A Grammar of Bangime

language isolate

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Overview

1. Introduction

1.1 Dogon languages

Dogon is a family of around 20 languages belonging to the vast Niger-Congo phylum. The internal structure of the family as a whole is not yet clear. Though Bangime has traditionally been classified as Dogon, the language has recently been reclassified as a language isolate (Lewis 2009). This decision was largely based on the research and publications of Roger Blench (Blench 2005b, 2007). As is shown in this grammatical description, my own research supports this conclusion because the vocabulary (aside from borrowings), phonology, morphology, and syntactic structure in no way resemble that of the Dogon languages.

1.2 Bangime language

1.2.1 Nomenclature

The language Bangerime, or Bangime [bàŋgímɛ̀], has been mentioned briefly in the literature by various names including Dyɛni or Yɛni (a name of one of the Bangime-speaking villages) (Bertho 1953), Numadaw or Numa-daw (DNAFLA/DRLP 1981; Plungian & Tembine 1994), Noumandan (a part of the greeting sequence, as is common to name Dogon languages by their introductory greeting interjection) (Togo 1984), Elebo (origin unsure, possibly referring to a name borrowed from Fulfulde meaning ‘beautiful’)

(Plungian & Tembine 1994), and most commonly, Banger–me, Bangeri–me, Bangeri me, or Baŋgi me (Blench 2005b, 2007; Calame-Griaule 1956; Hochstetler, Lee, & Durieux-Boon 2004; Plungian & Tembine 1994). I have chosen to use the endonym, Bangime [bàŋgímɛ̀], written without a space between 'Bangi' and 'me', because the bound suffix [mɛ], among other things, refers to languages. The speakers of the language refer to their ethnicity as Bangande ([baŋga] plus the plural suffix). The term 'banga' means 'hidden', 'furtive', or 'secret' in many Dogon languages.

1.2.2 Location

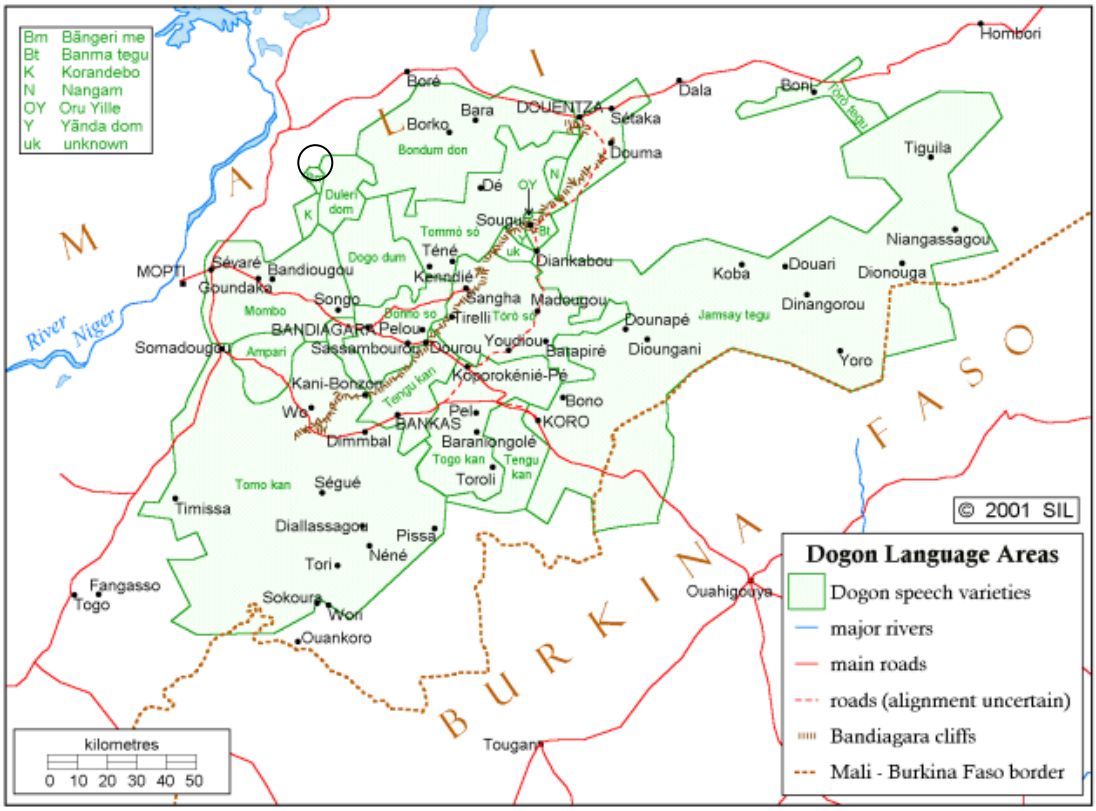
The language Bangime is spoken by a group of people, the Bangande, who originated as one clan in a village under the name of Bounou at a site atop the cliffs of their current location known as Yege. It is estimated by the chief elders that the Bangande moved from Yege at least five hundred years ago[1]. From there, they split into seven villages located in the Cercle of Goundaga, Commune of Kargue. 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 (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 area in which these villages is situated is reached by travelling north on single paved road that stretches north-east from the capitol of Mali, Bamako, to the city of Gao. Upon reaching Konna at approximately 660 kilometers, one then travels an additional 25 km on an unpaved path through the Jewol valley towards the Bandigara cliff range; this road can only be accessed by a five-hour donkey cart ride during the rainy

[1] This estimate is based on oral histories of how and when colonialism and the slave trade in the respective villages began.

season, (June - September/October), 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, and my research site.

The area in which Bangime is spoken relative to other Dogon languages is illustrated in following map in figure (1). Bangime is abbreviated as 'Bm' and is circled below:

(1) *Dogon Languages Map (Hochstetler, et al. 2004: 11)*



1.3 Demographics

The estimated total number of Bangime speakers ranges between 1,200 (Gordon 2005) to 3000 (Blench 2007). Among villages which were formerly situated atop the cliffs, but have now moved down to the plains, some of the Bangande practice Islam. Bounou, however, remains on top of an area of boulders due to the amount of water which inundates the surrounding canyon during the rainy season, and thus, because of its geographic isolation, villagers who practice animism are found among the village. This is of interest linguistically as some lexical items were either forbidden to be recorded in any manner, (written or oral), and some required the permission of the village elders.

The major economic activity of the Bangande is millet farming, and minor crops grown in the same fields include sorghum, sesame, rice, okra, cow-peas, roselle, cotton, and corn. Peanuts are not planted in Bounou due to spiritual reasons. The rainy season is roughly June to September, with a harvest in late October or early November. During the dry season, some off-season gardening of rice, onions, cotton, garlic, lettuce, tomatoes, chili peppers, sweet potatoes, tobacco, and cassava is done. Calabashes and various other plants found in the trees among the cliffs such as Karite fruits, wild grapes, Ronier fruits, Dunju berries, and Baobab leaves and fruits harvested and sold in the markets as well. Livestock herding is also practiced (sheep, goats, cattle). Market towns in Konna, Kargue, and Sambaré draw both sellers and buyers from the Bangime speaking area. Transportation of goods to the village markets is done by donkey cart and motorcycle. Donkeys also serve as mounts though cows are not allowed in the area for plowing fields; horses have disappeared from the immediate zone in recent times (though they are still found in some villages closer to Mopti-Sevaré). Schools were built in the 1990's in Bounou and Kargué. There is

currently a generation of students who are reaching high-school age and are relocating to Bandiagara or other larger towns to continue their studies. The family name of the Bangande was originally Baanaande and remains with the line of the Chief of Bounou and his descendants.

1.3.1 Classification

Though Bangime was classified as Dogon, within the Niger-Congo branch (Gordon 2005), it has now been classified as a language isolate (Lewis 2009). Each of the previously named researchers of Bangime has noted that it clearly lies outside the realm of what constitutes Dogon. Blench (2005a: 3) was the first to state that the language is an isolate, based on his own and Hochstetler's (2004: 99- 105) comparative Dogon word lists that cognates with other Dogon languages are below ten percent. However, the Bangande consider themselves to be ethnically Dogon and their language to be Dogon as well.

Surrounding villages speak Duleri, a Dogon language, Niononkhe, a dialect of Bozo, in the Mande language subphylum, and Fulfulde, a language of the Atlantic branch, all of which are also in the Niger-Congo language phylum.

1.4 Previous and contemporary study of Bangime

1.4.1 Fieldwork

Prior to this study, the most recent fieldwork done on Bangime was by Stefan Elders who spent approximately six months in Bounou from 2006 to 2007, though he was unable to

publish any material concerning the language besides a presentation in Bamako, (Elders 2006), prior to his death in 2007.

Roger Blench (2005b, 2007) gives an overview of the language, and it is to him that the 'discovery' of the language is credited, though Plungian & Tembine (1994) and Calame-Griaule (1956: 66) mention the language briefly in their overviews of the Dogon languages. In addition, three word lists have been published: Bertho includes an 80 item word list under the language heading, Yɛni (1953: 433- 434), 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.

My own fieldwork to date includes a fieldwork internship from June – August, 2008, collection and analysis of data for the grammatical sketch and lexicon from May – August 2009, and I am presently continuing this latter goal plus that of dissertation research on the tonology of the language which I began this year in July and plan to continue until the end of December (2010).

1.4.2 Methodology

Data were collected primarily from two native speakers of Bangime, Tiga Bade and Ali Karambe, in the village of Bounou during the months June through August, 2008, May through August, 2009, and July through December, 2010.[2] The Human Subjects approval number is #08-13242.

Recordings were made using an M-Audio Microtrack II and a Marantz Professional Solid State PMD660 digital recorder and were analyzed using the program Praat. Excel was

[2] In addition to the primary informants, other villagers participated in the telling of stories and checking data points for accuracy.

used for plotting vowel formant values and storing lexical items. Texts were stored and parsed using SIL Fieldworks Standard Edition 6.0.4. Transcriptions represented in the grammar are phonetic, unless otherwise noted, and are represented in IPA format. Long vowels are represented by the notation {v:} and with tone marked on the initial vowel of the sequence. Tones are marked with an acute accent for high, a grave accent for low, and a combination for rising or falling. Downstepped high is represented with a {ꜜ} proceeding the syllable which is downstepped. Morpheme boundaries are indicated with a hyphen { – } in between bound morphemes and { = } between clitics and their hosts. All transcriptions are phonetic unless otherwise noted.

1.4.3 Acknowledgements

Funding for an internship and language instruction was provided by the Indiana University International Enhancement Grant and the data collected for the grammar and lexicon was provided by the National Science Foundation grant PA 50643-04, "Dogon languages of Mali" in the summers of 2008 and in 2009 by the NSF BCS-0537435, DEL-853364 grant. And from July to January 2010 with support from 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". I am indebted to the people of the Bounou, including So Baanaande-Diko (chef de village), Tiga Baade, and Ali Karambe. Many other villagers helped out the lexicographic work by bringing specimens of flora and fauna. Without the previous work, careful

transcriptions, and insights of Stefan Elders, this intricate grammatical sketch would not be able to be produced.

Special thanks also are credited to Professor Jeffrey Heath for giving me the opportunity to fulfill a life-long goal and his untiring patience and confidence in my ability to document an understudied language. Thanks to Dr. Heath's assistant, Minkailou Djiguiba, for his constant support and encouragement and his invaluable assistance in establishing fieldwork in the village. Thanks to Laura McPherson for her advice and assistance in transcription, analysis, and being such a good friend. Appreciation is also owed to my advisory committee, Dr. Robert Botne, Dr. Stuart Davis, and Dr. Samuel Obeng, for their knowledgeable advice and sharing of relevant experiences.

2. Sketch

In this section, an overview of the language, Bangime, is provided, serving as a short chapter describing main highlights of the grammar. A sketch of the main aspects of the phonological, morphological, and syntactic system of the language is provided here. Each of these topics is discussed in further detail following in the grammatical description.

2.1 Phonology

2.1.1 Consonants

Upon encountering Bangime for the first time, one is surprised by its unusual consonant inventory compared to the Niger-Congo languages spoken in the area. For example, it is proposed that the labial-palatal approximant and the alveolo-palatal fricative, /ɥ ɕ/, are

phonemes in the language and the voiced labiodental approximant, [ʋ], is an allophone of either the voiced bilabial stop /b/ or the voiced bilabial fricative /β/.[3] In particular, the labial-palatal approximant and the alveolo-palatal fricative are not found among any language spoken in Mali. The proposed consonant inventory for Bangime is shown in (2) with examples of these unusual phonemic consonants in (3).

(2) */p b t d k g m n ɲ ŋ s ɕ j ɥ w l/*

[ʋ ʧ ʤ ɣ ʃ ʒ r]

(3)

	gloss	*stem*
a.	stalk (n.)	ɕúlì
b.	skull	dègè ǹ ɕùɥí
c.	water	ɥɛ̀
d.	buy	ɥárà
e.	red	ɥɛ́ɥí

Evidence from borrowings from Fulfulde shows the non-phonemic status of liquids other than /l/; words such as *reenude*, 'to protect' are pronounced as [leenude]. Like Dogon, borrowings from other languages with the phoneme /f/ are pronounced as [p], as in *France*, pronounced as [paransi]. This is proposed to be a socio-linguistic phenomenon due to the Bangande self-identification with the Dogon.

[3] The reason for the uncertainty is due to the necessity of a phonetician to examine these segments.

Stop consonants are often deleted after nasals, though near minimal pairs such as [dúgú.nè], ‘forests’ and [dégé.ndè], ‘heads’, make an apparent rule governing this change difficult to discover; the change does not seem to be semantically driven either, and may be a case of free-variation, or a change in process, as both variants are acceptable in any noun-plural stem. Nasalized approximants are also prevalent in the language. In addition, liquids and approximants alternate with NC clusters [nd] and [mb], which in turn also syncopate the stop, such as in examples /búr̃a/ ~ [búndà] ~ [bún], ‘finish’ and /táw̃à/ ~ [támbà] ~ [támà], ‘chew’.

A homorganic nasal appears not only in between elements of a noun phrase as in (3)a, but in verb phrases as well shown in (3)b. Since the latter example seems to be not semantically driven, it is hypothesized to be phonologically driven though this is explored further in the grammatical description.

(4)

(5) *sĭbè ǹ dŏmbó*

eye CONN hole

‘eye socket’

(6) *dà ă jà:mbè: ŋ kĕgèndè*

IMPERF DET child–3rd SG SBJ ? tickle

‘he tickles the child.’

The leniting effect of the [–ATR] vowels on consonants in Bangime is of interest. The conjugation of the imperfective to the perfective aspect, (in certain verb classes), provides an example, shown in (4)a, whereby the voiced velar fricative found between like vowels undergoes fortition to become a stop consonant when one of the vowels changes its [ATR] value from [+ ATR] to [–ATR]. In addition, (5)b shows the alternation between /b/ and [ʋ] between like, [–ATR] versus [–ATR] vowels. Target segments are underlined for clarity.

