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This thesis, entitled  
**The Linguistic Structure of Barain (Chadic)**  
written by  
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and submitted in partial fulfillment for the degree of  
Master of Arts  
with major in  
Applied Linguistics  
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**The Linguistic Structure of Barain (Chadic)**

by

Joseph Lovestrand

Presented to the Faculty of  
the Graduate Institute of Applied Linguistics  
in partial fulfillment of the requirements  
for the degree of

Master of Arts  
with major in  
Applied Linguistics

Graduate Institute of Applied Linguistics  
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## **ABSTRACT**

### **The Linguistic Structure of Baraïn (Chadic)**

Joseph Lovstrand  
Master of Arts  
with major in  
Applied Linguistics  
Graduate Institute of Applied Linguistics, December 2012

Supervising Professor: Dr. Paul Kroeger

This thesis is the first linguistic analysis of Baraïn [bva], an East Chadic (Afroasiatic) language spoken by about 6,000 people in the Republic of Chad. The study focuses on the fundamental phonological, morphological, and syntactic structures of the language. Baraïn has sixteen consonants (no implosives) and five vowels. It uses contrastive length and three levels of contrastive tone. No syllables are super-heavy. Morphophonological processes include asymmetrical patterns of voice spreading in consonant clusters and vowel backness harmony. Major class lexical items are minimally bimorphemic. Nouns are unbound roots with covert grammatical gender. However, gender is only distinguished in singular forms. Verbs are bound roots with an underlying tone melody. A small class of verb roots consist of a single consonant (and tone). Two classes of verbs have distinctive argument structures: labiles and causatives. Objects, indirect objects, and some oblique arguments can be indexed by verbal agreement, but

not subjects. Six distinct tense, aspect, and mood categories are marked by suffixes and one auxiliary. There are ten categories in the pronominal and agreement systems, but the first person plural inclusive markers are all bimorphemic. The language is head-initial and the unmarked syntactic order is SVO. Question words are *in situ*. Negation is sentence-final. The appendices include a proposed orthographic system and seven interlinearized texts taken from recorded natural speech.

## ACKNOWLEDGMENTS

This work is one result of the initiative taken by the Baraïn community and the founding members of the *Association pour le développement et la promotion de la langue barain* (ADPLB) who refused to sit idly by while their language was threatened by the realities of the modern world. Two members of that community, Moussa Adou and Sayide Moussa of Balili, played a key role as language informants, patiently enduring the peculiar experience of being subjected to the probings of a foreign linguist. This research project was facilitated by the Chadian mother-tongue literacy organization *Fédération des associations pour la promotion des langues du Guéra* (FAPLG). As a cultural outsider, I benefited immensely from the logistic and moral support of Sakine Ramat, Michel Karim, and Yaya Ali Ramat.

I am thankful for my friends in the SIL office in N'Djamena and the team in Mongo who continue to impress me with their perseverance in a less-than-ideal living environment. My colleagues Jim Roberts and Silke Sauer patiently reviewed my analysis in its most immature and naive stages, and put me on the right track early in my research. Mary Pearce, Don Burquest, and Sean Allison provided helpful insights and improved several parts of the analysis on multiple occasions.

I would like to thank the members of my committee, Paul Kroeger, Steve Parker, and Mike Cahill—especially the first two whose courses introduced me to linguistics.

Finally, thank you to my family and many friends who provided the material, emotional, and spiritual support needed during the past few years; and thank you to him *who gives everyone life and breath, and everything else*.

November 7, 2012



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## LIST OF ABBREVIATIONS

*	ungrammatical; not accepted by speakers	EXCL	first person plural exclusive
#	incomprehensible; not accepted by speakers	F / FEM	feminine
-	before suffix / after bound stem	FUT	Future tense
=	clitic boundary	IMPF	Imperfective aspect
( )	optional	INCL	inclusive marker (clitic)
(* )	ungrammatical if what is in the parenthesis is added	INF	Infinitive
*( )	ungrammatical if what is in the parenthesis is removed	IO:	indirect object suffix with the following features
(A)	word likely borrowed from Arabic	DTRV	detransitivizing suffix
(B)	word likely borrowed from Bagirmi	M / MASC	masculine
(F)	word likely borrowed from French	N:	adjectival agreement with the head noun
(S)	word likely borrowed from Sokoro	NEG	negative
???	undefined morpheme	NOM	nominalizing suffix
1	first person	OBL	oblique suffix
2	second person	PFV	Perfective aspect
3	third person	PL	plural
ASOC	associative preposition	(PL)	suppletive form of the possessor agreement suffix for plural roots
CAUS	causative	POSS	possessive pronoun
COND	conjunction with conditional or temporal meaning	POSS:	possessor agreement suffix indexing a possessor of the following features
CERT	Future tense particle (certainty)	(POSS)	suppletive root used in possessive forms
DEM:	demonstrative of the following feature	PREP	oblique preposition
DISC	verbal particle which follows the Perfective aspect	PRF	Perfect aspect
DO:	direct object suffix with the following features	PRO:	independent pronoun of the following features
DUAL	first person dual (inclusive)	PROG	Progressive aspect
DUR	durative	Q	question; interrogative
EQ	undefined grammatical marker (equivalence?)	REL:	relative marker of the following feature
		S / SG	singular
		S:	subject pronoun with the following features
		SBJV	Subjunctive (imperative)

## Chapter 1: Introduction

This thesis is the first linguistic analysis of Baraïn (or Barein, [bva]), a language spoken by an estimated 6,000 or more people<sup>1</sup> in the Guera region (*région du Guéra*) near the center of the Republic of Chad. More specifically, this analysis is concerned with the dialect known as Jalkiya spoken in the village of Balili and the surrounding area.

### 1.1 Research aims and organization

This study focuses on the most fundamental phonological, morphological, and syntactic structures of the language. One motivation for this research was to serve the Baraïn community by providing them with a linguistically-sound orthography proposal, enabling them to begin a literacy program in their own language (appendix 6). Having seen neighboring language groups involved in mother-tongue literacy activities, the Baraïn community took the initiative to organize a language association: *l'Association pour le développement et la promotion de la langue baraïn* (ADPLB). They then approached the regional federation of language associations, *la Fédération des associations pour la promotion des langues du Guéra* (FAPLG), a partner of SIL, to ask for technical assistance in building a literacy program.<sup>2</sup> This research has enabled them to begin literacy work and to develop literature for new readers. With this goal in mind, it is appropriate that this first investigation be wide in its scope in order to identify as many potential orthography issues as possible.

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<sup>1</sup> To estimate the population, Faris (1994) solicited a list of the names of Baraïn villages from the chief of the village Mebra. For 25 of the 36 villages named he was able to find populations from a 1993 government census totaling 4,092 (his sum includes one village twice). Presumably the number is higher since there may be up to 49 villages (appendix 2); however, it is difficult to estimate population growth since 1993. Secondhand information from a 2009 census for the populations of 26 villages brings the number up to 4,656 with another approximately 1,000 speakers living in the town of Melfi.

<sup>2</sup> FAPLG is a community-based organization dedicated to the development and preservation of the Guera languages and cultures through mother-tongue literacy. SIL partners with local community-based organizations like FAPLG in their efforts to maintain their cultures and languages through language development.

This description provides a basic understanding of the language that will enable more in-depth studies to take place in the future. This analysis of an underdocumented language is also a contribution to typological studies. To this end, frequent references are made to other Chadic languages and relevant typological publications.

The following ten chapters of this work are grouped into three parts. Part I consists of chapters 2 through 5, and is dedicated to the phonology, morphophonology, and tonology of the language. Part II includes chapters 6 through 8 which define some lexical categories and their associated morphology, and give an overview of the reference system. Part III includes chapters 9 through 11 which discuss grammatical relations, some complex syntactic structures, and non-verbal predicates. Finally, chapter 12 is the conclusion and highlights a few areas for future study. The appendices include a proposed alphabet for the orthography and seven interlinearized texts. Different discourse types (e.g., recent event, directions, historical, traditional folktales) were elicited from three different speakers. The translation and interlinearization were done with the assistance of the primary research participant, Moussa Adou.

## **1.2 Research participants**

All data used in this analysis were gathered by the author. The Baraïn speakers who gave their time and informed consent to the necessary data collection are Moussa Adou from the Jalkiya village of Balili near Melfi, and his daughter, Sayide Moussa. Moussa left the Baraïn region to work in the town of Mongo and then moved beyond the borders of Chad as part of the French military. It is thanks to this time working with the French that he speaks French fluently. Despite the time spent away from his homeland, Moussa still speaks his language in his home and visits the region where it is spoken. He seems to have maintained his language well. Moussa also speaks Chadian Arabic and Sokoro, alongside French and his mother tongue. His daughter Sayide was also born in the Jalkiya region and spent the vast majority of her life in Baraïn villages. In addition to her native language, Sayide has spoken Chadian Arabic since her childhood and completed two years of primary education in French.

The fieldwork for this analysis took place from January 2010 to February 2011 while I was in Chad as a member of SIL. The work took place in Mongo, where Moussa lives with his family, just north of the language area. Nearly all of the data samples are from direct elicitation. Transcriptions of recordings of natural texts are included in appendices to this work.

### 1.3 The Baraïn people

The Baraïn live in the southern part of the Guera, in an area around the town of Melfi, expanding south and west of the town (*département de Bahr Signaka, sous-préfecture de Melfi*; see map in appendix 1). There are approximately 30 to 40 Baraïn villages in the region (see appendix 2). Neighboring languages include Saba ([saa], East Chadic, B3) to the northeast, Bolgo ([bvo], Niger-Congo, Adamawa) to the east, Sokoro ([sok], East Chadic, B3) to the northwest, and Bagirmi ([bmi], Nilo-Saharan) to the southwest.

The Baraïn are multilingual. Levels of proficiency in Chadian Arabic [shu] were tested in 1993 (Faris 1994). The results show that, in the particular village tested, the majority only had a very basic understanding of Chadian Arabic (the area trade language). Nearly all performed well in a neighboring language, Sokoro. However, in villages farther from the Sokoro area, this is not likely to be the case. French is the language of education and government administration in Chad. In my own travels in the area, I found that only a handful of people in each village were willing to speak in French.

The Ethnologue uses the name “Barein” which likely comes from the research published by Lukas in German in 1937 (Lewis 2009). This spelling of the language name would be (and frequently is) pronounced [ba'ɪɛn] in English and does not reflect the local pronunciation of the name. The actual pronunciation ['ba.ra.in] is better represented in the French spelling used here.<sup>3</sup> The Baraïn speakers view this as an Arabic

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<sup>3</sup> This spelling is used in all French publications concerning the people group (Boujol & Clupot 1941; Rendinger 1949; LeBeuf 1959; Vincent 1962). One Baraïn speaker, writing in his own language, used the spelling “barayin”.

word, and its syllable structure (adjacent vowels) confirms that it is not a true endonym, since vowel clusters are not attested in the language. While each Baraïn dialect has its own endonym, there is no known endonym for the group as a whole. An early explanation for the name is that it comes from a geological feature in the Guera known as *Bara* (Boujol & Clupot 1941:33). Another suggestion is that the name traces back to a village called *Baro* (of which there are more than one) from where their history begins with a group migrating south (see appendix 10).

