosyllabic Verb Stems

		No OBJ			OBJ				Tone on Noun	
Verb	Gloss	1.S	3.S		1.S	3.S	Noun	Gloss	1.S	3.S
/ɥá/	buy	HH	LL	a.	HH	LL	/párí/	spear	HL	LH
				b.	HL	LL	/ŋàmbá/	sheep	HHL	LLH
/nɛ̌/	drink	HH	HL	c.	HH	LL	/bón/	porridge	HL	HH
				d.	HH	LH	/nníɛ́/	milk	HH	LH
/ɛɛ́/	carry	LH	LL	e.	HH	LH	/kógò/	basket	HHL	HHL
				f.	HH	LH	/bóróŋkó/	tied millet	LL	LL
/kón/	break	HH	LH	g.	HH	LH	/kùⁿ/	hip	HL	HH
				h.	HH	LH	/bʷɛ̀/	leg	HH	HH

As explained in Chapter 3, most polysyllabic nouns may not surface with their underlying tones if the underlying tones are level, non-contour melodies. I propose that the same effect is happening in the phrase. The first person indexes a high tone on the verb stem and the third person a low tone. Phonotactic constraints that are yet to be determined dictate the placement of the tone on a particular syllable in the stem or prevent the tone from emerging. The object noun adopts a polar tone which is the opposite value of the verb. Because of the tendency for polysyllabic nouns to surface with contour melodies, the adjacent syllable takes an additional opposing tone.

Note that the nouns (438g - h) are in the same segmental and tonal class, and that the verb has the same tonal behavior before both nouns. This also could also be due to the verb not changing its tones whether an object is present or absent.

13.4.2 Bisyllabic Verb Stems

Examples are shown with the verb ‘lift’ and various objects to illustrate that the emergence of the verb and noun tones differs depending on the object noun. The verb ‘lift’ has a high tone on the root vowel for first person and a low tone on the root vowel for third person without an object. The examples show the verb stem emerging exactly as was shown above when the verb did not have an object. Both object nouns surface with the tonal pattern explained above, a polar tone to the tone on the verb. The tonal pattern is not the same as the underlying form for this noun, shown in (439).

(439) símèè / símèè =ndɛ́ /símèè/ ‘rock, mountain’ ncl4
mountain mountain =PL

mountain, rock/mountains, rocks

a. pómb –í –H símèè –L ŋ kéè .
lift PRF 1 mountain 1 ~2 PRF

I had lifted a mountain/rock.

b. pòmb –í –L símée –H ŋ kéè .
lift PRF 3 mountain 3 ~2 PRF

He had lifted a mountain/rock.

The verb stems in (439a) and (439b) show the person tonal marking on the verb is on the root vowel. Note the difference between the high tones on the perfective suffix which have thus far been low. The object noun displays the expected tonal contrast; the first person is marked with low tones on the final two vowels of the noun stem, and the third person is marked with high tones on the first vowels of the noun stem. Again, neither noun reflects the underlying tone of the noun stem (440).

(440) kúqíè / kúqé =ndè /kúqé/ 'calabash' ncl3
calabash calabash =PL

calabash/calabashes

a. pómb –í –H kùqè –L ŋ kéè .
lift PRF 1 calabash 1 ~2 PRF

I had lifted a calabash.

b. pómb –ì –L kúqè –H ŋ kéè .
lift PRF 3 calabash 3 ~2 PRF

He had lifted a calabash.

The verb 'throw' was shown above to not change its tonal pattern in the first or third person. Here it is shown that the verb patterns remain the same but the tone of the noun may change. The first example (441) uses a noun that does change its final tone to the expected pattern for the first (441a) or third (441b) person but the noun shown in (442) does not.

(441) tómé +è / tɔ́ –mì =ndɛ́ /tómé/ ‘cowry’ ncl4
cowry shell(s) DIM cowry shell(s) DIM =PL

cowry/cowry shells

a. ŋ gúų –ù tómé +è –L ŋ kɛ́è̀ .
~2 throw PRF cowry shell(s) DIM 1 ~2 PRF

I had thrown cowry shells.

b. gúų –ù tómé +é –H ŋ kɛ́è̀ .
throw PRF cowry shell(s) DIM 3 ~2 PRF

He had thrown cowry shells.

The noun ‘pick axe’ surfaces with its underlying form before the completive particle in the examples below. The verb does not change, as in the cases above, the nasal preceding the verb indicates the first person (442a) and its absence corresponds with the third person (442).

(442) dàmá / dàmà =ndɛ́ /dàmbà/ ‘pick axe’ ncl1
pick axe pick axe =PL

pick axe/pick axes

a. ŋ gúų –ù –H dàmbà kɛ́è̀ .
~2 throw PRF 1 pick axe PRF

I had thrown a pick axe.

b. gúų –ù –L dàmbà kɛ́è̀ .
throw PRF 3 pick axe PRF

He had thrown a pick axe.

In some cases, both the verb and the object display the tonal marking for person. The verb ‘wash’ in a marks the initial syllable of the verb stem with a high tone for first person and the second vowel of the noun with a low tone. The initial vowel of the verb stem in (443b) is marked with a low tone for the third person and a high tone on the second vowel of the stem.

(443) sòɔ̀ⁿ / sɔ̀ =ndɛ́ /sòn/ ‘shirt’ ncl2
shirt shirt =PL

shirt/shirts

a. m púg –ù –H sòɔ̀ⁿ –L ŋ kɛ́ɛ̀ .
~2 wash RV 1 shirt 1 ~2 PRF

I had washed a shirt.

b. pùg –ù –L sòɔ́ⁿ –H ŋ kɛ́ɛ̀ .
wash RV 3 shirt 3 ~2 PRF

He had washed a shirt.

The noun ‘luggage’ or ‘belongings’ in (444) does not alter from its plural form in a (444b). As with the possessive proclitics briefly mentioned above, the tone of the plural stem has the ability to override the effects of the person marking tone. The verb is indexed for person on both vowels of the stem in both the first and third person.

(444) kíɛ̀ / kíɛ́ =nɛ̀ /kíɛ́/ ‘belongings’ ncl4
luggage, belongings luggage, belongings =PL

luggage, belongings luggage, belongings.

a. m púg –ú –H kíɛ́ =nɛ̀ ŋ kɛ́ɛ̀ .
~2 wash PRF 1 luggage, belongings =PL ~2 PRF

I had washed belongings.

b. pùg –ù –L kíɛ́ =nɛ̀ ŋ kɛ́ɛ̀ .
wash PRF 3 luggage, belongings PL ~2 PRF

He had washed belongings.

The summary for bisyllabic stems with objects is given in (445).

(445) Summary of Bisyllabic Stems with Objects

Verb	Gloss	1.S	3.S		1.S	3.S	Noun	Gloss	1.S	3.S
/pôm/	lift	HH	HL	a.	HH	LH	/símèè/	rock	HLL	HHH
				b.	HH	HL	/kúɥé/	calabash	LL	HL
/gûɥ/	throw	HL	HL	c.	HL	HL	/tómé/	cowry	HHL	HHH
				d.	HL	HL	/dàmbà/	pick axe	LL	LL
/pŭg/	wash	HL	LH	e.	HL	LL	/sòn/	shirt	LL	HL
				f.	HH	LL	/kíɛ́/	luggage	HH	HH

With the exception of (445d) and (445f), all of the object nouns which were shown with bisyllabic verb stems add a polar tone to one vowel of the noun stem. The example (445f) was shown to be a plural stem which appears to override the tonal effects of the person marking, but further examples are needed to support this hypothesis. The verb ‘throw’ has consistently been unchanged in its tones, which could contribute to the noun also not showing a tonal alternation, as ‘break’ showed a similar pattern.

13.5 Completive aspect

The patterns above are found among all tenses save for the completive aspect in which the pattern is the opposite. The completive aspect particle, with allomorphs discussed in Chapter X, carries the person-agreement tone on the phrase, yet in the opposite manner illustrated above. Also unlike the tonal patterns on the verbs above, the verb stem in the completive aspect does not alternate tonally for person. The person marking is solely on the completive aspect particle, which in these examples is the allomorph [kama].

13.5.1 Completive aspect Particle without Object

When the pronoun surfaces segmentally, the completive aspect particle is marked with high tones on both vowels of the morpheme in all persons except first person as demonstrated in the table in (446). As noted above, the person pronouns also have truncated forms. Shown here, the tonal patterns on the verb remain unchanged.

(446) [kama] Variation with Pronoun

Full Pronoun					Truncated Pronoun				
mí	kàmà	n	dég	–è	ŋ	kàmà	n	dég	–è
1S	CPL	T	hit	RV	1S	CPL	T	hit	RV
àẁ	kámá	n	dég	–è	à	kámá	n	dég	–è
2S	CPL	T	hit	RV	2S	CPL	T	hit	RV
mì	kámá	n	dég	–è	ŋ	kàmá	n	dég	–è
3S	CPL	T	hit	RV	3S	CPL	T	hit	RV
ndɛ̀	kàmà	n	dég	–è	———				
1P	CPL	T	hit	RV					
àà	kámá	n	dég	–è	———				
2P	CPL	T	hit	RV					
nnìì	kámá	n	dég	–è	———				
3P	CPL	T	hit	RV					

The tonal patterns on the completive aspect particle are the same as the sentences with the segmentally marked pronoun with the exception of a low tone added to the third person singular. This is summarized in (447).

(447) Summary of Tonal Patterns on completive Particle [kama] without Object

Full Pronoun		Truncated Pronoun	
SG	PL	SG	PL
LL	LL	LL	–
HH	HH	HH	–
HH	HH	LH	–

The only change on the completive aspect particle [kama] between the full and truncated pronouns' tonal marking is found in the third person singular; high-high becomes low-high.

13.5.2 Completive aspect with Object and Overt Pronoun

When an object noun is introduced into the completive aspect verb phrase, the only constituent in the phrase with tonal person marking continues to be the completive aspect particle. The tones of the completive aspect article are altered slightly from the patterns shown thus far. The reduced set of pronouns and an object noun induce yet another change on the completive aspect particle.

(448) [kama] with Object

Full Pronoun						Truncated Pronoun					
mí	kàmà	n	dég	–è	géŋgè	ŋ	kàmà	n	dég	–è	géŋgè
1S	CPL	T	hit	RV	salt	1S	CPL	T	hit	RV	salt
àẁ	kàmá	n	dég	–è	géŋgè	à	kámá	n	dég	–è	géŋgè
2S	CPL	T	hit	RV	salt	2S	CPL	T	hit	RV	salt
mì	kàmá	n	dég	–è	géŋgè	ŋ	kàmá	n	dég	–è	géŋgè
3S	CPL	T	hit	RV	salt	3S	CPL	T	hit	RV	salt
ndɛ̀	kámá	n	dég	–è	géŋgè	———					
1P	CPL	T	hit	RV	salt						
àà	kámá	n	dég	–è	géŋgè	———					
2P	CPL	T	hit	RV	salt						
nnìì	kámá	n	dég	–è	géŋgè	———					
3P	CPL	T	hit	RV	salt						

With an object noun and a pronounced pronoun, all of the persons alter the tone of the completive aspect particle to low-high save for the first person which remains low on both syllables.

(449) Summary of Tonal Patterns on completive Particle [kama] with Object

Full Pronoun		Truncated Pronoun	
SG	PL	SG	PL
LL	LH	LL	–
LH	LH	HH	–
LH	LH	LH	–

The tonal patterns on the completive aspect particle are similar in the sentences with and without an object for the sentences which use the truncated pronouns. Each phrase has high tones on both syllables save for the first and third person singular. This is the same as the sentences shown above save for the first person plural which has low tones.

13.5.3 Completive aspect with Plural Object and Overt Pronoun

A plural object causes the completive aspect particle to surface with the same tones as a singular object, in a phrase with overt pronouns, but the verb tones are different than those listed above. The verb has a low-high pattern whereas thus far the tonal pattern has been that of high-low.

(450) [kama] with Plural Object

Plural Object

ŋ	kàmà	n	dég	–è	jàà	=ndɛ́
1S	CPL	T	hit	RV	salt	PL
à	kámá	n	dég	–è	jàà	=ndɛ́
2S	CPL	T	hit	RV	salt	PL
ŋ	kámá	n	dég	–è	jàà	=ndɛ́
3S	CPL	T	hit	RV	salt	PL

ndɛ̀	kàmà	n	dég	–è	jàà	=ndɛ́
1P	CPL	T	hit	RV	salt	PL
àà	kámá	n	dég	–è	jàà	=ndɛ́
2P	CPL	T	hit	RV	salt	PL
nnìì	kámá	n	dég	–è	jàà	=ndɛ́
3P	CPL	T	hit	RV	salt	PL

Note from the summary of tonal patterns that the completive aspect particle has the same tones as the sentences with the verb ‘hit’ without an object.

(451) Summary of Tonal Patterns on completive Particle [kama] with Plural Object

SG	PL
LL	LL
HH	HH
HH	HH

13.5.4 Completive aspect with No Object and Pronoun, Verb: ‘eat’

The verb ‘eat’ shows that a different completive aspect verb particle has the same patterns as shown thus far. As with the examples above, the tone on the completive aspect verb particle differs when the pronoun is truncated.

(452) [kama] Variation with Pronoun and Verb ‘eat’

Full Pronoun					Truncated Pronoun				
mí	kàmà	n	ʤìj	–á	ŋ	kámá	n	ʤìj	–á
1S	CPL	T	eat	RV	1S	CPL	T	eat	RV
àẁ	kámá	n	ʤìj	–á	à	kàmá	n	ʤìj	–á
2S	CPL	T	eat	RV	2S	CPL	T	eat	RV
mì	kámá	n	ʤìj	–á	ŋ	kàmá	n	ʤìj	–á
3S	CPL	T	eat	RV	3S	CPL	T	eat	RV
ndɛ̀	kàmà	n	ʤìj	–á	———				
1P	CPL	T	eat	RV					

àà	kámá	n	ʤìj	–á	———
2P	CPL	T	eat	RV	

nnìì	kámá	n	ʤìj	–á	———
3P	CPL	T	eat	RV	

(453) Summary of Tonal Patterns on completive Particle [kama]

Full Pronoun		Truncated Pronoun	
SG	PL	SG	PL
LL	LL	HH	–
HH	HH	LH	–
HH	HH	LH	–

The verb /di/ ‘eat’ illustrates that the completive aspect particle [kama] may be greatly affected tonally. Whereas there was consistency with the other verbs between the full and truncated pronouns, here we see that before the verb ‘eat’ there is great variation.

13.5.5 Completive aspect with Object, Verb: ‘eat’

As noted above, the verb /di/ ‘eat’ exhibits great variation with respect to the completive particle [kama]. Here, the patterns on the particle [kama] are compared with two different objects, [bɔ́rɛ̀ n ɕíí], ‘toh’ or ‘millet porridge’ and [géŋgè] ‘salt’.

(454) [kama] Variation with Pronoun and Verb ‘eat’

Object ‘salt’						Object ‘toh’							
ŋ	kàmà	n	ʤìj	–á	géŋgè	ŋ	kàmà	n	ʤìj	–á	bɔ́rɛ̀	n	ɕíí
1S	CPL	T	eat	RV	salt	1S	CPL	T	eat	RV	baobab	GEN	food
à	kàmá	n	ʤìj	–á	géŋgè	à	kámá	n	ʤìj	–á	bɔ́rɛ̀	n	ɕíí
2S	CPL	T	eat	RV	salt	2S	CPL	T	eat	RV	baobab	GEN	food
ŋ	kàmá	n	ʤìj	–á	géŋgè	ŋ	kámá	n	ʤìj	–á	bɔ́rɛ̀	n	ɕíí
3S	CPL	T	eat	RV	salt	3S	CPL	T	eat	RV	baobab	GEN	food

ndɛ̀	kàmà	n	ʤìj	–á	géŋgè	———
1P	CPL	T	eat	RV	salt	
àà	kámá	n	ʤìj	–á	géŋgè	———
2P	CPL	T	eat	RV	salt	
nnìì	kámá	n	ʤìj	–á	géŋgè	———
3P	CPL	T	eat	RV	salt	

The summary for the two objects is provided in (455).

(455) Summary of Tonal Patterns on completive Particle [kama]

Full Pronoun		Truncated Pronoun	
SG	PL	SG	PL
LL	LH	LL	–
LH	LH	HH	–
LH	LH	HH	–

As with the examples above, using the verb /di/ ‘eat’ without an object, the presence of an object causes tonal alternations on the completive particle [kama], and the object itself affects the tones of the particle, but the tones on the noun are unchanged.

13.5.6 Completive aspect with Object and Truncated Pronoun, Verb: ‘eat’

In (456) the verb /tam/ ‘chew’ is shown with a singular and plural noun as an object in the completive aspect to illustrate the tonal behavior of the particle [kama] with another verb.

(456) [kama] with verb ‘chew’ and object ‘pancake’

Singular Object

ŋ	kàmà	n	tám	–b	–á	ŋw̃è
1S	CPL	T	chew	EF	RV	pan-cake
à	kámá	n	tám	–b	–á	ŋw̃è
2S	CPL	T	chew	–r–	RV	pan-cake

Plural Object

ŋ	kàmà	n	tám	–b	–á	ŋw̃è	=ndɛ́
1S	CPL	T	chew	EF	RV	pan-cake	PL
à	kàmá	n	tám	–b	–á	ŋw̃è	=ndɛ́
2S	CPL	T	chew	EF	RV	pan-cake	PL

ŋ	kàmá	n	tám	–b	–á	ŋw̃è	ŋ	kàmá	n	tám	–b	–á	ŋw̃è	=ndɛ́
3S	CPL	T	chew	–r–	RV	pan-cake	3S	CPL	T	chew	EF	RV	pan-cake	PL
ndɛ̀	kámà	n	tám	–b	–á	ŋw̃è	———							
1P	CPL	T	chew	–r–	RV	pan-cake								
àà	kámà	n	tám	–b	–á	ŋw̃è	———							
2P	CPL	T	chew	–r–	RV	pan-cake								
nnìì	kámà	n	tám	–b	–á	ŋw̃è	———							
3P	CPL	T	chew	–r–	RV	pan-cake								

The tonal patterns on the particle [kama] with a singular and plural object and the verb /tam/ ‘chew, bite’ are summarized in (457).

(457) Summary of Tonal Patterns on completive Particle [kama] with Object

Full Pronoun		Truncated Pronoun	
SG	PL	SG	PL
LL	LH	LL	–
HH	HL	LH	–
LH	HL	LH	–

The tonal patterns on the particle [kama] are more regular with the verb /tam/ ‘chew, bite’ than with ‘eat’. The only changes between a singular and plural object are in the second person singular and the first person plural.

13.5.7 Completive aspect with Truncated Pronoun, Verb: ‘go’

An intransitive verb also shows tonal alternations on the particle [kama].

First Person			Third Person		
ŋ	kàmà	wórè	ŋ	kàmá	wórè
~2	CPL	go	~2	CPL	go
I went			He went		

(459)

First Person				Third Person			
ŋ	kámá	wórè	náà	ŋ	kàmá	wórè	náà
~2	CPL	go	fields	~2	CPL	go	fields
I went to a field				I went to a field			

(460)

First Person				Third Person			
ŋ	kámá	wórè	kóò	ŋ	kàmá	wórè	kóò
~2	CPL	go	house	~2	CPL	go	house
I went to a house				He went to a house			

(461)

First Person						Third Person				
ŋ	kámá	wórè	díjà	ŋ	kó	ŋ	kàmá	díjà	ŋ	kó
~2	CPL	go	village	GEN	PP	~2	CPL	village	GEN	PP
I went to a village.						He went to a village.				

(462)

First Person				Third Person		
ŋ	kámá	wórè	kúúⁿ	ŋ	kàmá	kúúⁿ
~2	CPL	go	market	~2	CPL	market
I went to a village.				He went to a village.		

The table (463) summarizes the tonal patterns on the completive particle with /wore/ ‘go’.

(463) Summary of Tonal Patterns on completive Particle [kama]

Indirect Obj	Gloss	1.SG	3.SG
none	———	LL	LH
náà	wilderness	HH	LH
kóò	house	HH	LH
díjà	village	HH	LH
kúúⁿ	market	HH	LH

The presence of a noun following the completive particle [kama], whether it is a direct object or an indirect object, affects the tone on the particle.

13.6 Incompletive

The incompletive aspect is formed with the incompletive particle /daw/ and the default verb stem. The incompletive particle has segmental allomorphs [da, na, nda] with short vowels and [daa, naa] with long vowels. The initial consonant of the incompletive particle surfaces as a nasal after the first person singular and third person plural pronouns, both of which begin with a nasal. The following examples illustrate the tonal patterns on verbs in the incompletive aspect and the segmental alternations on the incompletive particle. The motivation driving the incompletive marker's allomorphy is as of yet undetermined. An interesting example in §8.1, showed that the length of the incompletive marker may be tied to the issue of timing.

When a phrase is in the incompletive aspect without an object, the person and number of the subject is found tonally on the verb stem.

(464) Incompletive Aspect without an Object, Verb: 'hit'

Ø	dáà	n	dég	–é		ndɛ́	náà	n	dég	–é
1S	INC	T	hit	RV		1.PL	INC	T	hit	RV
I am hitting.						We are hitting				
à	ndà	n	dèg	–é		à–rú	dáà	n	dèg	–è
2.S	INC	T	hit	RV		2–PL	INC	T	hit	RV
You are hitting.						You.PL are hitting				
Ø	dáà	n	dèg	–è		nnîì	náà	n	dèg	–è
3.S	INC	T	hit	RV		3.PL	INC	T	hit	RV
He is hitting.						They are hitting				

As with the other tenses, the first persons are marked with high tones, but in the incompletive aspect, the tone is on the verb stem, and the second and third persons are marked with low tones.

In an incompletive clause with an object, the default word order is subject-object-verb. Although there is some segmental variation in the noun, the tones on the object are not altered in the incompletive aspect.

(465) Incompletive aspect with an Object, Verb ‘hit’

ø	nà	jàá.mbɛ̀	n	dɛ́g	–ɛ́		ndɛ́	dà	jàá.mbɛ̀	n	dɛ́g	–ɛ́
1.S	INC	child	T	hit	RV		1.PL	INC	child	T	hit	RV
I am hitting a child.							We are hitting a child.					
à	dà	jàá.mbɛ̀	n	dɛ̀g	–ɛ́		áà	dà	jàá.mbɛ̀	n	dɛ̀g	–ɛ̀
2.S	INC	child	T	hit	RV		2.PL	INC	child	T	hit	RV
You are hitting a child.							You.PL are hitting a child.					
ø	dáà	jàá.mbɛ̀	n	dɛ̀g	–ɛ̀		nnîì	nà	jàá.mbɛ̀	n	dɛ̀g	–ɛ̀
3.S	INC	child	T	hit	RV		3.PL	INC	child	T	hit	RV
He is hitting a child.							They are hitting a child.					

The tones on the verb stem are exactly the same if an object is present or absent in the incompletive aspect with the verb ‘hit’.

(466) Summary of Tonal Patterns on Verb ‘hit’ in Incompletive aspect

Full Pronoun		Truncated Pronoun	
SG		PL	
HH	HH	HH	HH
LH	LL	LH	LL
LL	LL	LL	LL

As shown in the following sentences, some verbs, like ‘buy’ do not display the same tonal changes observed on the verb ‘hit’.

(467) /deg/ VC1 ‘hit’ without Object

Ø	dáà	n	dég	–é		ndɛ́	náà	n	dég	–é
1.S	INC	T	hit	RV		1.PL	INC	T	hit	RV
I am hitting.						We are hitting				
à	ndà	n	dèg	–é		à–rú	dáà	n	dèg	–è
2.S	INC	T	hit	RV		2–PL	INC	T	hit	RV
You are hitting.						You.PL are hitting				
Ø	dáà	n	dèg	–è		nnîì	náà	n	dèg	–è
3.S	INC	T	hit	RV		3.PL	INC	T	hit	RV
He is hitting.						They are hitting				

(468) /ɋaa/ VC2 ‘buy’ without Object

n	dáà	n	ɋàà	ndɛ̀	nà	n	ɋàà
~2	INC	T	buy	1.PL	INC	T	buy
á	dà	n	ɋàà	áà	dà	n	ɋàà
2.S	INC	T	buy	2.S	INC	T	buy
Ø	dáà	n	ɋàà	nnìì	nà	n	ɋàà
~2	INC	T	buy	3.PL	INC	T	buy

The verb ‘buy’ does not alter its tones in the incompletive aspect to agree with the subject. If no other subject pronoun is given, the difference is displayed by the presence or absence of a nasal preceding the incompletive aspect particle.

As with the sentences without an object, the verb ‘buy’ is not tonally marked for subject. As with the sentences above with the verb ‘hit’, the object is also not marked.

(469) Incompletive aspect with an Object: Verb, ‘buy’

n	dáà	ŋàmbá	–rá	n	ɥàà	ndɛ̀	nà	ŋàmbá	n	ɥàà
~2	INC	sheep	sfx	T	buy	1.PL	INC	sheep	T	buy
á	nà	ŋàmbá	–rá	n	ɥàà	áà	dà	ŋàmbá	n	ɥàà
2.S	INC	sheep	sfx	T	buy	2.S	INC	sheep	T	buy
ø	dá	ŋàmbá	–rá	n	ɥàà	nnìì	nà	ŋàmbá	n	ɥàà
~2	INC	sheep	sfx	T	buy	3.PL	INC	sheep	T	buy

The intransitive verb ‘go’ shows no tonal alternations in the incompletive aspect as shown in the following examples. The only difference between the first and third person singular persons is the nasal preceding the incompletive aspect particle and the length of the vowels.

(470) Incompletive aspect with Intransitive Verb, ‘go’

n	dáà	wòré	ndɛ̀	nà	wòré
~2	INC	go	1.PL	INC	go
á	dà	wòré	àà	dà	wòré
2.S	INC	go	2.S	INC	go
ø	dá	wòré	nnìì	dà	wòré
~2	INC	go	3.PL	INC	go

The verb ‘eat’ is also unaffected by the subject of the phrase in the incompletive aspect.

(471) Incompletive aspect with No Object: Verb, ‘eat’

n	dáà	dìj	–á	ndɛ̀	nà	dìj	–á
~2	INC	eat	RV	1.PL	INC	eat	RV
á	dà/nà	dìj	–á	àà	dà	dìj	–á
2.S	INC	eat	RV	2.S	INC	eat	RV
ø	dáà	dìj	–á	nnìì	dà	dìj	–á
~2	INC	eat	RV	3.PL	INC	eat	RV

The verb ‘eat’ is not affected tonally by the subject in the incompletive aspect with an object, nor is the object noun. The only difference in these sentences between the first and third person singular subject is found on the incompletive particle; the first person is represented by the underlying form of the particle /daw/, and the third person by the long vowel allomorph [daa], instead of the pattern that has been shown so far, that of the nasal’s presence or absence.

(472) Incompletive aspect with Object: Verb, ‘eat’

n	dáẇ	dìj	–á	póɔ́ⁿ	ndɛ̀	nà	póɔ́ⁿ	dìj	–á
~2	INC	eat	RV	meal	1.PL	INC	meal	eat	RV
á	dà	dìj	–á	póɔ́ⁿ	àà	dà	póɔ́ⁿ	dìj	–á
2.S	INC	eat	RV	meal	2.S	INC	meal	eat	RV
ø	dáà	dìj	–á	póɔ́ⁿ	nnìì	nà	póɔ́ⁿ	dìj	–á
~2	INC	eat	RV	meal	3.PL	INC	meal	eat	RV

13.7 Summary of Person Tonal Marking

Using the same examples that were given for the verb /deg/ ‘hit’ in Chapter 8, repeated in (473) we can see that there is a general tendency for low tones to be associated with the third person, whether on the verb (473a, c, d) or the object (473b). The object noun receives the opposite tones of the verb stem; high in the case of a third person subject. The completive aspect displays the opposite pattern as the other tenses; a high tone surfaces on the verb stem for the third person, with a low tone on the noun stem.

(473) Third Person Paradigm for /deg/ ‘hit’

<u>Incompletive</u>

a.	àdámá	ná	á	nníɛ́	–ré	–H	n	dèg	–è	–L
	Adama	INC	DEF	woman	3	T		hit	RV	3

Adama is hitting the woman.

Completive

b. àdámá kɔ́ n dég –ɛ́ –H à nìɛ̀ –rè –L .
Adama CPL T hit RV 3 DEF woman 3

Adama hit the woman.

Perfective

c. àdámá dèg –ɛ̀ –L níɛ́ –ré –H .
Adama hit RV 3 woman 3

Adama has hit a woman.

Perfect

d. àdámá dèg –ù –L á níɛ́ –ré –H kɛ́ɛ̀ .
Adama hit PRF 3 DEF woman 3 PRF

Adama hit the woman.

The word order of a sentence varies based on the tense of the clause. However, the placement of the object in the sentence does not seem to be the contributing factor to explain the tonal differences. Rather, the tense of the sentence, the syllable shape of the verb stem, and the syllable shape of the object noun all seem to play a part in influencing the tonal behavior.

Chapter 14. Negation

14.1 Overview of the Negative Marker

The negative morpheme [bíè] is the only means to negate a sentence. The negative marker may precede a noun, acting as a negative copula. The negative marker may also follow a noun to indicate lack of something. Verbs are also negated by the same marker preceding the verb. The tonal effects of the negative marker and its placement in a sentence are discussed in this chapter.

14.2 Word Order in a Negated Clause

The negative marker usually precedes each constituent it negates.

(474) Negation Preceding the Noun

a.

gúwóndíjɛ̀	káẃ	bíè	ŋʷɔ̀ròkɛ́
caracal	DEM	NEG	leopard

A caracal is not a leopard. (Chief 10 23.1)

b.

há	níŋà	sòɔ̀ⁿ	bíè	sòɔ̀ⁿ
IRR	say	shirt	NEG	shirt

One would say it is a shirt but it is not a shirt. (Consultant 10.2)

c.

sé	bíè	bɔ́jéɛ̀	ŋ kó	pááⁿ	bíè	básì
if	NEG	rope	PP	all	NEG	problem

(even) If there is no rope, it is not a problem. (Tiga sto 212.1)

The negative marker may act as a negative existential predicate. In this case, the negative marker follows the noun it negates.

(475) Negative Copula

a.

nèɛ̀	bíè
sun	NEG

There is no sun.

b. ŋ kásàⁿ tóɔ̀ⁿ bíè
at that time money NEG

At that time, money did not exist. (Tiga story 80.1)

c. ŋ kámà n súɥɛ̀ à nàà ŋ kò bùr̃á bíè táw̃áà bíè
CPL T descend DEF wilderness PP stick NEG pants NEG

He went into the wilderness without a stick and without pants.
(Tiga 5.53 - 55)

The tones of the noun are not affected when the negative marker follows the noun. The fact that the negative marker may surface either before or after the noun makes it difficult to assign to a specific morphological category such as pre or post clitic, prefix or suffix.

14.3 Negative Adjectival Predicate

Adjectives may not stand alone; they require a dummy noun such as 'thing' in a positive phrase. However, a negative adjectival predicate may consist only of the adjective preceded by the negative marker. As shown above, the negative marker may act as a copula and a negative with negative existential predicate noun phrases. In (476), we see that the negative marker acts in a similar manner with adjectives.

(476) Negative with Adjectives

a. bíè mɛ̀r̃è
NEG heavy

It is not heavy. (Consultant 12.2)

b. bíè bóɔ́rì
NEG many

There are not many. (Swadesh 21.1)

c. bíè wáá bíè jímbō
NEG hot NEG cold

It is warm. (LIT. 'it is not hot, it is not cold') (Swadesh 191.1)

The negative marker may negate a modified noun without overtly naming the noun, in the singular (476a), plural (476b), or with two conjoined adjectives (476c). The negative marker precedes each constituent in the phrase; it cannot negate the entire sentence at the beginning.

14.4 Negative in a Possessive Noun Phrase

In negative possessive noun phrases, the negative precedes the possessive pronoun. The set of pronouns that was briefly mentioned in §5.2 is used with the negative marker. If a noun is used, the negative marker precedes the noun, which is followed by the possessive pronoun.

The negative marker precedes the noun in demonstrative phrases, shown in (477).

(477) Possessive and Demonstrative Phrases

a. bìè mɛ́
it is not mine

b. à kòò bíé mɛ́
the house is not mine

c. bie X muw̃ɛ
it is not my X

d. bie X kaw
that is not an X

The negative marker either negates the possessive morpheme (477a - b) or both the noun and the possessive marker (477c). The demonstrative (477d) follows the same pattern as (477c).

14.5 Tonal effects of the Negative on Noun Stems

As with other morphemes which precede a noun, the possessive proclitics and the definite marker, the negative morpheme changes the tone of the noun.

14.5.1 Simple Nouns

In the words in (478) we see that nouns that end in a high tone in citation form end with a low tone when following the negative marker [bíè].

(478) Final H Tone → L

Gloss	Syllables		Stem	Tone on Noun
older sibling	CVV	a.	tíí	[H]
/H/		b.	bíè tíì	[HL]
machete	CV.CV	c.	páré	[H]
/H/		d.	bíè párè	[HL]
ancestor	CVV.CV	e.	kááw̃á	[H]
/H/		f.	bíè kááw̃à	[HL]
buffalo	CV.CVV	g.	kɔ̀báá	[LH]
/H/		h.	bíè kɔ̀bàà	[L]
man	CVV	i.	gɔ́ɔ̀^{n}	[HL]
/HL/		j.	bíè gɔ́ɔ̀^{n}	[HL]
baby	CV.CV	k.	bì+ɛ́	[LH]
/HL/		l.	bíè bìɛ̀	[L]
sugar cane	CVV.CV	m.	mùùré	[LH]
/LH/		n.	bíè mùùrè	[L]
goat bag	CV.CVV	o.	tòpáá	[LH]
/LH/		p.	bíè tópàà	[HL]

Each noun with a high tone on the final mora in this set surfaces as low after the negative marker. Note that bisyllabic nouns with long final high toned vowels (478g, o) both surface as low (478p, h). This has consequences for the choice of the tone-bearing unit. Nouns which surface with all low tones include (478h, l, n), altered from low-high toned nouns (478g, k, m).

Nouns with final low tones remain low on the final mora as shown in examples in (479).

(479) Final L → L

Gloss	Syllables		Stem	Tone on Noun
tree	CVV	a.	dʷàà	[L]
/L/		b.	bíè dʷàà	[L]
leg		c.	bʷèɛ̀	[L]
/L/		d.	bíè bʷèɛ̀	[L]
child	CV.CVV	e.	jămbɛ̀ɛ̀	[LHL]
/LHL/		f.	bíè jămbɛ̀ɛ̀	[LHL]
crocodile		g.	gèŋgìɛ̀	[L]
/L/		h.	bíè gèŋgìɛ̀	[L]
father	CVV	i.	bɔ́ó	[H]
/H/		j.	bíè bɔ́ó	[H]
log	CV.CV	k.	kúndù	[HL]
/H/		l.	bíè kúndù	[HL]
rock	CV.CVV	m.	símèè	[HL]
/HL/		n.	bíè símèè	[HL]
woman	CV.CV.CV	o.	n nìé–rɛ̀	[LHL]
/LH/		p.	bíè nìè–rɛ̀	[L]

One exception to the above pattern that all low toned final morae surface low is found in the word ‘father’ (479i - j).

14.5.2 Complex Nouns

Compounds are not a productive means of creating new lexical items in Bangime. Two potential exceptions are shown in (480) to illustrate that the tones are not affected by the negative marker. The word 'child' has a bound or lexicalized diminutive suffix in the singular citation form [jaambɛ] but emerges as [jaa=ndɛ] in the plural and with [pʷiɛ]. The word [pʷiɛ] refers to a 'wife', but when following the root of 'child' the stem means 'girl'. Similarly, when the word [boro+mbɛ], plural [boro=ndɛ] 'boy/boys', follows the root of 'child', it means 'young men'.

(480) Boy/Girl

Gloss		Stem	Tone on Noun
girl	a.	jàá pʷìɛ̀	[LH LL]
/H/	b.	bíè jàá pʷìɛ̀	[LH LL]
boy	c.	jáá bórómbɛ̀	[HH HHL]
/LH/	d.	bíè jáá bórómbɛ̀	[HH HHL]

Adjectives were shown to not affect the tone of a noun. The examples in (481) show that the negative marker does affect the tone of the noun, but not of the following adjective.