(7)

	Gloss	*Imperfective*	*Perfective*
a.	agree	táɣ́á	táq́ú

	Gloss	Word	Gloss	Word
b.	wind	pévéré	clap	tèbé

In addition, the process by which the phonemes /t/, /s/, and /j/ undergo palatalization and affricatization is of significance since the changes are not systematic in the language. The fricative /s/ becomes [ʃ] before non-low vowels in examples such as [ʃùmbí], ‘nose’, yet [sùmá], ‘goat sack’ is pronounced with the alveolar variant, suggesting that these segments are contrastive, but after further questioning, both forms are accepted with their non-palatal/palatal counterpart. This could be due to a change in process, or free variation between the forms. The affricate, [ʧ], appears word-initially, and is analyzed in examples such as the agentive marker [ʧɛ̆] as syncope of the high vowel providing an underlying representation, /tìjɛ́/. Similarly, examples such as /ʃùwɛ́/, ‘chicken’, pronounced [ʃʷɛ̆], /ʃíjè/, ‘take’ pronounced [ʃʲè], and /túwá/, ‘arrive’ pronounced [tʷá], provide evidence for underlying disyllabic words in cases of labialized or palatalized initial segments. The glide

/j/ and its allophone [ʒ] behave correspondingly to the above outlined case for /s/; examples such as 'honey' are also pronounced variably as [ʒìjè] or [jìjè]. After nasals, /j/ becomes the affricate [ʤ] as in the example /n jè/ ~ [n ʤè wájí] 'I rose'. The diminutive suffix *–mɪ* alternates in a seemingly free manner with *–jɛ* and *–wɛ*, as in the example 'little stool', [kùndù–mé] ~ [kùndù–jé] ~ [kùndù–wé].

Additional processes of syncope of vowel-consonant sequences are shown in the examples in (6)a - (6)c. Note that example (5)b shows that it is the first vowel, not the second, of the sequence which deletes. The examples of nasals syncopating are fewer, as in (6)d, though this is also a process found in the language, particularly noted between singular and plural allophones shown in (26) below.

(8)

	Root	Syncopated form	Gloss
a.	kòrógò	kógò	basket (large)
b.	bǎŋgérímè	bǎŋgímè	name of language
c.	díjérè	díjè	carve
d.	kúrémè	kúréè	dog

The process by which vowel-liquids delete is discussed in greater detail in grammatical description below.

2.1.2 Vowels

A full nine vowel system is present in the language as shown in (7) with contrastive features on vowels include tone, [±ATR], long and short, and nasalized and non-nasalized,

though vowel harmony is not an active process in the language. Examples such as [gɛ̄ŋgɛ̀] ‘metal’ and [kùwó–ndɛ̀] ‘houses’ illustrate that neither tauto- nor heteromorphic sequences involve vowel harmonization.

(9) /*i ɪ e ɛ o a ɔ u ʊ*/

2.1.3 Prosody

Bangime is a tonal language. Syllables may be H, L, (H = high tone, L = low tone), rising <LH>, or falling <HL>. Syllables may also be underlyingly toneless <Ø>. Single morae may bear contour tones, but only rising tones. Since only bimoraic syllables may carry falling tones, the tone-bearing unit (TBU) is the syllable. Thus, it can be stated that true falling contour tones, as described by Yip (2007: 4) are disallowed in the language.

As shown in the appendix of 200 core vocabulary items, many nouns in Bangime have a {HL} contour. Unlike Dogon languages, all regular stems (nouns, verbs, adjectives, numerals), do not have to occur at least one high tone element. Some stems are all-high toned, others have {LH}, {HL}, or {LHL} contours, (according to the number of TBU’s in the word), and some are lexically all-low toned.

These lexical tones are frequently modified or overridden entirely by tone contours imposed by syntactic patterns. The language’s lack of segmental morphology is compensated by the auto-segmental morphology; the tonal system, in particular, is very complex and thus a full explanation is provided in the grammatical description below.

2.2 Morphology

One of the main aspects of the language which differentiates it from the Dogon languages is its isolating morphology. The only productive suffixes found in the language are a plural marker and a diminutive. There is a semi-productive bound morphemes to indicate causation, though it appears to be a borrowing from Dogon. Verbs may also be inflected through consonant mutation in the case of a limited number of reversives and mutating stem-final vowels. Limited examples are provided in (10) with the possibility of further suffixation remnants explored in the grammatical description.

(10)

a. **–ndɛ** **plural**

bʷɛ̀	bʷɛ̀–ndɛ́	mosquitos
tɔ̌tɔ̀	tɔ̌tɔ̀–ndɛ́	anvils
kɛ́	kɛ́–ndɛ̀	things
dúúgú	dúúgú–ndɛ̀	forests
kùwó	kùwó–ndɛ̀	houses

b. **–ɛ ~ –mɛ ~ –jɛ ~ –wɛ** **diminutive**

bʷɛ̀	bʷɛ̀–ɛ̀	tiny mosquito
tɔ̌tɔ̀	tɔ̌tɔ̀–mɛ̀	tiny anvil
kɛ́	kírɛ́–jɛ̀	tiny thing
dúúgú	dúúgú–wɛ̀	tiny forest

c. **animate/language names**

Noun	**Gloss**	**Noun**	**Gloss**
bŭʋòò	Bobo person	bʷó–ɛ̀	Bobo langauge

bòndí	Bondu person	bòndí–jɛ̀	Bondu-so lang.
bàŋgá–ndɛ̀	Banga people	bàŋgí–mɛ̀	Bangime lang.

d. **frozen stems**

Noun	**Gloss**
dɔ́rɛ́ɛ́	bird
kǐjɛ́mɛ̀	branch, wood
ɲɔ̀ŋɔ̀mɛ́	camel
gɛ̀dɛ́jɛ̀	gecko
ŋàrámɛ̀	God
d^{w}áɛ̀	tree

e. **–nda** **causative**

dɛ̀r^{n}ɛ́	send (to get something)
n dá n dɛ̀r^{n}ɛ̀–ndá	I am sending (someone to the market to get something)
dìjá	eat
n dá n dìjà–ndá	I am feeding (someone)
kárá	learn, study, read
n dă ŋ kárándā	I am teaching

f. **initial consonant mutation** **reversive**

	stem	**gloss**	**stem**	**gloss**
t ~ d	tììndá	start	dììndá	stop
m ~ b	mùùndá	dress	bùùndá	undress
n ~ ɲ	nàw	give	ɲàw	take
t ~ ʒ	tíjé	sit	ʒíjé	rise
m ~ p	múúnda	knot, braid	pííndò	untie, unravel

As illustrated in these alternations found among the Reversive 'morpheme' the initial consonants, /t, m/ alternate with both [d, ʒ] and [b, p] respectively suggesting that there were two different forms of each phoneme synchronically[4].

In addition, as noted above, a semi-frozen bound morpheme that has the same phonological shape and alternations as the diminutive suffix is used as to mark animates and some names of languages.

Another feature common to Niger-Congo languages are noun class markers. Bangime has no evidence of noun class marking or any remnants of it. Languages among the Mande family display what some consider residual noun-class markers (Pozdnyakov 1991) in the form of word-initial homorganic nasals. Many nouns in Bangime are preceded by a homorganic nasal, though this is not thought to be a noun class marker as it appears seldom in words in isolation, and then only as a member of a series of geminate nasals. Homorganic nasals serve numerous functions in Bangime, including linking elements in compounds, as a transitive marker for verbs, and as pronominals. In addition, the language is syllable-timed, thus, some nasals serve the purpose of timing only and have no semantic content. Though some Dogon languages also mark animate nouns with a suffix, the suffix differs between singular animate and non-animate plural nouns, whereas in Bangime, only one plural marker is used, except in the case of close familial relations, where the suffix *–ru* is used; this being a borrowing from Dogon, as displayed in examples in (11).

[4] Thanks to Stuart Davis for pointing this out.

(11)	*Noun*	*Gloss*
a.	bŏ–rú	fathers
b.	ɲìjá–rú	mothers
c.	gɔ́ɣɔ́–rú	father's wives
	(borrowing from Fulfulde)	
d.	tèndɛ̀–rú	grandfathers
e.	ʧìjɛ́–rú	grandmothers
f.	kàà–rú	near
		(describing plural nouns)
g.	mééjé–rú	far
		(describing plural nouns)

As noted above, whereas Dogon and many other Niger-Congo languages have agglutinating morphology and thus adjectives and demonstratives agree in number and animacy with nouns, and pronominal affixes agree verbs which are marked for tense, aspect, and mood, these distinctions are expressed through unbound morphemes in Bangime, and are thus covered in the following section on syntactical aspects of the language.

2.3 Syntactic structure

2.3.1 Noun phrase

The main constituents in the noun phrase include a definite marker, possessive marker, modifiers, and post positions. All of these follow the head noun, except for the definite and possessive markers. Based on this information, it would appear that the basic word order of Bangime is SOV, but as shown below, the situation is more complex.

Examples are illustrated as follows in (10).

(12)

a. ʒìbɛ̀ pɛ́ɛ́ˈrɛ́
'a lot of people'

b. dùwàà m pʊ̀wɛ́ⁿ gújé kàrà
tree CONN leaf green
'green tree leaf'

c. à ɲɛ̀ɛ̀rɛ́ bɔ̃ɾ̃ò
DET woman big
'the big woman'

d. màá kúɥɛ́ búɥɛ́ jìndó mɛ̀nɛ́
1st SG POSS calabash red two heavy
'my red two heavy calabashes'

e. màá níí bɔ̃ɾ̃ó ŋ kò
1st SG POSS hand big CONN PP
'in my big hand'

Because of the lack of segmental morphology, tone also plays an important role among the constituents in the noun phrase, particularly among pro-clitics such as possessives and a definite article, and post-clitics such as adjectives and determiners.

2.3.2 Main clauses and constituent order

When the subject and object are both unfocalized nonpronominal NPs, the word order is SOV, as shown in (13)

(13)

nàá	dà	màà	tìíⁿ	n	ʒìrìŋgà
cow	IMPERF	3rd SG	tail	POSS	swing

'The cow swings its tail.'

In the negative forms, there is a binary distinction between the perfective and imperfective aspect as shown in the examples here, which also show the evidence for syllable timing in the language through the phonological process of vowel-r deletion, shown in the examples in (13).

(14)

a. maara build

m	bé	mààrá	kò	m	bé	kó	m=	màà
1st SG	NEG	build	house	1st SG	NEG	house	T	build
'I did not build a house'				'I do not build a house'				

b. t^{w}araa arrive

m	bé	t^{w}àràá	á	gándá	m	bé	á	gàndá	n=	t^{w}áà
1st SG	NEG	arrive	DEF	place	1st SG	NEG	DEF	place	T	arrive
'I did not arrive at the place'					'I do not arrive at the place'					

c. maara like

m	m^{w}ɔ́ɔ̀	à jìmɛ̀	m	bé	à jìmɛ̀	m=	màà
1st SG	like.NEG	DEF person	1st SG	NEG	DEF person	T	like
'I did not like the person'			'I do not like the person'				

Positive phrases in (13) support this conclusion further. The ordering of constituents in the verb phrase continues to depend on the tense/aspect/mood of the phrase, as shown in the phrases. These examples are only the most basic TAM distinctions in the language asbverbs indicate TAM distinctions depending on their phonological shape as well. Thus this verb, 'hit', as shown in c. takes a suffix *–u*, which can also be described as changing the final vowel of the verb stem, but this is not the case for all verbs in the language.

The example in d. illustrates the future tense. Note first that the 'auxiliary' is an allomorph of the same 'auxiliary' or TAM marker employed in b, the imperfective.

Therefore, the tense is formed by word order. Verb classes, based on the phonological shape of the verb form, determine the method by which they are marked for TAM whether it be umlaut, consonantal mutation, a change in the final vowel, or tonal.

a. IMPERATIVE

S	V	O	
àɔ́	dègè	à	jààmbɛ́
2nd PL	hit	DEF	child

'You (PL) hit the child.'

b. IMPERFECTIVE

S	AUX	O		V
àɔ́	dá	à	jààmbɛ́	dègè
2nd PL	IMPF	DEF	child	hit

'You (PL) hit the child.'

c. PERFECTIVES

V	O		
àɔ́	dèg–ú	à	jààmbɛ́
2nd PL	hit–PERF	DEF	child

'You (PL) hit the child.'

d. FUTURE1

V	V	S	AUX
n=	dégè	n	dáẁ
Trans	hit	1st SG	FUT

'I will hit.'

Also, note that in the examples in (14) if the future tense phrase contains an object, it resembles the passive, though, by examining other verb forms, it can be seen that the tense and mood differ. Therefore, the very rare word order, OSV is attested in the language.

FUTURE2

O		AUX	S	V	
	à	jààmbɛ́	ná	n	dègè
	DEF	child	FUT	1st SG	hit

‘I will hit the children.’

ŋǎ	nà	tàmbà	g.	ŋǎ	nà	n	tàw^{n}á
meat	PASS	chew		meat	FUT	T	chew
‘the meat is chewed’				‘I will chew meat’			

2.3.3 NP Coordination

The most common way of linking elements in the noun phrase is with the conjunction *na*, as shown in the example in (15).

(15)

a. gìrìmɛ̀ náẁ tʊ̀ʊ̀ré
rabbit CONN hyenna

‘rabbit and hyenna’

2.3.4 Relative clauses

Relative clauses are introduced with the conjunction *mɛ́* ‘which’ as shown in (16)a - b.

(16)

a) à dúwá hṹ mà: kóré kó pɛ́ndɛ̀
DET tree on 3rd SG POSS stomach PAST explode
‘The (person with the big) stomach that fell on the tree, explodes.’

b) à bɔ́rɛ̀ n dò mɛ́ bàrà
DET Baobab sauce ? set–IMP CONJ remain
'Set down the Baobab sauce which remains.'

2.4 Interclausal syntax

The infinitival marker, *hā́*, is used in chaining verbs as is the coordinating conjunction *á*, shown in the examples in (17).

(17)

a) hā́ gɛ̀mbì hā́ pú:ndì
INF sift INF pound
'to sift and to pound'

gírí wórè á dág kò níŋ ŋ kó m bè n twá
–mɛ̀ –ù –ɛ̀
rabbit– go COOR touch– PST speak– ? CONJ ? NEG ? arrive–
ANIM PERF PERF PERF
'Rabbit goes to open (the granary) but he said that he can't reach (the door).'