Early reports place their arrival to the region in the 16<sup>th</sup> century (Boujol & Clupot 1941:33). Like most inhabitants of the Guera region, the Baraïn are agriculturalists, their primary crops being millet and sorghum (LeBeuf 1959:112–113). They are described as following a patriarchal marriage system and having practiced, at least at one point, scarification (LeBeuf 1959:114–115). Today the Baraïn are thought to all subscribe to some form of Islam, and were one of the earlier groups to build close relations with their Arab neighbors (Vincent 1962:70). However, as late as the 1960's, the traditional regional practice of *margay* worship was still openly practiced (Vincent 1975:8). According to one speaker of the language, the traditional religious practices still remain active in the culture in some limited form. For example, the recent event recounted in appendix 11 includes a non-Islamic animal sacrifice.

#### 1.4 Linguistic classification

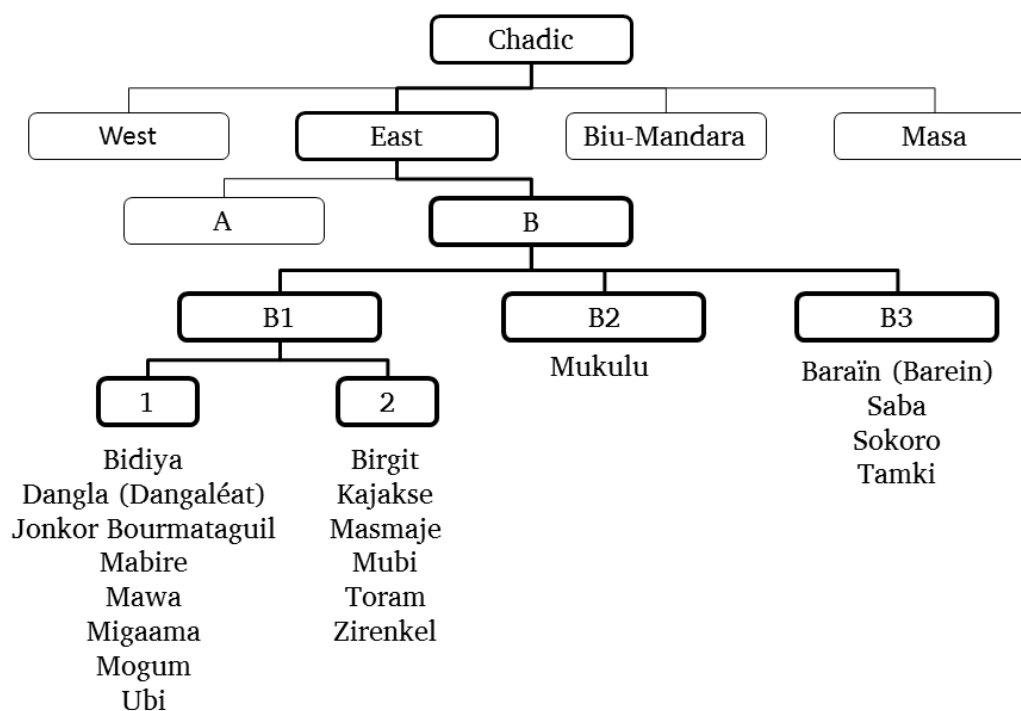
Baraïn is a member of the Chadic family in the Afroasiatic phylum.<sup>4</sup> The history of the classification of the language is discussed in Lovestrand (2012). Johannes Lukas was the first person to classify Baraïn and several related languages into what he called the “Sokoro-Mubi” group (Westermann & Bryan 1952:168). Over the years, several linguists added languages to that group and redefined the internal structure of the group, as well as its relationship to other groups (Greenberg 1963; Hoffman 1971; Caprile & Jungraithmayr 1973; Jungraithmayr 1981). For the last several decades, the standard

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<sup>4</sup> The history and validity of the Chadic family are discussed in Barreteau & Newman (1978), Newman (1978; 1980; 2006:189), Ruhlen (1991), Blench (2006), Frajzyngier & Shay (2012), among other works. Earlier classifications made a distinction between Chadic and Chado-Hamitic languages (e.g., Westermann & Bryan 1952). Those categories are now considered obsolete by the authors cited above.

classification has been based on the work of Paul Newman (1977a; Barreteau & Newman 1978). The current Ethnologue adds five additional languages to Newman's classification scheme (Lewis 2009).

**Figure 1: The Guera subbranch in the 16<sup>th</sup> edition of the Ethnologue (Lewis 2009)**



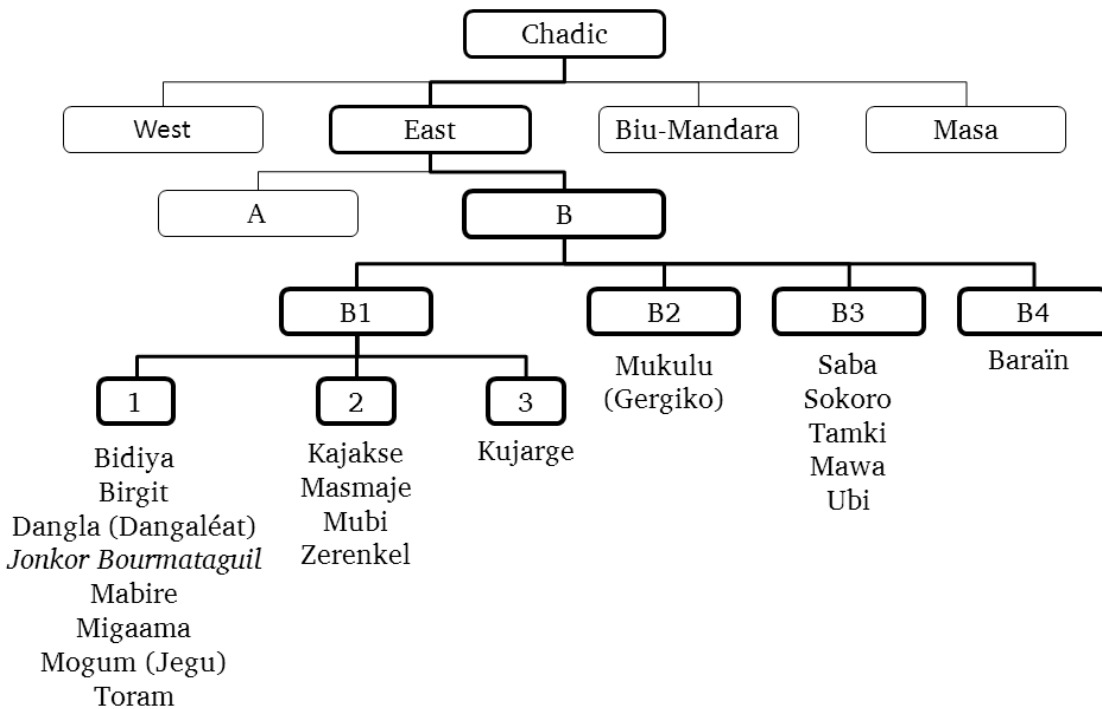
In this classification, the Chadic family is divided into four branches. The East branch is said to consist of 36 languages spoken in the Republic of Chad.<sup>5</sup> This branch is further divided into two subbranches: A and B. It has been suggested by James Roberts that it would be beneficial to refer to these subbranches according to their geographical locations: Chari-Logone and Guera respectively (2009). Baraïn is one of the Chadic languages of the Guera (East Chadic B). The internal classification of the Guera subbranch<sup>6</sup> (East Chadic B) consists of three groups. The largest, group 1, consists of fourteen languages and is further divided into two subgroups. Group 2 consists of a single

<sup>5</sup> The adjective “Chadic” refers to the language family, and the adjective “Chadian” refers to the country. Most Chadic languages are spoken outside of Chad. There was some discussion about this terminology and its translation into French and German in the Chadic Newsletter (No. 4 1972, No. 5 1973).

<sup>6</sup> I frequently use “Guera subbranch” to refer to the Chadic languages of the Guera, or East Chadic B. The reader should keep in mind that the Guera region of Chad includes Nilo-Saharan and Niger-Congo (Adamawa) languages.

language: Mukulu [moz]. Group 3 consists of the four southernmost languages. This third group (B3) includes Baraïn, Sokoro, Saba, and Tamki [tax], and is also called the Sokoro group (Newman 1977a; Lewis 2009).

**Figure 2: Classification recommended by Lovstrand (2012)**



By all accounts, the internal classification of the Guera subbranch is less than definitive.<sup>7</sup> Several linguists have proposed updates—summarized in Lovstrand (2012). One suggested change is that Baraïn should move to its own group in the Guera subbranch (B4). This change corrects an assumption of linguistic proximity based on geographic proximity, which has existed since Johannes Lukas first brought together the Chadic languages of the Guera in his “Sokoro-Mubi” group (Westermann & Bryan 1952:168). The most recent research confirms that there is no particularly close lexical relationship between Baraïn and any other Chadic language of the Guera (Maass et al. 1996; Dakouli, Maass & Toomey 1996; Lovstrand 2012).

<sup>7</sup> “...the exact relationship among the groups making up each subbranch is much less clear; and I have, therefore, refrained from indicating further internal structure until fuller data on these languages become available” (Newman 1977a).

### 1.5 Previous research

The pioneer in Chadic linguistics, Johannes Lukas, was the first person to publish a report of the Baraïn language (1937:50–51). He presents a list of one hundred words and some numbers. His publication was shortly followed by another European researcher who had been in the area around the same time or possibly before Lukas (Rendinger 1949). Rendinger's work includes a few pages of superficial observations concerning grammatical forms in Baraïn and several neighboring languages.

The next work published on the language is the sociolinguistic survey done by SIL in 1995 and made available in an online format in 2008 (Maass et al. 1996). Part of this data was recycled for a survey of neighboring languages (Dakouli, Maass & Toomey 1996). The only other linguistic research done with the language group is an unpublished SIL report on multilingualism in Sokoro and Chadian Arabic (Faris 1994). The name Baraïn shows up in many publications that provide lists of languages or people groups in the region, but no other original linguistic research has been found.

Among the languages of the Guera subbranch, Dangla (or *dangaléat* in French, [daa]) has been the subject of the highest number of publications, including a thesis by Lawrence Burke (1995) and a dissertation by Erin Shay (1999). Hermann Jungraithmayr has been the most prolific producer of materials from the Guera subbranch. Notably, he has published or helped publish lexicons with short grammatical sketches for Bidiya [bid] (Alio & Jungraithmayr 1989), Mukulu (Jungraithmayr 1990), and Migaama [mmy] (Jungraithmayr & Adams 1992). Another significant contributor has been Khalil Alio, who has published a book-length treatment of his own language, Bidiya (1986), and another work concerning several languages in the Guera (2004). More references for descriptive works from the Guera subbranch can be found in Lovestrand (2012), as well as in the Chadic bibliography of Paul Newman (2012).

Other references cited in this work include descriptions of West and Central Chadic languages, such as those by Zygmunt Frajzyngier (1989; 1993; 2001; 2002; 2008;



Frajzyngier, Johnston & Edwards 2005) and others (Hoffman 1963; Wolff 1983; Schuh 1998).

### 1.6 Dialect situation<sup>8</sup>

According to the 1995 sociolinguistic survey (Maass et al. 1996) and personal communication with the *Association pour le développement et la promotion de la langue barain* (ADPLB), the Barain people are composed of four distinct communities, each of which accepts the name Barain to refer to the people group as a whole. According to the ADPLB, the names of each of the four communities are Jalkiya, Giliya, Jalking, and Komiya.<sup>9</sup> This study is exclusively concerned with the Jalkiya dialect.

Wordlists from three of the four dialects were collected during the 1995 sociolinguistic survey (Maass et al. 1996). A later study, in collaboration with FAPLG, examined wordlists from all four dialects (Lovestrand 2011). These two studies reveal that two of the four dialects, Jalkiya and Giliya, are mutually intelligible. Their lexical similarity is over 90%. These are also the two dialects that are geographically closest.