(481) Noun + Adjectives Phrases

Gloss		Stem	Tone on Noun
white sheep	a.	ŋàmbá síjɔ̀ⁿ	[HL]
/LH/	b.	bíè ŋámbá síj̃ɔ̀	[H]
red thing	c.	kìì bʷíɛ́	[L]
/HL/	d.	bíè kìì bʷíɛ́	[L]
big woman	e.	nnìé bógò	[LH]
/LH/	f.	bíè nnìé bógò	[LH]

Whereas above the effect of the negative marker was shown to lower the final tone of the noun, with the exception of the dummy noun (481c - d), each noun has a high tone on the final mora. It appears that the adjective blocks the tone lowering of the negative marker but that the adjective itself is unaffected.

14.5.3 Summary of the Negative effects on the NP

The negative marker may precede or follow a noun in a NP. When it precedes a noun, it changes the tone(s) of the noun. If an adjective follows a noun, the tone of the noun is affected. The next section shows the tonal and segmental effects of the negative marker with a verb.

14.6 Negative Verb Phrase

The TAM categories are simplified in a negated clause. There are only two aspects when the clause is marked as negative: incompletive and completive. The negative marker [bie] precedes the verb just as it does a noun. The difference in the incompletive and completive aspects depends on the verb's inflectional class and the valency of the verb. Evidence from narratives shows that the tones in negated clauses follow the opposite pattern as those described for positive ones. Text XII, Tiga 2.14, 20, 26, shows that the tonal patterns shown for positive clauses is reversed; the first person is associated with low tone on the verb and high tone on the object.

14.6.1 VC2 Stems

The present tense in both negative and positive clauses has SOV word order. The verb stem is unsuffixed for inflection, and the verb stem is preceded by the transitive nasal.

In the completive aspect, just as with a positive clause, the word order is SVO. The verb root is followed by the [–r] suffix. As discussed in Chapter 8, verbs in Class Two take the [–r] suffix only in the completive aspect. Examples from texts, Chief 1.3, 4 show that when a clause is in the present tense and the verb takes a direct object, the object directly precedes the verb.

The word order of a negated present tense clause is S-AUX-O-V, just as with the positive incompletive marker /daw/.

In both tenses, the tone of the verb stem after the negative marker is in most cases low, although there are exceptions. First person singular examples are shown in (482).

(482) Negative VC2 Stems

	Gloss	Root	INC.NEG	CPL.NEG
a.	lick	/de/	bíé n déɛ̀	bíè déɛ́–rè
b.	drink	/ne/	bíé n nìè	bíé nìɛ̀–rè
c.	mix	/sɔo/	bíé n sɔ̀ò	bíé sɔ̀ɔ̀–rɔ̀
d.	reach	/tʷa/	bíé n tʷáà	bíé tʷáà–rà
e.	build	/maa/	bíé m màà	bíé màà–rà

As shown above, [+ATR] and [–ATR] stems take different vowels after the [–r] suffix. While the tone of the incompletive negative stem remains low, the tonal melody of the completive negative is high-low.

(483) Transitive Verb [–ATR]

	Gloss	Root	INC.NEG	CPL.NEG
a.	hear	/no/	bíè n nò	bíè nó–rè
b.	know	/so/	bíé n sò	bíé só–rè
c.	do (become)	/je/	bíè n ʒìè	bíè jé–rò
d.	put	/pe/	bíè m píè	bìé pé–rò

The transitive marker precedes the incompletive negative verb stem and the [–r] suffix appears when the verb is a negated completive stem. The transitive nasal and the [–r] suffix are

in complementary distribution in negated verb stems, just as was shown for verbs that reduplicate and take the [–r] suffix.

14.6.2 Timing in the Negative VC2 Stem

The negative verb phrase differs from the positive verb phrase in the behavior of the transitive nasal. The completive lacks the nasal, and it employs the [–r] suffix on the verb; the present surfaces with the nasal, but the verb does not have the suffix. The difference between the present and completive aspects in the negative is one of timing. Each verb phrase contains the exact same number of syllables and morae, as illustrated in (484).

(484) Negative VC2 Sentences

a. /ne/ drink

	Incompletive					Completive			
	S	A	O	V		S	A	V	SFX
i.	m	bíé	n	nìè	ii.	m	bíé	nìɛ̀	–rè
	1.S	NEG	T	drink		1.SG	NEG	drink	CPL
	I do not drink.					I did not drink.			
	m	bíé	n	nìè		m	bíé	nìɛ̀	–rè
	μ	μμ	μ	μμ		μ	μμ	μμ	μ
	σ	σ	σ	σ		σ	σ	σ	σ
	6 morae, 4 syllables					6 morae, 4 syllables			

b. /tʷa/ reach

i.	m	bíé	n	tʷáà	ii.	m	bíé	tʷáà	–rà
	1.S	NEG	T	reach		1.SG	NEG	reach	CPL
	I do not reach.					I did not reach.			
	m	bíé	n	tʷáà		m	bíé	tʷáà	–rà
	μ	μμ	μ	μμ		μ	μμ	μμ	μ
	σ	σ	σ	σ		σ	σ	σ	σ

6 morae, 4 syllables 6 morae, 4 syllables

c. /sɔo/ mix

i.	m	bíé	n	sɔ̀ò	ii.	m	bíé	sɔ̀ɔ̀	–rɔ̀
	1.S	NEG	T	mix		1.SG	NEG	mix	CPL
	I do not mix.					I did not mix.			
	m	bíé	n	sɔ̀ò		m	bíé	sɔ̀ɔ̀	–rɔ̀
	µ	µµ	µ	µµ		µ	µµ	µµ	µ
	σ	σ	σ	σ		σ	σ	σ	σ
	6 morae, 4 syllables					6 morae, 4 syllables			

d. /maa/ build

i.	m	bíé	kóó	m	màà	ii.	m	bíé	màà	–rà	kòò
	1.SG	NEG	house	T	build		1.SG	NEG	build	CP	house
	I do not build a house.						I did not build a house.				
	m	bíé	kóó	m	màà		m	bíé	màà	–rà	kòò
	µ	µµ	µµ	µ	µµ		µ	µµ	µµ	µ	µµ
	σ	σ	σ	σ	σ		σ	σ	σ	σ	σ
	8 morae, 5 syllables						8 morae, 5 syllables				

The examples above illustrate that a sentence in the negative with a VC2 stem contains the exact same number of morae and syllables in the present and completive aspects. Even with an object (484d) the timing is the same for syllables as well as morae. The examples in (485) of VC3 verbs illustrate that the deciding factor is morae rather than syllables if the nasal in the completive aspect stem is considered to be the coda of the first syllable.

(485) Negative VC3 Sentences

a. /kɔn/ break cut

Incompletive					Completive				
i.	m	bíè	ŋ	kɔ̀	–r̃ɔ̀	ii.	m	bíè	kɔ́n	–dò
	1SG	NEG	T	break	RV		1SG	NEG	break	CPL
	I do not break.						I did not break.			
	m	bíè	ŋ	kɔ̀	–r̃ɔ̀		m	bíè	kɔ́n	–dò
	μ	μμ	μ	μ	μ		μ	μμ	μμ	μ
	σ	σ	σ	σ	σ		σ	σ	σ	σ
	6 morae, 5 syllables						6 morae, 4 syllables			

b. den cook

iii.	m	bíè	n	dɛ̀	–r̃è	iv.	m	bíè	dɛ́n	–dè
	1SG	NEG	T	cook	RV		1SG	NEG	cook	CPL
	I do not cook.						I did not cook.			
	m	bíè	n	dɛ̀	–r̃è		m	bíè	dɛ́n	–dè
	μ	μμ	μ	μ	μ		μ	μμ	μμ	μ
	σ	σ	σ	σ	σ		σ	σ	σ	σ
	6 morae, 5 syllables						6 morae, 4 syllables			

In all verb stems that take the [–r] suffix or one of its allomorphs [r̃ ~ d ~ b], the difference between the present and completive negative verb phrase is the presence of the transitive nasal or its absence, respectively. To compensate for the deletion of the nasal, the completive aspect stem adds the [–r] suffix or a combination of the [–r] suffix and an additional nasal in the stem.

14.6.3 Intransitive Stems with the [–r] Suffix

Among verbs that are suffixed with the [–r] morpheme, few are intransitive, with examples listed in (486). Intransitive verbs cannot compensate for the loss of the mora in the incompletive negative stem, as there is no transitive morpheme.

(486) Intransitive Verbs

	Gloss	Root	INC.NEG	CPL.NEG
a.	get up	je	bíè jíè	bíè jé–rò
b.	lost	te	bíè téɛ̀	bíé té–rɛ̀
c.	pass	dɔ	bíé dóɔ́	bíè dóɔ́–rò
d.	respond	jɔ	bíè jóɔ̀	bíè jóɔ́–rò
e.	run	tig	bíè tígɛ̀	bíè tígí–rì
f.	pull (large things)	ʒum	bíè ʒúm–b–à	bíè ʒúm–bá–rà

In negative verb clauses with transitive verbs, words follow a timing pattern so that the number of morae in the corresponding present and completive sentences must contain equal numbers. Since the transitive morpheme, a homorganic nasal, must precede the verb in the present tense forms to follow the correct word order, this takes the place of one mora and thus, the present tense verb stem deletes a syllable to compensate. Further, the data illustrate that even if the clause contains an object, the nasal marker remains, showing that it is a true marker of transitivity and not a pronominal form. The data show that intransitive verb sentences do not follow the same mora-timing pattern, but the syllables are still of the same number.

14.7 Transitive Verbs

Verbs which do not take the [–r] suffix also do not compensate for the lack of the nasal in the negative completive aspect stem. In addition to the presence or absence of the transitive nasal,

transitive verbs without the [–r] suffix show a tonal difference. Based on the above conclusion that the language is mora-timed, the tonal assignment is likely to have a correlation based on the mora timing as well but this needs further investigation. The verbs in (487) show a pattern of a high tone on the final mora of the Incompletive stem and a low on the final mora of the completive aspect stem.

(487) Transitive Verbs without [–r] Suffix

	Gloss	Stem	INC.NEG	CPL.NEG
a.	change	gómbíè	bíè ŋ gómbíè	bíè gómbíè
b.	carry (child) on back	kúmbò	bíé ŋ kúmbò	bíé kúmbò
c.	take	síè	bíè n síé	bíé síè
d.	go out	bírè	bíè bíré	bíè bírè
e.	resemble	dógɔ̀nó	bíè n dógɔ̀nó	bíè dógɔ̀nò
f.	bury (sb)	múgù	bíé m múgù	bíé mùgù

14.8 Intransitive Verbs

The intransitive verbs shown in (488) show a pattern of a high tone on the final mora of the incompletive negative stem and a low tone on the final mora of the completive negative stem.

(488) Intransitive Verbs without [–r] Suffix

	Gloss	Stem	INC.NEG	CPL.NEG
a.	enter	míndè	bíé míndé	bíè míndè
b.	come	nóò	m bíé nnóó	m bìé nnóò
c.	go	wore	m bíè wóré	m bíè wòré
d.	look	súràà	m bíé súrá	m bíé sùrà

Some intransitve verbs show differences on the negative marker itself.

(489) Intransitive Verbs without [–r] Suffix

	Gloss	Stem	INC.NEG	CPL.NEG
a.	ripe	bìjú	bìé bìjù	bìè bíjù
b.	try	kíjà	bìé wóré kíjà	bìè wòrè kíjà
c.	talk	níŋá	bíè nníŋà	bìé nníŋà
d.	squeeze	ŋʷímà	bíè ŋʷímà	bìé ŋʷímà
e.	descend	sɥɛ́è	bíè sɥɛ́è	bìé sɥɛ́è
f.	lie down	túrù	bíè túrù	bìé túrù
g.	ascend	ɥìɛ	bíé ɥíè	bìé ɥíè
h.	call	jéndó	bíè jéndò	bíé jéndò

14.8.1 Exceptional Patterns

A number of exceptions to the above described generalizations are listed in (490).

(490) Exceptions

	Gloss	Stem	INC.NEG	CPL.NEG
a.	die	jáà	bíé jàà	bíé jàà–wɛ
b.	descend	sááⁿ	bìè sáàⁿ	bìé sáẁ
c.	sit	té–rò	bíè tí–rì	bíè té–rò
d.	show	té–ró	bíè n térɛ	bíè térɛ
e.	scrub	gíjà–rà	bíè n gíjà	bíè gíjà
e.	fall	tíbí–rì	bìé tíbì, bíè tí–rì	bíè tíjó
f.	scratch	kŏgɔʒɔ	bìé mí kògɔʒɔ	bìé kògɔʒɔ mí
f.	search	kúmbòrò	bìé kúmbò ŋ kùmbò/ bíé ŋ kúmbò	bìé kùmbò ŋ kúmbò/ bìé kúmbò

14.9 Summary

There is one negative particle in the language. The negative marker [bie] serves to negate both a noun and a verb phrase. The negative particle may precede or follow a noun in a noun phrase, but it only precedes a verb. In a negated verb phrase, there are two aspects, incompletive and completive. Transitive verbs in Class Two and Three take the [–r] suffix, or the [–d] allomorph, in the negative completive aspect. Class Two verbs take the [–r] suffix in the positive completive aspect as well. Class Three verbs take a nasalized allomorph of the suffix [–r̃] in the positive completive aspect and [–d] in the positive incompletive aspect. In the positive forms, the root without the [–r] suffix only appears in the perfect and perfective. Again, the meaning of [–r] is ambiguous as to how it relates to the TAM, and polar, category. In a negative completive sentence, the transitive nasal is deleted before Class Two and Three verbs. There appears to be a correlation between the number of morae in a negated completive verb and a negated incompletive verb so that the [–r] suffix and the root vowel correlates with the transitive nasal in terms of number of morae in the respective stems. With negated intransitive verbs, the difference in the aspect is tone and/or the [–r] suffix, but no corresponding nasal. The details of the issue of the morae and timing in the sentence is left to future research.

Chapter 15. Conclusion

Bangime is a complex language with an unknown history. The language may have some shared lexical items with surrounding Dogon languages, but shares little else in terms of phonology, morphology, and syntax. Bangime has few productive suffixes on nouns. These include the diminutive and the agentive. The plural is a clitic and the augmentative is a bound morpheme. The underlying tone on nouns is seen before the plural or the augmentative marker. The tonal system on nouns can be categorized into six classes or types. There is a tendency for nouns with more than one syllable to necessitate a change in pitch somewhere in the word so that monosyllabic nouns may surface with level tones but polysyllabic words may not. Syllable structure is also restricted so that a minimal word consists of two morae, and a maximal word is three, light syllables. Most bisyllabic words have either a heavy initial or heavy final syllable, but not both. Potential vowel harmony processes are neutralized by the laxing of mid vowels before approximant [r], velar [g], and nasals. Diphthongs often occur in lieu of long vowels and consist of vowels of different heights or even opposing [ATR] values.

Compounding is not a productive means of creating new lexical items in Bangime. Instead, genitive constructions, [X's Y], are used in lieu of mono-morphemic lexical items, and in many cases describe flora and fauna terms.

Adjectives follow the noun they describe. The plural marker is a clitic which then follows the adjective. The tone of the noun does not influence the adjective, and the plural clitic, which receives a polar tone, is opposite that of the adjective, not the noun stem. Quantifiers, however, precede the plural clitic. The definite marker and the possessive pronouns precede the noun. Both affect the tones on the noun stem and are affected by the noun stem as well. There is

a tendency in the language in general to express the first person tonally as a high tone and the third person tonally as a low tone.

Verb stems are categorized into five main classes, based on the behavior of the verb root in the various aspects and tenses in the language. Morphological marking on the verb stem varies among the classes and includes a suffix [r] which is proposed to indicate efferentiality. The only productive suffix on the verb is the causative suffix.

Tense, aspect, and mood is indicated in three ways in a clause: (1) the verb stem is inflected based on its verb class, (2) the placement of the object (if present) varies within the sentence - SOV for incompletive aspects, and SVO for completive ones, and (3) verb particles or auxiliaries either precede or follow the verb stem or the object. Bangime also displays the rare word order OSV in the future tense with an object; this should not be considered the passive since it is the only way to express the future with an object and there is a separate morpheme and process to create the passive mood. There is a contrast between the incompletive aspect and the completive aspect for the markers /daw/ and /kama/ respectively. Further, a contrast exists between the perfect clitic [kéè], for activity verbs and the stative suffix [wɛ], for stative verbs. Another contrast takes place between a verb stem suffix vowel which is determined through harmony patterns and a high vowel, although what the vowel signifies is yet to be determined.

The subject of a clause may be expressed through a noun, a pronoun, or tone. Even in the presence of a subject marker, tone is marked on the verb stem, the particle, and/or the object noun depending on the tense and the verb involved. There is a tendency again to express the first persons with high tones, the third persons with low tones, and the second persons with low tones as well, but the syllable shape of the verb, the object, and the tense of the sentence all affect the outcome of the placement and the surface distribution of the tones.

Future studies will focus on the tonal effects of persons other than first and third in both possessed noun paradigms and in clauses on the verb and object. The underlying tone of verb roots will also be examined in detail. I hope to discover the function of the [r] suffix in nouns and verbs and narrow the semantic scope of the tense, aspect and mood system. Also, I wish to conduct experiments to discover the function of timing in the deletion of segments. As a much larger goal, I will continue to seek to uncover the origins of Bangime and how it fits into the history of the Dogon people and their language.

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Appendix I: Comparative Wordlists

(data from author and Heath 2013)

	Bangime	Dogon		
1.	mí	mí	1.S	various
2.	à	ú, á	2.S	various
3.	mì	wó	3.S	various
4.	n dɛ́	í, ɛ́mɛ́	1.pl	various
5.	àà, á–rù	á	2.pl	various
6.	n níí	bé	3.pl	various
7.	káẁ/kɔ́ò	kó, kɔ́	it	various
8.	káẁ/kɔ́ò	nɔ́ɔ́	this	various
9.	káẁ/kɔ́ò	kɔ̀, kò	that	various
10.	ímà	íní, ínâ, ìnûw̃, òló	here	various
11.	kéɛ̀^{n}	ɛ̌w̃	there	various
12.	jéà/jààrú	àà	who	various
13.	né ʃì^{n}	ìndʒé	what	various
14.	kóɔ̀ tè	jɔ̌w lé, jɔ̀ɔ́ lé	where	various
15.	nɛ́ n nɛ̀	bàj jàár̃à, bàj jɔ̀gɔ̀ɔ́	when	various
16.	nìí/nù mì	ááŋgà òndí– ~ òndú–,	how	various
17.	béé (káẁ)	kɔ̀ɔ̀–rɔ́	not	various
18.	(kíi) pá^{n}	sâ^{n}, pú	all	various
19.	kíí péɛ́^{l}rɛ́	dʒwá, ségú, sèg–í^{n}	many	various

20.	màá táà	ntàá–nà	some	various
21.	bíè bóɔ́rì	bààlè	few	various
22.	kéɛ̀ tè	tóó	other	various
23.	tórè	túrɛ̀ɛ̀	one	Tebul Ure most languages are [túrú]
24.	jìndò	jè–nɔ́ɔ́	two	Yanda Dom
25.	tààrù	tààlú	three	Perge Tegu
26.	néɛ̀	néɛ̀w̃, nìŋŋěj̃	four	Bunoge
27.	núndì	nùmìí	five	Perge Tegu
28.	(kíì) bɔ́r̃ò, bógò	káŋ, gàrá, márá, bâj̃	big	Mombo, Togo Kan
29.	bíéndɛ̀	ʤàlɛ́ɛ́, mwɛ̀ɛ̀ⁿ	long	Najamba, Ampari
30.	téŋgó	wàjá–ŋgé	wide	Najamba
31.	mɛ̀r̃è	démɛ́, nìmí–jè	heavy	Yorno–So, Najamba
32.	(kírí) dáɣàj/kírí-jɛ̀	dáɣá	small	Gourou and area
33.	dúgí–jɛ̀	dùŋgùrí–jè	short	Penange
34.	(kíì) kàmbà-rà	èmbú, pɛ̀ŋgú bè–bíélè, bɔ̀ɔ̀rúwè	narrow	various
35.	bírɛ̀bɛ́	gé	thin, little	Yanda Dom, Ampari
36.	kóò	úló, uro	house	Tebul Ure
37.	ʒɨ̌bɛ́ɛ́	ɲɛ̀ʔⁿɛ̀ wé	person	Tomo Kan
38.	nnìé–rɛ̀	ɲɛ̌	woman	Jamsay, Perge Tegu, Gourou,Togo–Kan
39.	góɔ̀ⁿ	àr̃á	man	various

40.	jàá+mbɛ̀	ii	child, girl	various
41.	(máá=) pʷíɛ̀	jàá	wife	various
42.	(máá=) kándéé	ɔ̀ŋgɔ̀rɔ́, nɔ̀gɔ̀ɔ́	husband	various
43.	nníjà	nàá, nìì	mother	various
44.	bɔ́ɔ́	bɔ́ɔ̀	father	Ben Tey, Bankan–Tey
45.	ʒǐríbɛ̀ɛ̀	bɛ́lí	animal	Mombo
46.	ŋàmbàrá	ámbá	sheep	Tiranige
47.	bíiⁿ	bɛ̀rú, ɛ̀r̃ɛ́	goat	Peregue, Gourou
48.	nnàà	nàŋà, nàà	cow	various
49.	ɋíè n kò n ŋòɔ́	nàw̃à	fish	Toro Tegu
50.	dɔ́réɛ̀	nìí	bird	various
51.	kùrìʒɛ̀ɛ́	íínjɛ́	dog	Tiranige
52.	sémà	sèmá	louse	Dogul Dom, etc.
53.	kéréndɛ́ kéɛ̀	lùgèréè	snake	Tomo Kan
54.	dʷàà, dʷàɛ̀	tìmàá, tìmɛ̀	tree	various
55.	bùr̃á	bíéré, bágá	stick	various
56.	dʷáá m bìɛ́	tìmɛ̀–íínⁿ	fruit	various
57.	búrúù	síí	seed	various
58.	pʷíɛ̀ⁿ	pùnɛ̌n	leaf	Najamba Jamsay, Nanga,
59.	ʒíìⁿ	cééŋ, wèèrî, dǐl	root	Yanda Dom
60.	ʒàgà	kòkòó	bark	Togo–Kan

61.	tʷíìⁿ	kúrɔ́	flower bud/flower	various
62.	gǔʒé+è	gú–gúrú	grass, weeds	Togo–Kan
63.	bɔ́jéè	bóólè	rope	Bunoge, various
64.	kíŋgèè	gùʤú	skin	all
65.	nŋàẃ ~ ŋòɔ́	nàw̃á, nàmá, nɔ̀w̃ɔ́	meat	all
				Tomo Kan, Tebul
66.	ʒíì	ɲíí, jènjé	blood	Ure
67.	nnòɔ̀rè	kìr̃á, gɔ̀ɔ̀gè	bone	all, Penange
68.	ŋʷìè	nĕ–ŋgó, nŭŋ	oil	Najamba, various
69.	kúùⁿ	tàrú	egg	Toro Tegu
70.	síráá	círá	horn	Toro Tegu
71.	tííⁿ	dìlɔ̀	tail	Tiranige, etc.
72.	kúɥì	kùjá	hair	Bankan–Tey
73.	dégè	kúúⁿ	head	various
		sùgú, sùgùrù,		
74.	tàŋà	sùŋùnù	ear – see nose	various
75.	gìré	sííbíè	eye	various
76.	súmbí–rì	cíní	nose	various
77.	nɔ́ɔ̀	nɔ̀ɔ́	mouth	Nanga
78.	n nɔ́ɔ́ n síìⁿ	ínnì, ìn	teeth	various
79.	nɔ́ɔ́ n ʒèrí	jèrèdèⁿ	tongue	Tomo Kan
80.	nìì kwéèⁿ	nèè síí	finger	Mombo

			foot, leg – see	
81.	bʷèè	kúwɔ́	shoulder	various
82.	bʷèè ŋ kúmbíè	kúndú	knee	various
83.	kúwɔ̀	ká–kárú	wing, shoulder	Mombo
84.	kóórɛ́é	kûl\\kûl, bèrɛ́	belly	Najamba, various
85.	bɔ́rbɔ́rdè, kɔ̀rìì–ŋɔ̀ kúrúbè	ʤùŋɔ́	guts	Najamba, Togo–Kan
86.	kẃà	kɔ̀rɔ́	neck	Jamsay and various
87.	súɥè	ìríí, èsè	breast	various
88.	ʊìmmè	cɛ́nè	heart	Jamsay
89.	kúrí kìŋgɛ́ɛ́	kínɛ́	liver	Yorno–So
90.	nnìɛ́–rè	nèɛ́	drink	various
91.	dì–á	jɔ́ɔ̀ jè, jɛ́ɛ́–rí, lí	eat	Ampari, Toro Tegu
92.	támbà	támbá	chew, bite, scorpion sting sb	all
93.	túʒú–rù/rì	dʒì tùrɛ́	spit	Nanga, various
94.	nèɛ́ndí	gùlɔ́, úló, ùlò–lí	vomit	various
95.	níírù	níɲnú níɲnɛ́	breathe	Tommo–so and related
96.	mmáà	màndúù, màndám	laughter, cause to laugh	Najamba
97.	bɔ̀ndó	ɔ́mɔ̀ɔ̀	alive	Tebul Ure
98.	ʒáà	dɔ́ɔ̀, tíwɔ́, nuwɔ	die	Ampari, various

99.	ɥùúr–á	ʤâ	kill	various
100.	kóɔ́rì	kɔ̀mbɔ́ tá	war	Jamsay area
101.	sísɔ́ɣɔ̀/kɛ́rɛ́ndì	dànní	hunt	various
102.	dègɛ́	lágá	hit	Jamsay area
103.	jàg–á	jɔ̀gɔ́	cut	Yorno–so
104.	pɛ́rɛ́ndɛ́, kór̃ɔ̀	pɛ́lsú, káwrá	split	Toro Tegu, various
105.	kɔ̌gɔ́jà	kɔ́nʤɔ́	scratch yourself	Tommo–So, various
		gàndʒá, gùló,		
106.	kíndù	wàndʒá, gúʤɔ́	dig	various
107.	ŋwɔ̀ mɛ́ nà/ŋwɔ̀ mɛ́ ná wòrè	dáwɛ́	travel	various
108.	ŋwɔ́ⁿ	jój	walk	Perge Tegu
109.	tìgɛ̀–ré	dúgúrè	run	Mombo, Tiriange
				Bankan–Tey, Tebul
				Ure, Yanda Dom,
110.	nóò	wɔ́\\wá	come (see go)	Najamba
111.	gíjɛ̀ n sɛ̀rɛ̀	bɛ̀rɛ̀–cɛ́ʤɛ̀ cɛ́ʤɛ́	lie	all
112.	térò	dìŋé	sit (see stand)	all
113.	dínɛ̀	íjɛ́, igɛ, ii	stand, stop	various
114.	gòmbíjɛ́	kígíljè,gɔ̀ŋɔ́	turn	Mombo, Toro Tegu
115.	tìjò, tíbì	tíbɛ́	fall	Penange
116.	nnáẁ, níí	ów, ní	give	Toro Tegu, Ben Tey
117.	nɲáẁ	áw\\áwá	take	Toro Tegu
118.	síè	ìbié	take, catch	Tebul Ure

			rub – massage deeply sb, stimulating	
119.	gíjàrà	gàɣá/párá	muscles	various
120.	púg–ù	mɔ̀g–ú	wash	various
121.	júmbá–rà	jumba, árá, ʤùmbɛ́	pull large things	various
122.	tǐŋgá–rá	dàmbá	push	various
123.	guɥ–i	gúʤé	throw	Mombo area
124.	bàà	mɔ̀ɔ́	tie	Bankan Tey
125.	síí	kújé, píjɛ́	sew	various
126.	ŋíj̃ɔ̀	nìgìlè, núgó	count	Najamba and various
127.	nníŋá, dígà	gáá	say, talk	various
128.	nŋʷéɛ̀	nùŋú, nùŋɔ́, nùŋɛ́	sing	various
129.	sáŋà	cɛ̀ná cɛ́nú	play	various
130.	píndò pìndò	pír–ii pír–íí–jà	swell	various
131.	nnɛ̀ɛ̀ (nnìé)	nì–nìí	sun (but see ‘day’)	Jamsay
132.	ɥíɛ́	wɛ́ɛ̀	moon	Mombo
133.	tòrè+mɛ́, tòrò	tóró, tònòlò–j́	star	various
134.	ɥíè	nîi	water	various
135.	jóɔ̀ⁿ	jàrí, àjăn	rain	Ben Tey, Bankan–Tey, Nanga, Najamba

136.	nŋɔ́ɔ́mbɛ̀	gɔ̀ndɔ̀lɔ̀	river, pond	various
137.	dɛ̀wɔ̀	dɛ́	lake	Toro Tegu
138.	gɛ́ŋgíɛ̀	mɛ̀ndʒɛ́, mɛ̀ndʒɛ́ gɛ̀	salt	Ampari
139.	nímbɛ̀	sì–sɔ̌m, sù–sɔ̌m	sand	Jamsay
140.	kúrí	kùlɛ́–ŋ–kùlɛ̀	dust	Bunoge
141.	gàʒɛ́ⁿ	ádúná, àdúr̃ú	world	all
		ɔ̀rɔ̀ ɔ̀rɔ̀ gé, póndù,		Ampari, Bunoge,
142.	póórò	kùrùwɔ́	cloud	various
143.	ʒɔ́ɔ̀ⁿ	jàrí, àdʒǎn	sky, rain	Nanga, Najamba
144.	pévɛ́–rɛ̀	ɲɛ́ɲɛ́r̃ɛ́	wind, air	Togo–Kan
145.	bírɛ́ n jìɛ́	kúmbɛ̀	smoke	various
146.	bírɛ́ɛ̀	gɛ́nì	fire	Mombo
147.	síɛ̀	tɛ̀ɛ̀ŋgɛ̀	firewood	various
148.	tíqɛ̀	dwɛ́ɛ́, dwɛ́ɛ̀	ashes	Mombo, Ampari
149.	siwɔ	símbíé	grill, burn	various
150.	ʒɛ̀mbíɛ̀	ɛ̀dʒìmì ɛ̀dʒìmì gé	road	Ampari
151.	símɛ̀ɛ̀	cɛ́ɛ́mbɛ̀	mountain	Tiranige
152.	bʷíɛ́	bɔ́mbɛ̀	red	Bunoge, Penange
153.	símà	sìmà	white	Bunoge
154.	póɔ́ꜜrɛ́	jɔ̀rdɛ̀, jɔ̀ɔ̀lɛ̀	black	Penange, Bunoge
155.	ʒìɛ́	jáŋá, dìgɛ́, bàà dɛ̀nɛ́	night	various
		dɛ̀r̃ìŋ, dɛ̀nìgɛ̀ɛ̀ⁿ, gɛ̀ɛ̀ⁿ		
156.	nnìé	nì, gɛ̀ɛ̀dɛ̀n	day	Tiranige area

157.	bíí^{n}	àr̃à–kúsú, àr̃à–gúsú	year	various
158.	jímbò	tôm, tòmbò	cold	various
159.	péérɛ́	ségín, èsí^{n}	a lot	Yanda Dom, Najamba
160.	káráá	kàlá, kàndá	new	all
161.	kááw̃á	káámnɔ́, káánú	old	Mombo, Penange
162.	gáẁ^{n}	gàànà	good, easy	all
163.	jáŋgà	jáálá	bad	Mombo
164.	kíwù	kìrɛ́	difficult	Togo Kan
165.	mɔ̀ɣɔ́	gɔ̀mú	rotten	various
166.	dìŋgí	lɔ́ɣɔ̀, gíɲù	dirty, trash	Jamsay area, Dogul Dom
167.	téɛ̀	tèndóò\\tèndéè	straight	Najamba
168.	múŋgúdúmɛ̀/(kíì) bíŋgíríɛ̀	dúndúlé	round	Mombo
169.	(à bă^{n} màà nó) dérì	ɛ́rî	sharp	Nanga
170.	mótù	dùnú	dull	Toro Tegu, etc.
171.	míròo	òlú, órùm	smooth	Toro Tegu, etc.
172.	tɔ́ndú	tèmbóò\\tèmbíéè	wet	Najamba
173.	kɔ́ò^{n}	kúnú kúnó	dry	Yanda Dom
174.	kɛ́rɛ́	bɛ̀rú	near	Toro Tegu
175.	qúndù	wàgá, wágù	far	all
176.	sííbéɛ̀	ɲɛ̌ǰ	right	various
177.	bárà (n nìì)	bàr̃íǰà	left	all

178.	gúrù	bɔ́rɔ̀	under	Togo Kan
179.	ŋ kóò	kù	inside	Toro Tegu
180.	sɛ́nɛ́	dè	if	all
181.	kà jéró	sábù	because	all (borrowed)
182.	(màá) nîì	íní	name	Mombo

Further Possible Borrowings between Bangime and Dogon

	Bangime	Dogon	Gloss	Source Dogon Language
1.	kíiⁿ	kíiⁿ	canoe	Mombo, Bunoge, Penange
2.	dóɔ̀	dɔ́ɔ̀	paper	Dogul Dom
3.	dúgú	dùgú, dògù	forest	Tiranige, Bunoge
4.	kɔ́mɛ̀	kɔ́mɛ́, kɔ́mbɛ̀	slave	Tiranige, Bunoge
5.	tɔŋɔnɔ	tɔ̀ŋɔ̀r̃ɔ́, tóónò	truth	Togo Kan, Mombo
6.	kámbá–rā	kámá	mash	Tommo–So
7.	bɔ́ŋgɔ́–rò	bɔ́ŋɔ̀ɔ̀	belly button	
8.	dágá+jɛ̀	dágáj, dáɣá	little	Nanga, Gourou
9.	túgí–rì	tɔ́gɔ́–gí	pierce	Nanga
10.	múnd–á	mùnd–ó	braid	Nanga
11.	kàá–rà	káá	shave	Tommo–so
			sweep, wipe off	
12.	gíjɛ́–ndí	gɛ́ɛ́n–jɛ̀	sweat, mud	Penange, Mombo
13.	té–ró	tééré	show	Jamsay
14.	n táà	n tàá–nà	some	Penange
15.	nnàá	ɔ̀r̃ɔ́ɔ́	wilderness	various
16.	ʋòó	bằn	horse	Najamba
17.	póɔ̀ⁿ	pàná	meal	Gourou

				Toro Tegu, and Jamsay, Perge Tegu,Togo–Kan, Yorno–So,
18.	jéà	àjé, àà	who	Tommo–So, Tiranige, Mombo, Penange
19.	níì	àŋí	how	Toro Tegu
20.	nníɛ́	ɛ́mɛ́, írí	milk	various, Togo–Kan
21.	kúú^{n}	ébà	market	
22.	né n nɛ̀	ààr̃á	when	Tebul Ure, Yanda Dom

23.	bóɔ́^{n}	bòló	millet porridge	Toro Tegu
24.	síí^{n}	kíndó	shade, shadow	Bankan–Tey, etc
25.	kɛ́è^{n}	kèèndê also tugu	cheek	Nanga
26.	tíé	tèsí	grandmother	Nanga
27.	n nìè	jìr̃é	rainy season	Jamsay, etc
28.	gìí^{n}	gŭn also tun	back	Jamsay
29.	k^{w}éè	gɛ́è^{n}	tree bark	Perge Tegu
30.	túú^{n}	dùró, dòó	thorn	Nanga, Tebul Ure
31.	tíí	dɛ̀ɛ́^{n}	sibling older	Togo–Kan
32.	tèɛ̀	dùwɔ́	forge	all
33.	tág–à/ù	dàgá	agree	various
34.	tóɔ́^{n}	kɔr̃ɔ̀, tɔ̀ndí, kɛ́ɛ́rù	money	Tebul Ure, Bunoge
35.	tóɔ̀^{n}	kɔ́ɔ́nɔ̀	blacksmith	Bunoge
36.	kóɔ́rɔ̀	tóórù, tówrù	idol, fetish	various
37.	ímà	ìní	here	Toro Tegu
38.	kùú^{n}	dòó, kéú	waist	Nanga, Tommo–so
39.	bìrɔ̀ndɔ́	pòròò–ɲúú	corn	Jamsay