Appendix

Core 200-Word Vocabulary List

1.	it	káẁ	101.	turn	gòmbíjɛ́
2.	I	mí	102.	fall	kàrà
3.	him/her	mì	103.	give	n ɲáẁ
4.	you (sg)	á	104.	take	ɲáw/ʃíjɛ̀
5.	here	ímà	105.	rub	gíjà
6.	there	kéɛ̀^{n}	106.	wash	pùgá/túràà
7.	who	já	107.	pull	gómpà
8.	what	né ʃì^{n}	108.	push	ʒúmbàrà
9.	where	kóté	109.	throw	gúqú
10.	how	nìí/nù mì	110.	tie	bàà
11.	not	béè	111.	sew	síí
12.	all	(kîì) pá^{n}	112.	count	ŋíjɔ̀^{n}
13.	one	(kě) té/ tǐjɛ́	113.	say	dìgá/n nîì
14.	two	(kéɛ̀) jìndò	114.	sing	ŋ^{w}ímà
15.	three	(kéɛ̀) táàrù	115.	play	sáŋà
16.	four	(kéɛ̀) n níjɛ̀	116.	swell	píndù pìndù

17. five	(kĕ) núndì	117. sun	n ɲíé
18. big	(kîì) bɔ́r̃ò	118. moon	ɥìé
19. long	(kîì) béndɛ̀	119. star	tòrèmé
20. wide	(kîì) téŋgò	120. water	ɥíɛ̀
21. heavy	(kîì) mènɛ́	121. rain	ʒɔ́ɔ̀^{n}
22. small	(kîì) dáɣàj/kírìjɛ̀	122. river	ŋɔ́ɔ́mbɛ̀
23. short	(kîì) dúgìjɛ̀	123. lake	déẁ
24. narrow	(kîì) kámbàrà	124. salt	gɛ́ŋgè
25. thin	bírɛ̀bé/ʤáŋgà	125. sand	n ɲímbɛ̀
26. house	kóò	126. dust	kórí
27. person/human	ʒĭbéɛ́	127. earth/world	gàʒɛ́^{n}
28. woman	ɲìjɛ̀rɛ́	128. cloud	póòrò
29. man (adult male)	gʷɔ̀^{n}	129. sky	ʒɔ́ɔ̀^{n}
30. child	bìjɛ́/jàámbɛ̀	130. wind	pévɛ̀rɛ̀
31. wife	(máá) pʷéɛ̀	131. smoke	bíré n jìjé
32. husband	(máá) kándɛ̀è	132. fire	bíréɛ̀
33. mother	n níjà/n ɲáà	133. firewood	síjɛ̀
34. father	bóɔ̀	134. ashes	túɥɛ̀
35. animal	ʒĭríbɛ̀ɛ̀	135. burn	sîìwò
36. sheep	ŋàmbárà	136. road	jɛ̀ɛ̀mbé

37. goat	bîi^{n}	137. mountain	símèè
38. cow	n nàà	138. red	(kî) búɋɛ́
39. fish	ɋéè kɔ̀ ŋɔ́ẁ	139. white	(kî) sìmá/sìjɔ̀^{n}
40. dog	kùrèmɛ́/kùrìjèɛ́	140. black	(kî) pɔ́ɔ́rè
41. tree	d^{w}àè/d^{w}àà	141. night	ʒìjé (hù^{n})
42. stick	búr̃à	142. day	n nìé hù^{n}/dònɛ́
43. fruit	d^{w}áá m bìjɛ́	143. year	bìín
44. seed	bùrù	144. cold	(à gándá) ʒímbò
45. leaf	p^{w}éè^{n}	145. a lot	(kî) péérɛ̄
46. root	ʒîi^{n}	146. new	(kî) káráá
47. bark	ʒàɣà/(màá) k^{w}éè	147. old	(kî) ʃíjéndè/kááw̃á
48. flower	(màá) t^{w}îi^{n}	148. good	gáẁ^{n}
49. grass	gŭʒéè	149. bad	ʒàŋà/(kî) jándà
50. rope	b^{w}ójè	150. easy	bé kíjù
51. skin	kíŋgèè	151. difficult	kíjú
52. meat	n ŋăẁ	152. rotten	mɔ̀ɣɔ́
53. blood	ʒîi	153. dirty	díŋgì
54. bone	n nɔ́ɔ́rè	154. straight	téè
55. oil	ŋ^{w}èɛ́	155. round	múŋgúdúmè/(kî) bíŋgíríè
56. egg	kúù^{n}	156. sharp	(à bă^{n} màà nó)

			dérì
57. horn	síráá	157. dull	mótù
58. tail	tíí^{n}	158. smooth	mírò
59. hair	dégé kújù	159. wet	m mú^{n}
60. head	dégè	160. dry	jăgú
61. ear	táŋá	161. near	kɛ́rɛ́
62. eye	sííbɛ́ɛ̀	162. far	qúndù
63. nose	sŭmbírí	163. right	sííbéɛ̀
64. mouth	nɔ́ẁ	164. left	bárà (n nìì)
65. tooth	n nɔ́ɔ̀ ŋɔ́ sîî^{n}	165. under	gúrù
66. tongue	n nɔ̀ɔ́ n jéréndɛ̀	166. inside	ŋ kóò
67. finger(s)	n nìì k^{w}éɛ̀	167. if	séné́
68. leg	b^{w}éɛ̀	168. because	kà jéró
69. knee	b^{w}èɛ́ kŭmbɛ́	169. name	(màá) nîì
70. wing	(màá) kŭwò	170. spray, blow nose	(sŭmbí) síjɛ̀
71. belly	kŏrɛ̀ɛ́	171. sprout	púřá
72. guts	ŋɔ̀ kúrúʋɛ̀	172. wilderness	n náà
73. neck	kẃà	173. yolk	dùwɛ̀ m bú^{n}
74. breast	súɥɛ̀	174. stalk	(símè) ɕùlí
75. heart	bìmɛ̀	175. clay	dɥɛ̀ɛ́

76. liver	(máa) kúrì kìŋgé	176. ascend	ɥìè
77. drink	ɲìjé(rè)	177. weaver	dɛ̌gè ʃìjé^{n}
78. eat	dìjá	178. blacksmith	tw̃ɔ́ɔ́
79. bite	táw̃á	179. chief	dégè ʃíjè^{n}
80. spit	tŭjúrù	180. millet	dɛ̌mè
81. vomit	ɲèɛ́ndí	181. cassava	bǎr̃áŋkùú
82. breathe	n níírù	182. sweet potato	kúù
83. laugh	m máà	183. sorghum	sĭnʤè
84. live	bór̃ɔ	184. sweet sorghum, black variety (seed cover black)	tɔŋɔ táŋá
85. die	ʒáá	185. fonio	gàndʒà
86. kill	ɥúúrá	186. corn	bìrɔndɔ́n
87. fight, war	kórè/kóré ɲàànà	187. rice	gŏmè
88. hunt	sísɔ́ɣɔ/kɛ́rɛ́ndì	188. cow pea	ɲèɛ́
89. hit	dègé	189. peanut	tìgàjɛ́
90. cut	ʒàɣá	190. garden egg	tàŋkó
91. split	kór̃ɔ/pérɛ́ndɛ́	191. okra	màjí
92. scratch	kɔ̌ɣójò	192. onion	ʒáɣɛ́ɛ̀
93. dig	kííndù	193. garlic	túúmè
94. travel	ŋwɔ mɛ́ nà/ŋwɔ	194. sesame seeds	páráà

		mé ná wòrè			
95.	walk	bùwɛ́ ŋ kò wòré/ŋwɔ́n	195.	small calabash with protrusions on side (for milk)	kórì ʤìnʤú
96.	run	tìgèré	196.	small round calabash	gĭméè
97.	come	n ŋɔ̌	197.	calabash with light-colored interior for liquids (water, milk, cream)	tùmbá
98.	lie	tŭrú	198.	elongated calabash (for drawing water)	tɔ̀ŋwàjɛ́/tùŋgɛ́
99.	sit	térò	199.	sugar cane	mùùré
100	stand	dĭndá	200.	watermelon (wild)	séŋéè dè ŋ kímbà

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Grammar Description

1. Phonology

1.1 General

The phonemes and some basic facts about their distribution and combinations are presented in §3.2 (vowels) and §3.3 (consonants). Syllables are briefly covered in §3.4. Non-tonal phonological rules are described in §3.5. Cliticization is briefly discussed in §3.6. Tonal and intonation systems are the subject of §3.7.

1.2 Vowels

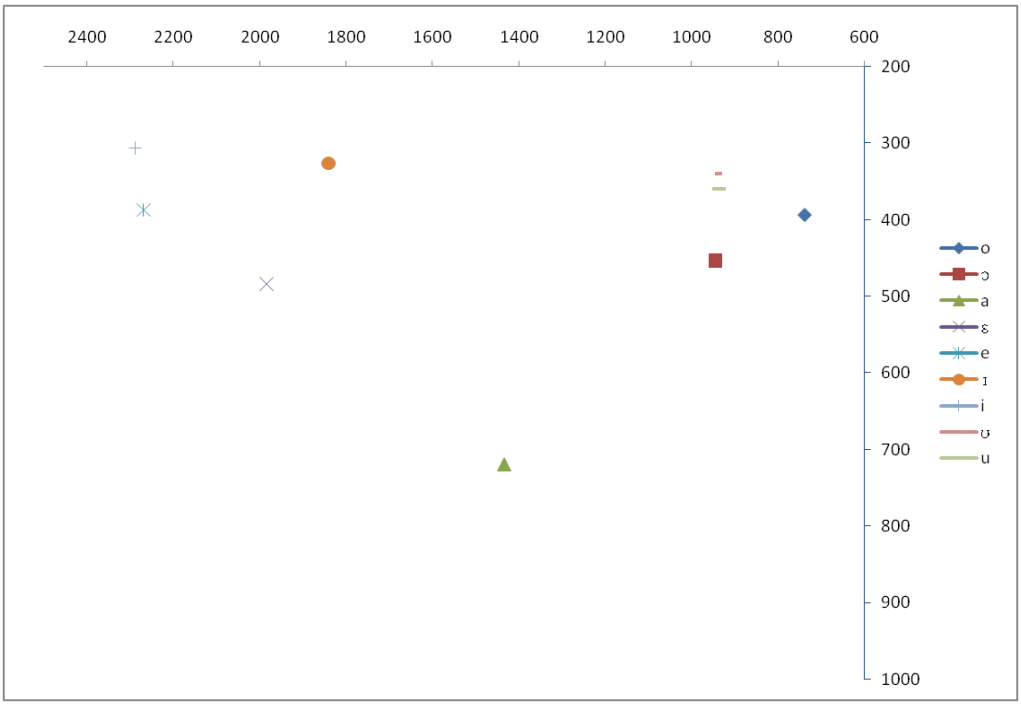
The following diagram in (9) illustrates the vocalic phonemic inventory of Bangime and the vowel chart in (10) demonstrates the necessity of transcribing [–ATR] counterparts for the high front and back [+ATR] vowels, even though these are universally marked (Archangeli & Pulleyblank 1994).

(1) Phonemic Inventory

Non-nasalized: /i, iː, ɪ, ɪː, e, eː, ɛ, ɛː, a, aː, o, oː, ɔ, ɔː, u, uː, ʊ, ʊː/

Nasalized: /ĩ, ĩː, ẽ, ẽː ɛ̃, õ, õː, ã, ã ɔ̃, ũ, ũː/

(2) Vowel Chart (averages)



1.2.1 Minimal Pairs

The examples of minimal or near minimal pairs in (11), (12), and (13) illustrate [±ATR], short/long, and oral/nasal vowel contrasts respectively. Note that a [±ATR] distinction is not found morpheme internally; vowel-harmony does not appear to be a phonological process in this language, either morpheme-internally or externally.

(3)

Stem	Gloss	Stem	Gloss
síjè	tree (species)	síjɛ̀	catch
dɛ̌gɛ̀	cotton	dégé	head
tɛ́mbírɛ̀	brick	témbírè	rock (large)
dé	sweet	dɛ́	taste
ságómɛ̀	secret, magic	sàgɔ̀mɛ̀	good luck charm
bùwó	field	bùwɔ́	file

kɔ̀:	able	kó:	leave

(4)

Stem	Gloss	Stem	Gloss
pɛ́	valley, cavity	pɛ́:	crevice
sìgá	grass (species)	sì:gá	batism
pɔ́rɛ̀	well	pɔ̌:rɛ̀	black
gòmé	rice	gò:mé	Baobab sauce

(5)

Stem	Gloss	Stem	Gloss
dà	imperfective marker	dǎ	there
pɛ́	valley, cavity	pɛ́́	ladder
ʒí:	cry	ʒí́:	blood

1.2.2 Initial vowels

Initial vowels which do not include borrowings from Arabic are uncommon in the language; an inventory of vowel-initial stems is presented in (14).

(6)

Stem	Gloss
à	determiner
á	coordinating conjunction
á	2nd SG
â:	2nd PL
ímà	here

1.2.3 Stem-final vowels

No similarly interesting observations can be made about final vowels.

1.3 Consonants

1.3.1 Phonemes

The following chart in (15) illustrates the phonemic inventory of Bangime.

(7)

	Bilabial	Alveolar	Alveolo-palatal	Palatal	Velar	Labial–Palatal	Labio–velar	Glottal
Plosive	p b	t d			k g			
Nasal	m	n		ɲ	ŋ			
Fricative		s	ɕ					h
Approximant				j		ɥ	w	
Lateral Approximant		l						

1.3.2 Allophones

The table in (16) illustrates the allophones found in Bangime.

(8)

	Bilabial	Alveolar	Post–alveolar	Velar
Fricative				ɣ
Approximant	ʊ	ɹ,ɪ̃		
Trill		r	ʃ ʒ	
Tap/Flap		ɾ		
Affricate			ʧ ʤ	

1.3.3 Segmental phonological rules

1.3.3.1 Alveopalatals [ʧ, ʤ]

The voiceless palato-alveolar affricate, [ʧ], is an allophone of /t/ before high front vowels in examples (17a – b). Its voiced counterpart, [ʤ], alternates with /ʒ/ after nasals as shown in (17c – d).

(9)

	Stem	Gloss	Stem	Gloss
a)	ʧĩ́	grandmother	t̠èndɛ̌	grandfather
b)	ʧĩ́jɛ́	one	t̠áárù	three
c)	kɔ́ɣɔ̀ʒɔ̀	scratch	dùnʤú	bumpy
d)	ʒì:bɛ́	person	sì:nʤá	sorghum

1.3.3.2 Voiced velar stop g and g-Spirantization /g/→[ɣ]

The phoneme /g/ is spirantized to [ɣ] between like, non-high, non-front, [–ATR] vowels. Note in the examples in (18) that the mid-front vowels do not trigger spirantization.

(10)

Stem	Gloss	Stem	Gloss
tígí	run	tígìndá	roll (v.)
kégéré	mat	dɛ́gè	head
bògó	big	ʒɔ̀ɣɔ́	outside
sógóndì	slide (v.)	mɔ́ɣɔ́gì	rub
múgú	bury	dúgè	short
tágú	agree (PERF)	táɣá	agree (IMPERF)

1.3.3.3 Voiced bilabial stop b and ʋ-lenition /b/→ [ʋ]

Though consonants are not spirantized between mid, back vowels above, the phoneme /b/ is lenited to [ʋ] between mid, back, [–ATR] vowels as shown in (19).

(11)

Stem	Gloss	Stem	Gloss
jí:ɾìb̲é	lip	sév̲éré	prick
nèréb̲ùwɛ́	rock used for starting a fire	pév̲èré	wind
sáb̲èré ɲítʃɨ́	traditional doctor/healer	kèv̲è	there

1.3.3.4 Back nasal /ɲ/

The following examples in (20) illustrate that /n/ and /ɲ/ are two distinguishable phonemes, as they occur in like-environments and are not in complementary distribution.