The other two dialects, Jalking and Komiya, are both lexically and geographically separated from the geographically central Jalkiya and Giliya dialects. Komiya has a lexical similarity of 79% with Jalkiya. Jalking appears to be even more distant linguistically. It has a 67% lexical similarity with Jalkiya, and 60% with Komiya. Jalkiya speakers communicate with the Jalking exclusively in Chadian Arabic.

The argument could be made that these dialects should be considered three separate languages. Nonetheless, the current attitude observed is that their history and

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<sup>8</sup> The term “dialect” is used here as a convenient label for describing the self-identified subgroups of the Barain-speaking community. This term may have implications that do not correspond to how the Barain would wish to be described. At the same time, the data may convince some that the term “dialect” does not accurately reflect the linguistic variation between the groups, and that some should be considered separate languages (Lovestrand 2011).

<sup>9</sup> The origin of the names Giliya and Komiya is quite clear. Gili and Komi are the central villages of each of these groups. The *-ya* suffix, phonetically [-já], is a plural marker (section 6.1.2). The name [jalki] is said to be the name of the ancestor who first migrated to the area (Faris 1994:5). When referring to their speech variety a nominalizing suffix *-áj* is added (section 6.1.4): [jalkija], [gilija], [komija]. The group named Jalking also identifies themselves as Koliya or Dakne. The *-ŋ* ending of the name Jalking remains an enigma. The same word is used for both the people and the speech variety.

traditions bind them together as one ethnolinguistic group, despite their limited intercommunication.

### 1.7 Language endangerment

Language endangerment has received considerable attention since *Language* devoted an issue to the topic, featuring Michael Krauss' apocalyptic warning that “the coming century will see either the death or the doom of 90% of mankind’s languages” (1992). A decade later, more optimistic linguists believed maybe 25% of the world's languages were in grave danger, while those with a pessimistic view of the situation still claimed a number as high as 80% (Crystal 2003a).

Joshua Fishman's Graded Intergenerational Disruption Scale (GIDS) remains the best-known framework for evaluating language vitality (Fishman 1991). On this 8-level scale, Baraïn ranks on level 6 (“The language is used orally by all generations and is being learned by children as their first language”). However, they have taken significant steps toward climbing up to level 5 (“The language is used orally by all generations and is effectively used in written form throughout the community”). The recently published Expanded GIDS (EGIDS) increases the framework to 13 levels (Lewis & Simons 2010). On this scale Baraïn would be labeled “vigorous” (6a).

In the system adopted by UNESCO for assessing language endangerment, there are nine factors to consider (Brenzinger et al. 2003). Three of these factors highlight potential reasons for concern regarding the vitality of Baraïn. The absolute number of speakers is relatively small (factor 2), the language is not being used in newer media formats such as radio and television (factor 4), and only in the last two years has any written material been developed in the language (factor 6). The ninth factor evaluates the urgency and need for documentation. The documentation for this language remains “inadequate” (one on a scale of zero to five).

Whatever the framework used to analyze language vitality, the essential factors are that the language is still transmitted to the youngest generation and that a strong

grassroots movement has made significant strides towards establishing a literacy program. The language group is relatively isolated. The threats to language vitality that Krauss warned of (genocide, social or economic or habitat destruction, displacement, assimilatory education, electronic media bombardment, urbanization, deforestation, desertification, AIDS, etc.) are either not present or not immediate threats—at least for the current generation.

## **Part I : Phonology**

The following five chapters discuss the phonological system of the language. Chapter 2 presents the sixteen consonants and five vowels of the language. Chapter 3 discusses syllable structures and presents two classes of verbs (monoverbs and polyverbs) and their underlying root structures. Chapter 4 presents the phonological alternations observed at morpheme boundaries. Chapter 5 presents tone and explains the attested patterns of tone spreading in nouns and verbs. The underlying tone melodies of verbs are represented using an autosegmental approach with assignment rules to predict which underlying tones will associate with specific tone-bearing units in the surface form.

## Chapter 2 : Phonemic segments

This chapter begins with a presentation of the phonemic segments of the language and a discussion of a few complexities in determining the phonemic values of certain sounds. The transcriptions follow the IPA phonetic alphabet with the exception of long vowels, which are transcribed as two consecutive vowels, each representing one mora (International Phonetic Association 2005). In marking tone, I mark only the first mora of a long vowel when the tone is flat, and mark rising and falling tones by individual L (grave), M (macron), or H (acute) accents separately on each mora. Rising and falling tones do not regularly occur on a single mora, but contour tone marking is used to represent underlying verbal tone melodies as explained in footnote 29 on page 31.

### 2.1 Consonants

Table 1 presents the sixteen phonemic consonants according to their place and manner of articulation. A chart with examples of contrast between phonemes of similar features can be found in appendix 3.

**Table 1: Phonemic Consonants**

	<i>Labial</i>	<i>Alveolar</i>	<i>Palatal</i>	<i>Velar</i>
<i>Voiceless stop</i>	p	t		k
<i>Voiced stop</i>	b	d	ɟ	g
<i>Fricative</i>		s		
<i>Nasal</i>	m	n	ɲ	ŋ
<i>Lateral</i>		l		
<i>Trill</i>		r		
<i>Approximant</i>	w		j	

Chadic languages typically have three series of plosives—voiced, voiceless and implosive—at up to four places of articulation (Newman 1977a; 2006). Every language of the Guera subbranch that has been subject to phonological study has revealed all three series, except for Baraïn (Lovestrand 2012). When speakers of the Jalkiya and Giliya

dialects were asked to repeat a word from a Saba speaker containing an implosive, one was unable to do so. The other was able to perform the implosive, but did not hesitate to state that he learned this from Sokoro, and that his language has no such sounds. Only one dialect of the language, Komiya, has a bilabial implosive, but no alveolar implosive (Lovestrand 2011). This is a counterexample to Schuh's observation that all Chadic languages have bilabial and alveolar implosives (2003:56).

The asymmetry at the palatal place of articulation (i.e., no voiceless palatal stop) is rare in Chadic. There are only two other language of the Guera subbranch not to have any evidence for a voiceless palatal stop: Saba and Tamki. The voiced alveolar fricative [z] is common in Chadic languages, including the Guera subbranch, but is not seen here. The rest of the consonant inventory is typical of the subbranch (Lovestrand 2012:22). Other branches of the Chadic family frequently have a set of prenasalized plosives (Newman 2006:192). These segments are attested in only two of the Guera languages: Zerenkel and Mubi (Lovestrand 2012:24; Prickett). In Baraïn, there are no word-initial or word-final nasal-consonant sequences and the syllable structures do not suggest that intervocalic nasal-consonant sequences should be analyzed as one segment.

### *2.1.1 Non-phonemic glottal stop*

A glottal stop is frequently heard at the beginning of a phrase which begins with a vowel, or after a vowel at the end of a phrase. It can also be inserted between two words when one ends in a vowel, and the next begins with a vowel. This extreme restriction on distribution and the lack of contrast between glottal-initial and vowel-initial words indicate that the phone is not phonemic. In addition, positing the glottal stop as a phoneme would require a phonological rule of deletion for vowel-initial words that occur phrase-medially in regular speech. It is more economical to analyze the glottal stop as an optional phonetic addition for vowel-initial words at a phrase boundary. A similar non-phonemic word-initial glottal stop is described in Dangla (Shay 1999:45). Contrary to what some linguists have posited, it is unlikely that the glottal stop is phonemic in any language of the Guera subbranch (Lovestrand 2012).

### 2.1.2 *Phonetic realizations of the rhotic trill*

The alveolar flap [ɾ] is an allophone of the alveolar trill /r/. The flap normally occurs in an intervocalic position, before the bilabial approximant, and, occasionally, phrase-finally. The trill occurs word-initially, word-finally and adjacent to other consonants. In careful speech, the speakers pronounce a trill—possible evidence of its status as the underlying form. Phonemic contrast between two rhotics has only been reported in three languages of the Guera subbranch (Lovestrand 2012).

### 2.1.3 *Fricatives resulting from lenition and loan words*

Other non-phonemic sounds frequently employed by the speakers are the labial fricatives [f] and [ɸ]. These sounds always occur in free variation with the bilabial plosive /p/ in intervocalic or word-initial position.<sup>10</sup> In one recording, a speaker pronounced [f] several times, and then stated that the sound was [p].

In a similar fashion the alveolar fricative /s/ can sometimes be pronounced [ʃ] and the velar plosive /k/ as [x]. These sounds, as well as [h] and [z], can also enter the language through Arabic loan words. However, since both language consultants involved in this research were fluent in Chadian Arabic, it proved difficult to test how Arabic words would naturally be pronounced in Baraïn.

### 2.1.4 *Phonetic realizations of the palatal consonant /ɟ/*

The phoneme /ɟ/ has a rather wide range of possible realizations. The pronunciation most often heard could be transcribed as a palatal affricate [t͡ɟ], which sounds quite similar to the English affricate [d͡ʒ].<sup>11</sup> It is pronounced with the blade of the tongue, which distinguishes it from the alveolar affricate. This pronunciation is the most common, because it is that which is used when the phoneme is followed by a vowel. When in an intervocalic position, its pronunciation can approach the palatal approximant

<sup>10</sup> This variation was also noted by Rendinger (1949:167).

<sup>11</sup> A similar pronunciation is noted in Migaama and Mubi (Chesley 2003; Kuipers 2010). Transcriptions of Baraïn done in the course of SIL's sociolinguistic surveys consistently transcribe this sound as a voiced alveolar affricate. This realization of the palatal stop is common cross-linguistically (Pullum & Ladusaw 1986:84).

[j]. It can occasionally be heard as [g]; a variation also noted in Migaama (Chesley 2003). In certain verb conjugations, a morphological environment can be created where the palatal consonant is followed by another consonant. In these situations, its pronunciation is clearly a true palatal stop.

#### 2.1.5 *Phonemic status of the palatal consonant /ɟ/*

The palatal stop /ɟ/ is asymmetrical in that it is the only plosive not to have a voiceless form. This could suggest that this segment is actually the surface form of two underlying phonemes such as /dʝ/ or /tʝ/. One reason that this hypothesis is not likely is that the palatal approximant [j] never follows any other consonant. In fact, when the suffix /-já/ is added to a stem ending in a consonant, an epenthetic vowel is added to avoid palatalized consonants (see section 4.8). In the surface form the palatal stop must be analyzed as one unit in order to conform to the syllable structure patterns seen elsewhere in the language (chapter 3). The simplest way to account for its presence is to include the sound in the phonemic inventory, accepting the asymmetry. The phoneme is reported for every language in the Guera subbranch which has been studied, with the possible exception of Tamki, for which language data are limited (Lovestrand 2012). It is also proposed for Proto-Chadic (Newman 1977a; 2006).

#### 2.1.6 *Phonemic status of the velar and palatal nasals /ŋ/ and /ɲ/*

A more complex issue involves the phonemic status of the palatal and velar nasals. The other two nasals (bilabial [m] and alveolar [n]) can occur in any position in the word: word-initial, intervocalic, next to a consonant, and word-final. The palatal and velar nasals, on the other hand, are restricted in their distribution. The palatal nasal [ɲ] is limited to the onset position. It never occurs at the end of a word.<sup>12</sup>

- |                        |                    |                  |
|------------------------|--------------------|------------------|
| (1) [ɲà:mó] 'to steal' | [mōrūɲó] 'to soak' | [tēɲō] 'to lick' |
| [ɲēlí] 'grass'         | [ákíɲí] 'twin'     | [mārɲīɲ] 'anger' |

<sup>12</sup> There is one exception [sòkòɲ] “shame” in the data, but the word is identical in Sokoro (a language which allows palatal nasals in the word-final position), and may be a loan word.