40.	kóɔ́ tè	jɔ̌w lé	where	Jamsay
				Ben Tey, Jamsay, Togo–Kan,
			person who is of the	Yorno–So, Ibi–so, Tommo–So,
41.	báŋgà	banga, bàànʃí–jɛ́	Banga race	Yanda Dom
42.	kúɥì	kùjá	hair	Bankan–Tey
43.	n níì kɔ́ɛ̀n sògójè	nàà–sìiⁿ kɔ̃w̃r̃ìì	fingernail	Ben Tey
44.	dégé kújù kúɥì	kùjá	hair head	Bankan–Tey
		kú\\kó, gùmbó,	break smth or smth	
45.	kɔ́ndò	gùmɔ́–\\gùmɔ́	break	Jamsay area
46.	sígá	sáré, úsú\\úsó	ask	Mombo, Jamsay
47.	níí ŋ kʷéɛ̀ⁿ sɔ́gɔ́jì	nùmɔ̀–kɔ̀r̃íí	fingernail, toenail	Togo–Kan
48.	ʊòò	wòrú	field	Perge Tegu, Togo–Kan
49.	múgúndú	púgúdʒù	squeeze	Togo–Kan
50.	pààⁿ	sâⁿ	all	Togo–Kan
		kíínì\\kííné, núwⁿó	ignite light switches,	
51.	téɛ́ndé	tó:ló, núwⁿó tán–gá	fire,	Togo–Kan, Perge Tegu
52.	ndɛ	nɛ	plural vs singular	Yorno–So
53.	tíndè	tìrɛ̀–[áj=nɛ́]	grandfather	Yorno–so
54.	kùɥìɛ́	kwɛ́j	calabash	Tomo Kan
		ɛ̌w̃, bɛ̀rɛ́ɛ́\\bɛ̀r–		
55.	kéɛ̀ⁿ	gɔ́\\bɛ̀r–mbɔ́	there	Penange, Tebul Ure
56.	nórè	núúndó, nɔ́	hear	Tiriange, Tebule Ure
57.	sòɔ̀ⁿ	sòŋ	shirt clothing	Yanda Dom

			turn about, allow	
58.	gómbíè	gìgíl\\gìgìlè	(non-volitional)	Najamba
		pírí–j\\pìrì–jè, pílí–		
59.	píndó	j\\pìlì–jè	bird, airplane glide	Najamba
60.	pírúndú	íbí–jɛ́	fear	Najamba
61.	píndù	púló	unbraid, untangle	Tiranige, etc
			good afternoon/good	Bunoge, Penange, Tiranige,
62.	tija	tíjá	evening	Mombo
63.	dámbá	ʤwéé	a lot for inanimates	Mombo, Penange
			sweep – wipe off	
64.	gíjɛ́–ndí	gɛ́ɛ́n–jè	sweat, mud	Penange, Mombo
65.	kéè tè	tóó	other	Penange, Mombo
66.	nìì	nɛ̀è	hand	Penange, Mombo
67.	tìgè–ré	dúgúrè	run	Mombo, Tiriange
68.	tɔŋɔnɔ	tɔ̀ŋɔ̀ɽ̌ɔ́, tóónò	truth	Togo Kan, Mombo
69.	tíɥè	dwɛ́ɛ́, dwɛ́è	ashes	Mombo, Ampari
70.	bìɛ́	bíéé, bíéé gè	baby	Ampari
71.	kìí á nò, kìʒá	kíjè, kíjà	respond	Bunoge, Penange, Kindige
72.	do ɲama	dóójè	sleep	Bunoge
73.	gúʒè káráá	kɔ̀jí kàjì	green	Bunoge
74.	t^{w}ɛ́$é^{n}$	tɛ̂j	basket small	Bunoge
75.	bíè bóɔ́rì	bààlè	few	Penange

			lay smth or sme down, put down, lie	
76.	bíř́á	bìjé	something down	various
77.	bɔ́ŋgɔ́–rò	bɔ́ŋɔ̀ɔ̀	belly button	
78.	bùù^{n}	púř́á, púná	millet powder	
79.	bùwó	bíérú	herd	
80.	déɛ́rè	dɛ̀nʤì, ɛ́rî	sweet	various
81.	déɛ́rɛ̀	woru	cultivate	various
82.	d^{w}é+ɛ̀ m bùù^{n}	pòrò–púnà	yellow	various
83.	karaa	jangu kana	read	all
84.	né síì^{n}	ǹʤɛ̀	what	various
85.	nnìɛ̀	ɲàá, nìŋáá, jéŋgì	yesterday	various
86.	nŋàẃ ~ ŋòɔ́	nàw̃á, nàmá, nɔ̀w̃ɔ́	meat	all
87.	pàà	kóóm, pampare	cave	various, Fulfulde
88.	pɛ́rɛ́ɛ̀	kɛ̀wí^{n}	key	various
89.	píí	nìŋɛ́	sauce	various
90.	píjɔ̀^{n}	ɲíŋù, gìɲú	smell	various
91.	píjù	súʤɔ́, píwɛ́	blow	various
92.	pɔ́ró–ndí	pogo	pick a fruit or vegetable	various
93.	púјíɛ̀	pɛ́jɛ́	tear clothing	various
94.	sáŋà	cɛ̀ná cɛ́nú\\cɛ́ná	play	various
95.	sígà	ɛ́jɛ̀	clean	various

96.	síjéndɛ̀	pjɛ̀^{n}	old, worn out	all
97.	sórè	ʤùgɔ́	know	various
98.	témbíɛ̀	tembe	small rock	various
99.	tɛ́è	nàà kɛ́ndɛ̀	palm	various
100.	tinda	tɔ́rɔ́, túmnó	start	various
101.	tìndè	kúr̃ú, tún	put	various
102.	tíè síí	si te	NEG – reverse	Bamana
103.	túw̃è+ɛ̀	dòndíjê, nì–nìw̃é	cat domestic	various
104.	jăgú	măj̃	dry	various
105.	jè–rò	kár̃ú\\kár̃á	do	all
106.	ʒérò	ígé, íŋgjɛ́ɛ̀	get up	various
107.	ʒie	jìí, jéé\\jéé	see	various
108.	ʒìɛ́	jěj, ìijé	honey	various
109.	lóɔ̀ŋgá	lɔ́wɔ́ŋgà	collective hunt	Bunoge

Appendix II: Comparitive Wordlists

(data from Hochstetler 2004: 99 - 101)

48 stone	pierre	t°u°o	tu°o	tuo	tubu	tubu	kinu	sim'e	cin	tib°	dumbo?	dumbo	kind°	tibu	cibu	cini	ceni	?ena	kini	dondi
49 sand	sable	?iaᵑsumo	?isjobuŋo	?syme'	sa?aba	sagaba	sondôdô°	niime	sonzom	so'°mô	so'°mo	so'°mo	soso dyirigu°	solomo	sôsoŋ	soinda	nuso'	sobagare	sobugari \sosobogari	
50 one	un	taru	taru	taru	ci:	ci:	tomon	tie	tuma	ti°i	ti	ti:	tomo	ti: \ taru \ tiru	tir	tua	teda	toda	toda	teta
51 two	deux	le'	le' \ lij	le'	l°e' \ le	l°e	mu'	jindo	'enoe	ne'	ne'	ne'	nego	le:' \ le'	le'	nenga	nega	?ẽŋga	?eŋga	?tika
52 three	trois	tali	tamdi	tali	tandi \ tande	tändi	taidi	kataro	ietandu \	tand°	tand°	tandu	tand°	tandu	tanu	tand'	tandi	tiladi	tandi	tãti
53 four	quatre	nai	na'	nci'	na'	na:	kese'	kenẽ	'ecezo	na'	nd'	na'	ceso	na'	nd'	cedyo	cedyo	ni:	ni:	ni:
54 five	cinq	numoi	nuji	nui	nunca	nuna	numiɲ	kendundi	ienum	no	?no	?no	n°no \ n°no	no	nũmẽnẽ	nom°	nom	nom \nom°	numu	num°
55 long	long	guru	guru	guru	gebe	gebe	djala	bende	zala	pala	palago	pala	dyaloŋ	pala	papara	golo	golodya	jem°ẽm°ɛ	mẽjẽ	mõjẽ
56 short	court	tuko'	tukei	tukei	q°e	q'e	dendũ	dogi	dene	dumbu	dumbugo	dumbi	deno	dumbu	dumi:	duŋguru	duŋgudu	jedeŋideŋi	deŋu	deni \ deŋi
57 good	bon	dyeŋ	dyeŋ	dyen	sẽ	sijeko	neŋ	gã \ gãõ	s'e	sɛ'	siẽ	siẽ	dyenofoo	sẽ \ gene	?esiwo	polo	polo	jedye	dyerobo	dyurubu
58 bad	mauvais	dyenda	dyenda	dyena	modyu	modyu	?enda	begã	cugomo	siele	siẽle \ padye	jamal	dyenocbomu	genewolo \ sẽla \	?esala \ moŋu	polonda	pololi	jedeguno	dyeraru	dyururu
59 few	peu	tegej	tegej	tegej	da?ama \ t°ele°	bõri \ bõr'ɛ	wundu	kirame	kiendɣm	gala	gale? \ dagi?	gale'	dageg°bo	dai'	gola \ ge'le	kebalo	kadi	kadeŋ	kite°i	boru
60 red	rouge	baŋ	ban	banc	bd	bd	banũ	kibu'e	ban	ban	ban°?	ban	ban°	bano	banu	tombo	bambe	jebambe	jabomie	bambe
61 black	noir	dyem	dyem	dyem	dyɔ	dyeŋ	gemũ	kipore	dyeme	gem	dyem°	dyem	dyemɔ	dyem	dyɛ°	kodo	kolo	koro	koro	koro
62 white	blanc	piri	piru	piri	pi	pi:	pyloŋ	kisimũ	p'le	piŋ	pyl	pil	pilo \ pilõ	pilu	piru \ pilu	sima	tombo	jetombo	tomo	tombo
63 who	qui	na'	?a'e	?ae	'o'	'o:	?am	'ã	?am	?aŋ	?ai	?a:	?ami	?a	?a	?a'	?a'	wa	waw	?oa
64 what	quoi	nje	je:	?ese	ieko'	?'ndyo	jenge'	'a	kin'ema	ndyẽ	?ndye' \ ngne	?ndye	?ŋgoni	ndyo	ndye'	°dyege	ŋgesie	?iŋgewe	?indyo	?'ndye
65 where	où	jadye	jaga	jaga	pamba'	n'ãmba	?amɲ	k°ote	?amba	jaba	jaba'	jaba:	?aŋa	jogora \ jara	jago	mane	wole	°a°	wombo	°a°
66 far	loin/lointain	waga	waga	waaga	°e?e	°ege?	xx	gand'undu	°odyu	wago	wago	'age	°agumbo	wage	wowage	waga	wadya	wadyobo	wacu	°odyu
67 when	quand	jageno'	jaga cenda	jaratoŋ°	'a?adyi \	'a?adyu	?aŋgisara	nene	?ara	wogod°	ba'ama	wariama	?ama	joma	warunge' \	manoŋga	wanale \ °age	?iŋge	wana	?°omati
68 I	xx	mbie	mi:	mi	mi:	mi:	mi	mi°	mu	mu	mi	mu	mu	mi	mu	mi	mi	mi:	mi	mi \ miu
69 you	xx	?uje	?u:°	?u	?a	?ali	?o	?au	?o	?u	?u	?u	?o	?u	?u	?o	?o	?o	?o	?o
70 this	ce...ci	ŋgubaza	ŋgubanza	wo	?ŋko	comba	ŋgu	?ima	bo \ je	neno	no	nombe?	?ogu	ŋgo	?õ	ni	nu	?õ	ɲaŋgo	nondege
71 that	ce...là	ntobazaŋg°i	nde' \ banza	°dangga	cuko \ ?ilacuko	nomba	mũ	kewe	kuba \?aŋe	jiba	jiba	nimbe?	?na	ŋgona	ko	?enda	?imba?	na	nõ	nondoro
72 all	tout	ceduŋa	cehunde	cehule	kofu \ ko?arecfu	fu:	medindi	neparã	c'em	kem	kɛ°	cɛ°	fu	kojawe	fu: \ pu:	sele	sapo'	sau	sa°	kemene
73 many	beaucoup	halimutuko'	muta	muta	gara	gara	s'en	kipere	ko'°nu	jul	dyol°	gaga	dyinebo	gau	gai	dy°a:	d°a:	dyo	dyo	bo
74 large/big	grand	ga	na	na:	gara	gara	gindoŋ	bauõ	golembo	gago	gago	d'e	binumbo	po	dye'	gago \ bagi \	bo'	jedogo \ dogo	dogodogo	dogere
75 small	petit	t°edye'	tejge'	tege'	sini \ sisini	bo'ri	wondu	kirame	cimsa'	kada	gale'	gale \ dagi	dageg°bo	?uzi	?usi	ŋkale	?enkalie	jekedende	kedeni	borui
76 drink	boire	ne	ne	ne	nõ	nõ	nmom	'e	n'a	nondom	no	nõ	na	nõ	nõ	nã	na	n°a	n°a	n°o
77 eat	manger	?ĩ	le	le	nd	nja	k°enam	dia \ d'a	nja	njedem	?n'e	?ɲe	ɲa	ɲã	kaja	ɲa	ɲã	ja	ja	ja
78 see	voir	?o	wo	wo	q°a	dyere	jenam	s'ra	tadya	jao°	jegada	'ende?	wula	wa	jene	sem°	s'em°	ɲina	manda	mata
79 hear	entendre	?ega	?ega	?ega	'a?a	jaga	ndum	no	nindyu	?era°°	?egegada	?ege	nendio	ege	cenije	nund°	nundy°	mana	cito	nuco
80 sleep	dormir	le'	le°	leo	l°ere	°ere	m°i	'o°odo	n'u	njydom	jeje	jej°	nojo	jeije	g'rije	nojo	nojo	?endo	?eno	?endo
81 die	mourir	nuo	nu°	nuo	numu	numu	tiba	'o°o'	tibe	jimoi	jime	jim°	tiba	jime	jime	d°a	doga	d°a	d°a	d°a
82 kill	tuer	wa	wowo	wo:	dala	da	dya	'ya	dya	do'le	da	da:	ta'a	da	da	dyewa	dyewa	s'ema	dya	dja
83 swim	nager	mugo	mugo	mugo	mugo \ °ana	mugo \ n°ana	bandi	paniwore a°eporo	bagu	dimugu	bune	mug°	beja \ be°ja	wence	bania	wanda	wanda	wanda	wanda	°anda
84 walk	marcher	jejo	jejo	joo	jeja	ja	?inu	°°o°ore	?un	?odo'	?odo'	'a:	?ina	jeze	jo'ja	?unu	?unu	nara	nara	nara
85 give	donner	?ou	?o°	?o°	?o°	?o	ndira	nondo°o'	ndi	?ob°	?obo	?ob°	?nda	?obo	?obo	teba	doga \ muntan°	tawa	tawa	ta°a
86 say	dire	ga	ga	ga	ho	ho	dama	ŋkane \ ŋka?ne	dama	soo	gegedi	taga \ soo	gina	ge	taga	dama	dama?	pora	pora	pora
87 know	savoir	zugobera	?ita	?ita	dyuga \ ?embe	dyuga?	be	haso	z'o	def'	ditle	dyugo	tigia	?igubi	dyugo	jara	jara	manda	manda	dũta
88 come	venir	jeli	jeri	jeri	'ala	jala	wo	nuima?	wo	jala	jele	?ele	mena	jele	u:	?ego	?egu	?egu	?egu	?egu
89 bite	mordre	cera	cera	cera	cara	cara	kera	nore?	ceda \	kera	kere	kere	cera	kere	cere	nuŋga	nuŋga	diga	diga	diga
90 fly (v.)	voler (oiseau)	kiro	kiro	kilo	culo	cylo	pirie	dapiru	cilio	kili	kili	kil'e	kilio	kile	kilie	ponda	kiligo?	kirio	kirio	kirio

Appendix III: Nouns by Categories

Tonal Type One: /H/

	Gloss	Singular	Plural	Augmentative	Segmental type
a.	father	bɔ́ó HH	bɔ́ɔ́=ndɛ̀/rú HH.L	n/a	1
b.	milk	nníɛ́ HH	nníɛ́=ndɛ̀ HH.L	n/a	1
c.	sibling (older)	téé HH	téé=ndɛ̀ HH.L	n/a	1
d.	forest	dúgú H.H	dúgú=nɛ̀ H.H.L	dúgú–bɔ́rɔ̀ H.H.H.L	1
e.	soap	pɔ́ɔˡkɛ́ HH.M	pɔ́ɔ́kɛ́=ndɛ̀ HH.H.L	———	1
f.	canoe	kíín HH	kí=ndɛ̀ H.L	———	2
g.	shade	síín HH	síí=ndɛ̀ HH.L	síín téŋgò n/a	2
h.	mongoose	síín HH	síí=ndɛ̀ HH.L	síí–bɔ̀rɔ̀ HH.L.L	2
i.	tail	tíín HH	tíí=ndɛ̀ HH.L	———	2
j.	basket (small)	tʷéɛ́n HH	tʷéɛ́=ndɛ̀ HH.L	———	2
k.	thorn	túún HH	túú=ndɛ̀ HH.L	túún–bɔ́rɔ̀ HH.H.L	2
l.	egg	kúún HH	kúú=ndɛ̀ HH.L	kúún–bɔ́rɔ̀ HH.H.L	2
m.	pestle (large)	kɔ́ɔ́n HH	kɔ́ɔ́=ndɛ̀ HH.L	kɔ́ɔ́n–bɔ́rɔ̀ HH.H.L	2

n.	money	tóɔ̀ⁿ HH	tóɔ̀=ndɛ̀ HH.L	———	2
o.	cream	bóɔ́ⁿ HH	bóɔ́=ndɛ̀ HH.L	———	2
p.	fence	sááⁿ HH	sáá=ndɛ̀ HH.L	———	2
q.	friend	pááⁿ HH	páá=ndɛ̀ HH.L	———	2
r.	amulet (waist)	túmí H.H	túmí=ndɛ̀ H.H.L	———	3
s.	fan	jí–rí–ŋgí H.H.H	jíŋgí=ndɛ̀ H.H.L	———	6

Tonal Type Two: /L/

	Gloss	Singular	Plural	Augmentative	segmental type
a.	arm	nnìì LL	nnìì=ndɛ́ LL.H	nnìì–bɔ́rɔ́ LL.H.H	1
b.	field	ʋòò LL	ʋòò=ndɛ́ LL.H	ʋòò–bɔ́rɔ́ LL.H.H	1
c.	cow	nnàà LL	nnàà=ndɛ́ LL.H	nnàà–bɔ́rɔ́ LL.H.H	1
d.	tree	dʷàà LL	dʷàà=ndɛ́ LL.H	dʷàà–bɔ̀rɔ́ LL.L.H	1
e.	ear	tàŋà L.L	tàŋà=ndɛ́ L.L.H	tàŋà–bɔ́rɔ́ LL.H.H	1
f.	hangar	ʒàŋà L.L	ʒàŋà=ndɛ́ L.L.H	———	1
g.	fonio	gàndʒà L.L	gàndʒà=ndɛ́ L.L.H	gàndʒà–bɔ́rɔ́ LL.H.H	1
h.	false	ŋàmbà	ŋàmbà=ndɛ́	———	1

	sorghum	L.L	L.L.H		
i.	shirt clothing	sòɔ̀^{n} L	sɔ=ndɛ́ L.H	———	2
j.	heart (animals) (same as Ronier)	tìì^{n} L	tìì=ndɛ́ L.H	tìì–bɔ̀ɲ́ó LL.LH	2
k.	mouse	nnìì^{n} LL	nnìì=ndɛ́ LL.H	nnìì–bɔ́ɲ́ó LL.H.H	2
l.	mosquito	b^{w}ìɛ̀ LL	b^{w}ìɛ̀=ndɛ́ LL.H	b^{w}ìɛ̀–bɔ́ɲ́ó LL.H.H	3
m.	leg	b^{w}ɛ̀ɛ̀ LL	b^{w}ɛ̀ɛ̀=ndɛ́ LL.H	b^{w}ɛ̀ɛ̀–bɔ́ɲ́ó LL.H.H	3
n.	termite	ɕìɛ̀ LL	ɕìɛ̀=ndɛ́ LL.H	ɕìɛ̀–bɔ́ɲ́ó LL.H.H	3
o.	sun	nnɛ̀ɛ̀ LL	nnìɛ̀=ndɛ́ LL.H	nnɛ̀ɛ̀–bɔ́ɲ́ó LL.H.H	3
p.	rainy season	nnìè LL	nnìè=ndɛ́ LL.H	nnìè–bɔ̀ɲ́ó LL.L.H	3
q.	heart	ʊìmmɛ̀ L.L	ʊìmmɛ̀=ndɛ́ L.L.H	———	3
r.	door	mmìɲ́à L.L	mmìɲ́à=ndɛ́ L.L.H	mmìnnà–bɔ̀ɲ́ó L.L.L.H	5
s.	tomorrow	bòrò L.L	bòrò=ndɛ́ L.L.H	n/a	5
t.	trick	nàmbàrà L.L.L	nàmbàrà=n̲ɛ́ L.L.L.H	———	5
u.	window frame	tàgà–rà L.L.L	tàgà=ndɛ́ L.L.H	———	6
v.	stomach	kó̲ó̲rɛ́ɛ́ HH.HH	kɔ̀ɔ̀rè=ndɛ́ LL.L.H	kòrè–bɔ̀ɲ́ó L.L.LH	6

Tonal Type Three: /H/ ~ [HL]

	Gloss	Singular	Plural	Augmentative	segmental type
a.	PPl of Demangari	tóɔ̀ HL	tɔ́=ndɛ̀ H.L	———	1
b.	village	díjà H.L	díjá=ndɛ̀ H.H.L	———	1
c.	neck	kẃà H.L	kẃá=ndɛ̀ H.H.L	kẃá–bɔ́ř̀ò H.H.H.L	1
d.	house	kóò H.L	kóó=ndɛ̀ H.H.L	kóó–bɔ́ř̀ò H.H.H.L	1
e.	paper	dóɔ̀ H.L	dóɔ́=ndɛ̀ H.H.L	dɔ́ó–bɔ́ř̀ò H.H.H.L	1
f.	house	kóò H.L	kóɔ́=ndɛ̀ H.H.L	kóó–bɔ́ř̀ò H.H.H.L	
g.	anvil	tótò H.L	tótó=ndɛ̀ H.H.L	tótó–bɔ́ř̀ò H.H.H.L	1
h.	trunk (tree)	tíŋgà H.L	tíŋgá=ndɛ̀ H.H.L	———	1
i.	log	kúndù H.L	kúndú=n̲ɛ̀ H.H.L	———	1
j.	goat	bíiⁿ HL	bíí=ndɛ̀ HH.L	bíí–bɔ́ř̀ò HH.H.L	2
k.	scythe	kóɔ̀ⁿ HL	kóɔ́=n̲ɛ̀ HH.L	kóɔ́ⁿ–bɔ́ř̀ò HH.H.L	2
l.	leaf	pʷíɛ̀ⁿ H.L	pʷéɛ́ⁿ=ndɛ̀ H.H.L	pʷíɛ́ⁿ–bɔ́ř̀ò H.H.H.L	2
m.	thing	kéɛ̀ HH	kéɛ́=ndɛ̀ HH.L	kéɛ̀–bɔ̀ř̀ò HH.L.L	3

n.	water	ɥíè H.L	ɥíé=ndɛ̀ H.H.L	n/a	3
o.	luggage, belongings	kíɛ̀ HL	kíé=nɛ̀ HH.L	———	3
p.	cheek	kɛ́ɛ̀ HL	kɛ́é=ndɛ̀ HH.L	———	3
q.	bark	kʷéɛ̀ HL	kʷéé=ndɛ̀ HH.L	———	3
r.	palm	téɛ̀ HL	téé=ndɛ̀ HH.L	———	3
s.	head	dégè H.L	dégé=ndɛ̀ H.H.L	dégé–bɔ̀rɔ̀ H.H.L.L	3
t.	slave	kɔ́mɛ̀ H.L	kɔ́mé=nɛ̀ H.H.L	———	3
u.	scorpion	námbɛ̀ H.L	námbé=ndɛ̀ H.H.L	———	3
v.	leopard	ŋɔ́rkɛ́ɛ̀ H.HL	ŋɔ́rké=ndɛ̀ H.H.L	———	3
w.	grass, weeds	gŭjéɛ̀ LH.HL	gŭjéé=ndɛ̀ LH.HH.L	———	3
x.	seed	déɛ́mɛ̀ HH.L	déɛ́mé=nɛ̀ H.HH.L	———	3
y.	eye	sííbíɛ̀ HH.HL	sííbíé=ndɛ̀ HH.HH.L	———	3
z.	rope	bɔ́jéɛ̀ HH.L	bɔ́jéé=ndɛ̀ HH.H.L	———	3
aa.	adze	dóɔ́bɛ̀ HH.L	dóɔ́bé=ndɛ̀ HHH.L	———	3

bb.	salt	géŋgíè H. HL	géŋgíé=ndɛ̀ H.HH.L	———	3
cc.	bag	ʒémbi̱è H.HL	ʒémbɛ́=ndɛ̀ H.H.L	———	3
dd.	change	gɔ́mbíè H.HL	gɔ́mˡbíé=ndɛ̀ H.MM.L	———	3
ee.	shroud, trap	káráŋgi̱è H.H.HL	káráŋgɛ́=ndɛ̀ H.H.H.L	———	5
ff.	beetle	kóómbɛ̀ HH.L	kóómbɛ́=ndɛ̀ HHH.L	———	3
gg.	clay	dɔ́rómbɛ̱̀ H.H.L	dɔ́rómɛ́=ndɛ̀ H.H.H.L	———	3
hh.	bracelet, ring	dúrúmbɛ̱̀ H.H.L	dúrúmɛ́=ndɛ̀ H.H.H.L	———	3
ii.	patas monkey	kárámbɛ̀ H.H.L	kárámbɛ́=ndɛ̀ H.H.H.L	———	3
jj.	millet	dé+mèɛ̀ H.L.L	dé+ˡmí=ndɛ̀ H.M.L	———	4
kk.	cowry shell	tɔ́+mèɛ̀ H.L.L	tɔ́+ˡmí=ndɛ̀ H.M.L	tɔ́m+èɛ̀–bɔ́ř̀ò H.LL.H.L	4
ll.	trimming ax	dóbí+ɛ̀ H.H.L	dóbɛ́+ˡmí=ndɛ̀ H.H.M.L	———	4
mm.	bird	dɔ́rɛ́+ɛ̀ H.H.L	dɔ́rɛ́+ˡmí=ndɛ̀ H.H.M.L	———	4
nn.	bullfrog	bóm+bɔ́ɛ̀ H.H.L	bómbɔ́ɛ́+ˡmí=dɛ̀ H.M.M.H.L	———	4
oo.	hare (all forms)	gírímɛ̀ H.H.L	gírímɛ́+ˡmí=ndɛ̀ H.H.H.M.L	———	4

pp.	large basket	kúgú+mɛ̀ H.H.L	kúgú+mí=ndɛ̀ H.H.H.L	———	4
qq.	blacksmith's mallet	síí^{n} bɔ́ré+ɛ̀ HH H.H.L	síí^{n} bɔ́ré+$^{!}$mí=ndɛ̀ HH H.H.M.L	———	4
rr.	slit–faced bat	gɛ́rí+ɛ̀ H.HL	gɛ́rí+$^{!}$mí=ndɛ̀ H.H.M.L	———	4
ss.	bird (sp.)	tɔ́ n tóréɛ̀ H H.HL	tɔ́ n tóré+$^{!}$mí=ndɛ̀ H H.H.M.L	———	4
tt.	onion	ʒáɣé+ɛ̀ H.H.L	ʒáɣá+$^{!}$mí=ndɛ̀ H.H.M.L	———	4
uu.	machete	párí H.H	páré=ndɛ̀ H.H.L	———	5
vv.	harvest	sɛ́rɛ̀ H.L	sɛ́ré=ndɛ̀ H.H.L	sɛ́rɛ̀–bɔ̀rɔ̀ H.L.L.L	5
ww.	bee	mmírò H.L	mmíró=ndɛ̀ H.H.L	mmíró–bɔ́rɔ̀ H.H.H.L	5
xx.	seed kind	búrúù H.HL	búrúú=ndɛ̀ H.HH.L	———	5
yy.	cloud	póórò HH.L	póóró=ndɛ̀ HH.H.L	póórò–bɔ̀rɔ̀ HH.L.L.L	5
zz.	work	wáárì H.HL	wáárí=ndɛ̀ H.H.L	———	5
aaa.	animal	ʒǐríbɛ̀ɛ̀ LH.H.LL	ʒǐríbɛ̀ɛ́=ndɛ̀ LH.H.LH.L	ʒǐríbɛ̀–bɔ̀rɔ̀ LH.H.L.L.L	
bbb.	donkey	kɔ́rɔ́ŋò H.L	kɔ́rɔ́ŋɔ́=ndɛ̀ H.H.H.L	kɔ́rɔ́ŋɔ́–bɔ́rɔ̀ H.H.H.H.L	5
ccc.	tied millet	bɔ́rɔ́ŋkò H.L	bɔ́rɔ́ŋ$^{!}$kɔ́=ndɛ̀ H.H.M.L	bɔ́rɔ́ŋkɔ́–bɔ́rɔ̀ H.H.H.H.L	5

ddd.	phantom	márágá+ɛ̀ H.H.H.L	márágá=ndɛ̀ H.H.H.L	———	4
eee.	carry on head	ɛ́íé–rɛ̀ HH.L	ɛ́íé=ndɛ̀ HH.L	———	6
fff.	thigh, falcoln	tóŋgó–rò H.H.L	tóŋgó=ndɛ̀ H.H.L	———	6
ggg.	basket	kó–ró–gò H.L	kógó=ndɛ̀ H.H.H.L	kógó–bɔ́ř̀ò H.H.H.H.L	6
hhh.	dove	pívɛ́–rè H.L	pívɛ́=ndɛ̀ H.H.H.L	pívɛ́ré–bɔ́ř̀ò H.H.H.H.L	6
iii.	container	págá–rà H.H.L	págá=ndɛ̀ H.H.L	págá–bɔ́ř̀ò H.H.H.L	6
jjj.	spit	tújú–rù H.H.L	túqú=ndɛ̀ H.H.L	———	6
kkk.	nose	súmbí–rì H.L	súmbì=ndɛ̀ H.H.H.L	———	6
lll.	belly button	bóŋgɔ́–rɔ̀ H.H.L	bɔ́ŋwíɛ́=ndɛ̀, bɔ́ŋˈgɔ́=ndɛ̀	———	6
mmm.	ditch	pómbó–rò H.H.L	pómbɔ́=ndɛ̀ H.H.L	———	6
nnn.	bed (bamboo)	sámbá–rà H.H.L	sámbá=ndɛ̀ H.H.L	———	6
ooo.	dry place	tómbó–rò H.H.L	tómbó=nɛ̀ H.H.L	———	6
ppp.	courtyard	bɛ́mbɛ́–rɛ̀ H.H.L	bɛ́mbɛ́=ndɛ̀ H.H.L	———	6

Tonal Type Four: /L/ ~ [LH]

	Gloss	Singular	Plural	Augmentative	segmental type
a.	pick axe	dàmá L.H	dàmà=ndɛ́ L.L.H	dàmà–bɔ̀ɲ̃ɔ́ L.L.L.H	1
b.	waist	kùúⁿ LH	kù=ndɛ́ L.H	———	2
c.	child	jàá+mbɛ̀ LH.L	jàà=ndɛ́ LL.H	jàá+mbɛ́–bɔ́ɲ̃ɔ́ LH.H.H.H	3
d.	shoe	kòɔ̀kɛ́ L.L.H	kɔ̀ɔ̀kɛ̀=ndɛ́ LL.L.H	kòɔ̀kɛ́–bɔ́ɲ̃ɔ́ LL.L.H	3
e.	person (compare with animal)	ʒìbɛ́ɛ́ L.HH	ʒìbɛ̀=ndɛ́ LL.L.H	ʒìbíɛ̀–bɔ́ɲ̃ɔ́ L.HL.H.H	3
f.	road	ʒɛ̀mbíɛ̀ L.HL	ʒɛ̀mbɛ̀=ndɛ́ L.L.H	ʒìmbɛ̀ɛ̀–bɔ́ɲ̃ɔ́ L.LL.H.H	3
g.	letter	sàgòmɛ́ L.L.H	sàgòmɛ̀=ndɛ́ LL.L.H	———	3
h.	rock	símɛ̀ɛ̀ H.LL	símɛ̀ɛ̀=ndɛ́ H.LL.H	símɛ̀ɛ̀–bɔ̀ɲ̃ɔ́ H.LL.L.H	3
i.	dog	kùrì+jɛ̀ɛ́ L.L.LH	kùrì+mì=ndɛ́ L.L.L.H	kúrɛ̀ɛ̀–bɔ́ɲ̃ɔ́ H.LL.H.H	4
j.	star	tòrɛ̀+mɛ́ L.L.LH	tòrò+mì=ndɛ́ L.L.L.H	———	4
k.	dog	kùrìjɛ̀+ɛ́ L.L.LH	kùrì+mì=ndɛ́ L.L.L.H	———	4
l.	fish (sp)	ɲ̀ɔ̀gɔ́+w̃ɛ́ L.H.H	ɲ̀ɔ̀gɔ̀+mì=ndɛ́ L.L.L.H	———	4
m.	door	mìɲ̃à L.L	mìɲ̃à=ndɛ́ L.L.H	mìnnà–bɔ̀ɲ̃ɔ́ L.L.L.H	5
n.	chain	ʒɔ̀ròɡú L.L.H	ʒɔ̀ròɡù=ndɛ́ L.L.L.H	———	5

o.	sheep	ŋàmbà–rá L.L.H	ŋàmbà=ndɛ́ L.L.H	ŋàmbà–bɔ̀ř́ó L.L.L.H	6
p.	buttock	tùkú–rú L.H.H	tù–kù=ndɛ́ L.L.H	———	6

Tonal Type Five: /LH/

	Gloss	Singular	Plural	Augmentative	Segmental Type
a.	wilderness	nàá LH	nàá=ndɛ̀ LH L	n/a	1
b.	horse	ʋòó LH	ʋòɔ́=ndɛ̀ LH.L	ʋòó–bɔ́ř̀ò LH.H.L	1
c.	bellows	pùùpá LL.H	pùùpá=ndɛ̀ LL.H.L	———	1
d.	goat bag	tòpáá L.HH	tòpáá=ndɛ̀ L.HH.L	tòpáá–bɔ́ř̀ò L.HH.H.L	1
e.	plank	kɔ̀ɔ́^{n} LH	kɔ̀ɔ́=ndɛ̀ LH.L	———	2
f.	back, trunk	gìí^{n} LH	gìí=ndɛ́ LH.L	———	2
g.	oil, spleen	n ŋ^{w}ìɛ́ LH	n ŋ^{w}ìɛ́=ndɛ̀ LH.L		3
h.	world	gàʒɛ́^{n} L.H	gàʒ̃ɛ́=ndɛ̀ L.H.L	———	3
q.	calabash	kùuɻ̀ɛ́ LL.H	kùuɻɛ́=ndɛ̀ LH.L	———	3
i.	metal	gèngɛ́ L.H	gèŋgɛ́=nɛ̀ LH.L	gèŋgɛ́–bɔ́ř̀ò L.H.H.L	3
j.	crocodile	gèŋgɻ́ɛ̀ L.HL	gèŋgɛ́=nɛ̀ LH.L	gèŋgɛ̀–bɔ́ř̀ò L.L.H.L	3

k.	owl	gŭmbí LH.H	gùmbí+ˡmí=ndɛ̀ L.H.M.L	———	4
l.	karite tree	wùré+ɛ̀ L.H.L	wùré+mí=ndɛ̀ L.H.H.L	———	4
m.	stick, medicine	bùr̃á L.H	bùr̃á=ndɛ̀ L.H.L	———	5
n.	corn	bìrɔ̀ndɔ́ LH	bìrɔ̀ndɔ́=ndɛ̀ LH L	bìrɔ̀ndɔ́–bɔ́r̃ò L.L.H.H.L	5
o.	woman	nnìé–rɛ̀ LH.L	nnìé=n̲ɛ̀ LH.L	———	6
p.	sheep	ŋàmbà–rá L.L.H	ŋàmbá=ndɛ̀ LH.L	ŋàmbà–rá–bɔ́r̃ò L.L.H.H.L	6