(12)

Stem	Gloss	Stem	Gloss
n̲ìjɛ́rɛ̀	woman	n̲ì:rú	breathe
n̲ùwɛ́	sing	n̲ùndí	four
nn̲èŋé	because	n̲é–mɛ̀	nipple
n̲ógòndó	co-wife	n̲òrè	hear
n̲àwú	give	n̲á	and (conj)

1.3.3.5 Laryngeals /h/

Unlike Dogon languages, /h/ exists in the phonemic inventory of Bangime, though few examples are found which do not come solely from loan words from Fulfulde or Arabic. Examples are shown in (21).

(13)

Stem	Gloss
hǜ	on
hǻ	infinitival marker
há	until

1.3.3.6 Sibilants /s, ʃ/

The voiced postalveolar fricative, [ʃ], appears variably as allophone of the alveolar fricative, /s/, before front and high vowels, though never before back, non-high vowels, as shown in the examples in (22).

(14)

Stem	Gloss	Stem	Gloss
símé	cliff	ʃîːbɛ̀	eye
sùmá	goat skin bag	ʃùmbí	nose
sémìjáŋá	pig	ʃéːmbù	chin
sɔ̀ɣɔ̀	close		
sáŋà	play		

1.3.3.7 Consonant clusters

Medial non-geminate CC clusters consist of a homorganic nasal followed by a consonant. A vowel which precedes this type of cluster tends to lengthen, though not always, as in

example (23c). Stop-consonant clusters are prevalent among verb stems. Examples are illustrated in (23).

(15)

	Stem	Gloss
a)	dà:ndá	hide
b)	kà:mpè	follow
c)	dìjàŋkí	add
d)	mɔ̀:nʤí	taste

1.4 Internal phonological structure of stems and words

1.4.1 Syllables

The syllable structure of Bangime is CV, V, CGV though the latter case is analyzed as $C^{G}V$. This will be examined further in §3.5.

1.4.2 Metrical Structure

Any word which is at least bisyllabic with a bimoraic initial syllable causes a syllable with a following high tone to downstep. This analysis assumes that the phonological representation of non-automatic downstep is caused by an intervening floating L (Connell 2008). However, examples such as (24d) 'rain cloud' [ʒɔ̀m̀pó꜒ró] suggest that the issue may be tied to footing, therefore stress could be in fact upstepping the tone of a heavy syllable rather than downstepping a light one.[5] Examples are given in (24).

[5] Thanks to Stuart Davis for offering this alternative analysis.

(16)

	Example	Gloss
a)	dɔ́ɔ́ˈbɛ́	short-handled pick-hoe
b)	dúúˈgú	forest
c)	mááˈbé	grass used for making mats
d)	jɔ̀ m póˈró	rain cloud

1.5 Autosegmental features

1.5.1 Tone

1.5.1.1 Lexical tone patterns

Tone is contrastive in Bangime as shown in the minimal pairs in (25). Register tones found in the language include low and high. The only contour tones which are permitted on a single mora are low-high. Falling, (or high-low contour), and low-high-low, (or 'bell shaped'[6]), tones are disallowed except on heavy syllables, (defined as long vowels and sequences of vowel-glide combinations, particularly CW), though the latter is found primarily among greetings so is interpreted as having a pragmatic influence. Additionally, rising tones are only permitted at the left edge of the word, if the word contains at least two syllables.

(17)

Stem	Gloss	Stem	Gloss
ɥɛ̌	moon	ɥɛ̀	water
ná:	cow	nâ:	wilderness

[6] Term coined by Jeffrey Heath (p.c.)

wá:	hot	wâ:	scoop
sɛ́rɛ̀	harvest	sɛ́rɛ́	chop
bùwó	field	búwò	horse
díjà	village	díjá	eat
nà: m bɛ́	wild animal	ná: m bɛ̀	scorpion
kùwórè	war	kùwòré	stomach
dǒ	good morning	dõ:	response
tíjà	good evening	tìjã:	response

1.5.1.2 Grammatical tone patterns

1.5.1.2.1 Noun phrase

Though this analysis requires further examination, it is hypothesized that nouns are separated into tonal classes based on their surface variation within the noun phrase which reveals whether or not each noun has underlying floating tone(s) and if so, their quality: H, L, or LH melody.

3.5.1.2.1.1 Plural suffix

The tone of the plural suffix alternates, as shown in the examples (26). Note that in the first set, a high tone on the ultimate mora in the root is shifted to a low tone before a suffix which is high. In the second set, the final high toned mora remains high but the plural suffix's final vowel shifts to a low tone. The third set consists of words in which the last mora shifts from a low tone to a high tone while the suffix's final vowel is low toned. In the fourth set, a root-ultimate mora's low tone stays high while the plural suffix's ultimate mora becomes high.

(18)

	Singular	Plural	Gloss
a)	nɔ́	nɔ̀–nɛ́	mouth
	ní	nì–ndɛ́	arm
	kŭ̃	kŭ̃–ndɛ́	egg
	bùwó	bùwò–ndɛ́	field
	símé	símè–nɛ́	cliff
	gŏ:mpá	gŏ:mpà–ndɛ́	stair case
b)	tí:	tí:–nɛ̀	older sibling
	dúúˈgú	dúgú–nɛ̀	forest
	póró	póró–nɛ̀	cloud
	bìɾɔ̀ndɔ̃́	bìɾɔ̀ndɔ́–ndɛ̀	corn
c)	dégé	dégé–ndɛ̀	head
	kóróŋgò	kóróŋgó–nɛ̀	donkey
	jíríbɛ̀	jíríbɛ́–ndɛ̀	animal
	kɛ̀ɾɛ́ndɛ́kɛ̀	kɛ̀ɾɛ́ndɛ́kɛ́–ndɛ̀	snake
d)	nà:	nà:–ndɛ́	cow
	tɔ́mɛ̀	tɔ́mɛ̀–nɛ́	cowry shell
	dùwà:	dùwà:–nɛ́	tree
	kɛ̆gɛ̀ɾɛ̀	kɛ̆gɛ̀ɾɛ̀–ndɛ́	cleft lip

Though the entire analysis of these phenomena goes beyond the scope of this grammar description,[7] it should be noted that the plural suffix and the root-final morae of some nouns are analyzed as being underlyingly toneless, and acquire their root-final tones by way of the process of tone-polarity, as per current definitions of the phenomenon (Hyman 2007: 502; Yip 2002: 159), that the target TBU of a polar tone is toneless.

[7] Hantgan, A. (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).

3.5.1.2.1.2 Possessives

Among possessed nouns, shown in examples in (27) below, there is surface variation on nouns in the 1st and 3rd singular forms of either the noun, the possessor morpheme, or both, dependent on which tonal class the target noun belongs.

(19)

	Surface form of noun		1st SG	2nd SG	3rd SG
a)	gloss	'mosquito'	mǎà	àà	màà
	example	$b^w\grave{\varepsilon}$	$b^w\check{\varepsilon}$	$b^w\check{\varepsilon}$	$b^w\check{\varepsilon}$
b)	gloss	'sky'	màà	àà	màá
	example	ʒɔ̀^{n}	ʒɔ́^{n}	ʒɔ́^{n}	ʒɔ́^{n}
c)	gloss	egg	màá	àà	màá
	example	kù^n	kǔ^n	kǔ^n	kú^n

As noted above, though a full analysis is pending, however, the alternation between 1st and 3rd person singular possessive morphemes in possessed nouns appears to be caused by a floating H-toned morpheme attached to right edge of noun in these examples.[8]

3.5.1.2.1.3 Determiners

The definite marker *à* lowers the tone of a determiner phrase as shown in examples in (28).

[8] As mentioned above, other tonal classes behave differently, though this too goes beyond the scope of this grammatical description.

(20)

a)	jɛ̌mbɛ́	à	jɛ̀mbɛ̀	b)	ŋwɔ̌ːmbɛ̀	à	ŋwɔ̀ːmbɛ̀
	road	**DET**	**NOUN**		river	**DET**	**NOUN**

However, if a noun phrase contains a noun is preceded by the definite marker and is followed by the deictic marker *káẁ*, the tone(s) of the noun do not lower; it remains in its surface form as shown in the examples in (29).

(21)

	à	$b^{w}ɛ̌$	káẁ
a)	DET	leg	DEIXIS
	lit. ‘the leg here’, ‘this leg’		
b)	à	kóré	káẁ
	DET	stomach	DEIXIS
	lit. ‘the stomach there’ ‘this stomach’		
c)	à	dégè	káẁ
	DET	stomach	DEIXIS
	lit. ‘the head there’ ‘this head’		

3.5.1.2.1.4 Adjectives

Some adjectives have no tonal effect on the noun, nor do they alternate in tonal form. Examples are shown in (30).

(22)

	Gloss	Adjective	Example	Gloss	Translation
a)	heavy	mènè	ɕúlì mènè	sorghum stalk heavy	‘heavy sorghum stalk’
b)	short	dèrèbé	ɕúlì dèrèbé	sorghum stalk short	‘short sorghum stalk’
c)	tall/long	béndé	ɕúlì béndé	sorghum stalk long	‘long sorghum stalk’

One adjective in particular, ‘big’, has been found to cause tonal alternations, not only on the noun it modifies, but also displays tonal allophoney itself between HL [bɔ́r̃ɔ̀] ~ LH [bɔ̀r̃ɔ́].[9] Examples are shown in (31).

(23)

	Noun ADJ	Noun in Surface Form	Gloss
a)	b^{w}ɛ̀ bɔ̀r̃ɔ́	b^{w}ɛ̀	‘mosquito’
b)	kŭ^{n} bɔ́r̃ɔ̀	kù^{n}	‘egg’
c)	kúɥɛ̀ bɔ̀r̃ɔ́	kúɥɛ̀	‘calabash’
d)	pórò bɔ́r̃ɔ̀	pórò	‘cloud’

It is therefore hypothesized that underlying floating tones are present on certain nouns and adjectives such as ‘big’ and that the interaction of the floating tones between these nouns and adjectives cause the tonal behavior displayed above.

3.5.1.2.1.5 Colors

When a color modifies a noun, the tone appears not to change, as shown in examples in (32).

(24)

	Noun in isolation	NOUN Color	Gloss
a)	kí	kí símà	white thing
		kí pɔ̌:rɛ̀	black thing
		kí bùjɛ́	red thing

[9] This is the participle form of the adjective ‘big’ which is derived from the verb /bógò/. The word-internal vowel disharmony appears to be a type of morpheme as it is also displayed in other verb to participle adjective shifts.

b)	kùɾè:	kùɾè: símà	white dog
		kùɾè: pɔ̌:ɾè	black dog
		kùɾè: bŭjɛ́	red dog

3.5.1.2.1.6 Numerals

Numerals, like nouns, are accompanied by a floating tone(s) which causes tonal allomorphy when following a noun with a floating tone(s), shown in the examples in (33).

(25)

Noun in isolation	Numeral in Isolation	NOUN Numeral	Gloss
ɲɛ́:ɾɛ́	tĭjɛ́/tŏɾé	ɲè:rɛ̲́ tò̲ɾé	one woman
dŏndɛ́	tĭjɛ́/tŏɾé	dŏndɛ́ tó̲ɾè	one day
dŏndɛ́	ʒíndó	dŏndɛ́ ʒĭ̲ndó	two days
kùɾé–é	ʒíndó	kùɾé–é ʒì̲ndò̲	two dogs
kùɾé–é	tá:ɾú	kùɾé–é tă̲:ɾú	three dogs
símé	tá:ɾú	sì̲mè̲ tà̲:ɾú	three cliffs
bùr̃á	nɛ̀:	bùr̃á nɛ̀:	four sticks
ɥɛ̀ ŋ kɔ̀ŋɔ́w	nɛ̀:	ɥɛ̀ ŋ kɔ̀ŋɔ́w nɛ̀:	four fish
kŭ̃	nŭndí	kŭ̃ nŭndì	five eggs
kó:	nŭndí	kó: nú̲ndì	five houses
kɛ̀ɾɛ́ndɛ́kɛ̀	kɛ̌:ɾé	kɛ̀ɾɛ̀ndɛ̀kɛ̀ kɛ̌:ɾé	six snakes
ɥɛ̀ ŋ kɔ̀ŋɔ́w	kĭ:jé	ɥɛ̀ ŋ kɔ̀ŋɔ́w kĭ:jɛ̀	seven fish
gwɔ̃̌	să:gɪ̃́	gʷɔ̃̌ să:gɪ̃̀	eight men
já:mbè	tɛ́gɔ̀	já:ndɛ̀ tɛ̀gɔ́	nine children
nɛ̀jɛ́	kúɾɛ́	nɛ̀jɛ́ kúɾɛ́	ten days

3.5.1.2.1.7 Compounds

The forms in (34) illustrate the tonal change among compound nouns.

(26)

	Noun$_1$ isolation	Noun$_2$ Isolation	Noun$_3$ Isolation	NOUN Compound					Gloss
a)	pǐ:	ɥɛ̀	kɔ̀ŋɔ́w	ɥɛ̀	ŋ̀	kɔ̀ŋɔ́w	m̀	pǐ:	fish sauce
	sauce	water	meat	water	CONN	meat	CONN	sauce	
b)		nɔ́	dáɣàmɛ̀	nɔ̰̌	n	dáɣàmɛ̀			
		mouth	small	mouth	CONN	small			little mouth
c)		nɔ́	bógò	nɔ̰̌	m	bógò			
		mouth	big	mouth	CONN	big			big mouth
d)		kɛ̀ɾɛ́ndɛ́kɛ̀	dégé	kɛ̀ɾɛ̰̀ndɛ̰̀kɛ̀	ǹ	dɛ̰̌gɛ̰̀			
		snake	head	snake	CONN	head			snake head

3.5.1.2.1.8 Post-positions

(27)

		POST POSITION		
NOUN in Isolation	Gloss	in Isolation	Gloss	Example
ʤàŋà	hangar	dɛ́gɛ̀	on top/over	ʤàŋà dɛ́gɛ́
ʤàŋà	hangar	gùɾú	down/under	ʤàŋà ŋ gùɾú
nàà	cow	tɛ́gù m pɛ̌	front	nàà tɛ́gù m pɛ̌
d^{w}àà	tree	gǐ m pɛ̌	back	d^{w}àà gǐ m pɛ̌
nú	come	ìmá	here	nú ímá
kúwò	house	kɛ́ɾɛ̀	next to	kùwó ŋ kɛ́ɾɛ́
kúwò	house	kɛ̀ʊɛ́	there	kúwó ŋ kɛ̀ʊɛ́
bɛ́mbɛ́	vestibule	ŋkó	inside	bɛ́mbɛ́ ŋkò
gàrà	station	hũ̀	on	gàrà hù^{n}
tígá	proper name	pé	with	tígá pé
à	2nd SG	wɛ́	for/to	à wɛ́

To summarize, Bangime has tonal classes among nouns, based on evidence from the interaction of nouns and their constituents in the noun phrase. Floating tones only attach to

an underlyingly toneless TBU. All nouns in the language assign tone from right to left, as evidenced by the fact that all floating tones align to the right edge of the word and rising tones are allowed to the exclusion of falling tones. Tone polarity is exhibited among nouns in the plural form. This differs from simple dissimilation and fits with the most current definitions of the phenomenon (Hyman 2007: 502; Yip 2002: 159). The number of marked processes which occur in the language is high, therefore, certain markedness constraints are ranked low in the language.