The palatal nasal can only precede a consonant at a morpheme boundary when the following consonant is a palatal stop.<sup>13</sup> The palatal nasal [ɲ] never occurs before any consonant except the palatal stop [j]. In this position, it is understood to be an underlying nasal of another place of articulation which assimilates to the point of articulation of the following consonant (see section 4.1).

In near complementary distribution with the palatal nasal, the velar nasal [ŋ] never occurs word-initially, but can occur word-finally. It seems to be restricted to the coda, but can also occur intervocally. It does not occur before any consonants except the velar stops [k] and [g].

(2) [dèŋgú] 'trap'	[májá] 'bush'	[dáláŋ] 'cheek'
[júŋgárfí] 'chicken'	[bánō] 'to deny'	[dúpíŋ] 'knee'

The syllabification of words with an intervocalic velar nasal raises a question concerning the restriction on its distribution. Hypothetically, it would be possible to claim that the velar nasal is in the coda of the first syllable and that the following syllable is vowel-initial, as in (3).

(3) [bàŋ.à]	CVC.V	'dog'
-------------	-------	-------

This hypothesis would provide a natural account for two patterns concerning the velar nasal. First, there is no evidence of long velar nasals, though there is evidence of a long palatal nasal.<sup>14</sup> The lack of a long velar nasal would be expected if the nasal is restricted to the coda, since long consonants are analyzed as occupying both a coda and an onset position (section 3.1). The long palatal nasal could be explained as a phonological process by which a nasal of another place of articulation assimilates to a palatal nasal in the onset position of the following syllable. Second, there are no examples of a long vowel preceding a velar nasal. If the velar nasal can only occur in the coda position, then a velar nasal following a long vowel would create an unlicensed super-heavy syllable.

<sup>13</sup> There are two apparent exceptions where the cluster occurs inside a word boundary: [sèjǰá] “tooth” and [sǰjǰá] “nose”. However, both of these belong to a small class of nouns that delete their final syllable before the possessive suffix (section 4.10).

<sup>14</sup> The long velar nasal does occur in another dialect, Jalking (Lovestrand 2011).

This intriguing hypothesis (that velar nasals are restricted to the coda, even in an intervocalic position, and are, therefore, in complementary distribution with palatal nasals) will not be accepted for the purpose of the present analysis. The major disadvantage to the hypothesis is that it requires postulating word-medial onsetless syllables—a universally dispreferred analysis. In addition, every Chadic language in the Guera reports four contrastive nasals (Lovestrand 2012:22). The same pattern has been proposed for Proto-Chadic (Newman 2006:192). The speakers I worked with appeared to be able to distinguish the two phones, suggesting a contrastive relationship. Since speaker intuition suggests contrastive phones, and the allophonic hypothesis requires making extraordinary assumptions about syllabification, my judgment is that the evidence of allophony does not yet justify removing either nasal from the phonemic inventory. Like all Chadic languages of the Guera, this language has four contrasting nasals. Further studies of the distribution of the palatal and velar nasals may still yield noteworthy results, particularly in a diachronic study.

While there may be some reason for questioning the relationship between the velar and palatal nasal, there is clear evidence that each nasal contrasts with the alveolar nasal. Before a consonant, assimilation in point of articulation neutralizes the contrast, however, assimilation cannot adequately account for the occurrence of these nasals in the other positions: word-initial, intervocalic, and word-final. In these positions, the palatal and velar nasal each contrast (in similar environments) with their most likely allophone—the alveolar nasal.<sup>15</sup>

(4) [nāmō] 'to help'	[ānā] 'when'	[àsàn] 'fruit, sp.'
[ɲà:mó] 'to steal'	[àɲà] 'presence'	[dáláj] 'cheek'
	[máɲá] 'bush'	

### 2.1.7 Long consonants

Long consonants are limited to the intervocalic position. Otherwise their distribution is not predictable. Unlike some Chadic languages (Newman 1990:68), gemination has not been attested as a morphological device. All long consonants are

<sup>15</sup> In Bidiya, the bilabial and alveolar nasals are realized as a velar nasal in word-final position (Alio & Jungraithmayr 1989:20). See appendix 3 for more examples of contrast.

either part of a root, or created by two consonants meeting at a morpheme boundary (sections 4.1.1, 4.2, and 4.3).

In informal measurements, the length of a long consonant is about 1.5 times that of a regular consonant. The presence of a long consonant can also be seen in the morphology. For example, if a verb root ends in a long consonant and a consonant-initial suffix is added, then an epenthetic vowel must be inserted in order to avoid the creation of a super-heavy syllable (see section 4.8). The minimal pair below demonstrates how the long consonant affects the morphological process.

- (5) [súmō] 'to swallow'                      [súmnà] 'Swallow!'  
       [súm:ó] 'to scratch'                    [súm:ínà] 'Scratch!'

All of the consonants have been found in a long form except four: the velar nasal /ŋ/, the rhotic /r/, and the approximants /w/ and /j/. However, when two palatal approximants or two rhotics come together at a morpheme boundary, they produce a phonetically long consonant. Another dialect, Jalking, has a contrastive long rhotic, long velar nasal, and long palatal approximant (Lovestrand 2011).

**Table 2: Contrast in consonant length**

p	[kúpō] 'to join' [tūp:ō] 'to spit'	b	[gòbì] 'snail' [òb:ī] 'hedgehog'
t	[bìtó] 'to extinguish' [pít:ō] 'to throw'	d	[kūdū] 'back there' [kúd:ú] 'a fruit'
k	[ɲákō] 'to look for' [bák:ó] 'to open'	g	[kūgō] 'to win' [rāg:ó] 'to put together'
j	[míjírí] 'sun' [mīj:ī] 'man'	n	[gónò] 'mortar' [wōn:ó] 'to know'
s	[ísó] 'to turn something' [ís:ō] 'to wash'	ɲ	[tíɲō] 'to smooth' [pīɲ:ō] 'to blow away'
l	[bíló] 'to shell/to husk' [bìl:ó] 'to chop'	j	[gàjà] '...loved...' [gàj:á] '...loved us (two)...'
r	[ɲárō] 'to search' [ɲár:ò] '...searched there...'		

## 2.2 Vowels

There are five phonemic vowels in Baraïn. They are shown in the following chart. Contrasting pairs for each of these vowels are shown in appendix 4. Of the sixteen languages in the Guera subbranch for which information is available, only four deviate from this pattern by adding up to three vowels to their inventory (Lovestrand 2012). East Chadic languages, in general, are characterized by a phonologically stable five-vowel system, unlike the notoriously complex vowel systems of other Chadic branches (Jungraithmayr 1992; James Roberts 2001; Schuh 2003; Frajzyngier & Shay 2012:251).

**Table 3: Vowels**

	<i>front</i>	<i>central</i>	<i>back</i>
<i>high</i>	i		u
<i>mid</i>	e		o
<i>low</i>		a	

### 2.2.1 Long vowels

All five vowels have a contrastive long form. Contrastive long vowels have been found in every language of the Guera subbranch for which data are available (Lovestrand 2012). Long vowels are transcribed as two consecutive vowels, each representing one mora. When tone is only marked on the first vowel, the second carries the same tone. Contour tones are analyzed and transcribed as two separate tones, one on each mora.

There are no surface vowel clusters in the language, nor in any language in the Guera subbranch (Lovestrand 2012). When two underlying vowels meet at a morpheme boundary, the first deletes (section 4.7). In other words, onsets are obligatory, except in word-initial position. However, long vowels never occur word-initially (i.e., without an onset), though they almost always occur in the first syllable (chapter 3). Another dialect, Jalking, does allow word-initial long vowels (Lovestrand 2011:10).<sup>16</sup>

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<sup>16</sup> There is only one other language in the Guera subbranch, Mubi, in which word-initial long vowels are not attested (Lovestrand 2012).

**Table 4: Long vowels**

	<i>front</i>	<i>central</i>	<i>back</i>
<i>high</i>	[wīrō̄] 'to illuminate' [wīrō̄] 'to fly'		[gùsò] 'to leave' [gùsò] 'to resemble'
<i>mid</i>	[sérō̄] 'to argue' [sèeró] 'to make come'		[wōsō̄] 'to inflate' [wōosó] 'to cover'
<i>low</i>		[mārō̄] 'to hunt' [māaró] 'to grow'	

Almost all long vowels are followed by a H tone. In a study of 113 disyllabic words, only 17 words had a long vowel followed by a tone other than a high tone. The other 96 occurrences of long vowels in polysyllabic words are all followed by a high tone. Even though most long vowels in disyllabic words are followed by a H tone, the distribution of long vowels and H tone is not predictable. For example, we know that the H tone does not automatically lengthen the preceding vowel, because the H tone can also follow short vowels. Contrastive vowel length is common in Chadic languages and rarely conditioned by tone (Mary Pearce, personal communication).

### Chapter 3 : CV (syllable) structures

The CV structures (underlying combinations of consonants and vowels which form the surface syllable structures) described here account for nouns and verbs with no derivational or inflectional affixes, viz., roots.<sup>17</sup> The CV structures of affixes are not described, but they conform to the patterns seen throughout the language. Verbs are bound roots, and are described separately from nouns—none of which are bound morphemes. Some function words have exceptional surface syllable structures, and are looked at in the third section. The final section describes restrictions on the distribution of consonants in the syllable.

There are five CV structures: CV, CVC, CVV, V, and VC. These five structures are found in every language of the Guera subbranch. The syllable VV is not attested. Syllables with long vowels always have an onset. Another dialect, Jalking, does allow the VV syllable type word-initially (Lovestrand 2011:10). The structure VV has been attested in every other language of the Guera subbranch, except for Mubi. Most languages of the subbranch have at least eight CV structures (Lovestrand 2012).

There are no complex onsets or codas in the language with one possible exception. The disyllabic noun *kòndrèn* “type of stringed instrument” is the only lexeme containing three consecutive consonants. In the Guera subbranch, complex codas are only attested in a few words of four languages. Complex onsets are only reported for one language—Zerenkel (Lovestrand 2012).

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<sup>17</sup> Root can be defined as “the morpheme that forms the core of a word, providing the lexical semantic content” (Kroeger 2005:349; cf. Payne 1997:24; Crystal 2003b:402, 433). Following these authors, I use “stem” to refer to a root plus any derivational morphology. Thus, if a word has no derivational morphology, the stem and the root are identical (Kroeger 2005:248). This use should not be confused with the use of these terms in comparative studies where some define verbal roots as having no vowels, call stems “simple-stems”, and words “stems” (Wolff 1977).

There is a restriction against super-heavy syllables, which prohibits more than two moras in a syllable (where a short vowel and coda are each considered one mora, and a long vowel is considered two moras). This effectively prohibits codas on syllables with a long vowel. The majority of the other Chadic languages in the Guera do allow super-heavy syllables (Lovestrand 2012). However, it is assumed that Proto-Chadic did not (Newman 2006).

All major class lexical items must be minimally bimoraic.<sup>18</sup> Therefore, the syllable types V and CV are *ipso facto* restricted to polysyllabic words and some function words discussed below.

There is a strong tendency for bimoraic syllables, especially long vowels, to be in the first syllable of the word.<sup>19</sup> There are only two words with a long vowel which is not in the first syllable. Both are trisyllabic with a long vowel in the second syllable: *gōmáaḡī* “type of clothing” and *kūlāakí* “type of bird”.