Tonal Type Six: /HL/

	Gloss	Singular	Plural	Augmentative	Segmental Type
a.	mother	nníjà HL	nníjà=ndɛ́ HL.H	———	1
b.	shadow, image, photograph	gíj̃ɔ̀ H.L	gíj̃ɔ̀=ndɛ́ H.L.H	———	1
c.	rain, sky	ʒɔ́ɔ̀ⁿ H.L	ʒɔ̀=ndɛ́ L.H	ʒɔ̀ⁿ–bɔ́r̃ó L.H.H	2
d.	man	gɔ́ɔ̀ⁿ HL	gɔ́ò=ndɛ́ HL.H	gɔ́ò^{n}–bɔ́r̃ó HL.H.H	2
e.	meal	póɔ̀ⁿ HL	póɔ̀=ndɛ́ HL.H	póɔ̀^{n}–bɔ́r̃ó HL.H.H	2
f.	bud/ flower	tʷíìⁿ HL	twíì=ndɛ́ HL.H	———	2
g.	branch, roof support	kíɛ̀ HL	kíɛ̀=ndɛ́ HL.H	kíɛ̀–bɔ́r̃ó HL.H.H	3

h.	ashes	tíɥɛ̀ H.L	tíɥɛ̀=ndɛ́ H.L.H	———	3
i.	chicken	súɥìɛ̀ H.LL	súɥìɛ̀=ndɛ́ H.LL.H	———	3
j.	step	góòmpá HL.H	góòmpà=nɛ́ HL.L.H	———	3
k.	hat	gíwárà H.H.L	gíwárà=nɛ́ H.H.L.H	———	5
l.	pidgeon	wúúrɛ̀ H.H.L	wúúrɛ̀=ndɛ́ H.H.L.H	———	5
m.	wasp hornless ram	gúmbá–rà H.H.L	gúmbà=ndɛ́ H.L.H	gúmbá–rà–bɔ́ɽ̀ò H.H.L.H.L	6
n.	resources	námbó–rò H.H.L	námbò=ndɛ́ H.H.L.H	———	6
o.	skullcap	bómbó–rò H.H.L	bómbɔ̀=ndɛ́ H.H.L.H	———	6
p.	face, forehead	tégó–rò H.H.L	tégò=ndɛ́ H.H.L.H	———	6

heart, mouth	bìmmɛ̀	bìmmɛ̀=ndɛ́	nnɔ́ɔ̀	nnɔ́ɔ̀=ndɛ́
	L	LH	H	HLH
throat, ear	kẃà	kẃá=ndɛ̀	tàŋà	tàŋà=ndɛ́
	HL	HL	L	LH
nose, eye	súmbì	súmbì=ndɛ́	sííbíɛ̀	sííbíɛ́=ndɛ̀
	H	HL	HL	HL
stomach	kòríɛ́	kòrì=ndɛ́	súɥɛ̀	súɥɛ́=ndɛ̀

breast	LH	LH	HL	HL
beard, hair	sɛ́mbò/sámbó	sɛ́mbó=ndɛ̀	dègè kúɥí	dègè kúɥí=ndɛ̀
	HL	HL	L H	L HL
earth, sky	gùwíɛ̀	gùwɛ́=ndɛ̀	ŋárá n dɔ́gò	ŋárá n dɔ́gó=ndɛ̀
	LHL	LHL	HL	HL
genitles	guru		bɔ́ŋwíɛ̀	bɔ́ŋwíɛ́=ndɛ̀
belly button			HL	HL
thigh, calf	tóŋgórò	tóŋgóró=ndɛ̀	bùwíè m bórníè	bùwíè m bórníé=ndɛ̀
	HL	HL	LHL HL	LHL HL
foot	bùwíè n tíɛ̀	bùwíè n tíɛ́=ndɛ̀		
	LHL HL	LHL HL		
tongue, teeth	nò n jɛ̀rí	nò n jɛ̀rí=ndɛ̀	nóɔ́ n síiⁿ	nóɔ́ n síiⁿ=ndɛ̀
	LHL	LHL	HL	HL

Appendix IV: Reduplicated Verbs

	Reduplicated Stem	Gloss	Related	Gloss
a.	báŋgá m báŋgà	hold a baby, etc. in your arms	bàŋgá	carry on shoulder
b.	bárágá m bárágà mì	lie straight		
c.	bímbó bímbò	whisper		
d.	dógòrò n dògòrò	congratulate		
e.	dùɥí dúɥì	dream		
f.	gărándʒá ŋ gărándʒà	scrape		
g.	gúndú nà gúndù	whisper		
h.	kámbárā ŋ kámbárà	squeeze	kámbá–rà	pull out a splinter
i.	káŋgó n káŋgò	hold something in one's mouth without biting it		
j.	káráá ŋ káràà	read, study	káràà	obtain
k.	kówɔ́ndò kówɔ́ndò	dry		
l.	kɔ́mbó kɔ́mbò	pinch		
m.	kúgújá n kúgújà	crumple (paper or clothing)		
n.	kúmbò ŋ kúmbò	search, wander	kúmbó–rò	follow
o.	kʷaa kʷaa	beg		
p.	nándá nándà	dent inward		
q.	píndò pìndò	swell		
r.	sàkà n sáká	choke		
s.	júmbá–rà	pull (large things)		
t.	n ŋʷímá ŋʷímà	twist		
u.	tɛ́bɛ́ à n tɛ̀bɛ̀	clap 'pound the palm'		

Appendix V: Chief Texts 1 - 10

Text I: Chief 1

MORPHEMES
GLOSS

FREE TRANSLATION

1 ndɛ̀ màá= =nɛ́ nii n dá n nò –ò –L tí –rí –H húⁿ báráà
1.PL.POSS person PL 3.PL ~2 INC T come RV 3 sit –rV– 3 PP Baraa
bíé ŋ wì .
NEG ~2 there

In [the time when] our people were coming [to] live [in Bounou], Baraa was not there.

2 bàárà –mí =ndɛ̀ wòrè –L n jág –à –H nò –ò –L
Baraa INHAB PL go 3 T cut RV 3 come RV 3

[the] People of Baara went [and] they came [to] cut (settle) [there].

3nii kóɔ́ n wó ŋ káárà –L , pévɛ́ –rè bíé níì ŋ káràà –L
3.PL CPL ~2 go T find 3 wind –rV– NEG 3.PL T obtain 3

They went [and] they found [the] wind does not get them (the place was not breezy enough).

4 pévɛ́ –rè bíé níì N kàárà –L , nii m mɔ́ɔ̀ ŋ wì
wind –rV– NEG 3.PL T obtain 3 3.PL T like.NEG.PRF ~2 there

[the] Wind does not get them [and] they did not like it there.

5 nii kɔ́ò n bú –rà nii tìw –ó –H húⁿ .
3.PL CPL T move out of –rV– 3.PL fall RV 3 PP

They left, they fell (lived) on [there].

6 bàárà gíínˀ hùⁿ nó –ó –H tìw –ó –H húⁿ .
Baraa behind PP come RV 3 fall RV 3 PP

Bara lived on [there] after [us]. (lit. Bara came to live there on our backs.)

7 báràà gíínⁿ hùⁿ nó –ó –H kóɔ́ níŋà á ʃĩjɔ̀ⁿ
Baraa back PP come RV 3 CPL say now

[we] Came after them, Bara now said.

8 nii ŋ kàà –w̃á –H máá= –H bʷóòⁿ wàj
3.PL GEN older –rV– 3 POSS= 1 Bunu PP

[they say] Their age is greater than Bounou's.

9 nii kóɔ́ nò –ò –L N káràà –L à páŋgá =nɛ̀ ŋ káá –ró .
3.PL CPL come RV 3 T find 3 DEF cave PL ~2 DEM DEM.PL

They came [to] find those granaries (referring to the Tellem caves).

10 bóòⁿ kóɔ́ jàá –H á gàndà –L dà –L ŋ wì
Bunu CPL see 3 DEF place 3 INC 3 ~2 there

Bounou saw the place (the Tellem caves) was there.

11 pévɛ́ –rè bíé níì N kàárà –L
wind –rV– NEG 3.PL T find 3

[the] Wind did not find/get them (the place was not breezy enough).

12 à gándá –L kámbá –rà .
DEF place DEF tight –rV–

The place [was] [too] narrow.

13 kàmá m bú –rà nò –ò –L tíj –ò –H hùⁿ bóòⁿ
CPL T exit, go out –rV– come RV 3 fall RV 3 PP Bunu

They left [and] came [to] settle at Bounou.

14 bàárà –L kóɔ́ nó –ó –H gíínⁿ hùⁿ .
Baraa 3 CPL come RV 3 back PP

Baara came afterwards.

15 kóɔ́ nó –ó –H ɥìɛ̀ –L á tíé –H hùⁿ .
CPL come RV 3 ascend 3 CHN sit 3 PP

They came [and] ascended to live on [there].

16 kámá nìí ŋá nii mí kàà –w̃á –H màá= –H bóòⁿ ŋ wàj
CPL say 3.PL REFL old –rV– 3 POSS 3 Bunu ~2 PP

They said they are older than Bounou's age.

17 nii mì kàà –w̃á –H màá= –H bóòⁿ ŋ wàj n dɛ̀ bẃɛ̀ ŋ kàẁ
3.PL REFL old –rV– 3 POSS 3 Bunu ~2 PP 1.PL see.NEG.PRF ~2 3.SG.

Bounou did not see [how] they [could be] older than us.

18 nii húⁿ N káráà n dɛ̀
3.PL PP T find 1.PL

They found us.

Text II: Chief II

1 bàráá –mí =ndɛ̀ wò jàg -ú –H nàà màà= jàà =ndɛ́ ŋ kí
Baraa INHAB =PL go cut PRF 3 1st PL POSS child =PL ~2 ADP
náà –H
wilderness 3

The people of Baraa went [and] attacked our children [in the] wilderness.

2 níí N kóórèè níí N dèg –ú –H síìⁿ
3.PL T war 3.PL T hit PRF 3 RECIP

They made war, they hit each other,

3 há ʒííⁿ à búùⁿ
until blood CHN move out of

until blood came out.

4 hájá nɛ́ màá= jíbɛ̀ =nɛ́ ŋ kẃà nii ŋ kì
OK 1st PL POSS person =PL ~2 able 3.PL ~2 thing

OK, our people beat them.

5 hájá díndɛ̀ –à nìì màá= –H jíbɛ̀ =nɛ́
OK stop RV 3rd PL POSS 1 person =PL

OK, my people stopped them.

6 jíbɛ̀ɛ̀ tóórè há à bàárèmì ŋ –wɛ̀
person one until CHN hurt ~2 STAT

Until one person was hurt.

7 hájá n dígà ŋ kóɔ́ n tʷá –ràà Bánìgàrà
OK ~2 talk ~2 CPL T reach –rV– Bandiagara

OK, [the] talk reached Bandiagara.

8 ŋ wí bún –d –í Bànìgàrà
~2 there finish –r– PRF Bandiagara

There [it] finished [in] Bandiagara.

9 hájá dáà bún –d –í Bánìgàrà
OK INC finish –r– PRF Bandiagara

OK, [it] was finished [in] Bandiagara.

10 bìì^{n} núndí
year five

[for] Five years,

11 à bìì^{n} nùndì ŋ kò ,
DEF year five ~2 PP

in the five years,

12 hă mɔ́ɔ̀ síí nɛ́ màá= kúú^{n} ,
until heal by spitting 1st PL POSS hip

until [the elders] healed our back[s],

13 bìì^{n} núndí
year five

five years,

14 nii nii dígà ŋ kó nìì màà= wóré
3.PL 3.PL talk ~2 PP 3rd PL POSS go

their talk lasted.

15 ha mɛ tes mínnà .
IRR no where

They were not allowed to go anywhere.

16 há bìì^{n} núndí déẁ^{n}
IRR year five full

Until [five] years was up,

17	nìì	síè	mɛ̀	=ndɛ́	sɔ̀ɣ	–ɔ̀	–L
	3.PL	take	COMP	=PL	close	RV	3

They, [the people] which were taken [and] locked (in jail) [for five years].

TEXT III: Chief III

1 ŋ kaw kì póɔ́rɛ́ =nɛ̀ kì pàⁿ
~2 DEM thing black =PL thing all

All the Africans,

2 tùbùkù n gòmbé –H nîì wòrè –L
foreigner T allow 3 3.PL go 3

the whites left them go.

3 kì póɔ́rɛ́ nnîì kɔ́ó ɲá –n –à n dègé –H .
thing black 3.PL CPL take –r– RV GEN head 3

[the] African[s] they took care of themselves.

4 bùùⁿ –mì N sìé –H bàŋà =nɛ́ kì pàⁿ .
Bunu INHAB T take 3 person who is of the Banga race =PL thing all

The people of Bounou took control [of] all [the] Bangande people.

5 búúⁿ –mì =ndɛ́ máà bàárà –mì =ndɛ́ màá= –L dégè
Bunu INHAB =PL EXIST Baraa INHAB =PL POSS 3 head

The people of Bounou inhabitants are the chiefs of the people of Baara (Bounou is the 'capitol' of the Bangande).

6 nnîì n dìjá –L kíìjɛ̀
3.PL GEN village 3 seven

[the Bangande] They [are] seven villages.

7 à dìjà –L kííjɛ̀ ŋ kàẁ .
DEF village DEF seven ~2 DEM

Those seven villages.

8 à túbàkù =nɛ̀ nnîì gòmbé –H à lààm
DEF foreigner =PL 3.PL allow 3 DEF rule

The whites gave up control [to] them,

9 à kì póɔ́rɛ́ =nɛ̀ wàj .
DEF thing black =PL PP

to the Africans.

10 ŋ kàẃ jìró díjà pó
because of that village each

Because of that each village,

11 kɔ́ó láàm dégè
CPL rule head

controlled itself.

12 ŋ kàw bún –d –á –H tùbákù =nɛ́ bùùⁿ .
~2 DEM make move out CAUS RV 3 foreigner =PL Bunu

That [is what] [the] whites took out [of] Bounou.

13 hájá díjà pààⁿ kɔ́ó láàm á n dégè
OK village all CPL rule DEF GEN himself/herself

OK, all the villages took control over themselves,

14 kàmá n jíró mì
because of that PASS

that is what did that.

TEXT IV: Chief IV

1 à pùùtá =nɛ́ nníí jìé –H nníì N bán –d –í
DEF Fulani who enslaved people =PL 3.PL do 3 3.PL T tired CAUS PRF

The Fulani enslavers, they made them tired,

2 à pʷándà =nɛ́ jáárī
DEF Fulani =PL very

the Fulani, very much.

3 nníì N káráá –H máà –L páánˀ .
3.PL T find 3 POSS 3 all

If they find them,

4 nníí màá= –H kẃà N jág –à –L
3.PL POSS 3 neck T cut RV 3

they [will] slaughter them.

5 hájá à pùndà –L =nɛ́
OK DEF Fulani DEF =PL

OK, the Fulani

6 nnìì ŋ kàmá –H tígè
3.PL ~2 CPL 3 run

they ran.

7 nníì kɔ́ó N pérò jɛ̀rɛ̀
3.pl CPL T cry out

They cried out

8 á báŋgà =ndɛ̀ wàj
DEF person who is of the Banga race =PL PP

to the Bangande,

9 á kíí póɔ́rɛ́ =nɛ́ wàj
DEF thing black =PL PP

to the Africans,

10 nnìì nnà á tòó =nɛ́
3.PL COOR DEF people of Demangari, etc =PL

they [cried out] to the people of Demangari.

11 nnìì kàmá N jé –rò kẃà tòrè
3.PL CPL T become –rV– voice one

They became one voice.

12 nnìì kàmá N ɲá –n –à á málpà =nɛ́
3.PL CPL T take –r– RV DEF rifle =PL

They took the rifles.

13 nnìì kámá N tág –à á pùndà –L =nɛ́ á
3.PL CPL T grab RV DEF Fulani DEF =PL DEF
púútà =nɛ́ n nìì
Fulani who enslaved people =PL GEN hand

They grabbed them [from] the Fulani enslaver's hands.

14 nnìì N tág –à á pùndá –L á púútà =nɛ́ nníí
3.PL T take RV DEF Fulani DEF DEF Fulani who enslaved people =PL 3.PL
mɛ̀ mínnà
COMP place, location

they grabbed the Fulani [from] the place which the enslaver's hand[s] [were].

15 hájá à pùùtá –L kɔ́ó tígè wàj
OK DEF Fulani who enslaved people DEF CPL run STAT

OK, the Fulani enslavers ran.

16 á pùndà –L =né ŋ kɔ́ó N bár –àà ŋ wì
DEF Fulani DEF =PL ~2 CPL T remain RV ~2 there

The Fulani remained there,

17 há nii maa ŋárákì á tíè .
IRR 3.PL.POSS thought, mind CHN sit

until they were calm.

18 nii maa ŋáràkì ŋ kó dógòndò .
3.PL.POSS remember

They remembered.

19 á báŋgà =ndɛ́ nnìì á N ɲà –n –á nii maa
DEF person who is of the Banga race =PL 3.PL CHN T take –r– RV 3.PL.POSS
jámbɔ̀rɛ̀
last name

The Bangande they took their last name.

20 nii maa jámbɔ́rɛ̀ ŋ kàmá nnú –ú –H mì
3.PL.POSS last name ~2 CPL come PRF 3 PASS.CPL

Their last name had came,

21 ŋ kámá n dĭkó
~2 CPL GEN Dicko

to be Dicko.

22 nii maa ŋ gɔ́ɔ̀ⁿ –mɛ̀
3.PL.POSS GEN man DIM

Their manhood.

23	ŋ	kaw	nii maa	jàmbɔ̀rɛ̀	dǐckó
	~2	that is why	3.PL.POSS	last name	Dicko

That is why their last name is Dicko.

TEXT V: Chief V

1 tíndè gíjɔ̀ⁿ dá ámíírí wùrò
grandfather Giyon COOR chief village of Jewol

[the chief's] grandfather Giyon and the chief of Jewol,

2 nii bánìgárá kùn –r –á –H síìⁿ
3.PL Bandiagara gather, meet PRF RV 3 RECP

they met together [in] Bandiagara,

3 bánìgárá à húbér ŋ kóò
Bandiagara DEF judge GEN house

[in] Bandiagara in the judge's house.

4 ŋ kàmà –L niŋá à kúmándáⁿ hà n náẁ
~2 CPL 3 say DEF commandant IRR T give

The mayor of Jewol said to give

5 báŋgá –rí pááⁿ wàj
person who is of the Banga race –rV– all PP

all the Bangande to him.

6 tíndè n kɔ́ó nìŋá m bíé nòrè –L
grandfather ~2 CPL say ~2 NEG hear 3

Grandfather said I did not hear [what you said].

7 mì –L kɛ́ndè báŋgɛ́ –rè paaⁿ wàj
SG 3 said people who speak Bangime –rV– all PP

He said, [give] all the Bangande to me.

8 tíndè kàmá nìŋá nè sìíⁿ
grandfather CPL say what

Grandfather said 'what?'

9 ŋ kàmá N jíé –H à ɲáẁ màá= –L párì
~2 CPL T get up 3 CHN take POSS 3 spear

He [grandfather] got up and took his spear,

10 n dá wòrè –L hà N tín –d –à qúúr –ù
~2 INC go 3 IRR T start –r– RV kill PRF

He goes to start [to] kill (him).

11 á kúmándáⁿ nníí kámá jì –rá –L ă síè
DEF commandant 3.PL CPL rise –r– 3 CHN take

The mayor [and his jailers] they got up to take [grandfather].

12 hájá nníí wo –re –L ŋ káráà –H
OK 3.PL go PRF 3 find 1

OK, they got [grandfather].

13 màà= –L bímmɛ́ –H jíé –H –wɛ̀ m pě
POSS= 3 heart 3 get up 3 STAT ~2 PP

He [grandfather] got angry.

14 nnìì kɔ́ó N síè tíndè há púndà wáj
3.PL CPL T take grandfather IRR Fulani PP

They took grandfather from the Fulani,

15 há só wò qùnd –ù wàj
IRR know go far PRF PP

until [they] knew he went far away,

16 n kí sáàⁿ à púndá mínd –ì wò qùnd –ù wàj
~2 thing descend DEF Fulani think PRF go far PRF STAT

until the Fulani thought he was far away,

17 há só nnìì n daw min –ra wo –L qùnd –ù wàj
IRR know 3.PL ~2 INC think –rV– go 3 far PRF STAT

until they know (he) has gone far away.

18 à púndà ŋ kɔ́ó mínd –á tíndè bíè mí –H káràà
DEF Fulani ~2 CPL think RV grandfather NEG SG 3 obtain

The Fulani thought grandfather could not get them.

19 nnìì kɔ́ó N gómbè tíndè wórè káẁ sàⁿ
3.PL CPL T allow grandfather go then, at that time

They left grandfather alone at that time.

20 tíndè jíè á tígé –rɛ m pé bíè káràà
grandfather get up CHN run –rV– ~2 PP NEG obtain

Grandfather got up and ran [but] didnt get him

21 hájà púndà kɔ́ó N tág –à dégè bíé mì –L jè –rò bóndò .
OK Fulani CPL T take RV head NEG SG 3 do –rV– again

OK, the Fulani took control of himself and did not think to do that again.

22 bíé míé háⁿ làám màà= –L báŋgá =ndɛ̀ bóndò
NEG think IRR rule POSS= 3 Banga person =PL again

He did not think to control the Bangande again.

23 tíndè búúⁿ dà ŋ káẁ
grandfather finish INC ~2 DEM

grandfather was finished with him. "grandfather relieved them of the problem".

24 hájá ŋ kàmá –H N tág –à dègè ŋ kɛ́ɛ̀
OK ~2 CPL 3 T take RV head ~2 PRF

He desired to chop the Fulani.

25	hájá	ŋ	kàmá	–H	N	tág	–à	dègè	ŋ	kɛ́ɛ̀
	OK	~2	CPL	3	T	take	RV	head	~2	PRF

OK, he controlled himself.

TEXT VI: Chief VI

1 góɔ̀ⁿ ŋò níí tímbá ŋ wì N bú -r̃ –à búúⁿ .
ancient king of Bounou ~2 there T from, come from –r– RV Bunu

The king is from Bounou there.

2 kɔ́ò –L n ɥíɛ̀ gógɔ́nì .
CPL 3 T ascend Gogoni (place where Ali's field is)

He ascended to Gogoni (place where Ali's fields are).

3 wòrè –L à káráà n díjà mɛ́ páẁ dá ŋ wì
go 3 CHN find ~2 village COMP all INC ~2 there

He went to find all the villages which are there.

4 kɔ́ò N dég –ɛ́ –L ŋ kíí pááⁿ à gúɥ -ú wòrè –L
CPL T hit RV 3 ~2 thing all CHN throw PRF go 3

He hit them all of them to (until) they scattered.

5 à dìjà –L =nɛ́ mɛ́ =nɛ̀ dá ŋ wí gógɔ́nì ŋ kò .
DEF village DEF =PL COMP =PL INC ~2 there Gogoni ~2 PP

The villages which are in/at Gogoni.

6 kɔ́ò n dég –ɛ́ –L à gúɥ –ù nnìì à wòrè –L .
CPL T hit RV 3 CHN throw PRF 3.PL CHN go 3

He hit them to (until) they scattered.

7 mì –L kɔ́ò lààmà gógɔ́nì
SG 3 CPL rule Gogoni (place where Ali's field is)

He ruled over Gogoni.

8 nnìì kɔ́ò bú -r̃ –à bóŋgó -rò
3.PL CPL from, come from –r– RV Bongoro –rV–

They (the people who the king took control over) came from Bongoro.

9 nníí kɔ́ò wòrè –L tíé –wɛ̀ búúⁿ
3.PL CPL go 3 sit STAT Bunu

They went [and] sat (lived) [at] Bounou.

10 búúⁿ bú -r̃ –à ŋ wí búúⁿ ŋ kò
Bunu move out of –r– RV ~2 there Bunu ~2 PP

Bounou came out of there, from Bounou (?)

11 kɔ́ó –H wòrè à dín –ɛ́ à dà n dègè
CPL 3 go CHN stand RV DEF view GEN head

He went to stand on the top (of the waterfall at Bongoro).

12 kɔ́ò nnó -ó –H à dín –ɛ́ símèè hùⁿ
CPL come RV 3 CHN stand RV rock PP

He came and stood on the rocks,

13 há nníí n só -rí -jò
until 3.PL T throw down –rV–

until he threw them down,

14 há nníí n só -rí -jò
until 3.PL T throw down –rV–

until he threw them down,

15 há nníí n à tígé m bu -w̃ -è̩ .
until 3.PL ~2 CHN run T move out of PRF RV

until they ran away.

16 mì –L hɔ̀ⁿ kɔ́ò n jé -rò –wàj náà n kéè̩
SG 3 emphatic CPL T become –rV– STAT wilderness GEN thing

He (emph) became the wilderness' thing (chief).

17 kɔ́ò N bár –àà –wàj .
CPL T remain RV STAT

He remained.

18 kéérí –mí =ndè̩ máà díjà ná n –wàj
Kɛtɛ INHAB =PL POSS village give ~2 PP

The people of Kete's village gave [things to eat] to him.

19 hájá kójí jé –rò jámbá nnìì hùⁿ
OK emphatic do –rV– trick 3.PL PP

OK, he fooled them.

20 há nìì máà jàà =ndé ŋ gúɥ –ì à bɔ́réè̩ hùⁿ
IRR 3.PL.POSS child =PL T throw PRF DEF baobab PP

He took their children and threw [them] onto the Baobab[s] (so that they could get fruits).

21 mɛ́ páẁ bíè síé à bɔ́réè̩ m bíè̩
COMP all NEG take DEF baobab GEN baby

She who did not take the Baobab's fruits,

22 sé mɛ́ síé píɛ̀ m bíɛ̀
if COMP take Boabab fruit GEN baby

if [she] who did not get Boabab fruit's baby (fruits),

23 há síé bíè tíbí sàà^{n} há jáá –wɛ̀
IRR take NEG fall descend IRR die STAT

he takes [her] [and] allows [her] to fall to die (he throws her down from the tree).

24 mɛ́ páẁ bíè káráà màà= –L píɛ̀ m bíɛ̀ síé
COMP all NEG obtain POSS= 3 Boabab fruit GEN baby take

She who does not get [the] Boabab fruit's fruits,

25 há gómíè bíè tíbí sàà^{n} há jáá –wɛ̀ .
IRR allow NEG fall descend IRR die STAT

He allows [her] fall and to die.

26 hájá dá n ká n ʒíè nníí n súráà .
OK INC ~2 DEM T do 3.PL T look

OK, they looked [at] that (what) he had done.

27 ŋ káẁ n tégé bíè gáẁ^{n} .
~2 DEM GEN not pretty, ugly

It was not pretty.

28 à dìjà –L ŋ kámáà m pé -rò báárí
DEF village DEF ~2 CPL T set –rV– circle

The village had a meeting (lit. ‘set a circle’).

29 nníí kàmá N kíndù póɔ́ríɛ̀ bɔr̃o bɔr̃o .
3.PL CPL T dig well AUG AUG

They dug a very big well.

30 kégɛ́ -rè dá n sóg -ɔ́ -rɔ̀
mat –rV– INC ~2 close RV –rV–

It is closed [with] a mat

31 nníí n kɔ́ò N jéndó nníí mɛ̀ pétù
3.PL ~2 CPL T call 3.PL.POSS celebration

They called [him] [for] their fete.

32 nníí sáŋá n sáŋà wàj
3.PL play ~2 play PP

They played (with him).

33 hájá nníí kɔ́ò bín –d –ò a kege bíínàw
OK 3.PL CPL lay (smth or sme) down –r– RV DEF mat middle

They put the mat in the middle.

34 té –rò bíínò mɛ́ mìnnà
sit –rV– middle COMP place, location

That which was set in the middle place,

35 há níí ŋà N gómb -íɛ̀ màà= –L tùù mɛ́ mìnnà
IRR say T allow RV POSS= 3 buttock COMP place, location

they said for him to turn his butt, in that place.

36 kɔ́ò –H nóró à sɥɛ̀è
CPL 3 sink CHN descend

He sank and fell.

37 à níí ŋà há gómb -íɛ̀ mì –L páẁ
CHN say IRR turn about RV SG 3 all

They said for him to turn around.

38 há sɥɛ̀è –L páẁ
IRR descend 3 all

He descended.

39 nníí kɔ́ò ŋ káráà sɥɛ̀è –L –wàj gaaⁿ je .
3.PL CPL T find descend 3 STAT a lot?

They found he descended a lot.

40 nníí há n só -rí -jò n tígè
3.PL IRR T throw down –rV– ~2 also

They also threw down,

41 sé ɲáẁ à gúɥ –ì ná mɛ́ mìnnà
if take CHN throw PRF INC COMP place, location

to the place at which he throws them,

42 támáà sígóò màá= jàà
300 EXIST die

300 [people] will die.

43 sé gúɥ –ì ná bòndò támáà sígóò màá= jàà
if throw PRF INC again 300 EXIST die

If he throws into that place, 300 die, if he throws again,

44 nníí ŋ kɔ́ò síé hù^{n} kúr̃úmà –wàj
3.PL ~2 CPL take PP fold STAT

they did it until he folded. (the people and the king were throwing rocks at each other).

45 bíè k^{w}áà ŋ ki à ʒíè à kèèsì
NEG able ~2 thing CHN do DEF nothing

He could not do anything.

46 n tígè síé hù^{n} ,
~2 also take PP

He too, he tried,

47 há nníí à ŋ k^{w}áà ŋ ki ,
IRR 3.PL CHN ~2 able ~2 thing

until they could [kill] him.

48 há kúr̃úmà N sɥɛ̀è –L –wɛ̀
IRR crumple T descend 3 STAT

until he crumpled,

49 nnìì ŋ kámáà N só -rí -jò N ʒúúr –ù
3.PL ~2 CPL T know –rV– T kill PRF

they threw down on him until they killed him.

50 gɔ́ɔ̀ⁿ ŋɔ̀ níí tímbá
ancient king of Bounou

The king.

51 kéérí –mí =nɛ̀ nníí kɔ́ò à lààmà nnìì
Kɛtɛ INHAB =PL 3.PL CPL DEF rule 3.PL

The people of Kete, they ruled themselves.

52 gɔ́ɔ̀ⁿ ŋɔ̀ níí tímbá ŋ wì m bú -r̃ –à kɔ́ò N ɥíè
ancient king of Bounou ~2 there T come from –r– RV DEM T ascend

The king came from there he ascended.

53 kɔ́ó ŋ wòrè –L à lààmì à náà ŋ ki pááⁿ ŋ wì
CPL ~2 go 3 DEF rule DEF wilderness ~2 thing all ~2 there

He ruled all everything in the wilderness.

54 kéérí –mí =nɛ̀ n tígè kɔ́ó N tág –à à náà ŋ kɛ́è .
Kɛtɛ INHAB =PL ~2 also CPL T take RV DEF wilderness ~2 PRF

The people of Kete also took all the wilderness.

55 n tígè n qúúr –ù nníí hɔ̀ⁿ .
~2 also T kill PRF 3.PL emphatic

He killed them too (before he died).

56 à túbákú =nɛ̀ ŋ kʷáà à kíí póɔ́rɛ́ =nɛ̀ ŋ kíí pááⁿ ki
DEF foreigner =PL T able 2.SG thing black =PL GEN thing all by

The Dogon were afraid of the whites - the whites can (control) all the blacks (all the places where blacks are at).

57 hájá n tígè ŋ kɔ́ò lààmà màà= –L gándà .
OK ~2 also ~2 CPL rule POSS= 3 place

They (the whites) ruled his (the king's) place (they dropped a bomb on Bandiagara?) and then they killed a Toubab and made his skin into a drum. - ok, he controlled his place?whose

58 lààmà à gàndà –L mɛ́ sàà^{n}
rule DEF place DEF COMP descend

At the time which he ruled the place,

59 ŋ kɔ́ò n ɋúúr –à .
~2 CPL T kill RV

he killed.

60 kéérí –mí =ndɛ̀ ŋ kɔ́ò ɲá -n –à à nàà –L ŋ kɛ́ɛ̀ .
Kɛtɛ DIM =PL ~2 CPL take –r– RV DEF wilderness DEF ~2 PRF

The people of Kete took the wilderness.

61 kéérí –mí =ndɛ̀ ŋ kɔ́ò ɲá –n –à à nàà –L ŋ kɛ́ɛ̀
Kɛtɛ DIM =PL ~2 CPL take –r– RV DEF wilderness DEF ~2 PRF

He took all of the wilderness

62 kɔ́ò N bár –àà kéérí –mí =ndɛ̀ mɛ́ bú -w̃ -ɛ̀ ,
CPL T remain RV Kɛtɛ DIM =PL COMP from, come from PRF RV

which remained belonged to Kete us also,

63 nɛ́ tígè mɛ́ búrúù bíè há n tɔ́ròndò bòndò
1.PL also COMP kind NEG IRR T bother again

Our kind does not bother (anyone) again.

TEXT VII: Chief VII

1 nnìì wòré –H kínd –ú á póɔ́ríɛ̀
3.PL go 3 dig PRF DEF well

They go dig the well.

2 sě gúų –é mɛ́ pàⁿ
if throw RV COMP all

If [for each one who] is thrown, (they threw rocks in the hole/well),

3 jìímɛ̀ m támàà= n sígòò màá= jàà –L
person GEN three hundred EXIST die 3

three hundred people will die.

4 nnìì n tígè kàmá n síè hùⁿ
3.PL GEN also CPL T take PP

They also took [rocks].

5 kúr̃úmá –H –wàj bíè ŋ kʷáà ŋ ki kéésì
crumple 3 STAT NEG ~2 able ~2 thing nothing

He crumpled, unable to do anything.

6 há nnìì jáá –H qùùr –ú ŋ kɛ́ɛ̀
until 3.PL die 3 kill PRF ~2 PRF

Until they killed him.

7 góɔ̀ⁿ ŋò nnìì tímbá
man 3.PL man of all talents

[the] Ancient King of Bounou

8 kàmá –H bú –r̃ –à ŋ wí
CPL 3 from, come from –r– RV ~2 there

He left [was moved] from there

9 kɔ́ó –H ŋ wòré ègínì gɔ́ɔ́ⁿ ŋɔ̀nnìì
CPL 3 ~2 go make move man

They went [and] made [the] ancient king move.