1.5.1.2.2 Verb Phrase

The tone of the verb phrase has not been fully discovered yet, but a significant change occurs on object nouns, possibly signaling a floating tonal case-marker. In the examples in (36), note the tonal alternations on the object noun, [ʃi], 'food'. Also note that the tone on the verb, *díjá*, 'eat', changes for each person. The alternations in the copula *na* ~ *nd*a show further evidence of the phenomenon of consonant-following a nasal deletion noted in §2.1.1; possibly to related to the preceding syllable's moraicity:

(28)

	Verb in Isolation	**díjá**	**'eat'**
	Noun in Isolation	**ʃí**	**'meal'**
a)	n dá ʃí ǹ díjá	'I eat food.'	
b)	á ná ʃí ǹ díjà	'You (SG) eat food.'	
c)	á dá ʃì ǹ díjà	'He/she eats food.'	
d)	nè ná ʃí n dìjà	'We eat food.'	
e)	á: ná ʃí ǹ díjà	'You (PL) eat food.'	
f)	ní ná ʃì ǹ dìjá	'They eat food.'	

In addition, view in the examples in (37) of the perfective aspect. The first person singular and the third person singular, (which optionally take a segmental suffix *mí*, 1st SG or *mì*, 3rd SG), obligatorily shift the tone on either an object noun if one is present in examples a), b) and d), or on the verb in the example in c).

(29)

a)	**Noun in Isolation**		**bɔ̂n**		**'cream'**
	1st SG	nɲɛ̀	bɔ́n	ŋ	kɛ́
	3rd SG	nɲɛ̀	bɔ̀n	ŋ	kɛ́
	gloss	drink	cream	?	PERF
	translation		'I/he drank cream.'		
b)	**Noun in Isolation**		**ŋàmbárà**		**'sheep'**
	1st SG	ɥá	ŋ́ámbárà	ŋ	kɛ́
	3rd SG	ɥá	ŋàmbárá	ŋ	kɛ́
	gloss	buy	sheep	?	PERF
	translation	'I/he bought a sheep.'			
c)	**Verb in Isolation**		**pɔ́mbì**		**'calabash'**
	1st SG	pɔ́mbí	kúɥɛ̀	ŋ	kɛ́
	3rd SG	pɔ̀mbì	kúɥɛ̀	ŋ	kɛ́
	gloss	lift	calabash	?	PERF
	translation	'I/he lifted a calabash.'			
d)	**Noun in Isolation**		**tɔ́mè–è**		**'cowry shell'**
	1st SG	gúwì	tɔ́mé–è	ŋ	kɛ́
	3rd SG	gúwì	tɔ́mé–é	ŋ	kɛ́
	gloss	throw	cowry shell	?	PERF
	translation	'I/he threw a cowry shell.'			

1.5.1.3 Nasality

Nasalization may appear not only on vowels, but also on approximants, though the phonemic status is also undetermined, since in certain cases the nasalized approximant alternates with a NC cluster [nd], and all of the examples found containing [r̃] are verbs. Examples illustrating nasalization of the flap [ɾ] are shown in (38a – d) and that of the conversion of nasalized [w̃] to the cluster [mb] in (38e).

(30)

	Root	Allomorph	Gloss
a)	múr̃á	múndá	come in
b)	kɔ̀r̃ɔ́	kɔ̀ndɔ́	break (in half)
c)	púr̃á	púndá	grow (as in a plant)
d)	bɔ̀r̃ɔ́	bɔ̀ndɔ́	live
e)	tàw̃à	tàmbà	chew/bite

1.5.2 Vowel Mutation/Harmony

As shown in the §3.3.1, vowel harmony does occur within the word root, though not across most morpheme boundaries. One exception to this rule is that vowel mutation does occur with the stative clitic, with alternates between the morphemes *wɛ* (39a – d) ~ *waji* (39e – g), in accordance with either [+ATR] or [–ATR] variants found in the verb root.[10]

(31)

	Root	Stative	Gloss
a)	sìjɛ́̃	sìjɛ́̃=wɛ́	(to be) old

[10] Though note that the examples also differ slightly semantically; this is explored further in the section on aktionsarten.

b)	kʊ̀wʊ̀ndɔ́	kʊ̀wʊ̀ndɔ́ = wɛ́	(to be) dry
c)	kɔ́ndɔ́	kɔ́ndɔ́ = wɛ́	(to be) broken
d)	jáá	jáá = wɛ́	(to be) dead
e)	qúwé	qúwé = wájí	ascend
f)	súmmó	súmmó = wájí	crouch
g)	túrú	túrú = wájí	lie down

1.5.3 Reduplication

Reduplication of a verb stem changes the tone shown in examples in (40d – e).

(32)

a)	n	dă	gùndú	ŋ	gùndù
	1st SG	COP	whisper		
	'I am whispering.'				
b)	n	dă	ŋ	kàɾà	
	1st SG	COP	?	receive	
	'I am receiving.'				
c)	n	dá	káɾá	kà̲ɾà̲	
	1st SG	COP	learn		
	'I am learning.'				

2. Morpho-Syntax

2.1 Noun Phrase

2.1.1 Nominal morphology

Though the nominal morphology of Bangime is mostly isolating; the markers indicating plurality and diminutive/animacy are exceptions.

2.1.1.1 Plural

The plural suffix is *–ndɛ*. Among familial relations, parental associations have the suffix *–ru*, as do some forms of deixis. Examples are shown in (41e - j). An exception to these patterns is found in the suppletive form of the word 'child', *jă:mbɛ́ ~ jă:ndɛ́*.

(33)

	Plural	Gloss
a)	jíríbɛ́–ndɛ̀	animals
b)	dʊ̀wà–nɛ́	trees
c)	pà–nɛ́	friends
d)	tʊ̀ɾɛ́–nɛ̀	hyenas
e)	bʊ̌–ɾú	fathers
f)	ɲă:–ɾú	mothers
g)	gɔ́ɣɔ́–ɾú	father's wives (borrowing from Fulfulde)
h)	tɛ̀ndɛ̀–ɾú	grandfathers
i)	ʧì̀jɛ́–ɾú	grandmothers
j)	kà:–ɾú	near (describing plural nouns)
k)	mé:jé–ɾú	near (describing plural nouns)

2.1.1.2 Diminutive/Animate

Examples of the diminutive suffix *–mɛ* are found in (42). As shown in the example meaning 'basket' (42d), the suffix also alternates with *–jɛ*. The diminutive is also found as a frozen suffix with some nouns, most of which can be considered animate, though the /m/ is syncopated in the singular form between mid-front vowels which then coalesce in examples (43a – g), so the presence of the suffix is best viewed in the plural as shown in (43h – n).

(34)

	Stem	Gloss	Diminutive	Gloss
a)	dɔ́	paper	dɔ̀–mɛ́	small paper
b)	kùndú	chair	kùndù–mɛ́	stool
c)	kì	thing	kì–mɛ́	small thing
d)	kòrógò	basket	kòrógó–jɛ́/kô:gó–mɛ́	small basket

(35)

	Singular	Plural	Gloss
a)	bǎŋgí:mɛ́	————	name of language
b)	dɔ́rɛ́–ɛ́	dɔ́rɛ́–mɛ̀–ndɛ́	bird
c)	kǐjɛ́–ɛ́	kǐjɛ̀–mɛ̀–ndɛ́	branch, wood
d)	ɲɔ̀ŋɔ̀–mɛ́	ɲɔ̀ŋɔ̀–mɛ́–ndɛ̀	camel
e)	gɛ̀dɛ́–ɛ́	gɛ̀dɛ́–mɛ̀–ndɛ́	gecko
f)	ŋàrá–mɛ̀	————	God
g)	dʷa: m bǒndɛ̀:	dʷa: m bǒndò–mɛ̀–ndɛ́	tree top

An additional possible marker of animacy, *bɛ*, is illustrated among the examples in (44), though the only example from which the word can be parsed into separate meanings is in (44f) from *nà:* , meaning ‘wilderness’.

(36)

	Example	Gloss
a)	sí:bɛ̀	eye
b)	jìbɛ̀	human
c)	jă:mbɛ́	child
d)	tɛ̀ɾíbɛ̀	grandchild
e)	jàbórómbɛ̀	boyfriend
f)	nă:mbɛ̀	wild animal

g) jè:mbè road

2.1.1.3 Agentive

The agentive is formed in Bangime with a combination of a noun or a verb and the suffix *–tijɛ̃*, pronounced as [–ʧĩ] in examples (45a – c) or [–ʃĩ] in (45d – e).

(37)

	Root	Gloss	Agentive	Gloss
a)	dégé	head	dègè–ʧĭ̃	chief of village
b)	dě	cultivate	dè–ʧĭ̃	farmer
c)	tǒ	money	tǒ̃–ʧĭ̃	rich person
d)	děgè	cotton	děgè–ʃìjɛ̃́	weaver
e)	bùr̃á	medicine	bùr̃à–ʃíjɛ̃̀	healer

2.1.2 Derived nominals

Very few nouns could be found derived from verbs, though all verbs are given as nominal verbs or gerunds as shown in the next section; examples are shown in (46). Note that in examples (46a – c), a discernable morpheme boundary can be drawn, though in the examples (46d – f), the change is autosegmental[11]: involving a shift of consonant, vowel, or a combination of both.

(38)

	Predicate	Gloss	Noun	Gloss
a)	bùɥ–é	redden	bùɥ–ɛ́	red
b)	pɔ́ɔ́r–é	blacken	pɔ́ɔ́r–ɛ́	black

[11] Thanks to Ian Maddieson for his comments on this issue, confirming that this is not a natural phonetic change and is therefore most likely morphological.

c)	gìjè–ndí	sweep	gìjé–nɛ̀	broom
d)	símá	whiten	ʃíjɔ^{n}	white
e)	bògó	become big	bɔ̀ɾ̃ó ~ bɔ́ɾ̃ò	big
f)	bɔ̀ɾ̃ɔ́	alive	bɔ̀ndɔ́	living

4.1.1 Verbal Nouns

Verbs when elicited in their infinitival form are verbal nouns so they are discussed in the section on verbs.

2.1.3 Compounds

Nouns (and certain verbs) may be connected with a homorganic nasal segment linking the two elements. Examples are shown in (46).

(39)

	Root	Gloss	Root	Gloss	Compound	Gloss
a)	ní:	arm	tɛ́	front	nì: n̄ tɛ́	palm of hand
b)	ʃùwɛ́	chicken	bíjɛ̀	baby	ʃùwɛ́ m̄ bíjɛ̀	chic
c)	ʃùwɛ́	chicken	ɲɛ́:ɾɛ̀	female	ʃùwɛ́ ɲ̄ ɲɛ́:ɾɛ̀	hen
d)	kɪ̌jɛ́:	branch	gómbé	hole	kɪ̌jɛ́: ŋ̄ gómbé	hole in tree

2.1.3.1 Compounds with ‘baby’

In Bangime, the combination of X + N (conjoining homorganic nasal) + *bɪjɛ*, ‘baby’, is used for ‘fruit of X’, and similar terms, where X is a tree or other plant species. This is exemplified in (47a) ‘small item associated with X’, where X is a (relatively large)

implement. The example in (47b), illustrates the usage of baby with a compound other than 'fruit'.

(40)

	Root	Gloss	Compound	Gloss
a)	màŋgórò	mango	màŋgórò m bìjɛ́	mango fruit
b)	màlpá	rifle (Ful. borrowing)	màlpá m bìjɛ́	bullet

2.1.4 Compounds with 'man' and 'woman'

Compounds using 'man' and 'woman' to indicate 'male' and 'female' after animal terms are shown in (49). Note that the example in (49c) for 'male chicken' is irregular in its usage of 'male'.

(41)

	Root	Gloss	Compound	Gloss
a)	ŋàmbárà	sheep	ŋàmbá ŋ gʊ̀wɔ̃	ram
			ŋàmbá ɲ ɲɛ̀:ɾɛ̀	ewe
b)	bɪ̂:	goat	bɪ̂: ŋ gʊ̀wɔ̃	billy goat
			bɪ́: ɲ ɲɛ̀:ɾɛ̀	nanny goat
c)	ʃìɥɛ́	chicken	ʃìɥɛ̀ ŋ kǎŋgɛ̀	rooster
			ʃìɥɛ̀ ɲ ɲɛ̌:ɾɛ̀	hen

2.2 Modifiers

2.2.1 Adjectives

Most adjectives in Bangime are derived from verbs in their stative form, (clitic *wɛ ~ waji*). Noted exceptions are colors noted above in examples (46c – e). Additional examples are provided in (50).

(42)

	Adjective	Gloss
a)	bìjʊ́ = wɛ́	ripe, ready
b)	kʷùndɔ́ = wɛ́	dry
c)	tèŋɔ́ = wájí	wide
d)	pégé = wájí	light (as in weight)

Adjectives follow the noun they modify. Adjectives which are formed with the stative morpheme are translated as both predicate and modified forms, though other adjectives are formed with a copula *kaw* as in example (51e). Examples are illustrated in (51).

(43)

a) dùwà: m pùwɛ̋ gújékàɾà
tree CONN leaf green
'a green tree leaf'

b) à gùwɔ̋ sìjɛ̋ = wɛ̀
DET man old, worn out = STAT
'the old man/the man is old/worn out'

c) ɲɛ́: bɔ̀ɣɔ̀ dá dò nà: m bɛ́–ndɛ̀
woman old IMPERF pass wilderness CONN animal–PL
'an old woman passes some wild animals.'

d) à ɲɛ̀:ɾɛ́ bòr̃ù
DET woman big–PRED
'the big woman'

e)	à	ɲè:rɛ́	kàw	bòr̃ù
	DET	woman	COP	big–PRED
	'the woman is big'			

2.2.2 Determiners

The determiner *a* marks definiteness, while the indefinite is unmarked. The forms *kaw*, *ŋ kaw*, and *ka:–ru*, *ŋ ka: –ru*, mark the diexis forms 'this', 'that', 'these', and 'those' respectively. These may be used in combination to specify both definite and diexis as shown in the examples in (52).

(44)

a)	à	bùwó	kăw	
	DET	field	this	
	'the nearby field'			
b)	à	bùwó	ŋ	kăw
	DET	field		that
	'the far away field'			
c)	à	bùwò–ndɛ́	ká:–rù	
	DET	fields	these	
	'these nearby fields'			
d)	à	bùwò–ndɛ́	ŋ	ká:–rù
	DET	fields		those
	'those far away fields'			

2.2.3 Quantifiers

Examples of quantifiers are shown in (53). Note that examples with the asterisk indicate ungrammatical phrases in the language.