### 3.1 Nominal CV structures

The general restrictions mentioned above (no complex onsets or codas, minimal bimoracity, no super-heavy syllables) plus the restriction against word-initial long vowels (above and section 2.2.1) result in only three possible CV structures for monosyllabic nouns: VC, CVC, and CVV. Only the last two are attested though there are three function words of the structure VC (section 3.3). I have found no more than 20 monosyllabic nouns, including some possible loan words.

**Table 5: Syllable structures for monosyllabic nouns**

CVV	[kèe]	'head'
CVC	[pìr]	'rainy season'

Table 6 shows the possible CV structures of disyllabic nouns. These include the two syllabic structures already noted: CVV and CVC. In addition, the syllable type CV is

<sup>18</sup> Strictly speaking this restriction refers to the surface form of the word—not the root. The class of verbs known as monoverbs are bound roots with no moras (sections 3.2.1 and 4.9.2).

<sup>19</sup> This pattern of distribution of heavy syllables has also been reported for Mukulu (James Roberts 2000).

relatively common. The right side of the table presents us with vowel-initial nouns, which require adding the structures V and VC to the list of syllable types. The syllable types V and VC are restricted to the word-initial position.

**Table 6: Syllable structures for disyllabic nouns**

CV.CV	[gùnò]	'wind'	V.CV	[árá]	'path'
CVV.CV	[bàatú]	'cat'	----		
CVC <sub>i</sub> .C <sub>i</sub> V	[pít:á]	'bark' <sup>20</sup>	VC <sub>i</sub> .C <sub>i</sub> V	[át:á]	'arm'
CVC.CV	[màrbò]	'girl'	VC.CV	[ìrwí]	'tear'
CV.CVC	[gósóm]	'beard'	V.CVC	[àbìl]	'rhinoceros' (2) <sup>21</sup>
CVV.CVC	[dèekél]	'elephant'	----		
CVC.CVC	[sómbór]	'rainbow'	VC.CVC	[èmbēr]	'giraffe' (1)

Long consonants are analyzed as the coda of the first syllable and onset of the second: /CVC<sub>i</sub>.C<sub>i</sub>V/. This analysis accounts for the restriction on long consonants to the intervocalic position and the absence of long vowels preceding a long consonant (to avoid super-heavy syllables).<sup>22</sup>

Table 7 shows the syllable structures of trisyllabic nouns. No new syllable types emerge, but there is a preference regarding the distribution of heavy syllables. Of 465 nouns sampled, only eight trisyllabic nouns and seventeen disyllabic nouns have more than one heavy syllable, some of which may be compound words (section 6.1.5). There are relatively few trisyllabic nouns which begin with a vowel.

<sup>20</sup> The subscript notation signifies a long consonant occupying the coda of one syllable and the onset of the next.

<sup>21</sup> Certain patterns are quite rare. When a structure is found three times or less, a number in parentheses after the gloss indicates the exact number of times the structure has been found for nouns.

<sup>22</sup> One reason to hesitate with this analysis is that there seems to be a restriction on lexemes with long consonants that does not apply to lexemes with consonant clusters. The lexicon contains lexemes with the structure /CVC.CVC/ when the two word-medial consonants are different phonemes, but there are no lexemes in the data with long consonants followed by a closed syllable: /(C)VC:VC/. However, this seems to be an accidental gap, since the structure is allowed when a direct object marker is suffixed to verbs with long consonants in the root: /ket:-ā-ŋ/ [két:àŋ] “...ask them...”



**Table 7: Syllable structures for trisyllabic lexemes**

CV.CV.CV	[síkītē]	'ostrich'	V.CV.CV	[àtìbé]	'ash'
CVV.CV.CV	[wíilàlì]	'lizard' (2)	--		
CV.CVV.CV	[kūlāakí]	'black crowned crane' (2)			
CV.CVC.CV	[túrúmbá]	'sandstorm' (3)			
CVV.CVC.CV	[màabúrkú]	'alcelaphus (antelope)' (1)			
CV.CV.CVC	[jàkìlám]	'chin'	V.CV.CVC	[òpòpòn]	'dry season' (1)
CV.CVC.CVC	[bòrùmbì]	'a fruit' (2)			
CVC <sub>i</sub> .C <sub>i</sub> V.CV	[mís:íjò]	'python'			
CVC.CV.CV	[mílmájú]	'blacksmith'	VC.CV.CV	[ìngàlì]	'manioc'
CVC <sub>i</sub> .C <sub>i</sub> V.CVC	[gáp:ínín]	'horn' (1)			
CVC.CVC.CV	[màrkùmbà]	'wild pigeon' (2)			
CVC.CV.CVC	[jèlbàdūm]	'a type of insect' (2)			

There are very few nouns with four syllables. Most long nouns are compound words (section 6.1.5). There are four nouns of four syllables which the speakers insist are not compounds. They are listed in table 8.

**Table 8: Nouns with four syllables**

V.CV.CV.CV	[ìtònóké]	'a type of insect'
CV.CV.CV.CV	[kòrùjásí]	'a type of fruit'
CV.CVC.CV.CV	[màràngàlì]	'termite'
CV.CVC.CV.CV	[sùrùngòlì]	'heart'

### 3.2 Verb root CV structures

In Barāin, the verb root is normally easy to identify, unlike many Chadic languages in which the underlying verb root is not always evident (Newman 1977a; Shay 1999:42). All verbs are bound morphemes, and always have a Tense/Aspect/Mood (TAM), direct object, or other suffix. The morpheme before the inflectional suffix is the verb stem. The verb root is identical to the verb stem, with the possible exception of the causative form of the verb (section 7.6). Causative forms are also the only place where

there is evidence of stem-internal morphology, common in other Chadic languages (frequently called apophony), although this is likely a fossilized process.

Structurally speaking, we can identify two major classes of verb roots. A small set of verbs (eleven have been found) have a bound root consisting of just one consonant. They can also be identified by the alternate paradigm they use for TAM marking (section 7.2.1). A similar class of verbs is seen in many Chadic languages. These verbs are labeled “monoverbs”. All other verbs are “polyverbs”, and have a bound root with at least one vowel and a root-final consonant.

All verb roots are lexically assigned a tonal melody which is assigned to the surface form according to assignment and spreading rules described in section 5.3.

### 3.2.1 *Monoverb roots*

The term “monoverb” is shorthand for a minor class of verb roots that consist of a single consonant and no vowels.<sup>23</sup> The exact definition or characteristic traits of monoverbs vary from language to language (Jungraithmayr & Tourneux 1990). In Baraïn, the set is clearly defined by both its root structure and by its alternate suffix paradigms (section 7.2.1). While in some languages monoverbs are described as having VC or CV(V) roots, monoverbs in Baraïn have a root of only one consonant and no vowels: C-. The underlying form of the root also specifies a tone melody. This structure is seen in at least eleven other Chadic languages including several other Guera languages: Sokoro, Migaama, Mawa, and Bidiya (Barreteau & Jungraithmayr 1990:43).

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<sup>23</sup> This label is taken from Schuh (1998:77). Another label given to this type of verb root structure is “monoconsonantal” (Frajzyngier 1989:71; 2008:114; Shay 1999:44). This label is not used here to avoid confusion with verb roots of the type VC- which are not in the monoverb class. Discussions on this class of verb roots in Chadic languages can be found in Jungraithmayr & Tourneux (1990). Other terms used in that publication include “monoradical” and, in French, “monoradicaux” and “monosyllabiques”.

**Table 9: Monoverb roots**

to draw (water)	b-	H
to walk	d-	H
to kill	d-	L
to feel/to hear	j-	LH
to eat	t-	L
to be <sup>24</sup>	t-	H
to send	l-	L
to ripen/to cook	n-	L
to come	s-	H
to drink	s-	L
to give birth	w-	L

### 3.2.2 Polyverb roots

Polyverbs are all verbs that are not monoverbs. There are seven canonical structures for polyverb roots, as shown in table 10. Unlike monoverbs, polyverbs have a vowel in the underlying form of the root. All polyverb roots end in a consonant. Vowel-initial roots are relatively rare, consisting of only 27 of the 223 polyverbs examined. As seen throughout the language, word-initial vowels cannot be long. The most common structure is CVC-, comprising over forty percent of the polyverbs examined. The other two relatively common structures are CVVC- and CVC:- comprising most of the other half of polyverbs. Only eighteen verb roots were found with the structure CVCC- where the two final consonants are not a long consonant.

**Table 10: CV structures for all verb roots**

C-	VC-	VC:-	VCC-	CVC-	CVVC-	CVC:-	CVCC-
11	12	9	6	95	37	46	18

Among verb roots with the structure VCC- or CVCC-, there is a subset whose final two consonants are broken up by an epenthetic vowel in the surface form to respect

<sup>24</sup> This verb was discovered rather late in the research process. The speaker translated it as something like “to be” or “to exist” although it is used rarely and does not appear to have a copular function.

the restrictions on distribution of consonants (section 3.4).<sup>25</sup> For example, if the first consonant of a root-final consonant cluster is a plosive, then an epenthetic vowel breaks up the consonant cluster to prevent a non-sonorant coda in the surface form. This results in the verb having an additional syllable. The surface vowel in these forms is always a high vowel (epenthetic [i] or [u] if affected by vowel backness harmony). Additional evidence for this economic analysis of underlying verb roots is that, in careful speech, the speakers will sometimes pronounce these verb stems without an epenthetic vowel. (Speakers' varying judgments on the acceptability of unlicensed consonant clusters are discussed in section 4.8.)

(6) /uɣb-o, H-Ø/ → [úɣúbó]  
 sow-INF

(7) /ɟukl-o, MH-Ø/ → [ɟūkūló]  
 limp-INF

A similar class involves a fossilized derivational morpheme that creates a complex verb stem (section 7.6). Unlicensed consonant clusters are broken up with epenthetic vowels in the surface form.

(8) CVCCr- /ɟiŋgr-o, LH.M/ → [ɟiŋgúrō]  
 descend.CAUS-INF 'to send down (to make someone descend)'

(9) CVC:r- /tik:r-o, H.M/ → [tík:úrō]  
 get.up.CAUS-INF 'to lift up (to make someone get up)'

(10) CVVCr- /gaasr-o, LH.M/ → [gàasúrō]  
 found.CAUS-INF 'to establish (to make someone found something)'

There is one verb with an exceptional root structure: *ámboró* “to shine” (VCCVC-). It is very similar to the causative stems, but its second vowel does not behave like the epenthetic vowels seen above. Normally, the epenthetic high vowel harmonizes with the feature [ $\pm$ back] of the following vowel, but does not change its height (section 4.8). Even if the second vowel is epenthetic, it is not certain that the stem-final [r] is the

<sup>25</sup> Similar structures are seen in Migaama, Mubi, Pero, Lele, and Miya (Jungrathmayr & Adams 1992:46; Frajzyngier 1982a:135–141; 2001:43; Schuh 1998:77).

causative derivational suffix. There is no evidence for a nonderived form, and no evidence that this verb uses the paradigm of object suffixes used by other causative verbs (section 8.3.3).

### 3.3 Function word syllable structures

While major class lexical items must be minimally bimoraic, this restriction does not apply to all function words: interrogatives, pronouns, prepositions, auxiliaries, and verbal particles. A likely explanation for the allowance of monomoraic function words is that many, if not all, of these words are phonologically bound to a major class word, viz., clitics.