10 màá= –H ʒíbɛ̀ɛ̀ –H =nɛ́ kí pàⁿ
POSS 1 person 1 =PL thing all

All my people

11 hásà báár –ú kéérī –mí –ndɛ̀
until remain PRF Kɛtɛ INHAB PL

[no one] remained until (except) the people of Kete

12 ŋ káá –rù màá= –H díjá –H dà ɥíè nà –à –L wàj
~2 DEM DEM.PL POSS 1 village 1 INC water give RV 3 PP

Those ones, my village, were giving water to him

13 ŋ kàmá niŋa mì –L kɔ́ɔ́rì à ŋ kɔ́ɔ́rì
~2 CPL say SG 3 war 2.SG ~2 war

they said they would not make war against him (because he is bigger than them)

14 nnìì màá= ʒìbɛ́ɛ́ =nɛ́ náẁ
3.PL.POSS person =PL give

Their people give

15 ŋ kàmá –H ŋ wòrè –L há nii maa ʒìbɛ́ɛ́ =nɛ́
~2 CPL 3 ~2 go 3 IRR 3.PL.POSS person =PL

He went and their people were

16 gùw –ì –L ɥúúr –á á nàà –L ŋ kò
throw PRF 3 kill RV DEF wilderness DEF ~2 PP

Thrown and killed into the bush (here he refers to the fact that the king killed the children when they wouldnt get the fruits)

17 ŋ kà –rú tígè nnìì ŋ kó –rón –d –ā
~2 DEM DEM.PL also 3.PL ~2 able –rV– –r– RV

They cannot (fight) with you

18 nnìì kɔ́ò n qúúr –à
3.PL CPL ~2 kill RV

they killed him

19 ŋ káráà démàngàrí màà= –L ʊóò –H
~2 obtain Demangari POSS= 3 field 3

Demangari got a field (because he happen to come upon the fight so the people of Kete gave him a field)

20 nɛ́ɲ́ɔ́ –mí =ndɛ̀ ŋ kàmá –H N nó –ó –H béndò
Neyon DIM =PL ~2 CPL 3 T come RV 3 come upon

The people of Neyon came upon

21 nii maa kórí ŋ kò
3.PL.POSS war ~2 PP

their war

22 ŋ kàmá saaʊa kɔ́ò Démàngàrí kàmá –H ŋ káràà púgɛ̀
~2 CPL because CPL Demangari CPL 3 ~2 obtain valley

for this reason, Demangari got a valley

23 à Dèmángàrì –màá= tígè béndò ŋ kò
DEF Demangari inhabitants of also come upon ~2 PP

A person from Demangari also came upon (the war)

24 ŋ wí máà –L bɔ̀ò –L mɛ́ dégé hìŋgà
~2 there POSS 3 father 3 COMP head before

His father was their chief before

25 gómɛ́ =ndɛ̀ pùgɛ̀ híŋgá nnìì
rice =PL valley before 3.PL

Rice [was cultivated] in the valley

26 ŋ wí n dà gómɛ̀ =ndɛ́
~2 there ~2 INC rice =PL

Rice was cultivated there

27 à dèmáŋgàrì –mí =ndɛ̀ máà –L ʋòò ŋ kò
DEF Demangari INHAB =PL POSS 3 field ~2 PP

In the people of Demangari's fields

28 à síjɔ̀ⁿ bèndó –L nii maa kórè ŋ kò
now come upon 3 3.PL.POSS war ~2 PP

Now he came upon their war

29 nnìì ɥúúr –ú ŋ kɛ́ɛ̀
3.PL kill PRF ~2 PRF

they killed him (the King)

30 nnìì kàmá –H náẁ à gàndà –L ŋ káẁ hà N dɛ́ɛ́
3.PL CPL 3 give DEF place DEF ~2 DEM IRR T cultivate

they gave the place to the people of Demangari to cultivate, the people of Kɛtɛ cultivated the place (after his death)

31 démángárí –máà bíé N dɛ́ɛ́
Demangari inhabitants of NEG T cultivate

the people of Demangari did not cultivate there (before the war)

32 sàá búúⁿ –mí =ndɛ̀ ná démáŋgárí –mí =ndɛ̀ nnìì a siiⁿ
if Bunu INHAB =PL COOR Demangari INHAB =PL 3.PL DEF RECIP
kírìn –d –à
discuss, squabble –r– RV

If Bounou and Demangari squabble,

33 nnìì há waaramɛ jé siiⁿ gííⁿ húⁿ
3.PL IRR witness become RECIP back PP

Tin Taw becomes the witness.

34 tin–tawⁿ N só –rè ndɛ́ máà bóɔ̀
Tin Tawn village T know –rV– 3rd PL POSS border

Tin Tawn knows whose boundary (because Tin Tawn and Bounou are the oldest villages in the valley).

35 saa ŋ kaw démàngàrí –máà bíè ŋ wí tóⁿ–tá bíè ŋ
if ~2 DEM Demangari inhabitants of NEG ~2 there clan of Demangari NEG ~2
wí
there

if the person from Demangari is not there, their clan is not there.

36 ndɛ̀ màá= kóò búúⁿ dá síìⁿ huⁿ
1.PL.POSS house Bunu EXIST RECP PP

Our houses are together.

Text VIII: Chief VIII

1 ŋ wòré –H bùwó mìnnà náà
~2 go 1 herd place, location wilderness

I went [to the] place [in the] wilderness [where we] herd.

2 kɔ́ó ŋ wòré –H N káráà ŋɔ́rkèɛ̀ síé màá= –H bìiⁿ –L .
CPL ~2 go 1 T find leopard take POSS 1 year 1

I went [and] found [that] a leopard took my goat.

3 bíí =ndɛ̀ bùwó N dó mìnnà .
goat =PL herd T bring place, location

[at] [the] Place where goats are herded.

4 dá m bùwó m bùwó
INC ~2 herd ~2 herd

While I was herding,

5 ŋɔ́rkèɛ̀ kɔ́ò N nò –ò –L síé màá= –H bìiⁿ –L
leopard CPL T come IMPV 3 take POSS 1 year 1

A leopard came and took my goat.

6 màá= –H bìiⁿ –L kɔ́ò níí ŋà “ weeee ”
POSS 1 goat 1 CPL say weeeee!

My goat said “weeee”.

7 níí ŋà “ weeee ” pááⁿ kɔ́ò n tígè
say weeeee! all CPL ~2 run

He said “weeee” [and] he ran.

8 ŋ kɔ́ó wòré –H
~2 CPL go 1

I went,

9 kɔ́ó N káráà à ŋɔ́rkèɛ̀ .
CPL T find DEF leopard
and found the leopard.

10 kóɔ̀ⁿ màá= –H bììⁿ –L ŋ kẃà ŋ kɛ́ɛ̀ .
break POSS 1 goat 1 GEN neck ~2 PRF
He broke my goat's neck.

11 kóɔ̀ⁿ màà= –L kẃà ŋ kɛ́ɛ̀ .
break POSS= 3 neck ~2 PRF
He broke his neck.

12 kɔ́ó n tíg –í –rɛ̀ m pè .
CPL ~2 run RV PRF ~2 PP
I ran after him.

13 há wòré –H N qúnd –ù .
until go 1 T far PRF
I went far.

14 bíé –H ŋ káráà ŋɔ́rkèɛ̀ .
NEG 1 ~2 obtain leopard
I did not get the leopard

15 hájá kɔ́ó wòré –H ŋ káráà màá= –H bììⁿ –L dà jàà –wɛ̀
OK CPL go 1 ~2 find POSS 1 goat 3 INC die STAT

Ok, I found that my goat died.

16 kɔ́ò jág –á –H màà= –L kẃà
CPL cut RV 1 POSS= 3 neck

I slaughtered him.

TEXT IX: Chief IX

1 ŋ wó –ré –H bíí =nɛ̀ bùwóndì N dò minna .
go PRF 1 goat =PL herd T come place, location

I went to herd goats at the place where they are herded (TB).

2 níŋé níŋè .
place where goats are herded

Place where goats are herded.

3 gúwóndíjɛ̀ mɛ ka N dò à míndé (mu^{n}) maa= bíí =nɛ̀
caracal COMP CPL T come CHN enter enter POSS goat =PL
túmbárì .
among, between

Caracal (cat species) came and entered in between my goats.

4 bíì^{n} kííjɛ̀ .
goat seven

Seven goats.

5 tíjè jìndò tàáró n néè núndì kɛ̀ɛ̀ré kííjì .
one two two four five six seven

One two three four five six seven.

6 bíì^{n} kííjɛ̀ daw N si –L màà= bíí =nɛ̀ n túmbárì .
goat seven INC T take 3 POSS= goat =PL ~2 among, between

He entered in among seven goats.

7 dáẁ n tàg –à –L nnìì .
INC T grab INC 3 3.PL

He grabbed/snatched them.

8 ŋ kàmá n ɲà –rà màá= kɔ́rò .
~2 CPL T take –rV– POSS

He took my axe.

9 n daw wo –re –H n sɛ́rɛ́ .
INC go PRF 1 T chop (fields before planting)

I went to chop (him).

10 ka n túrù dwàà kííjɛ̀ .
CPL T hang tree branch

he hung from a tree limb

11 ka n jì kîì kù maa –H kɔ́ó hùn
CPL T fall with force POSS 1 shoulder PP

He fell on my shoulders with force.

12 a / ŋ gùwóndíjɛ̀ N ka à tag –a –H mì ŋ kɛ́ɛ̀ .
DEF T caracal T CPL CHN agree RV 1 reflexive ~2 PRF

The cat took himself (and left).

13 nɛ daw= / n daw síiⁿ N kur –a / húⁿ àà dúgú ŋ kó .
1.PL INC= INC APP T meet RV PP DEF dense forest ~2 PP

We met in the forest.

14 á bíí =ndɛ̀ nîì à buwo jogo .
DEF goat =PL 3.PL CHN leave, go out outside

The goats they went outside.

15 ka N súràà nîì .
CPL T look 3.PL

I looked (at) them.

16 ka ŋ wòré à kaara –L námbà tórè bíè nîì m túmbárì .
CPL ~2 go CHN find 3 sheep one NEG 3.PL among, between

I found one sheep wasn't among them.

17 námbà tórè bíè à bíiⁿ N túmbárì .
sheep one NEG DEF goat T among, between

(I found) one sheep wasn't among the goats.

18 ka míndè à dúgú ŋ kó .
CPL enter DEF dense forest ~2 PP

I entered the forest.

19 ka N si –L N púwɔ́ n dò .
CPL T take 3 T search

I looked everywhere.

20 à gúwóndímɛ̀ búndì màá= –H ʃĭɥè ŋ kɛ̀ .
DEF caracal make move out POSS 1 breast ~2 PRF

The cat took off its breast/utter.

21 gúwóndíjɛ̀ bíiⁿ kííjɛ̀ màá= ságì –né ,
caracal goat seven POSS eight cardinal number (nd, rd, th)

The cat (took) seven goats, the eighth,

22 màá= ságì –né ka ŋ wò –ré –H N karaa –H
POSS eight cardinal number (nd, rd, th) CPL ~2 go PRF 1 T find 1
qùr –ú ŋ kɛ́è .
kill PRF ~2 PRF

The eighth I found was killed.

23 gúwóndíjɛ̀ káẃ bíè ŋʷɔ̀ròkɛ́ .
caracal DEM NEG leopard

The caracal is not a leopard.

24 gŭwóndíjɛ̀ .
caracal

caracal.

25 sé n tígè síé hà n tág –ù .
if T also take INF T grab PRF

If he takes it he takes it too.

26 sé daw wò –ré –H n dég –ɛ́ –H pàà^{n} à tìgɛ́ –ré wàj .
if INC go PRF 1 T hit RV 1 all CHN run PRF PP

If you (stop) to hit it, he runs.

27 há wòré à si –L kîì táà^{n} .
INF go CHN take 3 thing some

He will go take another.

28 há wò –ré –H à tág –ù .
INF go PRF 1 CHN grab PRF

He goes to snatch, grab,

29 há n dé^{n} kîì kííjɛ̀ .
INF T fill thing seven

until he has seven.

30 tág –ù kîì kííjɛ̀ mɛ̀ mínnà .
take PRF thing seven which place, location

at the place which he took out the seven,

31 ká m búnd –à à bìì =ndɛ́ jógò .
CPL T take out RV DEF goat =PL outside

he takes the goats outside.

32 ká n súràà níì pà^{n} .
CPL T look 3.PL all

I looked at them all.

33 ká ŋ wo –re –H ŋ káràà –L níì bíè tíɛ̀ –ré .
CPL ~2 go PRF 1 T find 3 3.PL NEG sit PRF

I found they were not all there.

34 ká wo –re –H n súrà à dúgú ŋ kó .
CPL go PRF 1 T look DEF dense forest ~2 PP

I went to look in the forest.

35 ká púwɔ́ndò ka m wo –re ŋ káràà –L n ɥúr –ú ŋ kɛ́ɛ̀ .
CPL search CPL ~2 go PRF T find 3 T kill PRF PRF

I searched and found he was killed.

TEXT X: Chief X

1 n dɛ̀ N bùúⁿ Dan
1.PL T move out of Dan

They left Daan.

2 nnìì N bú –rà Dan
3.PL T move out of –rV– Dan

They came out of Dan.

3 nnìì káẃⁿ wòrè –L wúrò jɛ́ẁ .
3.PL CPL go 3 village of Jewol

They left the village of Jewol.

4 nnìì kàẃⁿ bú –rà wùró jɛ́ẁ .
3.PL CPL move out of –rV– village of Jewol

They came out of the village of Jewol.

5 nnìì káẃⁿ wòrè –L ŋ ẃì .
3.PL CPL go 3 ~2 there

They went there.

6 nnìì kɔ́ó –H wórè –H jèŋé .
3.PL CPL 3 go 3 Yenge

They went [to] Yenge.

7 nnìì ɥu –ra yéŋè
3.PL ascend –rV– Yenge

They ascended Yenge.

8 nnìì kàẃⁿ –L wórè –H búùⁿ
3.PL CPL 3 go 3 Bunu

They went [to] Bounou.

9 nnìì bú –r̃ –á búùⁿ
3.PL move out of –r– RV Bunu

They went out [of] Bounou.

10 nnìì kɔ́ó –H N té –rò ŋ wí hàsá múwí
3.PL CPL 3 T straight –rV– ~2 there until today

They lived there until today. (they are still living here today)

11 nnìì kɔ́ó –H N té –rò à ʒóɔ̀ⁿ –L màá= mí
3.PL CPL 3 T sit –rV– DEF rain DEF like PASS.CPL

The rain (gods) were pleased.

Appendix VI: Chief Map

(history of from where Bounou moved)

1 múwí táràà .
today Tuesday

Today [is] Tuesday.

2 bìnd -í bùùⁿ màá= -L níí .
write IMP Bunu POSS 3 name

Write Bounou's name.

3 màá= -L sígóó ŋ kò .
POSS 3 day ~2 PP

On this day,

4 n dɛ̀ N bú -ràà mɛ́ mìnnà .
1.PL T move out of –rV– COMP place, location

[The] place from which we came.

5 dáàⁿ .
Daan

Daan.

6 nníì bú -ràà dáàⁿ .
3.PL move out of –rV– Daan

They came from Daan

7 nnìì kɔ́ò nnò -ò wùrò jéwò .
3.PL CPL come RV village of Jewol

They came [to] Wuro Jewol.

8 nnìì bú -ràà wùrò jéwó .
3.PL move out of –rV– village of Jewol

They left from Wuro Jewol.

9 nníì kɔ́ɔ́ N nó -ó -H jègèɛ̀
3.PL CPL T come RV 3 Jege

They came to Jege.

10 nnìì N bú -ràà jègèɛ̀ .
3.PL T move out of –rV– Jege

They left Jege.

11 nníí kɔ́ò wòrè -L bóŋgɔ́rò .
3.PL CPL go 3 Bongoro

They went to Bongoro.

12 gɔ́ɔ̀ⁿ ŋò níí tímbá kɔ́ó N sɔ́ɔj -ɛ̀ nnìì à gúɥ -ɛ̀ .
ancient king of Bounou CPL T throw down RV 3.PL CHN throw RV

The ancient king of Bounou threw them down.

13 nníí kɔ́ò N bú -ràà bóŋgɔ́rò .
3.PL CPL T move out of –rV– Bongoro

They left Bongoro.

14 gɔ́ɔ̀ⁿ ŋò níí tímbá .
ancient king of Bounou

Ancient king of Bounou.

15 nníí kɔ́ò N tíé búúⁿ .
3.PL CPL T sit Bunu

They sat (lived) [in] Bounou.

16 ŋ kámáà nníí N té -rò mɛ́ mìnnà à síɛ̀ .
~2 CPL 3.PL T sit –rV– COMP place, location right now

They sat (lived) at the place where they are now.

17 kɔ́ò N bú -raa bóŋgɔ́rò .
CPL T move out of –rV– Bongoro

They left Bongoro.

18 kɔ́ò N tíé -wàj búúⁿ .
CPL T sit STAT Bunu

They lived (sat) [in] Bounou.

Lineage of the Current Chief:

siiri dicko (killed by Fulani enslavers) (same family as gemɔⁿ but not same mother, same father)

hamadi bilaji dicko (maybe this was the chief that was there at the time of the 'invasion'?) (older brother of gemɔⁿ)

térémɔ̀ tindi dicko (older brother of gemɔⁿ)

sôh dicko (hamidi and soh are the same name) (older brother of gemɔⁿ - same mother, same father)

bokari dicko (older brother of gemɔⁿ)

gemɔⁿ dicko (father of chief's father)

dé dicko (older brother of chief's father)

sôh dicko (current chief) [So became Chief in 1979, 3 years in the first war between Burkina and Mali which began in 1974.]

Appendix VII: Tiga Texts

Text XI: Tiga 1

1 nɛ̀ màá= jíbɛ́ɛ́ =nɛ̀ bù –rá kɔ́ó –H ɥíɛ̀ tónípérɛ̀ .
1.PL.POSS person =PL from, come from PRF CPL 3 ascend Tondifere

Our people left [and] ascended [to] Tonifere

2 nɛ̀ mɛ̀ jàmbɛ́ –H n nìé –rɛ̀ .
1.PL.POSS child 1 GEN woman –rV–

Our girl,

3 sɥɛ́è à ɥìɛ̀ –L á tórɔ̀ⁿ mmínnà .
descend DEF water DEF CHN carry water place, location

descended [to] the place [where they] get water.

4 nnìì kɔ́ó –H kʷɛ́ɾ̃ɛ̀ ŋ kɛ́è .
3.PL CPL 3 steal ~2 PRF

They stole [her].

5 nnìì kɔ́ó –H dú ɥìɛ́ dɔ́gànì .
3.PL CPL 3 bring ascend Dogani

They brought her up [to] Dogani.

6 n kà sàⁿ n jámbɛ́ nnìé –rɛ̀ .
~2 then, at that time ~2 child woman –rV–

At that time, she [was] a girl (teenager).

7 ŋ kɔ́ó –H ŋ wórè –H à bàr –ú dɔ́gànì .
~2 CPL 3 ~2 go 3 CHN remain PRF Dogani

She remained [in] Dogani.

8 ŋ kɔ́ó –H m bár –à ŋ wíì .
~2 CPL 3 T remain RV ~2 there

She remains there.

9 ŋ ka m bar –a ŋ wíì .
~2 CPL T remains IMPV ~2 there

She remains there.

10 ŋ kɔ́ó –H m bár –à ŋ wíì ,
~2 CPL 3 T remain RV ~2 there

She remain there (she remained for a long time),

11 há máá= –H sɥìɛ –L à bú .
until POSS= 3 breast 3 CHN move out of

until her breasts came out.

12 màà= –L ɕíɛ́ⁿ bíè jíɛ̀ ,
POSS= 3 owner NEG see

Her owner (husband) is not seen, (she was not seen by her people though she was ready for marriage)

13 màá= –H sɥíɛ̀ –H bú –ráà .
POSS 3 breast 3 move out of –rV–

her breasts came out.

14 n dáà kúmbó –ró .
~2 INC search –rV–

I was searching for her.

15 nnìì n dà kúmbó –H .
3.PL ~2 INC search 1

They were searching for her.

16 n dàà kùmbó –L .
~2 INC search 3

He was searching for her.

17 nnìì nnì –ì tùmbɛ́ wòré –H á jìbɛ́ɛ́ =nɛ̀ páá^{n} wàj .
3.PL give PRF message go 3 DEF person =PL all PP

They gave a message [to be] sent to all [the] people.

18 nnìì nnì –ì á túmbɛ̀ hà púndà wàj .
3.PL give PRF DEF message in order to Fulani PP

They gave the message to the Fulani (because he travels a lot).

19 à púndá ŋ káẁ júlà .
DEF Fulani ~2 DEM buy in order to sell

The Fulani traded a sheep (this is what brought him to the village in the first place).

20 à púndá tígé dà –L ŋ kúmbò ŋ kúmbó .
DEF Fulani also INC 3 T search ~2 search

The Fulani was also searching.

21 ŋ kɔ́ó –H wórè à jìɛ́ ,
~2 CPL 3 go CHN see

He went and saw,

22 à nnìè –L ŋ wìí dógɔ̀nì .
DEF woman DEF ~2 there Dogani

the woman there at Dogani.

23 ŋ kàsáⁿ hɔ́ⁿ ,
~2 then, at that time emphatic

At the time which,

24 nnìì ɲáẁ ŋ kɛ́ɛ̀ ,
3.PL take ~2 PRF

they married her,

25 nnìì ɲàá –n –à ,
3.PL take –r– RV

they took,

26 ŋ kɔ́ó –H n sùr –á ,
CPL 3 T look RV

he looked,

27 ŋ kɔ́ó –H n su –ra ,
~2 CPL 3 T look –rV–

he looked,

28 ŋ kɔ́ó –H n su –ra ,
~2 CPL 3 T look –rV–

he looked (he looked for a long time),

29 hásá wórè –H gàẃⁿ .
until go 3 good

until he was satisfied.

30 mì –L kɛ̀ndɛ́ kúúwɔ̀ ,
SG 3 said DEM

He (the Fulani) said that

31 à bù –mì =ndɛ̀ nnìì ŋà nnìì màà= jìbɛ́ɛ́ –L mɛ̀ jáátì .
DEF Bunu INHAB =PL say 3.PL.POSS person 3 COMP definitely

this is definitely their person who the people of Bounou spoke of.

32 mí –H kɛ́ndɛ́ ŋ káẁ kɔ́ò hɔ̀ⁿ jáátì .
SG 3 say ~2 DEM CPL emphatic definitely

He said, that is definitely her.

33 kɔ́ò dóò –ró .
CPL pass –rV–

He (the Fulani) passed.

34 ŋ kɔ́ò sáwɔ́n –d –ò .
~2 CPL descend –r– RV

He descended.

35 ŋ kàmá –H nò –ò –L nìì ímà búùⁿ .
~2 CPL 3 come RV 3 say here Bunu

He came here [to] Bounou [and] said (he saw the person).

36 mì –L kɛ́ndɛ́ àà dà màá= jìbɛ́ɛ́ mɛ́ kúmbò ,
SG 3 said 2.PL INC POSS person COMP search

He said, your person for which you have been searching,

37 n jáá –H dá à gàndà –L káá kò .
~2 see 3 INC DEF place 3 DEM PP

I saw the place that she is at

38 kɔ́ó téè ?
where

Where (asked the people of Bounou)?

39 dógànì .
Dogani

Dogani (said the Fulani).

40 mì –L kɛ́ndɛ́ á káw ?
SG 3 said 2.SG sure, positive

They said, are you sure?

41 mì –L kɛ́ndɛ́ n káá n tɛ́è .
SG 3 said ~2 sure, positive

He said, I am sure.

42 mì –L kɛ́ndɛ́ káẁ à sìɛ́ kéndɛ̀ .
SG 3 said DEM now yet

He said, that [is] all for now.

43 màà= –L bʷèɛ́ –H wáà .
POSS= 1 foot 1 hot

My foot is hot (I'm in a hurry).

44 sé ŋ kɔ̀r –ɔ́ ŋ kíì ,
if change, switch, transform RV GEN thing

If/when I return,

45 n dá nnó –ò ,
~2 INC come RV

I am coming (I will be back),

46 nnìì hà qìɛ̀ –L síìⁿ .
3.PL IRR ascend 3 RECP

they will ascend together.

47 n dà –L wòrè –L té –ré –H .
~2 INC 3 go 3 show –rV– 1

I am going [to] show [you].

48 kɔ́ó –H níŋà hájá .
CPL 3 say OK

He said OK.

49 wòrè –L à kùmbó à kùmbó nnù –ù –L .
go 3 CHN search 2.SG search come PRF 3

He went and strolled about and came back.

50 kɔ̀r –à ŋ kìì hà nnú –ú –H .
change, switch, transform RV GEN thing IRR come PRF 3

He returned and came [back].

51 ŋ kɔ́ó –H nnó –ò .
~2 CPL 3 come RV

He came.

52 nnìì kɔ́ó –H ɥíɛ̀ síì^{n} .
3.PL CPL 3 ascend RECP

They ascended together.

53 ímà tìgè bú –mì =ndɛ́ nnìì kɔ́ó –H m bùn –d –à ,
here also Bunu DIM =PL 3.PL CPL 3 T remove –r– RV

Here too, [the] people of Bounou, they took out,

54 nnìì màà= kɔ́mɛ̀ gɔ́ɔ̀^{n} .
3.PL.POSS slave man

their male slave.

55 hà ɥìɛ́ n súrà hà jàlà sɔ́gɔ́jɛ̀ .
IRR ascend T look in order to whether truth

He (the male slave) went to see whether it was the truth

56 nnìì kɔ́ó –H nnìì ŋà sè ɥìɛ́ –L ,
3.PL CPL 3 say if ascend 3

They said, if he ascends,

57 màá= nnìì ŋà mì –L kɔ́mɛ̀ dè .
PROH say SG 3 slave emphatic

Do not say that he is/you are a slave.

58 nnìì ŋà hájá wá .
say OK reported speech

He said OK.

59 nnìì kɔ́ó –H ɥìɛ́ –L síiⁿ .
3.PL CPL 3 ascend 3 RECP

They (the Fulani and the slave) went up together.

60 kɔ́ó –H wòré –H há sùrá há jìɛ̀ ,
CPL 3 go 3 IRR look until see

He went and looked until he saw,

61 wòré –H à jìɛ́ ,
go 3 CHN see

they went to see,

62 kɔ́ó –H wórɛ̀ à káárà
CPL 3 go CHN find

they went to find,

63 kàá máà mì –L jáátì .
DEM EXIST SG 3 definitely

that is definitely her.

64 hájá màá= –L nìì ?
OK POSS 2 name

OK [what is] your name?

65 kàá màá= n dɛ̀ mɛ̀ ŋ kúmbò
DEM EXIST 1.PL COMP T search

That is [for] whom we search.

66 mɛ́ èh màá= –L nìì ?
COMP emphatic POSS 2 name

What is your name?

67 kàmá nɛ́ máá jìbɛ́ɛ́
CPL 1.PL.POSS person

(is this our person)

68 mì –L kɛ́ndɛ̀ máá= –H nìì ?
SG 3 say POSS= 1 name

He said, what is your name?

69 mì –L kɛ́ndɛ̀ hùh ?
SG 3 say huh

She said huh?

70 mì –L kɛ́ndɛ̀ à ná tì ímà nàw káámà ?
SG 3 say 2.SG INC live here EXIST CPL

You have been living here all this time?

71 mì –L kɛ́ndɛ́ wàlàjí ímà n dáẁ .
SG 3 say swear to God here ~2 EXIST

She said, I swear to God, I have been here.

72 mí –H kɛ́ndɛ̀ bɔ́ó dáà kúmbò ,
SG 3 say father INC search

He said, father has been searching,

73 à gàʒɛ́ⁿ ki pààⁿ ŋ kò .
DEF world thing all ~2 PP

all over the whole world.

74 ímà n dáẁ kámáà
here ~2 EXIST CPL

But you are just here.

75 mì –L kɛ́ndɛ̀ hàjà .
SG 3 say OK

She said OK.

76 bɔ́ó mì –L kɛ́ndɛ̀ há sàn –d –ó wà .
father SG 3 said IRR descend –r– RV reported speech

Father says to make you descend.

77 dà –L ɥíɛ̀ .
INC 3 ascend

She ascends.

78 nnìì kɔ́ó –H náẁ tɔ́mɛ̀ wàj
3.PL CPL 3 give cowry shell(s) PP

They gave cowry shells (money) to [him].

79 ŋ kásán tɔ́mɛ̀ máà mì n díj –à
~2 then, at that time cowry shell(s) EXIST PASS T eat RV

At that time, cowry shells were eaten (spent/used for money).

80 ŋ kásàⁿ tóɔ́ⁿ bíè .
~2 then, at that time money NEG

At that time, money did not exist.

81 tɔ́mɛ̀ máà mì n díj –à
cowry shell(s) EXIST PASS T eat RV

Cowry shells were eaten.

82 nnìì kɔ́ó –H náẁ tɔ́mɛ̀ wàj
3.PL CPL 3 give cowry shell(s) PP

They gave cowry shells to [them].

83 sé ɥìɛ́ pààⁿ ,
if ascend all

If they ascend,

84 sé wórè à káárà
if go CHN find

if they go to find,

85 m bɔ́jéɛ̀ ŋ kó nnáẁ ,
~2 rope GEN PP give

there is a rope (she is enslaved) they [will] give,

86 nnìì m bú –ràà ŋ kíí .
3.PL T move out of –rV– GEN thing

pay for (a slave).

87 sè bíè bɔ́jéɛ̀ ŋ kó dè ,
if NEG rope GEN PP emphatic

If there is no rope (if she is not enslaved),

88 hà n sàà^{n} wàj .
IRR T descend STAT

[they] will descend.

89 à kɔ́mɛ̀ ŋ gɔ́ɔ̀^{n} mì –L kɛ́ndɛ̀ hájà wà .
DEF slave GEN man SG 3 said OK reported speech

The slave man said OK.

90 mì –L kɔ́ó –H n ɥíɛ̀ .
SG 3 CPL 3 T ascend

He ascended.

91 kɔ́ó –H ŋ wórè à káràà bíè bɔ́jéɛ̀ ŋ kó .
CPL 3 ~2 go CHN find NEG rope GEN PP

He went to find there was no rope (she was not enslaved).

92 ká bɔ́jéɛ̀ ŋ kó ná ná ná máà nú mì ?
DEM rope GEN PP COOR COOR COOR EXIST how is it

(the Fulani asked) Is the rope around [her neck] (is she enslaved) or or or what?

93 mì –L kɔ́ó –H nìì ŋá wálájè
SG 3 CPL 3 say swear to God

He said, I swear to God.

94 sé tɔ̀ŋɔ̀gò bíè bɔ́jéɛ̀ ŋ kó .
if truth NEG rope GEN PP

If I tell the truth, the rope is not on [her neck] (she is not enslaved).

95 jìbɛ́ɛ́ n dógóndò kɔ́ó –H nnó –ó N gómbè nnìì nìì .
person T bring CPL 3 come RV T leave 3.PL hand

A person brings [her] and left her in our hands (he did not sell her).

96 kɔ́ó –H nnìì ŋà n dà –L wórè n dà nnó –ó .
CPL 3 say ~2 INC 3 go ~2 INC come RV

He said that he was going and [would] come [back].

97 n kámàà= nnò –ò ,
~2 CPL come RV

He came,

98 à gómbè nnìì nìì .
CHN leave 3.PL hand

and he left [her] [in] their hand[s].

99 ŋ ká kɛ̀ bíè kɔ́r –ɔ́ ŋ kì á nnú –ú –H bóndò
~2 excuse me NEG change RV GEN thing CHN come PRF 3 again

Like that, he did not return to come again.

100 há ŋàrà há pódí màà= ɲà –n –á tẃà ,
if God IRR made it EXIST take –r– RV reach

If God made it so that it was her time to be taken (married),

101 nnìé –rɛ́ sé màà= –L ɲà –n –à n tẃà páàⁿ ,
woman –rV– if POSS= 3 take –r– RV T reach all

when a woman's time comes to be taken (married),

102 mì –L há ɲà –n –á
SG 3 SUBJ take –r– RV

she [is] to be married.

103 ájíwà nnìé –rɛ̀ hɔ̀ⁿ sé ɛ́íɛ̀ⁿ bíè n wájè páàⁿ ,
OK woman –rV– emphatic if owner NEG ~2 PP all

OK, if a woman does not have an owner (someone to marry her),

104 mì –L hà n ɲà –n –á
SG 3 SUBJ T take –r– RV

she must [be] taken (married).

105 mí –H kɛ́ndɛ̀ wàjbì jáátí .
SG 1 said obligatory definitely

I said, that is obligatory, very much so.

106 mì –L kɔ́ó –H n ɲá –n –à –L .
SG 3 CPL 3 T take –r– RV 3

She is taken (married).

107 nnìì n ɲá –n –à –L ,
3.PL T take –r– RV 3

They take her,

108 háà káráà bì =ndɛ́ ,
until obtain baby =PL

until she gets children,

109 káráà bì =ndɛ́ péɛ́rɛ́ .
obtain baby =PL a lot

she got a lot of children.

110 ŋ kɔ́ó –H m bár –à ŋ kámáà .
~2 CPL 3 T remain RV ~2 CPL

She stayed there.

111 mì –L kɛ́ndɛ̀ à síɛ̀ bɔ́ó ,
SG 3 said now father

Now, he, father, said,

112 nnìì ŋà nìì ŋá à síɛ̀ há nnù –ù –L n súrà .
say say now IRR come PRF 3 T look

he said her father sent someone to come look at her.

113 sé tɔ́ŋɔ̀rɔ́ há dò sááⁿ nnó –ó wà
if truth IRR bring descend come RV reported speech

(he said,) If it's true that she is not enslaved, descend (bring her down).

114 mì –L kɛ́ndɛ̀ tɔ́ŋɔ̀rɔ́ jáátí
SG 3 said truth definitely

He said, that is definitely truth.

115 mì –L kɛ́ndɛ̀ wáláhàjì .
SG 3 say swear to God

I say swear to God

116 nɛ́ mɛ̀ ŋá –n –à –L kà bíè bɔ́jéɛ̀ tígè ŋ kó .
1.PL.POSS take –r– RV 3 DEM NEG rope also GEN PP

We have married her but she is not also enslaved.

117 àlhámdúlàjì múwì kámàà= hɔ̀ⁿ .
praise be to God today CPL emphatic

Thank God for today.

118 jíè –wɛ̀ bì =ndɛ́ ɕíɛ̀ⁿ jáátí .
do STAT baby =PL owner definitely

She has become the owner of children (very much so).

119 kàẃ ájìwá bɔ́ó nnìì ŋà há n sán –d –ò wá .
DEM OK father say SUBJ T descend –r– FV reported speech

OK, father said that she should come down.

120 á nnìé –rɛ̀ kɔ́ó –H nnìì ŋà kɔr̃ɔ
DEF woman –r– CPL 3 say DEM

The woman said that,

121 á gòɔ́ⁿ –L kɔ́ó –H nnìì ŋà káẁ
DEF man DEF CPL 3 say DEM

the man (her husband) said that,

122 à síɛ̀ kɔr̃ɔ kɛ́ndɛ̀ ,
now return say

now she said,

123 m bíè á sáẁ kéndɛ̀ .
~2 NEG CHN descend yet

I cannot descend yet.

124 ă sááⁿ ŋẁɔ́ !
2.SG descend go

You go (imperative) down.

125 sé káráà sígòó =nɛ́ tígè nɛ́ nà sán –d –ò .
if obtain day =PL also 1.PL INC descend –r– RV

If one week passes, we too will descend.

126 ndɛ̀ màá= pʷíɛ̀ jíndò ndɛ̀ sá –d –ō .
1.PL.POSS wife two 1.PL descend –r– PRF

We (me and the wife) will descend.

our wife, we (will) descend

127 mì –L kɛ́ndɛ̀ á kà tájrà ?
SG 3 said 2.SG DEM sure

He said, are you sure?

128 mì –L kɛ́ndɛ̀ ùhùh .
SG 3 said uhuh

She said uhuh.

129 mì –L kɛ́ndɛ̀ ùhùh à nnìé –rɛ̀ àhɛ́ⁿ sé sáẁ .
SG 3 said uhuh DEF woman –rV– how if descend

He said uhuh, if the woman knows how to descend.

130 à só –rè á bɔ́ò –L tájà ?
2.SG know –rV– 2.SG father DEF place, family

(will) you know your father's house/place?

131 mì –L kɛ́ndɛ̀ áh !
SG 3 said ah

She said ah!

132 mì –L kɛ́ndɛ̀ tɔ́ŋɔ́rò .
SG 3 say truth

She said truth.

133 bɔ́ò tájè té –wàj kì .
father place, family lost STAT thing

I forgot my father's place.

134 ká só –rè –H máá= –H píndɛ́ =nɛ̀ .
but know –rV– 1 POSS= 1 direction =PL

But, I know how to tell his directions (to his house).

135 mì máà bɔ́ò máá= –H kóó –H gí hù^{n} ,
POSS father POSS= 1 house 1 behind PP

Behind my father's house,

136 tóŋè –mí =ndɛ̀ n dáw ŋ wîì .
tree species DIM =PL ~2 EXIST ~2 there

There is the tree species.

137 kǎŋkájì dá ŋ wîì .
Salvadora Persica EXIST ~2 there

There is tree species .

138 mì –L kɛ́ndɛ̀ jáátí .
SG 3 said definitely

He says, definitely.

139 mɛ̀ à kóó –L n nɔ́ɔ́ tígì tìgì á bíè só –rè .
COMP DEF house DEF GEN mouth very much so DEF NEG know –rV–

They did not know the doorway very well.

140 ŋ káárà sígòò
~2 obtain day

They got the day.

141 ná máà –L kándèè nnìì jíndò nníí kɔ́ó –H ɲà –n –à nníí
COOR POSS 3 husband 3.PL two 3.PL CPL 3 take –r– RV 3.PL
kɔ́ó –H sáẁ
CPL 3 descend

She and her husband, they two, they took each other, they descended.

142 gìllá nníí sáẁ síiⁿ há ní tẃà ná pɔ́rɔ̀ hùn
since, until 3.PL descend RECP IRR 3.PL reach PASS well PP

Until they descended together, until they arrived at the well (body of water near Baraa).