(45)

	Quantifier	Gloss	Example	Gloss	Example	Gloss
a)	pé:ɾê	many	kí pé:ɾê	many things	nɔ̀ɾè pé:ɾé	many bones
b)	pɛ̃́	a lot	*kí pɛ̃́	*a lot of things	nɔ̀ɾè pɛ̃́	a lot of bones
c)	pɛ̀̃	a whole lot				
d)	dàɣá–mɛ́	little, few	nɔ́ dáɣà–mɛ̀	little mouth		
		very small,		few (pieces of)		
e)	kìɾá–mɛ́	few	dɔ̂ kìɾá–mɛ́	paper		
f)	tá:	half	mă: tá:	my half		
				thing which is		
g)	pɑ̃́	all	kì pɑ̃́	full	ndɛ̀: pɑ̃́	everyone
h)	dɛ̃́	full	tòpàà dɛ̃́	full goat sack		
i)	bì:	full	m bì:	I am full		

2.2.4 Numerals

Numbers also follow the noun they modify. Ordinal numbers one through ten are listed in (54) and twenty through one thousand are listed in (55). Numbers above ten are formed with a combination of numbers one through ten plus [kɔ̀ndɔ̀gɔ́], for example, [kɔ̀ndɔ̀gɔ́ tɔ̀ɾé] for ‘eleven’.

(46)

Numeral	Gloss
tĭjɛ́/tŏɾé	one
ʒíndó	two

tá:ɾú	three
nɛ̀:	four
nŭndí	five
kĕ:ɾé	six
kĭ:jé	seven
să:gǐ́	eight
tɛ́gɔ̀	nine
kʊ́ɾɛ́	ten

(47)

Number	Gloss
tă̋:wá	twenty
tă̋:wá nà bìjɛ́ kʊ̀ɾɛ́	thirty
dɛ̀vɛ́ (Fulfulde borrowing)	forty
dɛ̀vɛ́ nà bìjɛ́ kʊ̀ɾɛ́	fifty
tă̋:wá sĭgó	sixty
tă̋:wá sĭgó nà bìjɛ́ kʊ̀ɾɛ́	seventy
ʒŏ:ɾò	eighty
ʒŏ:ɾò nà bìjɛ́ kʊ̀ɾɛ́	ninety
tɛ̀:mɛ̀dɛ́ɾɛ́ (Fulfulde borrowing)	hundred
mʊ̀jú	thousand

2.2.4.1 Currency

Numerals for currency are formed with the Fulfulde borrowing, [mbʊ̀:dú], meaning ‘coin’ or ‘money’, and the numeral following it. When currency is discussed in languages other than French, such as Bangime, the numeral must be multiplied by five to derive the corresponding CFA amount. Examples are shown in (56).

(48)

Currency	Gloss	Translation
mbù:dú	one franc CFA	five francs CFA
mbù:dú jǐndó	two francs CFA	ten francs CFA
mbù:dú nǔndì	five francs CFA	twenty-five francs CFA
mbù:dú kùɾé	ten francs CFA	fifty francs CFA
mbù:dú ǹ tǎ̃:wá	twenty francs CFA	one hundred francs CFA
mbù:dú tɛ̀:mèdéɾé jǐndó	two hundred francs CFA	one thousand francs CFA

2.2.4.2 'First' and 'last'

The table in (57) shows examples of 'first' and 'last'.

(49)

Number	Gloss	Example	Translation
pǎ̃ pǎ̃ tìjɛ̃́	first	bì nó pǎ̃ pǎ̃ tìjɛ̃́	'first child'
gí m pé n dáẁ	last	bì nó gí m pé n dáẁ	'last child'

2.3 Pronominals

2.3.1 Person pronouns

Personal pronouns are listed in isolation in (58). First and third person singular are optional in the perfective aspect, with a tonal change represented on either the verb or the object noun, and alternate between a homorganic nasal in the present and *mi*, if segmentally marked, in the perfective.

(50)

a) 1st SG NOM mí 1st PL NOM ndɛ̌

	2nd SG NOM	ă	2nd PL NOM	ă:w
	3rd SG NOM			
	Animate/Inanimate	mì/kàw	3rd PL NOM	nǐ
b)	1st SG ACC	ŋ̀ wájɛ̀	1st PL ACC	ndɛ̀ wàjɛ̌
	2nd SG ACC	à wájɛ́	2nd PL ACC	ă: wájɛ́
	3rd SG ACC	ŋ̀ wàjɛ́	3rd PL ACC	ní ŋ wàjɛ́

Examples of pronouns which are case marked as being either nominal or accusative/dative as shown in the examples in (59) in 1. and 2. respectively. Nominal case is marked with a null suffix and accusative and dative are both marked by the marker *wajɛ*.[12]

(51)

1. Nominal/Accusative

a)	n	dɛ̌g–ú	à wájɛ́	
	1st SING–NOM	hit–PERF	2nd SING ACC	
	'I hit you.'			
b)	à	dɛ̀g–ú	ŋ	wájɛ̀
	2nd SING–NOM	hit–PERF	1st SING ACC	
	'You hit me.'			
c)	Ø	dɛ̀g–ú	ŋ	wájɛ́
	3rd SING–NOM	hit–PERF	3rd SING ACC	
	'He/she hit him/her.'			
d)	n dɛ́	dɛ̀g–ú	ă: wájɛ́	
	1st PL–NOM	hit–PERF	2nd SING ACC	
	'We hit you (pl).'			
e)	ă:	dɛ̀g–ú	ǹ	dɛ̀ wàjɛ̀
	2nd PL–NOM	hit–PERF	1st PL ACC	
	'You (pl) hit us.'			

[12] Stefan listed this in his notebook as being the post-position *wɛ*, meaning 'for/to'. Though it possible that this is the same morpheme, at least in these examples, it is not being used as the post-position 'for/to', though it is in the examples in (2).

f) n nì dèg–ú ŋ wájɛ́
3rd PL–NOM hit–PERF 3rd SING ACC
'They hit them.'

2. Nominal/Dative[13]

a) à tèr–ù kɛ̌ ŋ wájè
2nd SING NOM show–PERF thing 1st SING ACC
'You showed me something to me.'

b) n tɛ̌r–ú kɛ̌ à wájɛ́
1sg SING NOM show–PERF thing 2nd SING ACC
'I showed something to you.'

c) n tèr–ú kɛ̌ ŋ̀ wájɛ́
1sg SING NOM show–PERF thing 3rd SING ACC
'I showed something to him/her.'

d) à tèr–ù kɛ̌ n dɛ̀ wàjɛ̀
2nd SING NOM show–PERF thing 1st PL ACC
'You showed something to us.'

e) n tèr–ú kɛ̌ ă: wájɛ́
1sg SING NOM show–PERF thing 2nd PL ACC
'I showed something to you (pl).'

f) n tèr–ú kɛ̌ n nì ŋ wájɛ́
1sg SING NOM show–PERF thing 3nd PL ACC
'I showed something to them.'

2.3.2 Other

The use of an anaphoric pronoun, *kètɛ́*, meaning other, referring to someone or something already mentioned, is illustrated in (60).

[13] Examples from (Elders 2006: 2)

(52)

à	kɛ̀tɛ́	mà:	ní:	ŋkó
DET	other	3rd SG POSS	hand	PP (inside)

'inside his/her other hand'

2.3.3 Possessives

Plural possessives are formed by a combination of the nominative pronouns and the marker, *ma:*, examples of the possessive pronouns in isolation are shown in (61).

(53)

1st SG POSS	mă:	1st PL POSS	ndɛ̀ mă:
2nd SG POSS	ă:	2nd PL POSS	à: mă:
3rd SG POSS	mà:	3rd PL POSS	nì mă:

Possessive pronouns precede the noun they modify as shown in (62).

(54)

POSS NOUN	Gloss	POSS NOUN	Gloss
mă: nǹì	my name	ndɛ̀ mă: nǹì	our names
ă: nǹì	your (SG) name	à: mă: nǹì	your (PL) names
mà: nǹì	his/her name	nì mă: nǹì	their names

A set of genitive pronouns can be formed by a combination of the nominal pronoun and the genitive marker *mɛ*, examples are shown in (63).

(55)

a) á bî: mɛ̌ à bǐ: ndɛ̀ mɛ̌

	DET	goat	1st SING POSS		DET	goat	1st PL POSS
	‘The goat of mine.’				‘The goat of ours.’		
b)	á	bî:	à mě		à	bǐ:	à: mè
	DET	goat	2nd SING POSS		DET	goat	2nd PL POSS
	‘The goat of yours (SG).’				‘The goat of yours (PL).’		
c)	á	bî:	mè		à	bǐ:	nì mě
	DET	goat	2nd SING POSS		DET	goat	3rd PL POSS
	‘The goat of his/hers.’				‘The goat of theirs.’		

2.4 Organization of NP constituents

The examples provided in (64) indicate the grammatical and ungrammatical organization of constituents in the noun phrase.

(56)

a)	mă:	kúɥé	ɥéɥí	jìndó	mènέ
	1st SG POSS	calabash	red	two	heavy
	‘my red two heavy calabashes’				
b)	mă:	kúɥé	jìndó	ɥéɥí	mènέ
	1st SG POSS	calabash	two	red	heavy
	‘my two red heavy calabashes’				
c)	*mă:	kúɥé	jìndó	mènέ	ɥéɥí
	1st SG POSS	calabash	two	heavy	red
	‘My two heavy red calabashes’				
d)	*mă:	kúɥé	ɥéɥí	mènέ	jìndó
	1st SG POSS	calabash	red	heavy	two
	‘My red heavy two calabashes’				
e)	*mă:	kúɥé	mènέ	jìndó	ɥéɥí
	1st SG POSS	calabash	heavy	two	red
	‘My heavy two red calabashes’				

2.5 NP coordination

The following examples, in (65), are conjunctions used to coordinate constituents within the Noun Phrase.

(57)

	Conjunction	Gloss	Example				
a)	ná/náw	and	gìrìmɛ̀	náẁ		tù:rɛ́	
			rabbit	CONN		hyenna	
			‘rabbit and hyenna’				
b)	dà	and	tàŋkó	dà	búúsì	dà	lèèmùrù sííndù
			eggplant	CONN	cucumber	CONN	lemon
			‘eggplant and cucumber and lemon’				
b)	Ø	and	dégé	bór̃ó		kòrè	bór̃ó
			head	big		stomach	big
			‘(the people with a) big head and (a) big stomach’				
c)	pā́	all	ŋ	kí:	pā́	ʤɛ̀: púrá–nɛ̀	
			?	thing	CONN	lazy person–PL	
			‘all the lazy people’				
d)	tìgɛ́	also	jààrà	tìgɛ́			
			antelope	CONN			
			‘also antelope’				

2.6 Disjunction

Examples of disjunction of clauses are illustrated in (66).

(58)

a)	ɲá	bójé	há	gàbù	bè	míndá
	mother	see–NEG	INF	hippo	NEG–PERF	swallow

‘Was his mother not swallowed by the hippo?’

b) à ɲá mì màà à ɲá bé á pé
DET mother 1st SG 1st SG POSS DET mother NEG 2nd SG PP
‘The mother (said), am I not the mother (who is) with you?’

2.7 Adpositions

A careful study of Bangime adpositions shows that though some adpositions can be translated into simple meanings that seem to match senses found in Indo-European languages such as English, when these same adpositions are actually used in every-day constructions, the situation is much more complex. Therefore, the following examples show common usages and §5 on semantics explores the lexicalization patterns and figure and ground relations in Bangime adpositional phrases in an effort to clarify what meanings are actually encoded in the language.

2.7.1 Locatives

The following locatives are found in Bangime, shown in (67).

(59)

	Adverb	Gloss	Example		
a)	ŋ̀ wǐ:	there	nà	dá	ŋ̀ wǐ:
			wilderness	IMPERF	there
			‘wilderness is there/exists.’		
b)	kɛ́ʊ́	there (far)			
c)	ìmá	here			

2.7.2 Locative, allative, and ablative functions

In the various locational postpositions described below, there is no distinction between static locative ('in', 'at', etc.), allative ('to'), and ablative ('from'). Directionality is indicated by verbs like 'go in' and 'go out', which are commonly chained with other verbs. The postpositions meaning 'in' and 'on' are shown in examples in (68) as both being translated as 'to', while in (69) these same postpositions are translated as 'on'.

(60)

a) nè kó ŋ wórè à gàrà hű́
1st PL CONJ ? go DET station on
'We went to the gare.'

b) nè kó wórè à kó ˡŋkó
1st PL CONJ go DET house in
'We went to the house.'

Figure and ground and surface and container relationships in Bangime are expressed differently than they are in English. Examples of the uses of 'in' and 'on' are shown in (69).

(61)

a) ǹ dá wùré ŋ qě ŋ gìjá mă: mɔ̌: hű̃
1st SG 3rd SG
NOM COP karite ? anoint ? clean POSS wound on
'I anoint the karite butter on his wound.'

b) tŭmbé à qè wŏréˡ–ŋké à gùqé ŋkó
spill DET water go–PERF DET ground inside
'He spilled the water on the ground.'

c) ǹ à rádàʒò táŋà ɲ ʃí hǜ
1st SG DET radio listen on
'I am listening to the radio.'

d) mă: bʊ̀jɛ́ m pʊ̌ɾú à sìmé hǜ
1st SG POSS foot ? stub DET rock on
'I stubbed my foot on the rock.'

e) kó ɥɛ̌ à dʷá hǜ
house ascend DET tree on
'I am climbing the tree.'

2.7.3 Locative with place names

A locative postposition is not used with place names as shown in the examples in (70).

(62)

a) n tʷà Sámbɛ́ɾɛ̀ ŋkɛ́
1st SING arrive Sambere PERF
'I arrived at Sambere.'

b) n tʷà kʊ̋ ŋkò ŋkɛ́
1st SING arrive market inside PERF
'I arrived at (the) market.'

2.7.4 Spatial

Other examples of positional indicators among postpositions are shown in (71).

(63)

	POST POSITION	Gloss	Example	
a)	kɛ́ɾɛ̀	next to	mă: 1st SING POSS 'next to me'	kɛ́ɾɛ̀ next to

b)	míná	near/side	há	ʃúɥɛ́	à	pàŋgùndà	má:		míná
			INF	descend	DET	Neem	3rd SING POSS		near
			‘Descend near the Neem tree.’						
c)	má	by	sà:	dô		má	kárɛ́fʊ̀r	kí:	pã̀
			if	pass		by	junction	thing	all
			‘When you pass by the junction…’						
d)	tɛ́gʊ̀ m pɛ̌	in front							
e)	gĭ m pɛ̌	back/behind							
f)	dɛ́gɛ̂	on top/over							
g)	gùrú	down/under							
f)	tùmbárí	between							

2.7.5 Temporal

The examples in (72) illustrates temporal references such as until, (72a), while, (72b), and during (72c). Though there is a separate word for ‘until’, ‘while’ and ‘during’ are both marked with a specific verb[14] which encodes motion as well as temporal reference.