The Future auxiliary (section 7.1.5) has an exceptional structure. It appears to consist of a single nasal preceding the verb. No morpheme has been found which can be inserted between the Future marker and the verb. Nonetheless, it is considered a separate auxiliary, and not a prefix, according to the intuition of the speakers.<sup>26</sup>

There are only four words of the shape VC. They are the first person singular and dual subject pronouns (*ĩŋ* and *íŋ*) (section 8.2) and two prepositions *ĩŋ* and *íŋ* (sections 9.3.1 and 9.3.2). The vowel in these words often elides (section 4.6), in which case the remaining nasal is either pronounced as the coda of a preceding word, or syllabified.<sup>27</sup>

As mentioned above, there is a lexical restriction on words of the form CV. All of these words are function words (though not all function words are monomoraic). While there is no conclusive evidence for claiming that all CV words are phonologically bound, they do trigger nasal place assimilation with adjacent words (examples (17) and (18),

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<sup>26</sup> The analysis of the Future marker as an auxiliary is admittedly lacking in empirical support, and it creates a rather exceptional lexical class. There is only one other marker analyzed as an auxiliary (section 7.3.2), and it can co-occur with the Future marker. Both markers could potentially be analyzed as verbal prefixes, but that would be equally exceptional. There are no other prefixes in the language. One disadvantage of the prefix analysis is that it creates CV structures found nowhere else in the language, including unlicensed consonant clusters and word-initial velar nasals.

<sup>27</sup> The alternative analysis, that the vowel is epenthetic, is less likely because the velar nasal of the Future auxiliary has never been observed to take on an epenthetic vowel. Of course, if the Future auxiliary was re-analyzed as a prefix, this argument would not be as convincing.

section 4.1). Vowels of function words can also be subject to truncation (example (69), section 4.7) and elision in rapid speech (section 4.6).

**Table 11: Syllable structures for monomoraic function words**

C	ɨ̃	FUTURE AUXILIARY (1)
CV	mó	'what'
VC	íɨ̃	ASSOCIATIVE PREPOSITION (4)

### 3.4 Distribution of consonants

The main restriction on the distribution of consonants is that plosives are never found in the coda, except in loan words and in conjugated verbs where the stem ends with a consonant and the suffix begins with a consonant (section 4.2). All other consonants can occur in the coda, but with restrictions on what consonants can be in the following onset of the same word. Table 12 summarizes the more detailed information found in appendix 5 regarding the distribution of consonants in the syllable. The distribution of palatal and velar nasals is discussed above (section 2.1.6), and not included in this simplified table; neither is the restriction against the palatal approximant following another consonant (section 4.8).

**Table 12: Distribution of consonants in the syllable (simplified)**

	<i>Onset</i>	<i>Coda</i>	<i>Following onset</i>
<i>Plosives</i>	+	–	only long consonants
<i>Nasals: [m], [n]</i>	+	+	non-liquids
<i>Rhotic: [r]</i>	+	+	any consonant
<i>Lateral: [l]</i>	+	+	non-liquids
<i>Fricative: [s]</i>	+	+	liquids: [r], [l]
<i>Approximants: [j], [w]</i>	+	+	any consonant

There is a strong preference in the language in regards to the distribution of approximants. The labial approximant [w] is in the word-initial position in half of the words where it occurs, but the palatal [j] is only found in a word-initial position twice. Only two examples have been found of each sound in the coda position. There is also a

preference in regards to which approximant follows certain vowels, even when the approximant is in the onset position of the following syllable. The vowel [u] is followed by [w] far more frequently than by [j] and, in a similar pattern, the vowel [i] is frequently followed by [j] and rarely by [w].

When the vowel-glide sequence /uw/ is followed by a consonant-initial suffix, the two phones are pronounced as one long vowel.

(11) dúwó		dúugà	
dúw-	-o	dúw-	-gà
look	INF	look	DO:3.M

## Chapter 4 : Morphophonemics

This chapter describes the productive morphophonemic processes observed in morphological paradigms. Naturally, most of the processes described are common throughout the world's languages. The first five processes described are assimilatory processes. Then, elision, a rapid-speech process, is described. The next processes described are strategies for the avoidance of unlicensed CV structures including vowel deletion to avoid hiatus, epenthesis, and vowel shortening. The final process described is a case of lexically conditioned suppletion involving the possessor agreement suffix. Other cases of lexically or morphologically conditioned suppletion are discussed throughout the description of the morphological system.

### 4.1 Assimilation of the point of articulation (nasals)

Alveolar, palatal, and velar nasals always assimilate to the point of articulation of the following consonant in a word.<sup>28</sup> Assimilation is evidenced in verbs whose stem ends in a nasal. If the suffix begins in a consonant, then the stem-final nasal will assimilate to the point of articulation, unless it is a bilabial nasal. Bilabial nasals never assimilate.<sup>29</sup>

(12) m̀ìj̀nó m̀j̀j̀- -o slap INF	m̀ìj̀gà m̀j̀j̀- -gà slap DO:3.M	m̀ìnt̀ì m̀j̀j̀- -t̀ì slap DO:3.F
(13) m̀ám̀ō m̀ám̀- -o touch INF	m̀ám̀gà m̀ám̀- -gà touch DO:3.M	m̀ám̀t̀ì m̀ám̀- -t̀ì touch DO:3.M

<sup>28</sup> One exception to this description is the case of nasal clusters (section 4.1.1).

<sup>29</sup> Interlinearized examples in this work have up to four lines. From top to bottom, these consist of: phonetic pronunciation, underlying phonemic form, morpheme gloss, and free translation. If the phonetic form is not given, it is identical to the underlying form. The free translation is not always given in examples focusing on phonological processes. Verb roots include a diacritic symbolizing the underlying tone melody of the verb. The tone melodies described in section 5.3 are symbolized as follows: H ́, HM ̀, M ̀, MH ́, LH ́. For monoverb roots, the underlying tone melody is represented by capital letters to avoid floating diacritics. Morphemes with no diacritic are analyzed as unmarked for tone in their underlying form.



The four function words mentioned in section 3.3 (all of the phonological shape /iŋ/) and the Future auxiliary /ŋ/ always assimilate in place of articulation to the initial consonant of the following word. If the following word begins with any vowel, the nasal is pronounced as a velar nasal. This gives evidence for the velar as the underlying form. In the examples below, the vowel [i] often elides (section 4.6).

**Assimilation of the subject pronoun: /iŋ/ (section 8.2)**

- (14) [ín déjɲà dí] 'We all walk.'  
 [iŋ gòréjɲà gòró] 'We all run.'  
 [iŋ júkéjɲà júkó] 'We all get up.'  
 [ím bùkèjɲà búkí] 'We all talk.'

**Assimilation of the Future auxiliary: /ŋ/ (section 7.1.5)**

- (15) [músà ò dùwò] 'Moussa will see.'  
 [músà ŋ nárò] 'Moussa will look for.'  
 [músà ò māmò] 'Moussa will touch.'  
 [músà ŋ gājò] 'Moussa will love.'

**Assimilation of the associative preposition: /iŋ/ (section 9.3.2)**

- (16) [músà ŋ úmàr] 'Musa and Umar'  
 [bàatú ò bàṅà] 'cat and dog'  
 [kílāmí ŋ gúgùm] 'mouse and owl'  
 [wālò ŋ jaa] 'year and day'  
 [èmbēr ò dèekél] 'giraffe and elephant'

Assimilation of the point of articulation also occurs if a word ending in a nasal (except the bilabial) is followed by a monomoraic function word such as the demonstrative or the negation marker *dō*. It is not clear if this is an obligatory assimilation or a rapid-speech effect. If obligatory, this assimilation may support the hypothesis that monomoraic function words are phonologically bound to adjacent words (section 3.3).

- (17) [àláj] [kà àláj gī] [tì àláj dī] [ní àláj nī]  
 'where' 'Where is he?' 'Where is she?' 'Where are they?'
- (18) [dúpíŋ] [kà gásá dúpín dō]  
 'knee' 'He did not say, "knee."'

#### 4.1.1 Nasal clusters

A nasal can assimilate to another nasal if a suffix beginning with a nasal is added to a verb whose stem ends in a nasal. The alveolar nasal is the only suffix-initial nasal. If the nasal of the stem is alveolar, then the two alveolar nasals are pronounced as one long nasal.

(19) ténō	tén:ù
tén- -o	tén- -nù
touch INF	touch DO:1.s

If palatal, then its point of articulation is preserved and the alveolar nasal of the suffix assimilates to it.

(20) mìnó	mìj:ù
mǐj- -o	mǐj- -nù
slap INF	slap DO:1.s

When the nasal of the stem is velar, then it is difficult to tell if its point of articulation assimilates to the nasal of the suffix, or if there is no assimilation at all. This irregular behavior corresponds with the fact that no long velar nasal has been found in the language.

(21) jāŋō	jàŋnù / jàn:ù
jāŋ- -o	jāŋ- -nù
write INF	write DO:1.s

Just as before plosives, bilabial nasals do not change their place of articulation.

(22) gōmō	gòmù
gōm- -o	gōm- -nù
hit INF	hit DO:1.s

#### 4.2 Voicing in plosive clusters

Although plosive clusters are heavily restricted in the language (section 3.4), two plosives can come together at a morpheme boundary. When these clusters are not avoided by epenthesis (section 4.8), voicing often spreads from one consonant to another. The spreading patterns are asymmetrical and not identical in the nominal and verbal

morphology. Only plosives are affected by these spreading rules. They are the only natural class with voiced-voiceless pairs.

At least some speakers tolerate plosive clusters in the verbal morphology which are unlicensed elsewhere in the language (sections 3.4 and 4.8). In the verbal morphology, if a voiced plosive and a voiceless plosive of the same place and manner of articulation (i.e., identical except for voicing) come together at a morpheme boundary, the two plosives are pronounced as one long unvoiced consonant. The [-voice] feature spreads in both directions, regardless of whether the first or second consonant of the sequence is underlyingly voiced. The lower sonority consonant always dominates.

(23) /suk-ga, M-L/ → [sùk:à]  
smell-DO:3.M

(24) /pid-ti, M-L/ → [pìt:ì]  
carry-DO:3.F

If both plosives are voiceless and of the same place of articulation, then they will be pronounced as one long consonant.

(25) /bit-ti, LH-L/ → [bìt:ì]  
sell-DO:3.F

However, in the situation where two voiced plosives at the morpheme boundary are identical, an epenthetic vowel is inserted (section 4.8).

(26) /kug-ga, M-L/ → [kùgìgà]  
hoard-DO:3.M

(27) /woj-jo, M-H/ → [wōjūjó]  
give.message-DTRV

When the plosive cluster differs in place of articulation, then the feature [-voice] will spread left, but not right.

(28) /seeb-ti, H-L/ → [séptì]  
fish-DO:3.F

(29) /jib-ti, LH-L/ → [jìptì]  
throw-DO:3.F

(30) /bit-ga, LH-L/ → [bìtgà]  
buy-DO:3.M

(31) /dop-ga, H-L/ → [dópɡà]  
find-DO:3.M

There are no nouns in the language which end in plosives, except for loan words.<sup>30</sup> When a possessor agreement suffix is added to one of these loan words which ends with a voiceless plosive of the same point of articulation as the voiced plosive of the suffix, then the two sounds will geminate, but, unlike in the verbal morphology, the feature [+voice] spreads left.<sup>31</sup> The two plosives are pronounced as one long voiced consonant. In the verbal morphology, the feature [-voice] spreads (in both directions) and the surface form is pronounced as one long voiceless consonant.

(32) /súk-gò/ → [súg:ò]  
market(A)-POSS:2.M

If the two consonants are of different places of articulation there is no change in voicing.