143 mì –L kɛ́ndɛ́ hàjà .
SG 3 said

He said OK.

144 ǎ nnìì à tóɲè –mí =ndɛ̀ kàá –rù .
DEF 3.PL DEF tree species DIM =PL DEM DEM.PL

There are those tree species.

145 ǎ nnìì tóɲè –mí =ndɛ̀ káẁ dìnd –á .
DEF 3.PL tree species DIM =PL DEM stand RV

Those tree species stand there.

146 ă nnìì kăŋkájì káẁ dìnd –à .
DEF 3.PL Salvadora Persica DEM stand RV

Those tree species stand there.

147 káẁ bɔ́ó màá= –L kóó –H gíí^{n} hù^{n} .
DEM father POSS 3 house 3 back PP

That [is] behind her father's house.

148 mí –H kɛ́ndɛ́ jáátí .
SG 1 said definitely

I said that's it.

149 àà n dá ɥíɛ́ –H ,
SUBJ ~2 INC ascend 1

Let's ascend,

150 à dìjà –L ŋ kóó –rò .
DEF village DEF GEN PP –rV–

into the village.

151 ŋ kɔ́ó –H sígà kàẁ nà té –rè wàj à kòò –L n nɔ́ɔ́
~2 CPL 3 ask DEM INC show –rV– PP DEF house DEF GEN mouth

He asked for them to show the doorway to him.

152 n ná té –rè à kòò –L n nɔ́ɔ́ wàj .
~2 INC show –rV– DEF house 3 GEN mouth PP

They showed the doorway to him.

153 kàẇ ŋ wórè nnì –ì kɔ́ó –H náẇ ɥìɛ̀ nnìì ŋ wàj .
DEM ~2 go give PRF CPL 3 give water 3.PL ~2 PP

He gave water to them

154 nnìì kɔ́ó –H nníɛ́ –rè mì .
3.PL CPL 3 drink –rV– REFL

They drank.

155 kɔ́ó –H n tùrú .
CPL 3 T lie down

They layed down (spent the night there).

156 nnìì kɔ́ó –H díŋgín –d –à nnìì màá= dígá .
3.PL CPL 3 say again, repeat (word) –r– RV 3.PL.POSS talk

They repeated their talk.

157 mi –L kɛ́ndɛ́ ùhùh máánì ,
SG 3 said uhuh whatchamacallit

He said, uhuh, whats–your–name...

158 nú mì à káràà káẇ ?
how is it DEF obtain DEM

How did you come to get this [woman]?

159 mì –L kɛ́ndɛ̀ káẇ dè .
SG 3 said DEM emphatic

He said that,

160 jìbɛ́ɛ́ N dógóndò .
person T bring

a person brought [her].

161 kɔ́ó –H nnò –ò à nnì –ì N náẁ wàj .
CPL 3 come RV CHN give PRF T give PP

He came to give her to them.

162 kɔ́ó –H nnìì ŋà n dá nnò –ò –L ,
CPL 3 say ~2 INC come RV 3

He said that he is coming [back],

163 dá wòrè –L n dá n dò ,
INC go 3 ~2 INC T come

he is going and coming,

164 nnìì à sìɛ́ kéndɛ̀ .
3.PL now yet

they [should take her] for now.

165 haja nɛ̀ tígè nɛ̀ káw̃àà tág –à –L nɛ̀ káw̃àà síè .
OK 1.PL also 1.PL CPL take RV 3 1.PL CPL take

OK, we also took [her], we took [her].

166 kàw̃áá m bàr –á ímà né m pè .
CPL T remains RV here 1.PL ~2 PP

She remains with us.

167 màá= –L ɲá –n –á tẃà .
POSS 3 take –r– RV reach

Her marriage (time) arrived.

168 màà= –L ɕíɛ̀ⁿ bíè jíɛ̀ .
POSS= 3 owner NEG see

Her owner is not seen (there was no husband for her).

169 nìé –rɛ́ sé máá= –H ɲá –n –á tẃà pààⁿ ,
woman –rV– if POSS= 3 take –r– RV reach all

If a woman's marriage time arrives,

170 mì –L náẁ ɲà –n –à .
SG 3 give take –r– RV

she is given in marriage.

171 sé ɕíɛ̀ⁿ bíè wàj ,
if owner NEG PP

If there is no owner,

172 sé máà –L ɲà –n –á tẃà pààⁿ ,
if POSS 3 take –r– RV reach all

if her marriage time arrives

173 mì –L náẁ ɲà –n –á
SG 3 give take –r– RV

she is given/taken.

174 mì –L kɛ́ndɛ̀ ùhùh
SG 3 say uhuh

He said uhuh.

175 mì –L hɔ̀ⁿ bíè sígà ká kɔ́ó –H à sìɛ́ kéndɛ̀ ,
SG 3 emphatic NEG ask DEM CPL 3 now yet

I have not yet asked that,

176 bɔ́ɔ́ –wàj kɔ́ó –H ná náà à sìɛ́ kéndɛ̀ náà ?
tie STAT CPL 3 COOR COOR now yet COOR

is there a rope on her yet (or what)?

177 bíè bɔ́ɔ́ –wàj ŋ kó .
NEG tie STAT ~2 PP

A rope was not tied on [her neck].

178 wálájè sé tɔ́ŋɔ́rò gúwɛ̀ bíè bɔ́ɔ́ –wàj ŋ kó .
swear to God if truth better NEG tie STAT ~2 PP

I swear to God, if truth is better, a rope was not tied on her neck.

179 nnìì kɔ́ř –ɔ́ pó dógóndò ,
3.PL change, switch, transform RV each bring

They returned her,

179 nnìì kɔ́ó –H nná ŋ wàj .
3.PL CPL 3 give ~2 PP

they gave her to [him].

181 mì –L kɛ́ndɛ̀ bíè bɔ́ɔ́ –wàj ŋ kó .
SG 3 say NEG tie STAT ~2 PP

He said a rope was not tied on her [neck].

182 mì –L kɛ́ndɛ̀ à ká tájrì ?
SG 3 said 2.SG DEM sure

He said are you sure of that?

183 mí –H kɛ́ndɛ̀ sé bíè bɔ́ɔ́ –wàj kɔ́ɽ̃ –ɔ́ gúwɛ̀ .
SG 1 said if NEG tie STAT change, switch, transform RV better

I said it is better if [the rope] was not tied.

184 mi –L kɛ́ndɛ̀ gɔ́ɔ̀ⁿ ,
SG 3 say man

He said man,

185 mí –H dégè jáátì mì –L ɲà –n –à .
SG 1 himself/herself definitely SG 3 take –r– RV

I, myself definitely, I married her.

186 ádáhámdìlájè mí –H dégè mì –L ɲà –n –à dó n náẇ káràà mɛ̀
praise be to God SG 3 himself/herself SG 3 take –r– RV bring T give obtain 1SG POSS

Praise be to God, I myself, I married and brought give to find (they received children).

187 dɔ̀nɛ́ ná káràà mɛ̀ bi –mí =ndɛ̀ jàátí
day INC obtain COMP baby DIM =PL definitely

On the day in which we got children very much so?

188 mì –L kɛ́ndɛ̀ hájà kɔ́ó –H nnìì ŋà hà sán –d –ò .
SG 3 said OK CPL 3 say IRR descend –r– RV

He said OK, she has come to see her family

189 hájá nnìì N díj –à ɛ́íí .
OK 3.PL T eat RV food

OK they eat food.

190 hájá nnìì n díj –à ɛ́íí .
OK 3.PL T eat RV food

OK, they eat food.

191 ŋ kɔ́ó –H n sígà áẁ hɛ̀ⁿ màání ,
~2 CPL 3 T ask 2.PL emphatic whatchamacallit

He asked, hey whats–your–name,

192 à kɔ̀mɛ́ –L ŋ gɔ́ɔⁿ nnù –ù –L mì –L á nìì ŋá ?
DEF slave DEF GEN man come PRF 3 SG 3 CHN say

What did the slave man say?

193 a nnìì tu –d –o a maa nnìì
DEF 3.PL DEF POSS 3.PL

Have you sold her?

194 nìì ŋá nìì ŋá à kɔ́mɛ̀ náá ?
say say 2.SG slave question particle

Are you a slave?

195 máà nìì ŋá à mɛ́ tóò
EXIST say 2.SG.POSS younger sibling

He says, I am his younger sibling.

196 mì kɛ́ndɛ̀ á sè tɔ̀ŋɔ̀rɔ̀ gúwɛ̀
SG say DEF if truth better

He said the if one speakes the truth, it is better

197 nnìì nnìì mɛ kom
3.PL 3.PL 3rd SG POSS slave
?

198 mì kɛ́ndɛ̀ á jáŋà dègè
SG say 2.SG ruin himself/herself

he said you ruin yourself

199 mí nnìì ŋà sá ɥíɛ̀ pàà^{n} ,
SG say if ascend all

he said if you ascend,

200 nnìì áẁ à mɛ̀ tóò
3.PL 2.PL 2.SG.POSS younger sibling

Their younger sibling?

201 mì kɛ́ndɛ̀ máá nìì ŋá à dégè kɔ́mɛ̀ .
SG said PROH say 2.SG himself/herself slave

he said do not say that your self is a slave

202 kɔ́ó –H ŋ wórè kɔ́ó –H nìì ŋá mì –L kɔ́mɛ̀ .
CPL 3 ~2 go CPL 3 say SG 3 slave

you went and said that you were a slave

203 mí –H kɛ́ndɛ̀ kɔ́ó –H nnìì ŋá mí –H gɔ́ɔ̀ⁿ
SG 3 say CPL 3 say SG 3 man

204 mì –L kɛ́ndɛ̀ ajiwa
SG 3 say OK

he said OK

205 à síjɔ̀ⁿ ,
now

now

206 mi –L kɛ́ndɛ̀ sé bíè bɔ́ɔ́ –wàj ŋ kɔ́ó –H bù –w̃ –ɛ̀ .
SG 3 say if NEG tie STAT ~2 CPL 3 finish PRF RV

he said if there is no rope, it is finished

207 mì kɛ́ndɛ̀ à síjɔ̀ⁿ ,
SG say now

he said now

208 bɔ́ò mí –H kʷá –nd –ì á nnìì à síjɔ̀ⁿ
father SG 3 beg –r– PRF 2.SG 3.PL now

father I beseech, beg you now

209 mí –H tígè n jìé –H –wàj bìɛ́ n ɕíɛ̀ⁿ .
SG 1 also T become 3 STAT baby GEN owner

I also have become a owner of children.

210 m mɔ̀ɔ́ máà –L dígà búwɛ̀ hà jàŋ –à
~2 like.NEG.*** POSS 3 engagement IRR ruin RV

he does not want his engagement to be ruined

211 mì –L kɛ́ndɛ̀ uhuh kɔ́ó –H béè básì à síjɔ̀ⁿ hɔ̀ⁿ
SG 3 say uhuh CPL 3 NEG problem now emphatic

he said no, not a problem now (emphatic)

212 sé bíè bɔ́jéɛ̀ ŋ kó pááⁿ bíè básì
if NEG rope ~2 PP all NEG problem

If there is no rope, there is no problem

213 à síjɔ̀ⁿ ŋàrá nnì –ì ŋ kɛ́ɛ̀ á wàj .
now God give PRF ~2 PRF 2.SG PP

Now God gave her to you,

214 mì –L tígè nnì –ì ŋ kɛ́ɛ̀ à wàj
SG 3 also give PRF ~2 PRF 2.SG PP

I also gave her to you.

215 à síjɔ́ⁿ à màá á ɥíɛ̀ à síjɔ̀ⁿ
now CHN want CHN ascend now

Now we can ascend now

216 bíè bàsì nɛ̀ só –rè máà –L mínnà ŋ kɛ́ɛ̀ à síjɔ̀ⁿ .
NEG difficult 1.PL know –rV– POSS 3 place, location ~2 PRF now

No problem, we know his place now.

217 nnìì túrù jìɛ̀ jìndò .
3.PL lie down night two

They spent two nights.

218 nnìì kɔ́ó –H ɲá –n –à –L mì –L nnìì kɔ́ó –H ɥíɛ̀ .
3.PL CPL 3 take –r– RV 3 SG 3 3.PL CPL 3 ascend

They ascended.

219 nnìì kɔ́ó –H N dígán –d –à á diga –L ŋ wîì .
3.PL CPL 3 T talk –r– RV DEF talk DEF ~2 there

They repeated the talk there.

220 n dìgà –d –a á díg –L ŋ wìì tígè
~2 talk –r– RV DEF talk DEF ~2 there also

They repeated the talk there also.

221 mì –L à nìé –rɛ́ kórà á bì =ndɛ́ mɛ̀ –ndɛ́ ŋ wîì
SG 3 DEF woman –rV– give birth DEF baby =PL 1sg POSS PL ~2 there

The children which the woman gave birth to there

222 kàà –rú tígè nnìì jíè –wàj pʷíɛ̀ =ndɛ́ náw bóró =ndɛ̀
DEM DEM.PL also 3.PL become STAT wife =PL and young man =PL

Those also they became young women and young men

223 à nìé –rɛ́ tórè
DEF woman –rV– one

the one woman,

224 nnìì kɔ́ó –H ɲá –n –á nnìì kɔ́ó –H náẁ wòré tùbégé
3.PL CPL 3 take –r– RV 3.PL CPL 3 give go village name

they gave her in marriage to Tubege

225 nnìì N ɲà –n –á tùbégé
3.PL T take –r– RV village name

they married her in Tubege

226 ŋ káẁ tígè kɔ́ó –H wòrè a kɔ́ó –H ŋ wii
~2 DEM also CPL 3 go CPL 3 ~2 there

she gave birth there

227 tùbégé tige
village name also

228 nnìì ka na
3.PL CPL PASS

229 muwi tige a ka ŋ wii
today also DEF CPL there

230 hájá à sìì káw̃àà n sáká wòré
OK DEF ethnicity CPL GEN go

Our ethnicity is there.

231 tùbégé
village name

(she had 7 children in Tete, and these all scattered throughout Tondifere)

Text XII: Tiga 2

1 wɛ̀rɛ̀ ŋ gàrá púndà
village south east of Kargue Fulani

A Fulani from Werengara,

2 wɛ̀rɛ̀ ŋ gàrà –mí =ndɛ̀ ŋ káárá –H gúʒè
village south east of Kargue INHAB PL ~2 find 3 grass, weeds

The people of Werengara found grass, weeds.

3 wŭró jéwól –mí =ndɛ̀ m bíè káárà –L gúʒè
village of Jewol INHAB PL ~2 NEG find 3 grass, weeds

The people of village of Jewol did not find grass, weeds.

4 à wɛ̀rɛ̀ ŋ gàrá –màà= kóɔ̀ náẁ tŭmbé n nó –ó
DEF village south east of Kargue INHAB CPL give message T come RV

The village south east of Kargue inhabitants sent a message,

5 à wùró jéwól máà wayi
DEF village of Jewol inhabitants of PP

to the village of Jewol inhabitants.

6 mì –L kɛ̀ndɛ́ há n nú –ú n jí –nd –à gúʒè wáà
SG 3 say IRR T come PRF ~2 eat –r– RV grass reported

He said to come eat grass.

7 ŋ wìí hɔ́ⁿ níí hɔ́ⁿ tójò =wájí
~2 there emphatic 3.PL emphatic leftovers gone bad =STAT

There are too many weeds there.

8 màá= –H náá –ndɛ̀ hɔ̀ⁿ N bííⁿ ŋ wàj gújɛ̀
POSS 1 cow PL emphatic T fill ~2 STAT grass, weeds

My cows are very full of grass.

9 sé à wŭró jéwòl –máà kɔ́n –d –ì
if DEF village of Jewol INHAB able –r– PRF

If the village of Jewol inhabitants are unable,

10 gùjɛ̀ –L ŋ káàrà hù^{n} páá^{n} há nú –ú
grass, weeds 3 ~2 obtain PP all IRR come PRF

to get weeds, they should come,

11 à wŭró jéwòl –máà
DEF village of Jewol INHAB

(to) the inhabitants of the village of Jewol.

12 mì –L kɛ́ndɛ̀ tɔ̀ŋó
SG 3 say truth

He said truth.

13 á níí ŋà jáátí
2.SG say definitely

You said that very much so.

14 mí –H hɔ́^{n} m bíè nò –ò –L
SG 1 emphatic ~2 NEG come RV 1

I am not coming.

15 ŋ káẃ díndì ŋ kɛ́ɛ̀
~2 DEM hurt ~2 PRF

That hurts me. (because that shows the one village is better than the other)

16 kóɔ̀ n ɲá –n –á mì
CPL T take –r– RV REFL

He took himself,

17 kóɔ̀ n nò –ò –L búùⁿ
CPL T come RV 3 Bounou

He came to Bounou,

18 kóɔ̀ n nò –ò –L à sìg –ú –H à kí pɔ́ɔ́rɛ́ =nɛ̀
CPL T come RV 3 CHN ask PRF 3 DEF thing black PL

He came to ask the Dogon,

19 à kí pɔ́ɔ́rɛ́ –nɛ̀ nɛ̀jɛ́ròŋkáẁ
DEF thing black PL why

He asked the Dogon why,

20 nìí m bíè n káráá –H ʒòɔ̀ⁿ –L
3.PL ~2 NEG T find 3 rain, sky 3

they did not get any rain this year.

21 mì –L kɛ̀ndɛ́ à mɛ́ jérò nɛ̀ bíè n káráà –L ʒóɔ́ⁿ –H
SG 3 say DEF COMP why NEG T obtain 3 rain, sky 3

He said the reason which you did not get rain this year.

22 nàá ná m bíɛ̀ =nɛ̀ ŋ káẁ hándà
cow CONJ GEN baby PL ~2 DEM have to

You have to get a cow and its babies.

23 n jàg –á –H híngà ŋ kàẁ jé –r –ò
~2 cut RV 3 before ~2 DEM do PRF RV

You should have slaughtered it before.

24 nɛ̀ bíè ŋ káráà –L ʒòɔ̀ⁿ –L
why NEG ~2 find 3 rain, sky 3

That is why you did not get rain.

25 nɛ̀ m màá –H bíè kàráà –H
1.PL T want 1 NEG obtain 1

We wanted (rain) but did not get it.

26 níí m bíè jág –á –H
3.PL ~2 NEG cut RV 3

They did not slaughter.

27 ŋ káẁ hándā à ʒóɔ́ⁿ –H káráà –L
~2 DEM must DEF rain, sky 3 obtain 3

In order to get the rain, they must slaughter.

28 à pùndà –L mí –H kɛ́ndɛ̀ ŋ káẁ pɔ́ pɔ́ wà ?
DEF Fulani DEF SG 1 say ~2 DEM only only reported speech

The Fulani, I said it only?

29 mí –H kɛ́ndɛ̀ ɔ̀hɔ̀n ŋ káẁ pɔ́
SG 1 say yes ~2 DEM only

I said yes that only.

30 mì –L kɛ́ndɛ̀ ŋ káẁ pɔ́ ŋ káẁ pɔ́ ?
SG 3 say ~2 DEM only ~2 DEM only

He said that only, that only?

31 mì –L kɛ̀ndɛ́ hàjà á káràà –L kɛ́ɛ̀ ?
SG 3 say OK 2.SG obtain 3 PRF

He said, OK did you get it?

32 ŋ kɛ̌ hen nɛ̀nɛ̀ máà –L sígòò –L ?
alright now when POSS 3 week 3

When is its (slaughtering) day?

33 á sìgóó –H màá= –H níì káẁ
DEF week 1 POSS 3 name DEM

The day has not been named yet.

34 màá= –H m màà –L sìgòò –L
POSS 1 want 3 week 3

I want its day.

35 mí –H kɛ́ndɛ̀ hàjà
SG 1 say OK

I said OK.

36 sá à sìgóó –H ŋ káẁ nó –ò –L
if DEF week 3 ~2 DEM come RV 3

If the day it comes,

37 n dá N nó –ò –L
INC T come RV 1

I am coming.

38 nùŋà –L n dá nó –ò –L
prepare 2 INC come RV 1

You prepare, I am coming.

39 mì –L kɛ́ndɛ̀ hàjà
SG 3 say OK

He said OK.

40 mì –L kɛ́ndɛ̀ sá á náà ná máà –L bíɛ̀ N nù –ú –L hɔ̀ⁿ
SG 3 say if DEF cow CONJ POSS 3 baby T come PRF 3 emphatic

He said if the cow and her child come (emphatic)

41 mì –L kɛ́ndɛ̀ á ʒɔ̀ɔ́ⁿ –L hɔ̀ⁿ nɛ̀ tígé nɛ̀ ŋ káràà –L ŋ kɛ́ɛ̀
SG 3 say DEF rain DEF emphatic 1.PL also 1.PL ~2 obtain 1 ~2 PRF

He said, we also got the rain.

42 mì –L kɛ́ndɛ̀ hàjà koyi
SG 3 say OK emphatic

He said OK.

43 à pùndá –L ŋ kóɔ́ wórè
DEF Fulani DEF ~2 CPL go

The Fulani left.

44 ŋ kóɔ́ nó –ò –L
~2 CPL come RV 3

The Fulani came.

45 à pùndà –L wórè wàj
DEF Fulani DEF go STAT

The Fulani left.

46 wǒrè –L
go 3

He left.

47 à sìgóò dàm –b –á –H
DEF day full PRF RV 3

The day arrived. (The day was fulfilled.)

48 à púndā –H tìgé ŋ kóɔ̀ kùmbó –L
DEF Fulani 3 also ~2 CPL search 3

The Fulani also searched.

49 à nàà ná màà= –L bìɛ́
DEF cow CONJ POSS= 3 baby

The cow and her baby.

50 kóɔ̀ ɲá –n –à –L á níí mɛ́ jámbɛ̀ wàj
CPL take –r– RV 3 DEF give COMP child PP

He took that which was taken he gave to the child (the cow and its child) and gave (them) to the child.

51 kǒ n ɥíɛ̀ tíè màà= –L ʊóò hùⁿ
CPL ~2 ascend sit POSS= 3 horse PP

He got up on his horse.

52 ke pɛ̀rè –L nó –ó há bùùⁿ
say lead 3 come RV until Bounou

The Fulani's child led (the cow and her child) all the way to Bounou

53 n tígè n dáà N nó –ò –H
also INC T come RV 1

I also I am coming

54 à yàmbɛ̀ –L tìgé kóɔ̀ ɲá –n –à –L à nàà píè máà –L tégò
DEF child DEF also CPL take –r– RV 3 DEF cow put POSS 3 front

The child also took the cow (which) preceded them (i.e. the cow went first).

55 mì –L tìgé kóɔ́ qíɛ̀ à tíè màá= –L ʊóó –H hùⁿ
SG 3 also CPL ascend CHN sit POSS 3 horse 3 PP

He (the Fulani) also got up on his horse.

56 ímà bíè ímà
here NEG here

Here is not here.

57 ímà bíè ímà
here NEG here

Here is not here.

58 há búùⁿ
until Bounou

Until Bounou. (He kept saying, 'here is not here, until they reached Bounou'.)

59 há àmírù búùⁿ jàw
until chief Bounou beside

Until he arrived next to the Chief of Bounou (So's grandfather).

60 kóɔ́ nò –ò –L à níì ásàlámàlákùm
CPL come RV 3 CHN say is there peace here?

He came to say greeting

61 àmírù búùⁿ jàw
chief Bounou beside

Next to the Chief of Bounou.

62 àmírù mì –L kɛ́ndɛ̀ wàlákùmásálàm
chief SG 3 say there is peace here

The Chief, he said, greetings back.

63 bísímílájì
welcome

Welcome.

64 tág –à –L ɥì́é há níɛ̀
take RV 3 water IRR drink

Take water to drink.

65 mì –L kɛ̀ndɛ́ ha koyi
SG 3 say OK emphatic

He said OK.

66 kóɔ̀ tág –à –L à ɥì́é à níɛ̀ mì
CPL take RV 3 DEF water CHN drink REFL

He took the water and drank.

67 mì –L kɛ̀ndɛ́ ha amiiru buun niŋa mi nú –ú –H wàj
SG 3 say OK chief Bounou name SG come PRF 1 STAT

He said ok Chief of Bounou, we, ourselves have come.

68 mì –L nìì ŋá mɛ́ híŋgà
SG 3 say COMP before

He said that which before.

69 nɛ̀ màá= háʒɛ́ mɛ̀ N káárà –H ŋ kɛ́ɛ̀
1.PL.POSS need COMP T find 1 ~2 PRF

We got our need.

70 mì kɛ̀ndɛ́ hàjà ŋ ság
SG say OK God I am counting on you

He said OK God I am counting on Allah, I am counting on you.

71 mì kɛ̀ndɛ́ hàjà à púndā –L
SG say OK DEF Fulani DEF

He said OK, the Fulani.

72 kí hùⁿ á síjɔ̀ⁿ
make an effort PP now

Try hard now.

73 àẃ mɛ̀ mina a tẁá –H wùrò jéwòl
2.PL COMP location 2.SG reach 2 village of Jewol

Before you have reached the place which is the village of Jewol,

74 ènchállàh á ná à jòɔ́ⁿ –L ɥìé máà míndè sììⁿ
if God agrees 2.SG CONJ DEF rain DEF water EXIST enter RECIP
wùrò jéwòl
village of Jewol

If God agrees you and the rain water are entering together the village of Jewol

75 mì –L kɛ̀ndɛ́ ɔhɔh kùwó bíè tɔ́ŋɔ́rò jíè
SG 3 say no CPL NEG truth do

He said, no, that does not happen.

76 mì –L kɛ̀ndɛ́ mí –H níí ŋà
SG 3 say SG 1 say

He said I said that

77 mì –L kɛ̀ndɛ́ dáà hájà níí ŋà wòrè –L á jáá –ndɛ̀ wàj
SG 3 say INC OK say go 3 DEF child PL STAT

He said I am going to tell the children to hurry.

78 kóɔ̀ níí ŋà hàjà
CPL say OK

He said that OK.

79 ŋ kóɔ̀ níí ŋà hàjà màá= –H jáà =ndɛ́ wàj
~2 CPL say OK POSS 3 children PL PP

He said OK to his children.

80 à jàà =ndɛ́ kóɔ̀ N pɛ́ɛ́ˡrɛ́ á nàà
DEF child PL CPL T lead DEF cow

The children lead the cow.

81 nii kóɔ̀ n tégò níì màà= wàrí n jíè mínnà
3.PL CPL ~2 front, face 3rd PL POSS work ~2 do place, location

They went to see if their work had gone forward

82 nii níŋ ko tero
3.PL say CPL sit

83 níŋ ko ŋ ga diga hun
say CPL ~2 but talk PP

84 nii n da a diga diga
3.PL ~2 INC DEF talk talk

85 nii n da a dìgá diga
3.PL ~2 INC DEF talk talk

86 sàŋá jɛ̀ túré páẁ
once, one time all

There was this one time,

87 nii kóɔ̀ jàà –L ʒòɔ̀ⁿ –L póɔ́rī n náw
3.PL CPL see 3 rain, sky 3 black ~2 ascend

they saw rain, sky black ascend

88 mi kɛndɛ amiru wuro jewol jijɛ ha ŋ wo
SG say chief Jewol do IRR ~2 go

He said for the Chief of Jewol to go (in a hurry).

89 à ʒóɔ́ⁿ –L póɔ́rī náẁ wàj déè
DEF rain, sky DEF black ascend STAT emphatic

The black sky ascends.

90 mì –L kɛ̀ndɛ́ bíè múwì hɔ̀ⁿ
SG 3 say NEG today emphatic

He said not today!

91 mì –L kɛ̀ndɛ́ hájà kóji jìé –H
SG 3 say OK emphatic rise 3

He said OK get up.

92 à jáá à ʒóɔ̀ⁿ –L póɔ́rī náẁ wàj
2.SG see DEF rain, sky DEF black ascend STAT

You see the black sky ascends.

93 mì –L kɛ̀ndɛ́ hájà amiiru bùúⁿ mí –H n dáà wòrè –L wàj à síjɔ̀ⁿ n da wore wayi
SG 3 say OK chief Bounou SG 1 ~2 INC go 3 STAT now ~2 INC go STAT

He said OK, Chief of Bounou, I am going now, he is going.

94 mì –L kɛ̀ndɛ́ tìg –ɛ́ –ré –L
SG 3 say run RV PRF 3

He said run!

95 á kẃà kí à bʷéɛ̀ pááⁿ tĭg –ɛ́ –ré –H
2.SG able DEF foot all run RV PRF 3

If you are able to run (with your feet).

96 n tìg –ɛ́ –H kóɔ̀ N ɥíɛ̀ à tíè màà= –L ʊóò hùⁿ
~2 run RV 3 CPL T ascend CHN sit POSS= 3 horse PP

He ran and ascended to sit on his horse.

97 ŋ kẃà ŋ kí á bʷéɛ̀ –L pààⁿ dáà tíg –ì
~2 able DEF foot DEF all INC run PRF

If he is able to run.

98 dò màá= wùrò jèwól ŋ kí
pass EXIST village of Jewol ~2 thing

He is passing the village of jewol (?)

99 hàjà dò màá= kárígè ŋ kí
OK pass EXIST Karigue ~2 thing

OK, He is passing Karigue.

100 bíè tʷáá –r–á wùró jèwól
NEG reach –r–INC village of Jewol

He does not arrive at the village of Jewol.

101 à ʒòɔ̀ⁿ –L kóɔ̀ m píè
DEF rain, sky 3 CPL T put

The rain put (set down upon him).

102 kóɔ̀ n tíŋgí –d –á máá= –H ʊóò
CPL ~2 get up –r– RV POSS= 3 horse

It woke up his horse.

103 n dà –L wórè mìndè –L wùrò jèwól pààⁿ
~2 INC 3 go enter 3 village of Jewol all

(as) He is going to enter the village of Jewol,

104 à ʒóɔ́ⁿ –H sáẁ wàj hùⁿ
DEF rain, sky 3 descend STAT PP

the rain descended (was descending).

105 hà bìé káráà –L màà= –L ʊòò –L màà=– tòrò –L
until NEG obtain 3 POSS= 3 horse 3 EXIST hang 3

He could not get his horse tied.

106	dáà	ʋòò	–L	màá=	–L	kèrè	kérè	pìn	–d	–ò	á	sán	–d	–í
	INC	horse	3	POSS	3	saddle		put	–r–	RV	CHN	descend	PRF	PRF

He is putting his saddle onto his horse.

107	à	ʒóɔ́ⁿ	–H	dá	sààⁿ	hùⁿ	dá	tígí	–rì	mìndè	–L	wàj	ŋ	kúwò
	DEF	rain	1	INC	descend	PP	INC	run	–rV–	enter	3	STAT	GEN	house

The rain is falling on him as he is entering the house.

Text XIII: Tiga 3

1 ŋ kàẃ bíè té n nò
~2 3.SG NEG lost ~2 come

It (my testimony) will not come to be lost.

2 nɛ̀ dáw kàrígé máà
1.PL CONJ Karigue inhabitant of

We, a person from Karigue and (me),

3 nɛ́ mɛ̀ N kùn –r –á –H síìⁿ
1.PL.POSS T gather, meet PRF RV 3 RECIP

we meet each other.

4 ŋ wíì kàrígé
~2 there Karigue

There in Karigue.

5 kàrìgé màà= –L díréctór jáà wò
Karigue POSS 3 see STAT

(we) saw Karigue's director.

6 mi –L kɛ́ndɛ́ éh nii níí sìndú
SG 3 say emphatic 3.PL say first

He said they say they came first (to the valley).

7 bú mí –ndɛ̀ wàà
Bounou DIM PL reported speech

The people of Bounou said,

8 mí –H kɛ́ndɛ̀ uh huh áá bíè sìndú bùùⁿ –mí =ndɛ̀
SG 1 say 2.PL NEG first Bounou DIM =PL

I said, uh huh, you did not come before the people of Bounou.

9 mi –L kɛ́ndɛ̀ níí níŋà sìndú
SG 3 say 3.PL say first

He said they say they [came] first.

10 ŋ kɛ́ndɛ̀ wàlájì áá bíè sìndú bùùⁿ –mí =ndɛ̀
~2 say swear to God 2.PL NEG first Bounou DIM =PL

I said, I swear to God, you[pl] did not come before the people of Bounou!

11 à hɔ́ⁿ à dá gándà mɛ̀ ŋ kò á síɛ̀ tígí tígì
2.SG emphatic 2.SG INC place COMP ~2 inside now very much so

You (emph) you are very much in the place where you are at right now!

12 dábé jé –r –ò –L à kẁá káàrà ŋ káẁ
curse do PRF RV 3 CHN able obtain ~2 3.SG

Because of the curse you were able to do it.

13 àá ɲɔ́ⁿ –ɛ̀ìɛ̀ⁿ =ndɛ́
2.PL vampire AGENT =PL

You vampires!

14 mi –H kɛ̀ndɛ́ àá kwá káàrà ŋ kàẁ
SG 1 say 2.PL able obtain ~2 3.SG

I say that is how you were able to get it.

15 a wó –r –é –H wó á ŋùwà
2.SG go PRF PRF 3 go [and] CHN prepare

You went and prepared (the curse).

16 nnìé bògò nɔ́ siiⁿ
woman big mouth between

Plant sp (lit. 'old woman's teeth') [the curse was made from the plant species – it has thick, sharp thorns.]

17 kwá sámbà gázɔ̀ⁿ ŋ kí páàⁿ ŋ kò
2.PL able spray, sprinkle DEF world ~2 something all ~2 inside

You were able to spray everything in the world.

18 sè tùg –í –L bǎŋgì –mɛ́ pááⁿ jàà –L wàj
if pierce PRF 3 person who is of the Banga race INHAB all die 3 STAT

If it [the plant species] pierces a Bangime, he dies.

19 sè tùg –í –L bǎŋgì –mɛ́ pááⁿ jàà –L wàj
if pierce PRF 3 person who is of the Banga race INHAB all die 3 STAT

If it pierces a Bangime, he dies.

20 sè tùg –í –L bǎŋgì –mɛ́ pááⁿ ja –L wàj
if pierce PRF 3 person who is of the Banga race INHAB all die 3 PP

If it pierces a Bangime, he dies.

21 ŋ kìì pààⁿ dá wò –r –é –H jáà bùùⁿ wàj
~2 thing all INC go PRF PRF 3 die Bounou STAT

They [the Bangande] all go die until they were finished.

22 á kì –rì –ɛ́ mɛ̀ bár –àà kɔ́ tíg –é wàj
DEF thing –rV– DIM COMP remain RV CPL run PRF STAT

The few that remained ran.

23 à kì –rí –ɛ́ ŋ káẁ tìg –í –r –ɛ́ wàj
DEF thing –rV– DIM ~2 3.SG run PRF PRF RV PP

Those that ran,

24 à tìgɛ̀ á kwá nò –L à kwá nò –L á tìè hùⁿ
DEF also CHN able come 3 CHN able come 3 CHN sit PP

They also came to be able to come to be able to sat there.

25 ŋ káẁ jè –r –ó –H à kẃà káàrà à gàndà –L kàw
~2 3.SG do PRF RV 1 CHN able obtain DEF place DEF 3.SG

That is what happened that they were able to get that place.

26 sé béè ŋ káẁ sáàⁿ n tɔɣɔ síìⁿ
if NEG ~2 3.SG descend ~2 no one RECIP

If not for that, the people of Karague,

27 bíè ímà híŋgà
NEG here before

were not there.

28 à màá= dábé jè –r –ò –L à kwá káàrà á gàndà –L káẁ
2.SG POSS curse do PRF RV 3 CHN able obtain DEF place DEF 3.SG

Because of your curse, you got that place.

29 gìɛ́ jà ?
false QU

Is it false?

30 á sà –mí kɛ̀ndɛ́ wáláji tɔ́ŋɔ̀ró wá
DEF Karigue people INHAB say swear to God truth reported speech

The person from Karague said, I swear to God that is truth.

Text IXX: Tiga 4

1 bú –mí –ndɛ̀ náẁ báráá –mì =ndɛ́
Bunu DIM PL COOR Baraa INHAB =PL
The people of Baraa and the people of Bounou,

2 nnìì kɔ́ò káŋánà síiⁿ à báráá –mì =ndɛ́
3.PL CPL argue (over smth for ownership) RECP DEF Baraa INHAB =PL
they argued with the people from Baraa.