(64)

a)	nɛ̀	kó	tú:rú	hà	ɥɛ̀	bìyɛ́	hʊ̃̀	
	1st PL	PST	lie	until	descend	morning	on	
	‘We lay down until late morning.’							
b)	n	dá	à	mòbílí	n	dɛ́ŋgɔ̀	màá	pã́	kóndò
	1st SG	IMPERF	DET	car	?	wait	1st SG POSS	friend	come–while
	‘While waiting for the bus, my friend came.’								
c)	n	dá	pɔ̃̀	dìjá	bɔ̀	kóndò			
	1st SG	IMPERF	meal	eat	father	come–during			
	‘Father visited me during the meal.’								

[14] Many verbs appear with the ending *ndo*, therefore an alternative explanation is provided in the section on verbs.

2.7.6 Dative

As mentioned in section 4.3.1, the dative construction may be formed as a combination of a noun phrase and the postposition *wɛ*, meaning 'for/to'. Further examples are shown in (73).

(65)

a)	n	dá	kɛ́	nɑ̃́w	à	wɛ̀
	1st SG NOM PERF	COP	thing	give–PERF	2nd SG	for
	'I give you something to you.'					
b)	à	tèr–ʊ̀	kɛ̌	ŋ	wájɛ̀	
	2nd SING	show–PERF	thing	?1st SG	for	
	'You something showed to me.'					

2.7.7 Instrumental

The following examples in (74) illustrate that the applicative instrumental postposition, *ŋko* can be translated as either 'inside' or 'with', while a separate post-position, *wɛ*, also specifically indicates an comitative meaning.

(66)

a)	n	dá	ɲògúndó	bìkí	ŋkò	
	1st SG NOM	COP	write	pen	inside/with	
	'I am writing with a pen.'					
b)	n	dá	wòré	Kárúgè	móbìlì	ŋkò
	1st SG NOM	COP	write	Kargue	car	inside
	'I am going to Kargué inside a car.'					
c)	n	dá	dɛ́ndɛ̀	à	pé	
	1st SG NOM	COP	cultivate	2nd SG	with	
	'I am cultivating with you'					

d)	n	dá	déndɛ̀	dàmá	ŋkò
	1st SG NOM	COP	cultivate	hoe	inside/with
	'I cultivating with a hoe.'				

2.8 Verb Phrase/Aktionsarten

2.8.1 Verbal stem

Verbal stems in Bangime fall into classes though the correlation among the classes is so far undetermined, though it appears to be a combination of phonological shape and semantic category. The verb class of the root determines its output in the perfective form, as will be shown below in section 4.8.3, inflection.

2.8.2 Verbal derivation

Another indication that Bangime should not have been classified as a Dogon language is its isolating morphology among verb stems. The only somewhat productive suffixal derivations for verbs are the causative and reversive.

2.8.2.1 Causative

Examples of the causative suffix *–nda* are given in (75).

(67)

a)	n	dă	n	dìjá		n	dá	n	dìjà–ndá
	1st SING	IMPERF	?	eat		1st SING	IMPERF	?	eat–CAUS
		'I eat.'					'I feed.'		
b)	n	dá	ŋ	kárá		n	dă	ŋ	kárá–ndá
	1st SING	IMPERF	?	learn		1st SING	IMPERF	?	learn–CAUS

‘I learn.’	‘I teach.’

2.8.2.2 Reversive

There is some evidence of consonant-initial mutation causing a change in meaning of a verb to indicate doing the opposite or reverse of an action, though the process no longer seems to be productive in the language. Examples are illustrated in (76).

(68)

Stem	Gloss	Stem	Gloss
tíjé	sit	ʒíjɛ́	rise
mù:ndá	put on pants	bù:ndá	take off pants
ɲàw	take	nàw	give
tì:ndá	start	dì:ndá	stop
mú:ndà	knot	pí:ndò	untie, unravel

2.8.3 Verbal Inflection

Verbs are inflected for [+ATR], aspect, and mood, (TAM), in a variety of ways, but the only form which shows alternations in the verbal root itself is the perfective aspect, described in section 4.8.3.3.

2.8.3.1 Imperatives and Hortatives

Imperatives are formed with the verb stem and a variable subject marker; an object, (if present), follows the verb. Hortatives are formed similarly but with a subject marker. The negative imperative is formed with the pro-clitic *ma*. Examples are shown in (77).

(69)

a)	Imperative	dìjá ʃì	áw dɛ̀gɛ́ à jà:mbɛ̀
		'you (SG) eat food'	'you (PL) hit the child'
b)	Imperative Negative	mà n díjá.	
		'you (SG) don't eat'	
c)	Hortative	à ná díjá	
		'let's eat'	

2.8.3.2 Imperfective

The imperfective is formed with the marker *da* which also alternates with *na* as shown in (78).

(70)

a)	n	dá	ʃí	n	díjá
	1st SING	IMPERF	food	?	eat
	"I am eating food."				
b)	á	nà	ʃí	n	díjà
	2nd SING	IMPERF	food	?	eat
	"You are eating food."				

2.8.3.3 Perfective

As noted above, verb stems emerge in various classes of conjugation in the perfective form. The perfective is formed in three ways: the stem-final vowel is replaced by *–u* and the clitic *–ŋkɛ* is added, shown in (79a), the stem–final vowel is replaced by *–i* and the clitic *–ŋkɛ* is added, illustrated in (79b), or the stem-final vowel undergoes no change and the and the clitic *–ŋkɛ* is added, as in the examples in (79c).

(71)

a) Vowel u + ŋkɛ

Verb	Gloss	Perfective
táɣá	agree	tág–ú
sìgá	ask	sìg–ú
dègè	hit	dèg–ù
pɔ̀rɔ̀	milk	pɔ̀r–ù
nà:rá	plaster	nà:r–ú
sáŋà	play	sáŋ–ù
pè:ndɛ́	shatter	pè:nd–ú

b) Vowel i + ŋkɛ

k^{w}á:ndà	k^{w}á:nd–ì	beg
ké:ndà	ké:nd–ì	ignite
gú:mbà	gú:mb–ì	release
pɔ́ndà	pɔnd–ì	mix
ɲɛ́ndà	ɲɛ́nd–ì	place cooking pot onto fire

c) No vowel change + ŋkɛ

kí:jà	answer
pìjú	blow
ŋíjɛ́	drink
sì:wò	grill
ʒúmbárá	pull
ʃì	sew

Also, note in the examples in (80) that some elicited phrases and sentences from texts were translated in the perfective form though the clitic was not used, and the word order shifts. This deserves further investigation since the tone plays an important factor as discussed in section 4.5.3.1 on grammatical tone patterns.

(72)

a)	mí		pɔ̃:	dìʒá
	1st SING		lunch	eat
	'I ate lunch.'			
b)	n	dí:	pɔ̃:	ŋkɛ́
	1st SING	eat	lunch	PERF
	'I ate lunch.'			

2.8.3.4 Stative

The stative is formed with the suffix *wɛ* or its allomorph, *wajɛ* as shown in examples in (81).

(73)

a)	mă:	să:	ŋ	kù–ɥɛ́	dɛ̆–wɛ́
	1st SING POSS	bag	?	?–water	full–STAT
	'My water bag is full.'				
b)	à	ná:	kí:–ndɛ̀	nì:	bíré–wáj
	DET	wilderness	thing–PL	3rd PL	leave–PASS
	'The wild things left.'				

Note in the examples in (82) that a verb root's meaning can be derived as either stative or active depending on the use of *ŋkɛ*/*wɛ*.

(74)

Stem	Gloss	Stem	Gloss
jɛ̆:ndɔ = ŋkɛ́	call s.o.	jɛ̆:ndɔ = wɛ́	be called

pérɛ̀ = ŋkɛ́	tear something	pérɛ̀ = wɛ́	be torn

However, note in the examples in (83), that the case is not always clear cut between stative and active verb forms. The examples in (83a – c) show verbs which, like the ones in (82), may take either ending. Following, examples (83d – f), illustrate verbs which may only take the perfective meaning. Next are examples in (83g – l) which may only take the stative meaning, not the active perfective one.

(75)

	Gloss	VERB in isolation	Perfective	Stative
a)	carry	kùmbɔ́rɔ́	kúmbɔ́ ŋkɛ̀	kúmbɔ́ wɛ̀
b)	heal	dí	dí ŋkɛ́	dí wájí
c)	wake up	tìŋgò	tìŋgò ŋkɛ́	tìŋgò wájí
d)	eat	dìjá	dìjá ŋkɛ́	*dìjá wɛ̀
e)	rekindle	(n da bire) téénˈdé	tééndé ŋkɛ́	*teende wɛ̀
f)	wash	túrà mì	túrà mì ŋkɛ́	*tura mi wɛ
g)	break	kɔ́ndɔ́	*kɔ́ndɔ́ ŋkɛ́	kɔ́ndɔ́ wɛ̀
h)	die	jàá	*jáá ŋkɛ́	jáá wɛ̀
i)	go	wòrè	*wòrè ŋkɛ́	wòrè wájí
j)	live	bɔ́ndɔ́	*bɔ́ ŋkɛ́	bɔ́ wɛ̀
k)	sit	tírí	*tiri ŋkɛ	tíjɛ̀ wɛ́
l)	take	ʃijɛ	*ʃijɛ ŋkɛ	ʃijɛ wɛ

The examples in (84) are of further interest in that they show that some verbs change meaning when put into the perfective or stative form.

(76)

	Verb Phrase	Translation
a)	mìró mì ŋkɛ́	'sink (for someone who can swim)'
	mìró wáyí	'sink (for someone who cannot swim)'
b)	à wàrì bú wɛ́	'the work was finished'
	à wàrì búw̃ɛ́ ŋkɛ́	'I finished the work'
c)	bɔ́ wɛ́	'I lived'
	*bɔ́ ŋkɛ́	Impermissible - one cannot die and live again, unless implying that one had been re-incarnated.
d)	jáá wɛ́	'I died'
	*jáá ŋkɛ́	Impermissible - implies one may die more than once
e)	dí wájí	'I am healed'
	dí ŋkɛ́/ à dí à hù^{n} à bìrè ŋkɛ́	'stay somewhere a long time/put out a fire'
f)	ʃwì díjá ŋkɛ́	'the food was eaten (and it's finished)'
	ʃwì n díjá wɛ́	✓'the food was cooled', *'the food was eaten'

2.8.3.5 Past

The past tense is formed with a preverbal marker *ko*. Note in the examples in (85), an exerpt from a text, that the subject is repeated in (85a), the past tense sentence and the next sentence follows in (85b), with a repetition of the same idea, yet in the imperfective.

(77)

a)	nà:	m	bɛ̀–ndɛ́	nì:	ŋ	kó	n	dógó	bẃò
	wilderness	CONN	ANIM–PL	3rd PL	?	PST	?	halve	field
	'The wild animals, they made a new field.' Lit. 'The wild animals, they halved their new field.'								
b)	n	dá	nì:	màà	bẃò	n	dógò		
	1st SG	IMPERF	3rd PL	POSS	field	?	halve		
	'(I make), they make their new field.'								

Another way to form the past tense is to reduplicate a verb. Examples of this usage are illustrated in (86).

(78)

	Verb	Gloss	Reduplicated	Translation
a)	gùjú	throw	gùjù ŋ gújú à sìmè wòrè	'I threw a rock.'
b)	sàwá	cave in	sàwá n sáwá	'It caved in.'

2.8.3.6 Future

The future is marked in at least three ways; the markers *naw*, (87a – b), *na*, and a possible floating tonal marker *ja* or *a*, (87e – f), though this alternating morpheme may be related to phonological hiatus resolution. Examples are shown in (87).

(79)

a)	ndɛ̀	màrà náw					
	1st PL	build FUT					
	'We will build.'						
b)	n	tìŋàndù	náw				
	1st SG	wake up	FUT				
	'I will wake (him) up.'						
c)	kŏ	ná	má				
	house	FUT	build				
	'I will build a house.'						
d)	nì:	já	kɔ̀r̃ɔ́	nì:	mà:	kʷá	tù:ré
	3rd PL	FUT	break	3rd PL	3rd SING POSS	neck	hyenna
	'They will break their? hyena's neck.'						
e)	bóró	kùwó	ná	màrà			
	tomorrow	house	FUT	build			

‘Tomorrow, I will build a house.’

In addition, the future may be formed with the usage of the verb ‘go’ *wore* or ‘come’ *ndo* with the imperfective morpheme *da*. Examples are shown in (88). Note how the example in (88b) differs from that in (72b) above in that *ndo* appears without a verbal host; therefore it is interpreted as an unbound morpheme, translated as ‘come’ but again with a temporal and a motion interpretation.

(80)

a)	nì:	n	dá	wòrè	kɛ́	m	bù:ndá
	3rd PL	?	IMPERF	go	thing	?	take out
	‘They go to take something out.’[15]						
b)	n	dá		ndò	kǒ	mà	
	1st SG	IMPERF		come	house	build	
	‘I come build a house.’						

2.8.3.7 Negative

A phrase is negated with the marker *be*, which precedes the verb stem. Segmentally, the forms for the negative imperfective and the perfective are the same; there is solely a tonal difference on the verb to distinguish these forms as shown in the examples in (89).

(81)

a)	m	bé	ɲógùndó	b)	m	bé	ɲógùndò
	1st SG	NEG	write		1st SG	NEG	write.PERF
	‘I am not writing.’				‘I did not write.’		

[15] These examples are purposely not translated with an infinitival meaning because no infinitival morpheme is present.

c)	à	bé	ɲógùndó	d)	à	bé	ɲógùndò
	2nd SG	NEG	write		2nd SG	NEG	write.PERF
	'You are not writing.'				'You did not write.'		
e)	mì	bé	ɲógùndó	f)	mì	bé	ɲógùndò
	3rd SG	NEG	write		3rd SG	NEG	write.PERF
	'He is not writing.'				'He did not write.'		
g)	ndɛ̀	bé	ɲógùndó	h)	ndɛ̀	bé	ɲógùndò
	1st PL	NEG	write		1st PL	NEG	write.PERF
	'We are not writing.'				'We did not write.'		
i)	ă:	bé	ɲógùndó	j)	ă:	bé	ɲógùndò
	2nd PL	NEG	write		2nd PL	NEG	write.PERF
	'You (PL) are not writing.'				'You (PL) did not write.'		
k)	nì:	bé	ɲógùndó	l)	nì:	bé	ɲógùndò
	3rd PL	NEG	write		3rd PL	NEG	write.PERF
	'They are not writing.'				'They did not write.'		

2.8.3.8 Infinitive

The infinitive of a verb is formed with the marker *hã̀*, which precedes the verbal stem, though it is not used in all verb-chaining forms as shown below in (91). Examples are illustrated in (90). Note in example a) that the verb stem is formed with the final high vowel, the perfective form, though it is translated as being tenseless.