(33) /àsét-gò/ → [àsétgò]  
plate(A/F)-POSS:2.M

Three different environments trigger different voice spreading processes in the verbal and nominal morphology. Asymmetries in voicing assimilation across morpheme boundaries are also seen in Dangla where the process is sensitive to lexical constraints and subject to individual speaker preference and rate of speech (Shay 1999). The processes demonstrated above are summarized in the following table.

<sup>30</sup> Words which are assumed to be loan words are marked in the gloss by one of three letters in parenthesis to indicate their assumed language of origin: Chadian (A)rabic, (F)rench or (S)okoro. No serious attempt has been made to verify the etymology of any of these words. Arabic or Hausa words may have passed into the language via another language, and French words may have entered the language via Chadian Arabic.

<sup>31</sup> No nominal suffixes begin with a voiceless plosive except the plural possessor agreement suffixes (section 6.1.2), which always follow the plural suffix -já, so it is not possible to test if [+voice] also spreads right to a nominal suffix or if [-voice] would spread left from a suffix. No loanwords were found ending in a voiced plosive of the same POA as the initial plosive of a nominal suffix.

**Table 13: Voice spreading in plosive clusters**

<i>Environment at morpheme boundary</i>	<i>Verbs</i>	<i>Nouns</i>
Voiced and voiceless plosive of same POA	[-voice] spreads both directions	[+ voice] spreads left
Voiced and voiceless plosives of different POA	[-voice] spreads left, not right	no change in voicing
Voiced plosives of same POA	Epenthetic vowel inserted	unable to test

### 4.3 Rhotic assimilation

The oblique suffix has two different forms depending on the speaker: *-rò* or *-dò* (section 8.11). The former is the only suffix that begins with a rhotic. Example (34) demonstrates that the underlying form of this variant is *-rò*, since it occurs following a vowel.

- (34) *kà sàarò jē ò gérá*  
*kà s-, H -āa -rò jē ò gérá*  
 S:3.M come PFV OBL DISC PREP village  
 'He came to the village.'

Speakers who employ the form *-rò* exhibit a total assimilation of the rhotic when it directly follows a voiced consonant of the same place of articulation: [n], [l], or [d].

- (35) *kà kól:ò jē ò gérá*  
*kà kól- -rò jē ò gérá*  
 S:3.M go OBL DISC PREP village  
 'He went to the village.'

- (36) *kà gán:ò kítà ò máná*  
*kà gán- -rò kítà ò máná*  
 S:3.M make OBL work PREP bush  
 'He worked in the bush.'

- (37) /*tad-ro*, MH-L/ → [tād:ò]  
 climb-OBL

Before another rhotic, the two consonants are pronounced as one long consonant. This is the only environment where a long rhotic has been found (section 2.1.7).

(38) /nar-ro, HM-L/ → [nár:rò]  
look.for-OBL

The rhotic does not assimilate to the voiceless alveolar stop or to sonorants of other places of articulation.

(39) /bot-ro, LH-L/ → [bòtrò]  
get.lost-OBL

(40) /buŋ-ro, M-L/ → [bùŋrò]  
dive-OBL

(41) /mij-ro, LH-L/ → [mìj̀rò]  
slap-OBL

#### 4.4 Fronting of back vowels

The plural suffix is frequently accompanied by a fronting of the final vowel of the noun. When the plural suffix *-já* is added to a noun ending in [o] or [u], the vowel becomes [e] or [i] respectively.

(42)	[túrú]	'moon'	[túríjá]	'moons'
	[wālō]	'year'	[wālējá]	'years'

This process does not occur in monosyllabic nouns. This is either because the first vowel of the word is protected (as in vowel harmony, section 4.5), or because the process does not affect long vowels. It is not possible to test which hypothesis is correct, because long vowels are never word-final in polysyllabic words (section 2.2.1), and monosyllabic nouns cannot end in a short vowel (section 3.1).

(43)	[sùu]	'animal/meat' <sup>32</sup>	[sùujá]	'animals/meats'
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<sup>32</sup> A single noun meaning both “animal” and “meat” is considered an areal trait of Sub-Saharan African languages. At one point, Greenberg believed that this was absent in East Chadic languages (Greenberg 1983:15–18). Baraïn is undoubtedly not the first counterexample.

#### 4.5 Vowel backness harmony

Vowel backness (fronting) harmony is a long-distance (across a consonant) regressive spreading of the feature [ $\pm$  back] which occurs at morpheme boundaries. The binary value of the first vowel in a suffix spreads leftward to a preceding vowel. This process completely excludes the low vowel [a]. It is a neutral vowel which does not assimilate or trigger assimilation. Otherwise, both high and mid vowels harmonize with each other for [ $\pm$  back] without any change in vowel height. While I was eliciting noun paradigms, the speakers became aware of this phonological change and occasionally “corrected” their pronunciation to give the underlying form. On numerous occasions, one speaker corrected the other for having pronounced a word with vowel harmony. Nonetheless, a general pattern of when vowel harmony is at least acceptable can be described. The nominal suffixes which include a vowel other than [a] are possessor agreement suffixes (section 6.1.3) and nominal agreement suffixes (section 6.2).

(44)	gólmégètì gólmó -gètì house POSS:3.F	gólmégè gólmó -gè house POSS:2.F	gólmógò gólmó -gò house POSS:2.M
(45)	dàrnújù dàrní -jù gums POSS:1.S	dàrnúgò dàrní -gò gums POSS:2.M	dàrnígè dàrní -gè gums POSS:2.F
(46)	sàalíjì sàalú -jì knife POSS:3.M	sàalígètì sàalú -gètì knife POSS:3.F	

The first vowel of a word cannot be affected by vowel harmony. Since most nouns are disyllabic, it is normally only the final (or second) vowel of the root that is affected by vowel harmony. When vowel harmony occurs in trisyllabic nouns, the final vowel is always affected, but, at least in some words, the penultimate vowel of the root can also be affected.

(47)	ātūbógò ātībè -gò ash POSS:2.M	ātūbójù ātībè -jù ash POSS:1.S	ātībèjì ātībè -jì ash POSS:3.M
------	--------------------------------------	--------------------------------------	--------------------------------------

(48) āṅgúlòjù                      āṅgílèjì  
       āṅgúlò -jù                      āṅgúlò -jì  
       tree, sp.<sup>33</sup> POSS:1.S              tree, sp. POSS:3.M

(49) àrgòtòjù                      àrgètìjì  
       àrgòtò -jù                      àrgòtò -jì  
       tantalus<sup>34</sup> POSS:1.S              tantalus POSS:3.M

However, the speakers did not spread the [ $\pm$ back] feature to the penultimate vowel of the root in every trisyllabic root. In one recording, example (50), the speaker repeated the same word back-to-back, the first time only harmonizing the final vowel of the root, and the second time harmonizing the last two vowels.

(50) ákíjùgò                      ~              ákújùgò  
       ákíjì -gò                      ákíjì -gò  
       twin POSS:2.M                      twin POSS:2.M

In all examples where the [ $\pm$ back] feature does not spread to the second vowel of a trisyllabic root, the first vowel of the word has the opposite binary value for [ $\pm$ back] to the suffix which is triggering vowel harmony (the suffix vowel), as in example (51). This pattern suggests that the first vowel prohibits vowel harmony in the second vowel. In all those cases where vowel harmony does (or can) affect the second vowel of a trisyllabic noun root—(47) through (50)—the initial vowel is the low central vowel [a].

(51) bükürìjì                      bükürìgè  
       bükürū -jì                      bükürū -gè  
       bowl POSS:3.M                      bowl POSS:2.F

The same environment for vowel harmony is applied to verbs without exception. The speakers have not resisted or “corrected” vowel harmony in any verb. Vowel harmony frequently affects the Perfect suffix *-ē*, which can precede direct object suffixes (section 8.6).<sup>35</sup>

<sup>33</sup> *Balanites aegyptiaca*, called “savonnier” by French-speaking Chadians.

<sup>34</sup> *Chlorocebus tantalus*, a species of monkey

<sup>35</sup> This TAM marker is almost always followed by a suffix containing a trigger for vowel harmony. However, its underlying form is revealed when followed by a suffix containing just one nasal segment, as in lines 6 and 7 of appendix 9.



(52) gòmò̀nù gōm- -ē -nù hit PRF DO:1.S	gōmṑgó gōm- -ē -gó hit PRF DO:2.M	gōmḕgé gōm- -ē -gé hit PRF DO:2.F
(53) árò̀nù ár- -ē -nù burn PRF DO:1.S	árṑgó ár- -ē -gó burn PRF DO:2.M	árḕgé ár- -ē -gé burn PRF DO:2.F
(54) dāwò̀nù dāw- -ē -nù heal PRF DO:1.S	dāwṑgó dāw- -ē -gó heal PRF DO:2.M	dāwḕgé dāw- -ē -gé heal PRF DO:2.F

Vowel harmony also affects epenthetic vowels inserted at morpheme boundaries, which are always the front high vowel [i] when not affected by backness harmony (section 4.8).

(55) gúp:únù gúp:- -nù pierce DO:1.S	gúp:úgó gúp:- -gó pierce DO:2.M	gúp:ígà gúp:- -gà pierce DO:3.M
(56) wōn:únù wōn:- -nù know DO:1.S	wōn:úgó wōn:- -gó know DO:2.M	wōn:ígà wōn:- -gà know DO:3.M

In some verbs, an epenthetic vowel is inserted inside the root (section 3.2.2). This vowel is also subject to vowel harmony.

(57) bōtū̀pó bōtɥ- -o forget INF	bōtí̀tì bōtɥ- -tì forget DO:3.F	bōtún:ù bōtɥ- -nù forget DO:1.S
(58) ítúró ítɥ- -o count INF	ítí̀rtì ítɥ- -tì count DO:3.F	ítúrnù ítɥ- nù count DO:1.S

In one recorded text, there are a few examples of vowel harmony occurring across a word boundary in rapid speech. All of these examples involve the monomoraic third person plural subject pronoun. In this environment, vowel harmony is the exception rather than the rule.

(59) kákrén júkéj ná nū kóléj jēléj mīy:ō dōgò bótíkí  
 kàk:írèṅ júk- -ēji ná nì kól- -ēji jēl- -ēji mīy:ō dòkò bótíkí  
 there stand IMPF EQ S:3.PL go IMPF put IMPF person until Botiki  
 'From there they sent someone as far as Botiki.' (appendix 10)

(60) wóré ná nū kóléj jēléj bósē  
 wóré ná nì kól- -ēji jēl- -ēji bósē  
 Wore EQ S:3.PL go IMPF put IMPF Bosse  
 'From Wore, they put someone at Bosse.' (appendix 10)

#### 4.6 Elision of [i]

There are four words in the language of the phonological shape /iŋ/: two subject pronouns (section 8.2) and two prepositions (sections 9.3.1 and 9.3.2). These are also the only words with the syllable structure VC (section 3.1). The vowel [i] in these words frequently elides in normal speech.

(61) bèdèj mák:à ñ úmàr  
 bèd- -èji mák:à ñj úmàr  
 give IO:3.M peanuts PREP Umar  
 'He gives peanuts to Umar.'

(62) bàatú m̀ bàṅà  
 bàatú ñj bàṅà  
 cat ASOC dog  
 'cat and dog'

(63) múusà ṅ kóló n̄ súk sánē  
 múusà ṅ kól- -o ñj súk sánē  
 Moussa FUT go INF ASOC market(A) or  
 'Will Moussa go to the market?'