3 nnìì kɔ́ò níŋà níí mì –L ŋ káw̃àà màà= –L bú –mí =ndɛ̀ wàj
3.PL CPL say SG 3 ~2 old POSS= 3 Bunu INHAB =PL PP
They said they are older than Bounou's people.

4 nnìì kɔ́ò níŋà níí mí –H káw̃àà
3.PL CPL say SG 3 old
They said they are older.

5 ámíró búùⁿ mɛ́ kɛ́ndɛ̀ ná wòrè –L ɥáá nàà
chief Bunu COMP say INC go 3 buy cow
The chief of Bounou said he is going to buy a cow.

6 nnìì kɔ́ò wòrè –L ɥáá à nàà
3.PL CPL go 3 buy DEF cow
He went and bought the cow.

7 nnìì kɔ́ò dú –ú à nàà wòrè –L à kɔ́r̃ɔ́nò húⁿ
3.PL CPL bring PRF DEF cow go 3 DEF place near Karague PP
They brought the cow (went) to Kornono.

8 mɛ́ –ɕìɛ̀ⁿ káw̃àà há jág –à à nàà màá= –H kẃà
COMP AGENT old IRR cut RV DEF cow POSS 3 neck
The ones which were oldest (the oldest men) [from both villages] [came] to slaughter the cow.

9 à báráá –mì =ndɛ́ nnìì kɔ́ò níŋà níí káw̃àà
DEF Baraa INHAB =PL 3.PL CPL say old
The people of Baraa say they are older.

10 ámíró búùⁿ kɔ́ò náẁ à bàáⁿ nnìì wàj
chief Bunu CPL give DEF knife 3.PL PP

The chief of Bounou gave the knife to them.

11 kɔ́ò níŋà jág –à –L à nàà màá= –H kẃà
CPL say cut RV 3 DEF cow POSS 3 neck
He said cut the cow's neck (slaughter the cow).

12 kɔ́ò jág –à –L à nàà màá= –H kẃà
CPL cut RV 3 DEF cow POSS 3 neck
He slaughtered the cow.

13 kei saaⁿ à báráá –mì =ndɛ́ nnìì há ʒáà
after that DEF Baraa INHAB =PL 3.PL IRR die
After that, the people of Baraa [began] to die.

14 nnìì kɔ́ò nò –ò siijɛ bujisiɛ
3.PL CPL come RV ask for forgiveness
They came to ask for forgiveness.

15 nnìì kɔ́ò níŋà tɔŋò bú –mí =ndɛ̀ káw̃àà
3.PL CPL say truth Bunu INHAB =PL old
They said it is the truth, the people of Bounou are older.

Text XX: Tiga 5

1 túndúrū
call (and response)
I am going to tell a story.

2 náámù
listen
We are listening.

3 jìbɛ́ɛ́ jìndó n té –ró –H ʃíìⁿ m páⁿ –mɛ̀
person two T become –rV– 3 RECIP ~2 friend DIM
Two people became friendship (friends) [with] each other.

4 nìì màá= páⁿ –mɛ̀ wò dé
3rd PL POSS friend DIM EXIST sweet
Their friendship was sweet.

5 nníí dìjà tòrè
3.PL village one
They [were from] one (the same) village.

6 à kéɛ̀ tè ŋ kámá n sàŋà n dá nnìé –rɛ̀
DEF thing one ~2 CPL ~2 mess around (euphamism) ~2 INC woman –rV–
The one played with a woman.

7 ɲáẁ màà= –L díjá –H ŋ kò
take POSS= 3 village 3 ~2 PP
She was from another village.

8 á díjá –H ŋ káẁ
DEF village 3 ~2 DEM
That village,

9 sé máà –L pààⁿ –L sɥɛ́è nàá jìɛ̀ hŭⁿ jáá nàw
if POSS 3 friend 3 descend wilderness night PP die FUT
if his friend goes to the wilderness at night, he will die.

10 ŋ kóɔ́ níí ŋà mì –L sɥɛ́è nàw
~2 CPL say SG 3 descend FUT

He said that he will descend (to the wilderness).

11 ŋ kàmá níí ŋá máà sɥéɛ̀ nàw
~2 CPL say PROH descend FUT
He (his friend) said don't descend.

12 ŋ kámá níí ŋá mì –L sɥéè nàw
~2 CPL say SG 3 descend FUT
He said that he will descend.

13 ŋ kámá níí ŋà sé sɥéè n dàẃ màlp̀a dá ŋ wì
~2 CPL say if descend ~2 INC rifle INC ~2 there
He said (his friend said), if you go down, there will be a rifle.

14 kɔ̀ó hà n ɲá –n –á á màlpà
CPL IRR T take –r– RV DEF rifle
I will take the rifle.

15 há tínd –é níî ŋ kʷéɛ̀ⁿ tóré m bɔ̀óⁿ há tínd –é sɥéè ŋ kò
IRR put PRF hand GEN fingernail one GEN powder IRR put PRF descend ~2 PP
I will put one fingernail over the gun powder (in order to silence the rifle).

16 màlpá ŋ bìɛ̀ kɛ́tɛ́ hà n tìnd –è sɥéɛ́ à màlpà ŋ kò
rifle GEN baby other IRR T put PRF descend DEF rifle ~2 PP
I will put one bullet inside the rifle.

17 séè sɥéɛ́ à náà ŋ kò
if descend CHN INC ~2 PP
If he descends into the wilderness,

18 séè kéɛ̀ ŋ kámá n jóɔ́ –r –ò n jàw
if thing ~2 CPL T respond PRF RV ~2 beside
if he responds to anything,

19 máà jɔ̀ɔ́ há n dèẁⁿ bùúⁿ tàáró
PROH respond until T fill time three
do not respond until (you are called) three times.

20 ŋ kàmá n wòré á nnìé –rɛ̀ n jáw
~2 CPL ~2 go DEF woman –rV– GEN beside
He went next to his woman.

21 ŋ kàmà n tíŋgòn –d –ó á nnìé –rɛ̀
~2 CPL T get up –r– RV DEF woman –rV–
He woke up his woman.

22 ŋ kámà níŋà jéà hɛ́ɛ̀rɛ̀
~2 CPL talk QU peace
He said is there peace?

23 màà– máà á nnìé –rɛ̀
want want DEF woman –rV–
He [said that] he wanted the woman.

24 ŋ kámà nìŋà máà màá á nnìé –rɛ̀
~2 CPL say want want DEF woman –rV–
He said that he wanted the woman.

25 ŋ kámá níŋá sàà á gɔ́ɔ̀ⁿ
~2 CPL talk if DEF man
She asked if he was the man.

26 ŋ kámà nìŋá máà –L pááⁿ –H nìŋá n tàg –ú
~2 CPL say POSS 3 friend 3 say T agree PRF
He said his friend said he agreed.

27 ŋ kàmá nìŋá níì hà wòréé níì máà díjà ŋ kò
~2 CPL say 3.PL IRR go 3rd PL POSS village ~2 PP
He said for them to go to their village.

28 níì sɥɛ̀ɛ́ à náà ŋ kò
3.PL descend DEF wilderness ~2 PP
They descended wilderness.

29 níì n tʷàá –L á kéɛ̀ màá= –L kóò n nɔ́ɔ̀
3.PL T reach 3 DEF thing POSS 3 house GEN mouth
They arrived at the thing's house's mouth (door).

30 níì kàmá n té –rò ŋʷí
3.PL CPL T sit –rV– there
They sat there.

31 à kéɛ̀ á kàmá n nó –ó –H à káráà níì ŋʷí
DEF thing CHN CPL T come RV 3 CHN find 3.PL there
The thing came to find them there.

32 à kéɛ̀ ŋ kámá nìŋá n dá mɛ̀ ŋ kùmbó n dà ímà
DEF thing ~2 CPL say ~2 INC COMP T search ~2 INC here
The thing which I am looking for is here.

33 káw̃à n wórè kámà n n dò
CPL ~2 go CPL T
He went and came back.

34 hán dɛ̀ búùⁿ táàrò
until time three
Three times.

35 n tígè kà sááⁿ n tàʊ́ á m màlpà ŋ kò
~2 also DEM descend T shoot DEF rifle ~2 PP
He also shot it with the rifle.

36 nnìé –rɛ̀ ŋ kàmà nìŋá táàw̃á mɛ́ hà n súrà
woman –rV– ~2 CPL say fire which IRR T look
The woman told he who was shot to look,

37 há sáà m búùⁿ tàárò
IRR time three
until it is done three times,

38 n tìgɛ́ɛ́ ŋ kà sááⁿ n jè –ró háⁿ súrà
~2 also ~2 DEM descend T do –rV– until look
He also looked at it that time.

39 n kámá wòrè –L á kàráà á kéɛ̀ jàá –wɛ̀
~2 CPL go 3 CHN find DEF thing die STAT
He went to find the thing died.

40 kàmá n jág –à –L màá= –L kẃà
CPL T cut RV 3 POSS 3 neck
He cut his throat (he slaughtered the thing).

41 kàmá sìg –á á nnìé –rɛ̀
CPL ask RV DEF woman –rV–
He asked the woman

42 nîì màà= –L páán –H
say POSS= 3 all 3
Tell his friend,

43 ŋ kàmá n wòrè –L á nîì máà páán –H wàj
~2 CPL ~2 go 3 DEF 3rd PL POSS friend 3 PP
to tell his friend,

44 à kéɛ̀ tàg –ú –L à nnìé –rɛ̀ ŋ kéɛ̀
DEF thing take PRF 3 DEF woman –rV– ~2 PRF
the thing took the woman.

45 ŋ kàmá nìŋá óóhòò
~2 CPL say uhuh
He said, uhuh.

46 ŋ kámá nìŋá hàn tùrúú n dá à kéɛ̀ m píè hùn
~2 CPL say IRR lie down ~2 INC DEF thing T put PP
He said to lie down on the thing.

47 n dá wòrè –L n dá n dò wáà
~2 INC go 3 ~2 INC T pass reported speech

48 ŋ kámá N nò –ò –L à káárà màà= –L páán –H tùùrù ŋ
~2 CPL T come RV 3 CHN find POSS= 3 friend 3 lie down GEN kò
inside
He came to find his friend lying inside.

49 ŋ kámá –H síg –à jà hɛ́ɛ̀rɛ̀
~2 CPL 3 ask RV who peace

He asked whether there was peace.

50 ŋ kámá –H níŋà bíé hɛ́ɛ̀rɛ wáà
~2 CPL 3 say NEG peace reported speech
He said there is not peace.

51 á kéɛ̀ tàɣ –á màà= –L nnìé –rɛ̀ ŋ kɛ́ɛ̀
DEF thing take RV POSS= 3 woman –rV– ~2 PRF
The thing took my woman

52 n tígè ŋ kámá ɲà –n –á mí
~2 also ~2 CPL take –r– RV REFL
I also took myself.

53 ŋ kámà –L N sɥɛ́ɛ́ à nàà ŋ kò
~2 CPL 1 T descend DEF wilderness GEN PP
I went to the bush,

54 bùr̃á béɛ̀
stick NEG
without a stick,

55 táwnáà béɛ̀
pants NEG
without pants,

56 ŋ kámà –L wòrè –L à káráá á kéɛ̀ túrùú á nnìé –rɛ̀ ŋʷí
~2 CPL 1 go 3 CHN find DEF thing lie down DEF woman –rV– there
I came to find the thing had lied down with the woman.

57 hàⁿ n dèg –é màá= –L nníì ŋ kò
IMPERATIVE T hit RV POSS 3 hand GEN PP
Hit its hand!

58 á nnìé –rɛ̀ kàmá nìŋà màà=– n dèg –é –H jáá –wɛ̀
DEF woman –rV– CPL say PROH T hit RV 3 die STAT
The woman said don't hit it until it dies.

59 á ké té ŋ kámá nò –ò –L á káráá níì dá ŋʷì
DEF thing one ~2 CPL come RV 3 CHN find 3.PL INC there

The other found them there.

60 nii kámá ɥíɛ̀ kóò
3.PL CPL ascend house
They went home.

61 bùùⁿ
finish
The end.

Text XXI: Maraka (Bozo) attack Bangande and how they reconciled

1 nnìì nò –ò –L ŋ káráà né ŋ wîì jégéɛ̀
3.PL come RV 3 T find 1.PL ~2 there Jege

They came, they found us there at Jege

2 nnìì ŋ wîì N káráà
3.PL ~2 there T find

There they found us.

3 né té –ré jégéɛ̀
1.PL sit –rV– Jege

We (were) sitting (at) Jege

4 nnìì ŋ kɔ́ò nò –ò –L ɲá –n –à màà= –L bùřá
3.PL ~2 CPL come RV 3 take –r– RV POSS= 3 stick

They came and took my staff.

5 né máà tégò jìbɛ́ɛ́ màà= –L bùřá
1.PL.POSS front, face person POSS= 3 stick

Our chief, his staff

6 màà= –L dègè ɕíɛ̀ⁿ màà= –L bùřá
POSS= 3 head owner POSS= 3 stick

Our chief, his staff.

7 nnìì kɔ́ò jè –rò màà= –L dábè
3.PL CPL do –rV– POSS= 3 curse

They did their spells.

8 nnìì màà= –L dábè ŋ káẁ
3.PL POSS= 3 curse ~2 DEM

Their spells there.

9 à túúⁿ sé túg –ì áẁ pááⁿ há pínd –ú
DEF thorn if pierce PRF 2.PL all IRR swell PRF

The thorn, if it pierces you, you swell,

10 hà wó bɔ̀r̃ó
IRR go AUG

until it gets big.

11 ŋ kámáà à síè màà= –L bìmmɛ̀
~2 CPL CHN take POSS= 3 heart

(the hurt) Took my heart

12 nnìì kɔ́ò bán –d –à né tɔ́r̃ –à n dɛ ŋ kámáà
3.PL CPL tired –r– RV 1.PL bother RV 1.PL ~2 CPL

They pulled the wool over our eyes (they bothered us).

13 n táá há já –wɔ̀
~2 half IRR die STAT

Half (some) died.

14 n táá há tígí –wàj
~2 half until run STAT

Half (some) ran.

15 hɛ́ n dɛ́ n tígí –rè
emphatic 1.PL run –rV–

Hey we ran!

16 né kɔ̀ò wòré –H n tié ŋ wí búúⁿ
1.PL CPL go 1 T sit ~2 there Bunu

We went and lived at Bounou

17 ŋ kámáà m báá búúⁿ
~2 CPL T move out of Bunu

I left Bounou,

18 há wò bóŋgɔ́ –rò
until go Bongoro –rV–

until I went to Bongoro.

19 n dɛ́ ŋ kɔ̀ò núw̃ –à n dɛ́ màà= –L dábé –rè
1.PL ~2 CPL prepare RV 1.PL POSS= 3 curse –rV–

We prepared our spell.

20 nnìì kɔ̀ò égà
3.PL CPL move

They moved.

21 nnìì kɔ̀ò wòrè –wàj
3.PL CPL go STAT

They left.

22 nnìì kɔ́ò nò –ò –L
3.PL CPL come RV 3

They came.

23 nnìì kɔ́ò nò –ò –L
3.PL CPL come RV 3

They came.

24 nnìì kɔ́ò nò –ò –L síè n dɛ́ m bʷèɛ̀
3.PL CPL come RV 3 take 1.PL ~2 foot

They came to ask for forgiveness.

25 nɛ́ kɔ́ò ŋ kɛ́mb –è
1.PL CPL T reconcile PRF

We reconciled.

26 nnìì kɔ́ò n té –rò
3.PL CPL T sit –rV–

They sat.

Text XXII: dingi mayi leydi buubi

Magic Cat

1 àmìrí bùùⁿ n túndò màá= –L jáámbɛ̀ ɥìɛ̀ .
chief Bunu T send POSS 3 child ascend

The chief of Bounou sent his child up.

2 màá= –L jáámbɛ̀ ŋ káẁ n túndò ɥìɛ́ bàràmá .
POSS 3 child ~2 DEM T send ascend Burema

This child of his, he sent up was Burema.

3 ŋ kàmáá ɥìɛ́ –H bàndʒìgàrà .
~2 CPL ascend 3 Bandiagara

He went up to Bandiagara.

4 à dégé ɕíìⁿ màà= –L túmbé hùⁿ .
DEF head owner POSS= 3 message PP

The chief sent him.

5 nnà síí ɕììⁿ =ndɛ́ ŋ kɔ́ò n jáá síìⁿ .
INC strength owner =PL ~2 CPL T see RECP

the police (owners of strength) saw each other (the police and Burema).

6 ŋ kámáá túg –à síìⁿ ɕíɛ́ =ndɛ̀ .
~2 CPL curse, insult RV strength owner =PL

He insulted the police (they thought the chief sent an insult).

7 hè kɔ́ó n dínd –á à síì ɕíɛ́ =ndɛ̀ .
if CPL T hurt RV DEF strength owner =PL

He hurt the police (with his insult).

8 ŋ kámáá nníí ŋ kɔ́ó ɲà –r̃ –à mí .
~2 CPL 3.PL ~2 CPL take –r– RV PASS

He took them (they got ready to put Burema and the chief into jail).

9 nníí kɔ́ò sóg –ɔ́ –H bùùⁿ máà –L nnɔ̀ɔ̀ –L .
3.PL CPL close RV 3 Bunu POSS 3 mouth 3

They closed the mouth of Bounou (they surrounded the village – the valley).

10 ŋ kámàà= á bùù –mí –ndɛ̀ tígé níì ŋ kɔ́ò jé –rò nnúŋ –à
~2 CPL DEF Bunu DIM PL also 3.PL ~2 CPL do –rV– prepare RV

mì
REFL

The people of Bounou, they also got themselves ready.

11 nníí kɔ́ò n ɋíɛ̀ à sìmèè –L hùⁿ .
3.PL CPL T ascend DEF rock, cliff DEF PP

They climbed the cliffs (people of Bounou).

12 sìríí máà dègè ɛ́íɛ́ⁿ .
Sirii EXIST head owner

Sirii was chief.

13 nìì kɔ́ò n ɋúúr –à à díjà –L ŋ kò , sìríí .
3.PL CPL T kill RV DEF village DEF GEN PP Sirii

They killed the chief in the village, Sirii.

14 à díjà –L n dó ɋíɛ̀ –wàj .
DEF village DEF T bring ascend STAT

The village went up.

15 nnìì wórè ŋ káràà bíè wórè .
3.PL go ~2 find NEG go

They go [and] find [they] will not go. (the people of Bounou came and found the Fuuta would not go).

16 nnìì tígè ŋ kɔ́ò n jáà sììⁿ .
3.PL also ~2 CPL T see RECP

They also saw each other (the people of Bounou met to make a spell).

17 nnìì ŋ kɔ́ò núŋ –à n dègè .
3.PL ~2 CPL prepare RV ~2 himself/herself

They prepared themselves.

18 nnìì ŋ kɔ́ò sáá^{n} –wɛ̀ pɛ́ré nnìì gúw –ɛ̀ .
3.PL ~2 CPL descend STAT chase out 3.PL separate IMPV

They descended and chased them away.

19 nnìì ŋ kɔ́ò núŋà n dègè .
3.PL ~2 CPL prepare ~2 himself/herself

They prepared themselves.

20 síríì kɔ́ò jáá –wɛ̀ .
Sirii CPL die STAT

Sirii was dead.

21 nnìì tígè ŋ kɔ́ò n jáà sìì^{n} .
3.PL also ~2 CPL T see RECP

They also saw each other (the people of Bounou met to make a spell).

22 nnìì kɔ́ò n ɥúúr –à díjà –L ŋ kò , sìríí .
3.PL CPL T kill RV DEF village DEF ~2 PP Sirii

They killed [the chief] in the village, sirii.

23 nnìì tígè ŋ kɔ́ò n jáà sìì^{n} .
3.PL also ~2 CPL T see RECP

They also saw each other (the people of Bounou met to make a spell).

24 nnìì kɔ́ò n ɥúúr –à díjà –L ŋ kò , sìríí .
3.PL CPL T kill RV DEF village DEF ~2 PP Sirii

They killed [the chief] in the village, Sirii.

25 nnìì kɔ́ò pé –rò à túw̃èɛ̀ nìì máà dégé síiⁿ màà= –L ʊ́ó̀ –L
3.PL CPL put –rV– DEF cat 3.PL.POSS head RECP POSS= 3 horse 3

hùⁿ
PP

They put the cat on top of the (Fuuta) chief's horse.

26 à túw̃ɛ̀ à túŋùmɛ́ nnìì màá= –L dégè –L síiⁿ màà= –L ʊ́ó̀ –L
DEF cat DEF cat 3.PL POSS 3 head 3 RECP POSS= 3 horse 3

hùⁿ .
PP

The cat, the cat, they put [it] on top of the chief's horse.

27 ŋ kámáà à pútá =ndɛ̀ màà= –L dábì jàŋ –ù .
~2 CPL DEF Fulani who enslaved people =PL POSS= 3 curse ruin PRF

They ruined the spell of the Fuuta.

28 nnìì kámáà nnìì kɔ́ó tígè –wàj .
3.PL CPL 3.PL CPL run STAT

They ran.

29 nnìì kɔ́ò pé –rò à túw̃èɛ̀ nìì máà dégè –L síiⁿ màà= –L
3.PL CPL put –rV– DEF cat (domestic) 3.PL.POSS head 3 RECP POSS= 3

ʊ́ó̀ –L hùⁿ .
horse 3 PP

They put the cat on top of the (Fuuta) chief's horse.

30 à túw̃ɛ̀ pé –rò mí ɥíɛ̀ màà= –L ʊ́ó̀ –L hùⁿ
DEF cat (domestic) put –rV– PASS ascend POSS= 3 horse 3 PP

The cat was put up on the horse.

31 kàá saaⁿ à bíè mìnnà n ʒìè .
then, at that time CHN NEG place, location T see

They (the Fuuta) could no longer see the place.

32 à ʋóò –L màà= –L túú màà= –L gíí^{n} m pè mɛ́
DEF horse DEF POSS= 3 buttock POSS= 3 back ~2 with COMP

They (the Fuuta) could not tell the back from the butt of the horse.

33 à bíè màá= –L dégè –L nnìì ʒíɛ̀ .
DEF NEG POSS 3 head 3 3.PL see

They don't see their own heads.

34 màà= –L góndɛ̀ gándà mɛ́ à káráà à bíè n ʒíɛ̀ .
POSS= 3 torso place COMP CHN find DEF NEG T see

Their chests they didn't know from their backs, they killed their own horses.

Text XXIII: Tiga 5

Beer Making

1 nàà sĭngɛ̀ =ndɛ́
sorghum PL

oh, the sorghum

2 nɛ̀ mùwɔ́n –d –ò
1.PL wet –r– RV

we wet (the sorghum)

3 nɛ̀ ŋ ká n ʒe kɔ̀ndʒɛ́
1.PL ~2 this T do beer

we do this, the beer

4 sé nɛ̀ mmùwɔ̀ díné hùn
if 1.PL wet morning

if we wet (the sorghum) in the morning

5 hà bár –ù hà kŏmpé
INF remain PRF until afternoon

to leave (it) until the afternoon

6 n dɛ̀ à ŋ wòré N sàẃⁿ
1.PL CHN ~2 go T strain (water out of something)

we go strain

7 n dɛ̀ à N bùn –d –ì n dɛ̀ à n tàá
1.PL CHN T remove –r– PRF 1.PL CHN ~2 lay out

we take it out and lay it out

8 hà ɥìɛ́ bínà
INF morning

until late morning

9 bŏrò n dɛ̀ à N dùg –ú wòré
tomorrow 1.PL CHN T have PRF go

we will take

10 n dɛ̀ à n wó tébɛ̀rɛ̀
1.PL CHN ~2 go weight something down

we put the rocks on the sorghum to weigh it down so the wind does not blow it away

11 sé né n tébérè
if 1.PL ~2 weight something down

if we weight it down

12 n dɛ̀ à N sòg –ú gúʒɛ̀ hùn
1.PL CHN T close PRF grass, weeds PP

we close it with weeds

13 sé nɛ̀ N sòg –ú gúʒɛ̀ hùn
if 1.PL T close PRF grass, weeds PP

if we close it with weeds

14 n daw N tòr –ú
~2 RV T water PRF

he waters it

15 dínɛ̀ hùn náà kómpè
morning with afternoon

morning and night

16 dɔ̀ndɛ́ jìndò
day two

two days

17 màá= –H tàárù –nɛ́ ŋ kò
POSS 1 three PL GEN inside

on the third day

18 sé tòr –ú mì kómpè
if water PRF PASS afternoon

if it is watered in the afternoon

19 bé mì n tòr –ɔ́ díné hùn
NEG PASS ~2 water RV morning

we do not water in the morning

20 n dɛ̀ á n tòr –ú
1.PL CHN ~2 water PRF

we water it

21 hà pùú^{n}
INF grow

until it starts

22 sé púù^{n}
if grow

if it starts

23 hà kɔ́gó mì
INF rake PASS

it is raked

24 sé kɔ́gó mì
if rake PASS

if it is raked

25 háà tàá mì
until lay out PASS

it is layed out

26 hásà kùwóndò
until dry

until it dries

27 sé tàá mì
if lay out PASS

if it is layed out

28 háà kùwɔ̀ndò
until dry

until it dries

29 hàà N nàá mì
until T grind PASS

it is ground

30 sé nàá mì
if grind PASS

if it is ground

31 hà dɛ̌n mì
INF cook PASS

it is cooked

32 hàà jóɔ̀ⁿ mì
until mix by hand PASS

unti it is mixed by hand

33 sé ʒɔ́ⁿ mì pàⁿ
if mix by hand PASS all

if it is all mixed by hand

34 màá= –H bɔ̀wⁿ dɛ̀n mì
POSS 1 millet porridge cook PASS

its cream is cooked

35 sé maa –H bɔ̀wⁿ
if POSS 1 millet porridge

if its cream

36 n dɛ̌n mì há bìyù
~2 cook PASS until ready

is cooked until ripe

37 hà bùn –d –í mì
INF make move out –r– PRF PASS

it is taken out

38 há tínd –è mì súyɛ̀
INF put RV PASS descend

it is put down

39 páɣà ŋ kò
pot, container GEN PP

inside the container (large container for storing beer)

40 hà bòrò dìnɛ́ hùn
INF tomorrow morning

until tomorrow morning

41 bòrò dìnɛ́ hùn
tomorrow morning

tomorrow morning

42 hàà gèrú mì
until scoop (off dirty things from water) PASS

the dirty water is scooped off the top

43 sé gèrú mì
if scoop (off dirty things from water) PASS

if it is scooped

44 hàà m mɔ̀wɛ́ⁿ mì
until ~2 wring out PASS

it is wrung out

45 sè m mɔ̀wɛ́ⁿ mì
if ~2 wring out PASS

if it has been wrung out

46 màá= –H ɥìɛ́ hàà dɛ̌n mì
POSS 1 water until cook PASS

its water is cooked

47 sé maa –H ɥíɛ̀ ŋ káẁ dɛ̌n mì
if want 1 water ~2 DEM cook PASS

if its water that is cooked

48 háà bìjú
until ready

until ripe/ready

49 hàà bùn –d –í mì
until make move out its half –r– PRF PASS

it is taken off

50 háà tínd –è mì súɥè páɣá ŋ kò
until put RV PASS descend pot, container inside

it is put down into the container

51 sé bún –d –í mì
if remove –r– PRF SG

it if is taken out

52 háà tínd –è mì súɥé
until put RV PASS descend

it is put down

53 á páɣá ŋ kò
DEF pot, container GEN PP

in the container

54 sé dẃòn hà tínd –è mì n sùɥè
if cold INF put RV PASS ~2 descend

if it cools, they put down

55 tóŋgè ŋ kò
pot, jar, canary GEN PP

inside the pot

56 sé sùɥé à tóŋgè ŋ kò
if descend DEF pot, jar, canary GEN PP

if it is put down into the pot

57 sé sùɥɛ́ à tóŋgɛ̀ ŋ kò
if descend DEF pot, jar, canary GEN PP

if descend pot, jar, canary inside

58 sé dẃɔ̀n
if cold

if it cools

59 n dɛ̀ wòré nàà ŋ káràá síîn wàj
1.PL go INC ~2 find bitter STAT

we go find it is bitter

60 ŋ kàsán hɔ̀n
~2 then, at that time emphatic

at this time

61 mì háà nnìɛ̀
SG until drink

it is drunk

Appendix VIII: Numerals

níjɔ̀ⁿ ná há déɛ̀ⁿ góɔ̀ⁿ jíndò

‘Counting from One to Two Thousand’

1 tíjɛ́ɛ̀
one

2 jíndò
two

3 táárù
three

4 néɛ̀
four

5 núndì
five

6 kéɛ́rè
six

7 kííjè
seven

8 sáágì
eight

9 tɛ̀égò
nine

10 kúrɛ́
ten

11 kɔ̀nórɔ́ tórè
ten one

eleven

12 kɔ̀nórɔ́ jíndò
ten two

twelve

13 kɔ̀nórɔ́ táárù
ten three

thirteen

14 kɔ̀nórɔ́ néɛ̀
ten four

fourteen

15 kɔ̀nórɔ́ núndì
ten five

fifteen

16 kɔ̀nórɔ́ kéɛ́rè
ten six

sixteen

17 kɔ̀nórɔ́ kííjè
ten seven

seventeen

18 kɔ̀nórɔ́ sáágì
ten eight

eighteen

19 kɔ̀nórɔ́ tɛ̀égò
ten nine

nineteen

20 tááw̃à
twenty

twenty

21 tààw̃á daw= tómè +ɛ̀ tórè
twenty CONJ= cowry shell(s) DIM one

twenty one

22 tááw̃à daw= tómè +ɛ̀ jíndò
twenty CONJ= cowry shell(s) DIM two

twenty two

23 tááw̃à daw= tómè +ɛ̀ táárù
twenty CONJ= cowry shell(s) DIM three

twenty three

24 tááw̃à daw= tómè +ɛ̀ néɛ̀
twenty CONJ= cowry shell(s) DIM four

twenty four

25 tááw̃à daw= tómè +ɛ̀ núndì
twenty CONJ= cowry shell(s) DIM five

twenty five

26 tááw̃à daw= tómè +ɛ̀ kéɛ́rè
twenty CONJ= cowry shell(s) DIM six

twenty six

27 tááw̃à daw= tómè +ɛ̀ kííjè
twenty CONJ= cowry shell(s) DIM seven

twenty seven

28 tááw̃à daw= tómè +ɛ̀ sáágì
twenty CONJ= cowry shell(s) DIM eight

twenty eight

29 tááw̃à daw= tómè +ɛ̀ tɛ̀égò
twenty CONJ= cowry shell(s) DIM nine

twenty nine

30 tááw̃à daw= bíɛ̀ kúrɛ́
twenty CONJ= baby ten

thirty

31 tááw̃à daw= bíɛ̀ kúrɛ́ daw= tómè +ɛ̀ tórè
twenty CONJ= baby ten CONJ= cowry shell(s) DIM one

thirty one

tááw̃à / tááw̃à jíndò
twenty twenty two

forty

tááw̃à jíndò daw= tómè +ɛ̀ tórè
twenty two CONJ= cowry shell(s) DIM one

forty one

tááw̃à jíndò daw= bíɛ̀ kúrɛ́
twenty two CONJ= baby ten

fifty

táámà sígò
twenty today

sixty

táámà sígò daw= bíɛ̀ kúrɛ́
twenty today CONJ= baby ten
seventy
jóórò
eighty

eighty

jóórò daw= bíɛ̀ kúrɛ́
eighty CONJ= baby ten

ninety

tááw̃à núndì
twenty five

one hundred

tááw̃à tááw̃à há déɛ̀ⁿ kíì kúrɛ́
twenty twenty INF fill thing ten

two hundred

gɔ́ɔ̀ⁿ tórè
man one

one thousand

à gɔ́ɔ̀ⁿ jíndò
DEF man two

two thousand

Appendix IX: Quantifiers

1 kɛ́è pààⁿ .
thing all

All things.

2 kíí pààⁿ nii kúúⁿ náẁ wòré .
thing all 3.PL market INC go

Everyone is going to the market.

3 ɥáá támátí ŋ kíí pààⁿ .
buy tomato ~2 thing all

Buy all [the] tomatoes.

4 ɥáá à tàmátí m pààⁿ .
buy DEF tomato ~2 all

Buy all the tomatoes.

5 ɥáá ŋ kíí pààⁿ .
buy ~2 thing all

Buy everything.

6 ɲáẁ ŋ kíí pààⁿ .
take ~2 thing all

Take everything.

7 n náẁ ŋ kíí pààⁿ nno –o .
~2 INC ~2 thing all hear RV

He understands everything.

8 ɋáá ŋ kíí pàà =ndɛ́ màà= kɛ́ɛ̀ .
buy ~2 something all =PL EXIST thing
Spend all the money in order to buy the things.

9 à díjà jàà =ndɛ́ pààⁿ .
DEF village child PL all
All of the village's children.

11 ɋáá ŋ kíí péɛ̀rɛ̀ .
buy ~2 thing many
Buy many of things.

12 ɋáá kɛ́è péɛ́rɛ̀ .
buy thing many
Buy many of things.

13 ɋáá kɛ́é =ndɛ̀ péɛ́rɛ̀ , ɋáá kɛ́é péɛ́rɛ́ =ndɛ̀ .
buy thing =PL many buy thing many =PL
Buy many of things.

14 n dúg –á –H sóɔ̀ⁿ ʃĩjéndɛ̀ péɛ́ˈrɛ́ .
have RV 1 shirt old, worn out many
I have many of worn out shirts.

16 à jàà –ndɛ́ níì péɛ̀ⁿ .
DEF child PL 3.PL many
Many of children.

17 à jàà =ndɛ́ péɛ̀rɛ̀ n dɔ́ɔ̀ⁿ ~ dáà ŋ wì à kɔ́ò ŋ kò .
DEF child PL many ~2 EXIST EXIST ~2 there DEF house ~2 inside
There are many of children in the house.

18 kéɛ̀ péɛ́rɛ̀ mɛ̀ dáà ímàá= burkina màà= –L ɥáá péɛ̀ⁿ .
thing many COMP EXIST here Burkina Faso POSS= 3 price many
Many of things in Burkina are expensive.

19 kàdìjà maa –L kùrɛ̀mɛ́ pɔ́ɔ̀rè péɛ̀ⁿ .
Kadija POSS 3 dog black many
Many of kadija's black dogs.

20 péɛ̀ⁿ jáárī .
many very
A whole lot.

21 à= gúʒɛ̀ káráá péɛ̀ⁿ jáárī .
DEF green many very
There are many of weeds.

23 nnɛ́ màà= N bítì wàj .
1.PL almost T finish STAT
We are almost finised (complete).

24 à nnìɛ̀ náá máà búⁿ –rà –L wàj .
DEF milk EXIST almost finish –rV– 3 STAT
The milk is almost finished (depleted).

26 n tɔ́ò pɔ̀ò .
alone
Alone.

27 tɔ́ò pɔ̀ò n dégé máà kɔ̀ò .
alone himself/herself EXIST house
I am alone in the house.

28 tɔ́ò pɔ̀ò n dégé máà wòré kùùⁿ .
alone himself/herself EXIST go market
I am going alone to the market.

29 máà púwè tɔ́ò pɔ̀ò n dégé máà ɥíɛ̀ síméé hùⁿ .
1.POSS wife alone ~2 himself/herself EXIST ascend mountain PP
My wife is going alone on top of the cliffs.

30 níì pɔ́ò .
3.PL only
Only them.

31 káẁ tɔ́ò pɔ̀ò mmáá .
DEM alone want
I only want that.

Appendix X: Texture Experiment

Consultant 1: full response

1. scrubby pad

	Phrase	Gloss	Translation
1	dáẁ múgú múgù		
	RV spongy	is spongy	It is spongy.

2. nylon

	Phrase								
2.1	n	dág	–ú	kéɛ̀	m	bíè	sùrè	máà	síí
	~2	touch	PRF	thing	~2	NEG	know	3.POSS	type

Gloss: ‘I touched a thing, I don't know its type.’
Translation: I touched something but I don't know what it is.

	Phrase	Gloss	Translation
2.2	dáràà		
	slick	slick	It is slick.

	Phrase			Gloss	Translation
2.3	kíì	dɛ́réb	–íɛ̀		
	thing	soft	DIM	soft little thing	It is soft and little.

3. sponge

	Phrase	Gloss	Translation
3.1	n súré ŋ kíì		
	~2 know CAUS	I am made to know	I am sure I know what it is.