(82)

a)	hã́	pú:ndì					
	INF	pound					
	'to pound'						
b)	mă:	hã̀	wóɾé	kṹ			
	want–1st SG	INF	go	market			
	'I want to go to the market.'						
c)	gìrìmɛ́	kó	nìŋá	nɛ̀rɛ̀	tù:ɾɛ́	hã́	tígìndú
	rabbit	CONJ	say	uncle	hyena	INF	spill

‘rabbit said to his uncle hyena to spill’

2.8.3.9 Chaining Verbs

Verbs are chained together with the marker *a*, which differs from the use of the infinitival marker above. Examples are shown in (91).

(83)

a) kó nó wòrè á jɛ́: ndó màà dòó–ndɛ̀
PST-1st SG come go CHAIN call TAM 3rd SG POSS relative–PL
‘I went and (to) call his relatives.’

b) nì: kó ŋ wòrè ŋ kárá á pàŋgá dàmbá tú:ré m bìjɛ́
3rd PL PST ? go ? find CHAIN granary a lot hyena CONN excrement
‘They went and found a lot of the hyena’s droppings in the granary.’

2.9 Organization of VP constituents

The ordering of constituents in the verb phrase depends on the tense/aspect/mood of the phrase, as shown in (92).

(84)

IMPERATIVE	S	V	O	
	àɔ́	dègè	à jà:mbɛ́	
	‘You (PL) hit the child.’			
IMPERFECTIVE	S	AUX	O	V
	àɔ́	dá	à jà:mbɛ́	dègè
	‘You (PL) are hitting the child.’			
PERFECTIVE	S	V	O	
	àɔ́	dègú	à jà:mbɛ́	
	‘You (PL) hit the child.’			

$FUTURE_1$		O–S		V			
	bòrò	ŋámbà–1st SG		ŋ	ɥă:		
	‘Tomorrow, I will buy a sheep.’						
$FUTURE_2$	S	AUX	V	S	O		
	nì:	já	kɔ̀ɾ̃ɔ́	nì:	mà:	k^{w}á	tù:ɾé
	‘They will break the hyena’s neck.’						

2.10 Interrogation

Question words are listed with examples in (93).

(85)

	Gloss	Question	Example	Translation
a)	who?	já	ŋ káẁ jă?	who is that?
b)	what?	né sɨ̀	né sɨ̀ jìɾí mɨ̀?	what happened?
c)	why?	n né sáẁ	né jìɾó káw à jìɾó káw?	why did you do that work?
d)	where? (location)	kóté	kóté à wòɾè?	where are you going?
e)	when?	nènè	nèné à wòɾè?	when are you going?
f)	how?	nĭ:	jíbɛ̀ n nĭ: ímà?	how many people are there?

2.11 Conditional constructions

Conditional constructions are prolific in texts. They are formed with a morpheme translated as ‘if’ plus the word for ‘all’, thus translated as meaning, ‘if all is VERB…’ Examples are shown in (94).

(86)

nè	màà	tùrù	tùrù	táárù	séné	twà	à	gàrà	hù^{n}	pá^{n}
1st PL	POSS	neighborhoods		three	if	arrive	DET	station	PP	all
nà	n	sígù	sígù							

FUT ? ask–PERF
’If you arrive at the station, ask about our three neighborhoods.’

3. Semantics

3.1 Motion + Manner/Cause

By an examination of the dictionary, the majority of the verbs involving motion in Bangime seem to conflate the characteristics Motion with Manner and/or Cause. Examples are shown in (95).

(87)

	Gloss	Example
	Non-agentive	
a)	hang	tɔ̀ɔ̀ndɔ́rɔ́
b)	roll.PASS (something is rolled)	kŭrúmà =wɛ́ (mat)
c)	stand, stop	díndá
d)	cultivate (second time)	kɔ́ɣɔ́
e)	explode	pɛ̀ɛ̀ndɛ́
f)	jump	pĭndò
	Agentive	
g)	roll (something)	kŭrúmà
h)	carry (something) on head	túqɛ́rɛ́
i)	jiggle, shake gently back and forth (e.g. sb's hand)	màɣá
j)	throw (e.g. stone)	gújú
k)	kick	méné
l)	gather	máŋgásĩ́
m)	amass	pà:
n)	dump (as in mud off the head)	tùw̃à

Notice how the majority of these verbs are specify the type of action to be preformed, as in 'carry on the head'; a prototypical verb meaning 'carry' does not exist in the language. Reduplication and morphology can further encode Manner onto satellites as in the examples in (96).

(88)

a) 'run' *tìgɛ̀rɛ́* > Manner: '(water) flow hard' *tǐgìrì* > Causation: 'drive' *tígí–ndá*

b) 'be swollen' *pìín'dú* > Causation: 'inflate' *pìíndù m̀ pìíndú*

c) 'push' *tǐŋgárá* > Manner: 'squash' *tíŋgàrà tíŋgàrá*

The homorganic nasal in (96b) indicates that the verb for 'inflate' is a compound[i], thus, it uses the composition of conflation for Compound verbs: V_{manner} + $V_{causation}$, whereas the example in c) seems to employ Subordination: V_{manner} $V_{causation}$-part[=ger.] as an uninflected verb in Bangime essentially represents a gerund.

3.2 Motion + Path

When used in a sentence, however, a motion verb which is translated in all the examples in (97) below as 'fall', is actually being expressed with three verbs which, in isolation, are translated as a) 'unfold', b) 'fall' and 'fall one by one', and c) 'depart', 'fall', and 'descend'.

(89)

a) à žíbɛ́ sand–ì
DET person unfold.PST
'The person fell.'

b) kó tíjó sɔ̀w à kí
CONN fall fall one by one DET thing
'They fell out of the plane."

c) wùrɛ̀ kó: tìjò à sán=wɛ́ à kɛ̀tɛ́ mà: ní: hṹ
karite tree depart fall DET descend.PASS DET other 3rd SG POSS hand PP
'The fruit of the karite tree fell down into his hand.'

Thus, the expression in a) illustrates that the Manner lexicalized in the verb for 'unfold' can, in addition to the action required to spread out a cloth can also incorporate Path as movement away from something. The verb translated literally as 'fall', however, seems only to encode Motion and must be used with at least one satellite as in the Serial verb composition: V_{manner} V_{path} to express Manner and Path/Figure in b) and in fact two other verbs and the Complementation composition: V_{manner} PP/DP_{path} in c) for Path, 'depart' and Ground 'descend (to a place)'. It would appear from these examples that Bangime is an equipollently-framed language since Manner and Path are encoded simultaneously as main verbs in these clauses.

3.3 Motion + Figure/Ground

Examples of verbs in Bangime which encode other elements are found among the extensive subsystem of verbs for 'take' and 'put' shown in (98) and (99).

(90)

a) nɛ́ ʒíjɛ́ hù^{n} nà ʒíjé m búndá
1stPL night PP AUX honey ? take out
'During the night, we take out the honey."

b) à bè k^{w}á síjɛ̀ mà: ŋáẁ
2ndSG NEG able take 3rdSG POSS meat

'You can't take his meat.'

c) à ɲí:já kó nàrⁿá gàwó dá pàndìjá dápàrí
DET child CONJ take spear IMP small spear machete
'The child takes the spear, the small spear, and the machete.'

(91)

a) ná jàgù tíndé ʃìɥɛ́ kʷíwɛ̀ ŋkò
with cut.PERF put descend calabash PP
'We put down and cut the calabash.'

b) há nɛ́ndì à bɔ̀rɛ̀ m páɣà–jɛ̀
INF put (on a fire in order to cook) DET baobab leaves CONN container.DIM
'To put the small pot with the baobab leaves into the fire to cook.'

c) nìì kó já ʒà:rá m bìjɛ́ bàngá
3rd PL CONJ FUT gazelle CONN baby put sack on shoulder
'They put the sack with the baby gazelle on their shoulders.'

The examples in (98a) and (99a) lexicalize Motion and Path, while that of (99b) incorporates Motion and Ground. (98b) is a prototypical verb meaning 'take', though (98c) could be lexicalizing figure, this is the only example available of its usage so it is unclear. The usage of (99c) is also limited to this example though it could also be seen as lexicalizing figure.

4. Greetings

Greetings, like all West African cultures, are an essential part of daily life and culture. Example greetings are shown in (100).

(92)

Call	Response	Gloss

dô	dôó	morning greeting
kwɛ̌ hɛ̀rɛ́ njɛ́w	Allah hamdilaeh	
tíjà	tìjáǎ	afternoon greeting
kwɛ̌ hɛ̀rɛ́ tùrû	Allah hamdilaeh	
kɔ̀ n tʃɛ̌ndɛ́		how is your family?
à pwɛ̀ɛ̂ nà yàándé (male)	kísè bíníʔû	how is your spouse?
à kàándɛ́ nă yàándé (female)	kísè bíníʔû	
à nà ná:	nâ: dàŋwí	greeting for sme returning from the fields

5. Text

The following text is an excerpt from a larger description of how to construct a bee-hive. Note that the transcription style is slightly different than the rest of the grammar, this orthography represents the Malian orthography and was transcribed in this manner so that the villager of Bounou could read it.

Hippo

1.

1.1. kó	súɥɛ́	sɔ́^{n}	púgá	mìná	
kó	súɥɛ́	sɔ́^{n}	púgá	mìná	
PAST	descend	clothing	wash	location	

She descended (to) the place where the clothes are washed.

2.

2.1. kó	súɥɛ́	à	sɔ́^{n}	púgá	mìná	
kó	súɥɛ́	à	sɔ́^{n}	púgá	mìná	
PAST	descend	DETERMINER	clothing	wash	location	

She descended (to) the place where the clothes are washed.

3.

3.1. bìtàwáy à gábú kó mííndà à

bìtà =wáyí à gábú kó mííndà à

complete STATIVE DETERMINER hippo PAST swallow DETERMINER

yààmbɛ́

yààmbɛ́

child

When she was finished, the hippo swallowed the child.

4.

4.1. màà ɲíyá ɲò bóyé kɛ̀ɛ̀ dá dóò

màà= ɲíyá ɲò bóyé kɛ̀ɛ̀ dá dóò

3rd SING POSS mother woman big wild animal IMPERFECT pass

His mother, the old woman, passes the wild animals.

5.

5.1. kó ñána à yààmbɛ́ piyɛ́ à pɔ̀rɛ́ dégé

kó ñána à yààmbɛ́ piyɛ́ à pɔ̀rɛ́ dégé

PAST take DETERMINER child put, set down DETERMINER well top

She took the child (and) set (it) on the well.

6.

6.1. à ɲò bóyé kó ɲárⁿá ɥìyɛ́ màá táyɛ́

à ɲò bóyé kó ɲárⁿá ɥìyɛ́ màá táyɛ́

DETERMINER woman big PAST take ascend 3rd SING POSS place, family

The old woman took (the child) up to her place.

7.

7.1. kó márándá há wórè bògó

kó márándá há wòré bògó

PAST take care of (Ful) until go big

She took care of (the child) until (it) (was) big.

8.

8.1. séé wórè màá mɔ̀kɔ́ndɛ́ túmbárí

séé wòré màá mɔ̀kɔ́ndɛ́ túmbárí

if go 3rd SING POSS age group among, between

If (he) goes among his age group,

9.

9.1. níí á nɔ̀ n kúmbó

níí á nɔ̀ n kúmbó

3rd SG SBJ FUT mouth CONNECTIVE make fun of

they will make fun of (him).

10.

10.1. níí á nìŋà wɛ́ à mɛ́ sàà à ɲíí

níí á nìŋà wɛ́ à mɛ́ sàà à ɲíí

3rd SG SBJ FUT say STATIVE FUT COMP if DETERMINER woman

á gàbú mìndá

á gàbú mìndá

DETERMINER hippo swallow

They said the one which the hippo swallow(end) was the woman (his mother).

11.

11.1. à ɲííyá há wòré à sìgú à ɲò

à ɲííyá há wòré à sìg -ú à ɲò

DETERMINER mother until go FUT ask Perfective DETERMINER woman

bóyé há nìì gàbú bè míndá

bóyé há nìì gàbú -bè míndá

big infinitive marker they hippo NEG swallow

He went and asked the old woman and she said the hippo didn't swallow his mother.

12.

12.1. à ɲá mì màà à ɲá be á pé

à ɲá mì màà à ɲá be á pé

DETERMINER mother 1sg COPULA 2nd SING mother NEG 2nd SING with

The mother (said) am I not with you?

13.

13.1. n káw à dɔ̀né tɔ̀rɛ̀

n káw à dɔ̀né tɔ̀rɛ̀

CONNECTIVE 3rd SING INANIMATE DETERMINER day one

One day...

14.

14.1. màà nó kó táàgámì

màà= nó kó táàgámì

3rd SING POSS mouth PAST accidently

Her mouth slipped (she accidently said).

15.

15.1. kó nìŋá gàbú mìndá à ɲííyá

kó nìŋá gàbú mìndá à ɲííyá

PAST say hippo swallow 2nd SING mother

She said, hippo swallowed your mother.

16.

16.1. kó ɲàrⁿá gàwó ná pàndìyá ná pàrìnɛ́

kó ɲàrⁿá gàwó ná pàndìyá ná pàrì -nɛ́

PAST take spear and spear (small, thrown) and machete PLURAL

He took a spear, a spear, and machetes.

17.

17.1. kó wòré à dèwò

kó wòré à dèwò

PAST go DETERMINER mar

He went (to) the mar.

18.

18.1. kó ɲúwɛ́ré yáàyá n gìmárì à kó mì yó

kó n à kó mì

PAST CONNECTIVE DETERMINER PAST 1sg

yáàyá

He sang the song ...

19.

19.1. kó níŋà à gàwó ná pànžìyá ná pàrí

kó níŋà à gàwó ná pànžìyá ná pàrí

PAST talk DETERMINER spear and spear (small, thrown) and machete

She (the old woman) said, with the spear, a spear, and a machete

20.

20.1. kóté nà wórè ?
kóté nà wòré
where PASSIVE go

where are you going?

21.

21.1. kó pɛ́réndɛ́
kó pɛ́réndɛ́
PAST split

He split it (the hippo).

22.

22.1. kó yá wo
kó yá wo
PAST die STATIVE

It died.

23.

23.1. màà ɲìiyá kó dúgú woré màà tawe
màà= ɲìiyá kó woré màà= tawe
3rd SING POSS mother PAST go 3rd SING POSS place, family

His mother took him (to) her place.

24.

24.1. kó nìŋá nìì mɔ̀pɔ́ wó
kó nìŋá nìì
PAST say they

She said all the people,

25.

25.1. kó nìŋá ɲííyá à gábú míndà

kó nìŋá ɲííyá à gábú míndà

PAST say mother DETERMINER hippo swallow

She said (to the people who make fun of him), if anyone says that his mother was swallowed

26.

26.1. ɲííyá jɛ́ròmɛ́ à gábú dá kó jɛ́yɛ́ à

ɲííyá jɛ́ròmɛ́ à gábú dá kó jɛ́yɛ́ à

mother a lot of talk DETERMINER hippo IMPERFECT PAST do 2nd SING

hú^{n}

hú^{n}

on

By a hippo again, she will take all the spears to them and kill them.

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[i] Though this nasal usually indicates a compound, it does not always, see ex. 4a.