	Phrase	Gloss	Translation
3.2	kíí múgú múgù		
	thing spongy	spongy thing	It is a spongy thing.

4. coarse linen

	Phrase					
4.1	há	nníŋà	náẁ	sòɔ̀^{n}	bíè	sòɔ̀^{n}
	IRR	say	RV	shirt	NEG	shirt

Gloss ‘to say it is clothing not clothing’
Translation It is like fabric but it is not fabric.

	Phrase					Translation
4.2	m	bíè	sùrè	máà	síí	
	~2	NEG	know	3.POSS	type	I do not know its type.

	Phrase				Gloss	Translation
4.3	n	dɔ́góndò	káẁ	bíè	mì	It looks like something
	~2	resemble	DEM	NEG	RFL	resemble it not it but it is not that.

5. wool

	Phrase			Gloss	Translation
5.1	m	bíè	súré ŋ kíì		
	~2	NEG	know CAUS	I am not made to know	I am not sure.

	Phrase				Gloss	Translation
5.2	kíí	síjɔ̀^{n}	kíì	déréb–ìɛ̀	white thing,	
	thing	white	thing	soft–DIM	soft little thing	It is white, little, and soft.

6. eraser

	Phrase					
6	n	súré ŋ kíì	sé	nníì	nà	káráá káràà
	~2	able to know	COND	3.PL	CONJ	teach

Phrase (cont)							
sá	ɲɔ́góndì	sé	bíè	gáwⁿ	há	géjìnd–ì	búnd–ì
COND	write	COND	NEG	good	IRR	sweep–PRF	take off–PRF

Gloss ‘I am able to know, if teaching, if writing, if not good, to sweep make move out’
Translation I know what it is, if while teaching, one makes a mistake, they can wipe it off.

7. yarn

	Phrase		Gloss	Translation
7	bɔ́wìɛ̀	dáɣàɛ̀		
	rope	small	small rope	It is a small rope.

8. sea salt

	Phrase		Gloss	Translation
8.1	kúqìɛ̀	dáɣàɛ̀		
	calabash	small	a small calabash	It is a small bowl.

	Phrase			Gloss	Translation
8.2	kúqìɛ̀	màà=	kɔ́rò		
	calabash	3.POSS	stomach	a calabash’s stomach	Inside a bowl.

	Phrase					Gloss	Translation
8.3	dɛ́è	dáẁ	kúqìɛ̀	dáɣáɛ̀	kò	a seed is in a	A small grain is
	seed	RV	calabash	small	PP	small calabash	inside a small calabash.

	Phrase		Gloss	Translation
8.4	kíì	kú kàjì		
	thing	bumpy	a bumpy thing	It is bumpy.

	Phrase	Gloss	Translation
8.5	kíí gúní gár̃ì dáɣàɛ̀ thing cracked small	a small, cracked thing	It is a little bit cracked.

9. chalk

	Phrase	Gloss	Translation
9.1	m bíè súré ŋ kíì ~2 NEG able to know	I am not able to know	I am not sure what it is.

	Phrase	Gloss	Translation
9.2	búr̃í –mɛ̀ kúrí+jɛ̀ stick DIM short	a short little stick	It is a short, little stick.

10. felt

	Phrase	Gloss	Translation
10.1	ŋ dág –ú káẁ á síjɛ̀ ~2 touch PRF DEM now	I touched it now	I just touched it.

	Phrase
10.2	há nníŋà sòɔ̀ⁿ bíè sòɔ̀ⁿ IRR say shirt NEG shirt

Gloss: ‘to say shirt not shirt’
Translation: One would say it is clothing but it is not clothing.

	Phrase	Gloss	Translation
10.3	dáràà kírí –jɛ̀ slick thing DIM	slick little thing	It is a little bit slick.

11. marble

	Phrase	Gloss	Translation
11.1	m bíè súré ŋ kíì ~2 NEG know	I am not able to know	I am not sure what it is.

	Phrase	Gloss	Translation
11.2	kíì múgùl –ìè thing round DIM	a little round thing	It is a little round thing.

12. styrofoam

	Phrase	Gloss	Translation
12.1	kíí míró mírò thing smooth	a smooth thing	It is smooth.

	Phrase	Gloss	Translation
12.2	bíè mèr̃ɛ̀ NEG heavy	not heavy	It is not heavy.

	Phrase	Gloss	Translation
12.3	kíì pɛ́gí pɛ́gì –jɛ̀ thing light DIM	a little light thing	It is a little light thing.

13. slime

	Phrase	Gloss	Translation
13.1	ɥíɛ̀ bíè ɥíɛ̀ water NEG water	water not water	It seems like water but it is not water.

	Phrase	Gloss	Translation
13.2	kíì dɛ́rébɛ̀ jímbō thing soft cold	a soft, cold thing	It is soft and cold.

14. orange netting

	Phrase	Gloss	Translation
14.1	n dág –ú kɛ́ɛ́ ímà síé ~2 touch PRF thing here now	I touched a thing here now	I just touched something.

	Phrase	Gloss	Translation
14.2	kíí sɔ́gójíbíè thing scratchy	a scratchy thing	It is scratchy.

	Phrase	Gloss	Translation
14.3	bíè míró mírò NEG smooth	not smooth	It is not smooth.

15. tape

	Phrase
15.1	n dág –ú kɛ́è tè mánàà n dáẁ máà nníí hù^{n} ~2 touch PRF thing one plastic ~2 RV 3.POSS hand PP

Gloss: ‘I touched one thing it sticks on my hand/arm’
Translation: I touched something that sticks to my hand.

	Phrase	Gloss	Translation
15.2	máà n dáẁ jííbɛ̀ n nníí stick person GEN arm	sticks person’s hand	It sticks to a person’s hand.

16. black fur

	Phrase			Gloss	Translation
16.1	sɔ́ɔ̀^{n}	mɛ̀	dáɣàɛ̀		It is a piece of fabric
	shirt	COMP	small	a clothing which is small	which is small.

	Phrase		Gloss	Translation
16.2	dáẁ	múgú múgù		
	RV	squishy	is squishy	It is squishy.

	Phrase		Gloss	Translation
16.3	bíè	mènɛ̀		
	NEG	heavy	not heavy	It is not heavy.

17. mouse ball

	Phrase				Gloss	Translation
17.1	kíì	múgúl–ɛ́é	mènɛ̀	dáɣàɛ̀	a round, heavy,	
	thing	round–DIM	heavy	small	small thing	It is round, heavy, and small.

	Phrase						
17.2	mɛ̀	dá	màà=	á sìjè	kíì	múgú múgù	–mɛ̀
	COMP	RV	3.POSS	now	thing	spongy	DIM

Gloss: ‘that which is here now is here now is a small, squishy thing’
Translation: That which is here now is here now is small and squishy.

18. red plastic

	Phrase						Gloss	Translation
18.1	n	dág	–ú	kɛ́è	tè	bòndò	I touched one	I touched something here
	~2	touch	PRF	thing	one	again	thing again	that was here earlier.

	Phrase	Gloss	Translation
18.2	kíì pɛ́gí pɛ́gì –jɛ̀ thing light DIM	a little light thing	It is little and light.

	Phrase	Gloss	Translation
18.3	dáràà há nníŋà náẁ mánàà slick IRR say RV plastic	slick to say plastic	It is slick, one would think it is plastic.

19. modeling clay

	Phrase	Gloss	Translation
19.1	kíí míró míròˊ thing smooth	smooth thing	It is smooth.

	Phrase	Gloss	Translation
19.2	dɔ́gòndò mánàà bíè mánàà resemble plastic NEG plastic	resembles plastic but not plastic	It resembles plastic, but it is not plastic.

20. cork square

	Phrase
20	káẁ sìpóⁿ dɔ́gòn ò mɛ̀ bú–ràà híŋgá DEM styrofoam resemble COMP move out of before

Translation: It resembles that styrofoam which came out before.

21. wooly fabric

	Phrase	Gloss	Translation
21.1	sòɔ̀ⁿ bíè sòɔ̀ⁿ shirt NEG shirt	clothing not clothing	It is like fabric but it is not fabric.

	Phrase	Translation
21.2	náà múgú múgù	
	RV squishy	It is squishy.

	Phrase	Translation
21.3	dúg –á kúɥì	
	have RV hair	It has hair.

22. wavy paper

	Phrase	Translation
22.1	n dág –ú kɛ́è tè ímà bɔ́ndō	
	~2 touch PRF thing one here again	I touched something here again.

	Phrase
22.2	níŋà náẁ mánnà –è bíè mánnà –è
	say RV plastic DIM NEG plastic DIM

Gloss: ‘say is small plastic not small plastic’
Translation: One would say it is a small piece plastic but it is not a small piece of plastic.

	Phrase	Gloss	Translation
22.3	kéɛ̀ gúndí gánnì		
	thing bumpy	a bumpy thing	It is bumpy.

	Phrase	Gloss	Translation
22.4	góró górò		
	wavy	wavy	It is wavy.

23. velvet

	Phrase	Gloss	Translation
23.1	nníŋà náẁ sòɔ̀ⁿ bíè sòɔ̀ⁿ say RV shirt NEG shirt	I say is shirt not shirt	One would say it is fabric but it is not fabric.

	Phrase
23.2	bíè n súré ŋ kíì dɔ́gòndò kíì síjɔ̀ⁿ NEG ~2 know resemble thing white

Gloss: ‘I am not able to know, it resembles a white thing’
Translation: I am not sure, but it resembles something white.

	Phrase	Gloss	Translation
23.3	n súré ŋ kíì dáràà ~2 able to know slick	I am unable to know, slick	I am sure it is slick.

24. brush

	Phrase	Gloss	Translation
24.1	dáà múgúlò RV round	is round	it is round

	Phrase	Gloss	Translation
24.2	kíì sɔ́gójíbɛ̀ thing scratchy	scratchy thing	It is scratchy.

	Phrase
24.3	há níŋà n dáẁ dégè hásàà kéɛ́ IRR say ~2 RV head brush thing

Gloss: ‘one would say it is a head brushing thing’
Translation: I think it is a hairbrush.

	Phrase										
24.4	à	tàá	káẁ	bíéndɛ̀	à	tàá	káẁ	kíì	dùgí	–mí	=ndɛ̀
	DET	half	DEM	long	DEF	half	DEM	thing	short	DIM	PL

Gloss: ‘the half, that is long the half of that thing, they are short’
Translation: On one side that is long, on one side those are short.

25. stress ball

	Phrase						
25.1	n	dág	–ú	bɔ́ndō	kíì	míró míròˋ	–mɛ̀
	~2	touch	PRF	again	thing	smooth	DIM

Gloss: ‘I touched again, a thing, a small smooth thing’
Translation: I touched another small smooth thing.

	Phrase		Gloss	Translation
25.2	bàlò	dáɣàɛ̀		
	ball	small	a small ball.	It is a small ball.

	Phrase						
25.3	há	nníŋà	náẁ	méné ménè	bʷìɛ́	ŋ	kò
	IRR	say	RV	kick	leg	~2	PP

Gloss: ‘to say is kicking with foot’
Translation: One would say it is a soccer ball.

	Phrase				Gloss	Translation
25.4	kíì	múgúndú	–mɛ̀	pɛ́gí pɛ́gì	a little light,	It is little,
	thing	round	DIM	light weight	round thing	light and round.

26. fabric sponge

	Phrase					Gloss	Translation
26.1	há	nníŋà	náẁ	bíè	sòɔ̀ⁿ	to say shirt	One would say it is fabric
	IRR	say	RV	NEG	shirt	but not shirt	but it is not fabric.

	Phrase			Gloss	Translation
26.2	kíì	múgú múgù	–wɛ̀		
	thing	squishy	DIM	a small, squishy thing	It is small, squishy and soft.

	Phrase						Gloss	Translation
26.3	há	nníŋà	náẁ	sòɔ̀ⁿ	bíè	sòɔ̀ⁿ	to say a shirt	one would say it is fabric
	IRR	say	RV	shirt	NEG	shirt	but not shirt	but it is not fabric.

	Phrase							Gloss	Translation
26.4	ŋ	káẁ	máà	síí	dág	–á	bɔ́ndō	its type I	Its type is the same as I
	~2	DEM	3.POSS	type	touch	RV	again	touch again	touched before.

	Phrase				Gloss	Translation
26.5	sòɔ̀ⁿ	jɔ́gó	máà	dègè	a shirt turns	
	clothing	turn over	3.POSS	head	over its head	There is a fabric covering it.

	Phrase			Gloss	Translation
26.6	kíì	múgú múgù	–jɛ̀		
	thing	squishy	DIM	little squishy thing	It is little and squishy.

27. round rope

	Phrase			Translation
27	bɔ́wìɛ̀	dág	–á	
	rope	touch	RV	I touch a rope.

28. loufa (?)

	Phrase				Translation
28.1	mɛ̀	kíì	mógíbɛ̀	mɛ́rébɛ̀	
	COMP	thing	slimy	fluid	It is a thing which is slimy and fluid.

	Phrase		Gloss	Translation
28.2	màà=	kúɥì	bɛ́ndē	
	3.POSS	hair	long	its hairs long	Its hairs are long.

	Phrase		Gloss	Translation
28.3	kúɥí	ɛ̀ìɛ̀^{n}	hair owner	It has hair.
	hair	owner		

29. washcloth

	Phrase			Gloss	Translation
29.2	màá=	kɔ̀rɔ̀	kúɥí		
	3.POSS	stomach	hair	its stomach's hair	Its inside is hairy.

	Phrase					Gloss	Translation
29.3	kíí	jìndò	dègè	síì^{n}	hù^{n}	two things are on	Two things are
	thing	two	head	RECP	PP	each other's heads	stuck together.

30. nail file

	Phrase	Gloss	Translation
30	búr̃à bìrìbíéɛ̀ dáɣàɛ̀ stick thin small	thin, small stick	It is a thin, small stick.

31. terrycloth

	Phrase	Gloss	Translation
31.1	sòɔ̀ⁿ bíè sòɔ̀ⁿ shirt NEG shirt	a shirt not a shirt	It is like fabric, but it is not fabric.

	Phrase	Gloss	Translation
31.2	kíì dɛ́réb–íɛ̀ míró míròˇ thing soft–DIM smooth	a little, soft, smooth thing	It is little, smooth, and soft.

32. play dough

	Phrase	Gloss	Translation
32.1	kíì múgú múgù thing squishy	squishy thing	It is squishy.

	Phrase	Gloss	Translation
32.2	há níŋà wùrú n jíí IRR say karite tree GEN blood	it is like (the sap of the) Karite tree	It is like chewing gum.

33. chalkboard eraser (?)

	Phrase	Gloss	Translation
33	ŋ káẁ màà= sóɔ́ⁿ kíì kíɛ́vɛ́ ~2 DEM 3.POSS shirt thing flat	that, its fabric flat	

34. contact paper

	Phrase	Gloss	Translation
34.1	mánàà ɲàá plastic course	course plastic	It is course plastic.

	Phrase	Gloss	Translation
34.2	n dáẁ kú kájì kírì –jɛ̀ 1.SG RV rough thing DIM	it is rough little thing	It is a little bit rough.

35. cardstock

	Phrase	Gloss	Translation
35	dɔ́ò mɛ̀ dágáɛ̀ paper COMP small	paper which is small	A piece of paper which is little.

	Phrase	Gloss	Translation
35.1	mánàà dáɣàɛ̀ plastic small	small plastic	It is a small piece of plastic.

36. brown beans

	Phrase	Gloss	Translation
36.1	kúɥìɛ̀ dáɣàɛ̀ kéɛ̀ dáà máá kɔ̀rò calabash small thing RV 3.POSS inside	a thing in a calabash	There is something small inside a bowl.

	Phrase	Gloss	Translation
36.2	kírí gúní gárǐ thing bumpy	uneven	It is bumpy.

	Phrase	Gloss	Translation
36.3	dɛ́é síìⁿ há níŋà tígàjɛ̀ seed IRR say peanut	seeds, to say peanut	It is little pieces like peanuts.

37. leather material

	Phrase	Gloss	Translation
37.1	há níŋà náẁ mánàà dérɛ́b–íɛ̀ IRR say RV plastic softDIM	to say is soft plastic	One would say it is soft plastic.

	Phrase	Gloss	Translation
37.2	mánàà dérɛ́b–íɛ̀ plastic soft–DIM	a little, soft plastic	It is a little, soft piece of plastic.

38. wood cylinder

	Phrase	Gloss	Translation
38.1	káẁ buñi –jɛ DEM stick DIM	that is a little stick	That is small stick small.

	Phrase	Gloss	Translation
38.2	buñi –jɛ mégɛ́lù dáɣàɛ̀ stick DIM round small	a small cylindrical stick	It is a small, cylindrical stick.

39. flat rope

	Phrase	Gloss	Translation
39.1	bɔ́wìɛ̀ dáɣàɛ̀ rope small	small rope	it is a small rope

	Phrase			Gloss	Translation
39.2	táwá	màá	bɔ́wìɛ̀		
	pants	3.POSS	rope	pant's rope	It is a belt.

40. pumice stone

	Phrase				Gloss	Translation
40.1	bʷìɛ́	n	gíjá	sìmèè		
	leg	GEN	scrub	rock	leg's scrubbing foot rock	It is a pumice stone.

40.2	sá	à	bʷìɛ́	ná	gúní gáɾ̃ì	sá	à	gíjá	náẁ	báá
	COND	2.SG	foot	RV	cracked	COND	2.SG	scrub	RV	move out of

Gloss: 'if you foot crack you rub, it comes out'
Translation: If your foot is cracked, so that you scrub them clean.

41. corrugated paper

41	n	dág	–ú	kéɛ̀	ímà	kẁɔ́ⁿ	náẁ	góró górò
	1.SG	touch	PRF	thing	here	square	RV	wavy

Gloss: 'I touch a thing here a square is wavy'
Translation: I touched something here, a square that is wavy.

42. green fabric

	Phrase			Gloss	Translation
42	mánnà	–mɛ̀	dáɣáɛ̀		
	plastic	DIM	small	small piece of plastic	It is a small piece of plastic.

43. talcum powder

	Phrase			Gloss	Translation
43.1	búúⁿ	dág	–á		
	powder	touch	RV		I touch powder.

	Phrase		Gloss	Translation
43.2	búúⁿ	síjɔ̀ⁿ		
	powder	white	white powder	It is white powder.

44. cotton balls

	Phrase		Gloss	Translation
44	káẁ	núgù		
	DEM	cotton	cotton	It is cotton.

45. shaving foam

	Phrase			Gloss	Translation
45.1	kíì	dɛ́réb–íɛ̀	mɔ́gíbɛ̀		
	thing	soft–DIM	syrupy	a little soft syrupy thing	It is little, soft and syrupy.

	Phrase		Gloss	Translation
45.2	kíì	dáràà		
	thing	slick	slick thing	It is slick.

	Phrase			Gloss	Translation
45.3	jímbó	kírí	–jɛ̀		
	cold	thing	DIM	a little, cold thing	It is a little bit cold.

	Phrase		Gloss	Translation
45.4	kíì	tɔ́nˡdɛ́		
	thing	wet	a wet thing	It is wet.

Consultant 2: full response

1. scrubby pad

	Phrase	Gloss	Translation
1	kíí sɔ́ɣójèbɛ̀		
	thing scratchy	scratchy thing	it is scratchy

2. nylon

	Phrase	Gloss	Translation
2	mánàà dɛ́rébɛ̀		
	plastic soft	soft plastic	It is soft plastic.

3. sponge

	Phrase	Gloss	Translation
3	kíí pɔ́ɣó pɔ́ɣò		
	thing light	light thing	It is light.

4. coarse linen

	Phrase	Gloss	Translation
4.1	kíí pɔ́ɣó pɔ́ɣòg –wɛ̀		
	thing light DIM	little light thing	It is little and light.

	Phrase	Gloss	Translation
4.2	kíì kíɛ́vɛ́		
	thing flat	flat thing	It is flat.

5. wool

	Phrase	Gloss	Translation
5	kíí sɔ́ɣójèbɛ̀		
	thing scratchy	scratchy thing	It is scratchy.

6. eraser

	Phrase	Gloss	Translation
6	kíí máà ʒíí thing bouillon cube	bouillon cube thing	It is bouillon cube–like.

7. yarn

	Phrase	Gloss	Translation
7	bɔ́rí yarn	yarn	It is yarn.

8. sea salt

	Phrase	Gloss	Translation
8.1	déɛ́ n ɕíɛ̀ⁿ seed GEN seed	millet's seed	It is a grain.

	Phrase	Gloss	Translation
8.2	déɛ́ n ɕíɛ̀ⁿ seed GEN seed	millet's seed	It is a grain.

9. chalk

	Phrase	Gloss	Translation
9	búr̃á kúrúmɛ̀ stick short	short stick	It is a short stick.

10. felt

	Phrase	Gloss	Translation
10	sìpɔ́ⁿ styrofoam	styrofoam	It is styrofoam.

11. marble

	Phrase	Gloss	Translation
11.1	kórɔ́jéɛ̀ màá= déɛ́ bead 3.POSS seed	bead's seed	It is a bead.

	Phrase	Gloss	Translation
11.2	kíí míró míròˊ thing smooth	smooth thing	It is smooth.

12. styrofoam

	Phrase	Gloss	Translation
12.1	sìpɔ́ⁿ kúɥìɛ̀ káj –mɛ̀ styrofoam rough DIM	little rough styrofoam	It is a little and rough piece of styrofoam.

	Phrase	Gloss	Translation
12.2	dʷàà pɔ́ɣó pɔ́ɣòˊ tree light	light tree	It is a light tree

13. slime

	Phrase
13	ɥíè há nníŋà náẁ kéɛ̀ ŋ kùrùbɛ́ water IRR say RV thing GEN intestines

Gloss: 'water, to say it is a thing's intestine'

Translation: Water, one would say it is intestine–Like

14. orange netting

	Phrase			Gloss	Translation
14	kíí	kúqìɛ̀ káj	–mɛ̀		
	thing	rough	DIM	a little, rough thing	It is little and rough.

15. tape

	Phrase	Gloss	Translation
15	táárè		
	bee's wax		It is a pin cushion.

16. black fur

	Phrase	Translation
16	bágí páríɛ̀	
	cloth strip of cotton or other fabric that is woven	It is small strips of cloth.

17. mouse ball

	Phrase			Gloss	Translation
17.1	kórɔ́mɛ̀	màá=	déɛ́		
	bead	3.POSS	seed	bead's grain	It is a bead.

	Phrase		Gloss	Translation
17.2	kíí	míró míròo		
	thing	smooth	smooth thing	It is smooth.

18. red plastic

	Phrase	Gloss	Translation
18	míró míró –mɛ̀		
	smooth DIM	smooth	It is little and smooth.

19. modeling clay

	Phrase	Translation
19.1	kíí dáɣ –á bíbìɛ̀	
	thing touch RV gooey	I touch a gooey thing.

	Phrase	Gloss	Translation
19.2	ʒíɛ̀ bíè ʒíɛ̀	honey not honey	It is like honey but it is not honey.

	Phrase	Gloss	Translation
19.3	kîì múgúndú –mɛ̀		
	thing round DIM	a little round thing	It is little and round.

20. cork square

	Phrase	Gloss	Translation
20	kíí kúwɔ́ –ndī kîì kíɛʊ́ɛ́		
	thing dry CAUS thing flat	a thing made dry and flat	It is rough and flat.

21. wooly fabric

	Phrase	Gloss	Translation
21.1	mɛ̀ kîì mógíbɛ̀ mɛ́rébɛ̀	a thing which is	it is a thing which is
	COMP thing syrupy fluid	syrupy and fluid	syrupy and fluid

	Phrase	Gloss	Translation
21.2	màà kúɥì bɛ́nˡdé 3.POSS hair long	its hair long	Its hair is long.

	Phrase	Gloss	Translation
21.3	kúɥí ɛ̀ìɛ̀ hair owner	hair owner	It is hairy.

22. wavy paper

	Phrase	Gloss	Translation
22	sɔ́ɔ̀ⁿ –mɛ̀ kíì pɔ́ɣò pɔ́ɣò –wɛ̀ shirt DIM thing light DIM	little light shirt	It is a little, light piece of clothing.

23. velvet

	Phrase	Gloss	Translation
23	bágí –mɛ̀ dɛ́réb –íɛ̀ cloth DIM soft DIM	little small cloth	A little, soft piece of cloth.

24. brush

	Phrase	Gloss	Translation
24.1	dégɛ̀ hásàà kéɛ́ head brush thing	head brushing thing	hair brush

	Phrase	Gloss	Translation
24.2	kíí gúní gárǐ hɔ́ⁿ thing bumpy EMPH	a bumpy thing	a very bumpy thing

25. stress ball

	Phrase	Gloss	Translation
25	kíì múgúndú –mɛ̀ thing round DIM	little round thing	It is little and round.

26. fabric sponge

	Phrase	Gloss	Translation
26	sìpɔ́ⁿ kíí –bɔ́ɽ̃ò dáɣàɛ̀ styrofoam thing AUG small	styrofoam, large small	it is styrofoam, it is a little bit big.

27. round rope

	Phrase	Gloss	Translation
27.1	bɔ́wìɛ̀ ŋ kíndī rope GEN short	rope's short	It is a short rope.

	Phrase	Gloss	Translation
27.2	bɔ́wìɛ̀ kúɥìɛ̀ ɛ́ìɛ̀ⁿ	rope hair owner	It is a hairy rope.

28. loufa

	Phrase	Gloss	Translation
28.1	mánàà mùdʒóbɛ̀ plastic stringy	stringy plastic	it is stringy plastic

	Phrase	Gloss	Translation
28.2	kíì kúɥìɛ̀ káj –mɛ̀ thing rough DIM	little rough thing	It is little and rough.

29. washcloth

	Phrase	Gloss	Translation
29.1	bómbɔ́rò dáɣàɛ̀ hat small	small hat	It is a small cap.

	Phrase	Gloss	Translation
29.2	kíì jìndò dégè síínˢ hùⁿ thing two head RECP PP	two things's heads are on each other.	two things are connected

	Phrase	Gloss	Translation
29.3	pótámáánì dáɣàɛ̀ wallet small	small wallet	It is a small wallet.

	Phrase	Translation
29.4	kíì kúɥìɛ̀ káj –mɛ̀ dáɣàɛ̀ thing scratchy DIM small	It is a little bit rough/scratchy.

30. nail file

	Phrase	Translation
30.1	sìpɔ́ⁿ mɛ́ =nɛ̀ kéɛ̀ jáɣ –à styrofoam COMP PL thing cut RV	It is a piece of styrofoam that cuts.

	Phrase	Gloss	Translation
30.2	kíì kúɥìɛ̀ kájmɛ̀ mɛ́ nɛ̀ kéɛ̀ jáɣ –à thing rough COMP PL thing cut RV	rough thing which cuts things	It is a rough thing that cuts.

31. terrycloth

	Phrase	Gloss	Translation
31.1	bágí párámɛ̀ dáɣàɛ̀ cloth small		a little bit small cloth

	Phrase	Gloss	Translation
31.2	kíí míró mírò thing smooth	smooth thing	it is smooth

	Phrase	Gloss	Translation
31.3	kíí dáɣàɛ̀ thing small	small thing	It is small.

32. play dough

	Phrase	Gloss	Translation
32.1	táárè múgùl –ìɛ̀ bee's wax round DIM	round beeswax	pin cushion

	Phrase	Gloss	Translation
32.2	kíí bɛ́ndē dáɣàɛ̀ thing long small	a long small thing	It is a little bit long

33. chalkboard eraser

	Phrase	Gloss	Translation
33	kíì kíɛ́vɛ́ thing flat	a flat thing	It is flat.

34. contact paper

	Phrase	Gloss	Translation
34	bágí –jɛ̀ símá dáɣàɛ̀ cloth DIM white small	a small white cloth	It is a small, white cloth.

35. cardstock

	Phrase			Gloss	Translation
35	dɔ́ò	–mɛ́	dáɣàɛ̀		
	paper	DIM	small	a small paper	It is a small piece of paper.

36. brown beans

	Phrase			Gloss	Translation
36	kórɔ́mɛ̀	màá=	déɛ́		
	bead	3.POSS	seed	bead's seed	a bead's grain

37. leather material

	Phrase			Gloss	Translation
37	bágí	bógò	dáɣàɛ̀		
	cloth	big	small	small big cloth	a piece of cloth which is a little big

38. wood cylinder

	Phrase			Gloss	Translation
38	búr̃à	–mɛ́	dáɣàɛ̀		
	stick	DIM	small	small stick	It is a small stick.

39. flat rope

	Phrase		Gloss	Translation
39.1	bɔ́wìɛ̀	dáɣàɛ̀		
	rope	small	a small rope	It is a little rope.

	Phrase			Gloss	Translation
39.2	táwá	màá=	bɔ́wíɛ̀		
	pants	POSS	rope	pant's rope	It is a belt.

40. pumice stone

	Phrase									
40	kíì	kúɥìɛ̀	kájmɛ̀	à	síméé	á	bʷèɛ̀	gíjá	mɛ́	ŋ	kò
	thing	rough		DET	rock	DET	leg	scrub	COMP	GEN	PP

Gloss: the rough rock which scrubs the feet.
Translation: pumice stone

41. corrugated paper

	Phrase		Gloss	Translation
41	géŋgìɛ̀	kíɛ́vɛ́		
	metal	flat	flat metal	A flat small piece of metal.

42. green fabric

	Phrase						Gloss	Translation
42	á	níŋà	dáẁ	tóɔ́ⁿ	m	pʷéɛ̀ⁿ	one would say it	
	2.S	say	RV	money	GEN	leaf	is money's leaves.	It resembles cash.

43. talcum powder

	Phrase			Gloss	Translation
43.1	bùùⁿ	ŋ	kò		
	powder	GEN	PP	powder's inside	powder is in it

	Phrase						Gloss	Translation
43.2	há	níŋà	náẁ	níɛ́	m	búúⁿ	to say is	One would say it is
	IRR	say	RV	milk	GEN	powder	milk's powder	like milk powder.

44. cotton balls

	Phrase						Gloss	Translation
44	há	níŋà	náẁ	dègè	kúɥíɛ̀	dáɣàɛ̀	to say is small	One would say it is
	IRR	say	RV	head	hair	small	head's hair	like small head hair.

45. shaving foam

	Phrase						
45	kí–rì	dáɣàɛ̀	tínd	–é	s^{w}íí	ŋ	kò
	thing	small	put	RV	descend	GEN	PP

Gloss: 'a little thing put down inside'
Translation: There is a small thing is dropped inside.

VITA

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EDUCATION

Indiana University, Bloomington, Indiana Ph.D., African Linguistics, June 2013 Minor: African Studies
Warren Wilson College, Swannanoa, North Carolina Bachelor of Arts, Major: Psychology, 1996 Minor: Art

LANGUAGES

English, native language
Fula (Fulfulde Maasina), speak fluently and read/write with high proficiency
Dogon (Kindige), speak fluently and read/write with high proficiency
Bamana, speak, read, and write with high proficiency
French, speak, read, and write with high proficiency
Bangime, speak, read, and write with high proficiency

AFRICA EXPERIENCE

Linguistic Field Researcher, Mopti Region, Mali and Bobo-Dioulasso, Burkina Faso
Dogon and Bangime Linguistics, 2008 – Present

- Describing Malian and Burkibé indigenous languages, Dogon (Bondu-so and Ibi-so), Bangime, Tiefo
- Performing acoustic and theoretical analysis of vowel harmony and tonal patterns in Dogon (Bondu-so)

Linguistic Field Researcher, Mopti Region, Mali Dissertation Research, 2010 – 2012

- Documented Bangime, language isolate, with concentration on phonology and morphology
- Acquired glossing and specimens of native flora and fauna species which were identified by a botanist
- Recorded, transcribed, and translated narratives, filmed ceremonies, and photographed ritual sites

Africa Trip Leader, Dakar, Senegal Operation Crossroads Africa, Summer 2003

- Guided 10 students on work/study trip to practice French and assist a women's gardening collective

Natural Resources Management Volunteer,Douentza, Mali Peace Corps, 1998 – 2001

- Established literacy program with women's micro-credit gardening collective
- Taught environmental education to rural elementary school-aged children
- Formed woodless construction mason collective

Soil Erosion Prevention Project, Bamenda, Cameroon Warren Wilson College, Spring 1994

- Co-supervised project with students and villagers to plant grasses and trees on sloped areas

TEACHING EXPERIENCE

Instructor, Languages in Africa
Linguistics/African Studies Department, Spring 2011 and Spring 2013

- Taught and developed materials for general study of African languages for undergraduate and graduate students
- Evaluated students' presentations, exams, and papers for content, quality, and comprehension of material

PROFESSIONAL EXPERIENCE

Assistant Editor and Secretary, Linguistics Club Working Papers Online
Indiana University Linguistics Department, 2007 – 2010
- Solicited manuscripts
- Found peer reviewers
- Managed communications

Graduate Student Representative, African Languages Committee
Indiana University African Studies Program, 2007 – 2010
- Recruited students to study African Languages at Indiana University
- Communicated needs of students to professors within African Languages Program

President, African Languages Club
Indiana University Linguistics/African Studies Department, 2006 – 2009
- Co-founded Indiana University's first African Language Club
- Co-sponsored African Languages Night

President, Linguistics Club
Indiana University Linguistics Department, 2008 – 2009
- Served as president to organize annual student conference and departmental picnic
- Organized and co-sponsored colloquium series

Faculty-Student Liaison, Linguistics Club
Indiana University Linguistics Department, 2007 – 2008
- Attended faculty meetings and communicated between students and faculty
- Represented department at Graduate Professional Student Organization

Vice President, Graduate Students in African Studies
Indiana University African Studies Program, 2007 – 2008
- Assisted President to coordinate activities for students in African Studies
- Arranged meetings of graduate students in African Studies

Assistant, African Studies Program
Indiana University African Studies Program, 2007 – 2008
- Aided in preparation of Title VI grant
- Requested and acquired list of achievements from faculty affiliated with African Studies Program

Team Leader, Monroe County, Indiana AmeriCorps*VISTA, 2005 – 2006
- Recruited volunteers for Area Ten Agency on Aging
- Provided leadership for eight Retired and Senior Volunteer Program VISTA members

AWARDS AND GRANTS

Indiana University College of Arts and Sciences Dissertation Year Fellowship, 2011 – 2012
National Science Foundation Doctoral Dissertation Improvement grant BCS-1024347, 2010 – 2012
Fulbright-Hays Doctoral Dissertation Fellowship, 2010 – 2011
Carleton T. Hodge Prize, April 2010
Travel Grants: College of Arts and Sciences and Linguistics, August 2009, June 2010
International Enhancement Grant, June – August, 2008
Foreign Language Area Studies fellowship, academic years 2006 – 2008

PUBLICATIONS AND PAPERS

Hantgan, A. (March 7 - 10, 2013). *Bangime Tonal Classes*. Paper Presented at the 44th Annual Conference on African and Linguistics. Georgetown University, Georgetown.

Hantgan, Abbie and Davis, Stuart. (2013). Bondu Vowel Harmony. *Studies in African Linguistics*. Volume 42, Issue 1.

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———. (2010). Does tone polarity exist? Evidence from Plural Formation among Bangime Nouns. *Indiana University Working Papers in Linguistics Volume 8 (African Linguistics across the Discipline)*.

———. (August 24-26, 2009). *Bondu Vowel Harmony*. Paper presented at the 39th Colloquium on African Languages and Linguistics. Leiden University, The Netherlands.

———. (August 17 - 21, 2009). *Tone in Bangime Nouns*. Paper presented at the 6th World Congress of African Linguistics (WOCAL 6). University of Cologne, Germany.

Heath, Jeffrey and Hantgan, Abbie. (April 9 - 11, 2009). *A group fieldwork project on a 20-language family (Dogon)*. Paper presented at the 40th Annual Conference on African and Linguistics. Urbana-Champaign, Illinois.

Hantgan, A. (August 25 - 27, 2008). *A Brief Description of Bangeri Me, a Peripheral Dogon Language*. Paper presented at the Colloquium on African Languages and Linguistics. Leiden University, The Netherlands.

Eight encyclopedia entries for ABC-CLIO World Geography Database 2007 - 2010. "People": Burkina Faso, Cameroon, Côte d'Ivoire, Mali, Niger, The Gambia, Benin and Togo.

MEMBERSHIPS

Linguistics Society of America, 2006 - Present
African Studies Association, 2007 - Present
West African Research Association, 2008 - Present