(64) gē n̄ nándì	gē m̀ mèjèrè
gē ñj nándì	gē ñj mèjèrè
REL:M PREP children.PL	REL:M PREP people.PL
'for kids'	'for people'

The high front vowel frequently elides from the demonstrative in the identification construction (section 11.1.3), especially in rapid speech.

- (65) *tìdná*  
*tì dì ná*  
 S:3.F DEM:F EQ

The Imperfective suffix and the third person masculine indirect object suffix, both of the shape *-eji*, are frequently pronounced without their final vowel in normal speech.

#### 4.7 Deletion to avoid hiatus

One suffix which begins with a vowel is the nominalizer *-áj* (section 6.1.4). The examples in (66) show that this suffix is vowel-initial.

- |                   |                 |
|-------------------|-----------------|
| (66) <i>wúlgú</i> | <i>wúláj</i>    |
| <i>wúl- -gú</i>   | <i>wúl- -áj</i> |
| kind N:M          | kind NOM        |
| 'kind'            | 'kindness'      |

Examples (67) and (68) demonstrate that when this morpheme is attached to a root ending with a vowel, the vowel of the root is deleted. Even in the case where the vowels are of the same quality, as in (67), the combination is not pronounced as a long vowel, but as one short vowel. Cross-linguistically, languages differ as to whether hiatus in this context is resolved by deletion of the root-final vowel or the suffix-initial vowel (Casali 1997:506). Baraïn patterns with those languages that preserve morpheme-initial sounds and allow deletion of segments from the root.

- |                     |                   |
|---------------------|-------------------|
| (67) <i>wàajàgú</i> | <i>wáajáj</i>     |
| <i>wàajà- -gú</i>   | <i>wàajà- -áj</i> |
| strong N:M          | strong NOM        |
| 'strong'            | 'strength'        |
- 
- |                   |                      |
|-------------------|----------------------|
| (68) <i>sìl:í</i> | <i>sìl:ájjì</i>      |
| <i>sìl:í</i>      | <i>sìl:í -áj -jì</i> |
| salt              | salt NOM POSS:3.M    |
| 'salt'            | 'its saltiness'      |

In the examples above, the nominalizing suffix contains a coda. Thus the motivation for deletion could equally be described as deletion to avoid a super-heavy

syllable. However, deletion of the first of two adjacent vowels has also been observed across word boundaries in rapid speech where one of the words is a monomoraic function word. In this situation, deletion is not obligatory. Whereas the second vowel deletes at the juncture of a root and a suffix, the first vowel may delete when a function word precedes a major class lexical item. This pattern coincides with the universal preference to preserve segments in lexical words (as opposed to function words), as well as the above-noted preference to preserve morpheme-initial segments (Casali 1997:504).

- (69) **wánē**            sēt:ā            súlē  
       wò ánē        s-, H -ēt:a súl- -ē  
       and PRO:EXCL come PRF sit PRF  
       'But we came to live here.'

#### 4.8 Epenthesis of [j]

The epenthetic vowel in Baraïn is [i], as in other East Chadic languages (Frajzyngier & Shay 2012:252). Epenthesis occurs to prevent palatalized consonants, super-heavy syllables, or plosives in the coda. An epenthetic vowel is inserted before any palatal approximant [j] when the preceding syllable ends in a consonant. There are two suffixes that begin with a palatal approximant—one verbal, one nominal.<sup>36</sup> Both of these suffixes engender an epenthetic vowel. This epenthesis happens even when neglecting it would not create a super-heavy syllable or place a consonant in the coda which is normally restricted from that position (section 3.4). The palatal approximant never directly follows another consonant anywhere in the language (appendix 5).

- (70) /lísín-já/ → [lísínjáj]  
       tongue-PL

- (71) /bólól-já/ → [bólóljáj]  
       throat-PL

- (72) /gom-ja, M-H/ → [gōmījáj]  
       hit-DO:DUAL

<sup>36</sup> An alternative analysis could question whether the vowels in examples (70) through (72) are examples of epenthesis, or if the suffixes contain an underlying /i/ which deletes before words ending in vowels to prevent vowel clusters. The speakers have a clear intuition that the suffixes are -*já* and not -*ija*. Where deletion is attested, it is the vowel of the stem that deletes, not the vowel of the suffix (section 4.7).

There may be one consonant that allows a type of palatalization process instead of epenthesis in this environment. In rapid speech, a word ending in an alveolar nasal may become palatal, and delete the approximant of the plural suffix. In other words, the nasal and the approximant coalesce.

(73) [àsàn] 'type of fruit'                      [àsàná] 'fruits' (fast speech)

Epenthetic vowels frequently occur in the verbal morphology in order to comply with the restriction against super-heavy syllables.

(74) /wils-ga, MH-L/ → [wĩlsígà]  
boil-DO:3.M

(75) /gup:-ga, H-L/ → [gúp:ígà]  
pierce-DO:3.M

As seen in (76), epenthetic vowels are subject to vowel harmony.

(76) /tirk-nu, M-L/ → [tĩrkùnù]  
contribute-DO:1.s

The vowel [a] in a suffix does not trigger vowel harmony (section 4.5). When this vowel is in a syllable following the epenthetic vowel, it shows that the default epenthetic vowel is the high front vowel [i], as in examples (70) through (75). Epenthesis is not the only option for avoiding super-heavy syllables. In some cases it may be possible to shorten a long vowel (section 4.9).

Epenthesis is employed when the verbal morphology would otherwise violate the restriction on the distribution of consonants in the syllable (section 3.4). However, the speakers have different levels of tolerance for violating the restriction on distribution of consonants. The younger speaker preferred to follow the distribution pattern seen elsewhere in the language (section 3.4), avoiding all unlicensed consonant clusters by adding an epenthetic vowel. For the elder speaker, epenthesis is normally not required, but optional, when dealing with unlicensed consonant clusters.

	<b>speaker A</b>	<b>speaker B</b>
(77) /dop-ga, H-L/ → find-DO:3.M	[dópígà]	[dópǵà] or [dópígà]

	speaker A	speaker B
(78) /ep-ga, M-L/ → punish-DO:3.M	[èpìgà]	[èpgà] or [èpìgà]
(79) /pas-nu, HM-L/ → miss-DO:1.S	[pásùnù]	[pásnù] or [pásùnù]

#### 4.9 Vowel shortening

Alternations between short and long vowels have been observed in three different environments in the verbal morphology. The first two cases appear to be cases of shortening long vowels to avoid unlicensed CV structures, either the vowel of a verb root, or the TAM marking of a monoverb. The third environment where an alternation is observed involves indirect object suffixes on monoverbs, and does not reveal any clear phonological motivation.

##### 4.9.1 Shortening of verb stem vowels

Epenthesis is not the only way to avoid super-heavy syllables in verb conjugations. Verb roots with a long vowel can also shorten their vowel to allow for a coda.<sup>37</sup>

(80) /naam-ga, MH-L/ → [nāamígà] or [nāmígà]  
steal-DO:3.M

(81) /woon-ga, MH-L/ → [wōonígà] or [wōngà]<sup>38</sup>  
attach-DO:3.M

As seen above, speakers have varying tolerance for some types of consonant clusters (section 4.8). In the case where a verb stem has a long vowel, but ends with a consonant that is restricted in its distribution, only those speakers that tolerate the otherwise unlicensed consonant cluster allow vowel shortening. Other speakers must insert an epenthetic vowel.

<sup>37</sup> Vowel shortening to avoid unlicensed syllables is also seen in East Dangla verbs (Shay 1999:21).

<sup>38</sup> In this example, it appeared that the speaker was not allowing the nasal to assimilate in place of articulation to the following consonant (section 4.1). This may correlate with the nasal acting as a tone-bearing unit, but could equally be accounted for by an unnatural level of awareness of the underlying form of the word that was brought about by my eliciting these two forms back-to-back and asking for careful pronunciation.

	<b>speaker A</b>	<b>speaker B</b>
(82) /seeb-ti, H-L/ →	[séebítì]	[séptì] or [séebítì]
fish-DO:3.F		

The choice between epenthesis and shortening in verbal morphology can also be influenced by the verbal tone pattern. This is examined in section 5.3.2.

#### 4.9.2 *Vowel shortening of TAM marking in monoverbs*

In monoverbs, the vowel length of some Tense/Aspect/Mood (TAM) suffixes alternates before direct object suffixes. Monoverb roots consist of a single consonant and an underlying tone (section 3.2.1). The monoverb TAM markings which alternate in length before direct object suffixes are the Perfective, Subjunctive, and Perfect. (However, the Perfective and Subjunctive are identical.) The TAM marking is a long vowel when followed by a direct object suffix of the form CV. When followed by a direct object suffix of the form C, the TAM marking is short (section 8.6). A straightforward explanation for this alternation is that the vowel shortens to avoid a super-heavy syllable.

(83) /l-aa-nu, L-M-L/ → [làanù]	/l-aa-ŋ, L-M-H/ → [lā́ŋ]
send-PFV-DO:1.S	send-PFV-DO:2.PL

(84) /l-ee-nu, L-M-L/ → [lèenù]	/l-ee-ŋ, L-M-H/ → [lḗŋ]
send-PRF-DO:1.S	send-PRF-DO:2.PL

The alternative analysis is that the vowels lengthen (assuming they are underlyingly short). Lengthening is well motivated when no direct object suffix is present, as in (85), since the extra mora is required to meet the bimoraic minimality constraint (chapter 3). However, when direct object suffixes of the form CV are attached after the TAM suffix, as in (83) and (84), this analysis is less convincing, since the suffix provides the necessary second mora. In addition, all TAM suffixes are assumed to be subject to morphologically conditioned suppletion before direct object suffixes. Therefore, even though it is intuitive to assume that the suffix in (85) (with no direct object suffix) is in a predictable phonological relationship with the TAM before the direct object suffix in (83), it is not a more economical analysis.<sup>39</sup>

<sup>39</sup> A strikingly similar situation is seen in monoverbs in Miya (West Chadic). In that case, Schuh analyzes the vowel as underlyingly short. However, he writes, “This account of the choice of long or short vowels

- (85) /1-aa, L-Ø/ → [làa]      /1-ii, L-H/ → [líi]  
 send-PFV                      send-INF

#### 4.9.3 *Alternating vowel length in indirect object suffixes in monoverbs*

One peculiarity in the data not explained by the shortening analysis is the case of indirect object suffixes. In other environments, indirect object suffixes begin with a single short vowel (section 8.4), and TAM marking truncates (sections 4.7 and 8.4) or suppletes to null (section 8.6) before indirect object suffixes. With monoverbs, it appears that the initial short vowel of the indirect object suffix lengthens when attached to a monoverb root.

- (86) /1-aga, L-L/ → [làagà]      /1-ago, L-L/ → [làagò]  
 send-IO:3.PL                      send-IO:2.M

This apparent lengthening applies to the six of the nine indirect object suffixes that begin with the vowel [a] and have the structure -VCV. However, the two indirect object suffixes of the shape -VC and the third person masculine suffix *-èji* always have a short vowel.

- (87) /1-eji, L-L/ → [lèjì]      /1-aw, L-L/ → [làw]  
 send-IO:3.M                      send-IO:1.s

It is possible that this irregular behavior is the result of interaction with suppletive TAM markings (section 8.6) or with the underlying tone of truncated TAM marking (section 8.4). These possibilities have not been tested. Another hypothesis is that, in monoverbs, the TAM marking does not delete before the indirect object pronouns unless to avoid a super-heavy syllable. This hypothesis accounts for every case except the third person masculine suffix in (87). The most economical account may be to claim that the lengthened suffixes are a case of morphologically conditioned suppletion.

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for MONOVERBS does not explain the fourth group... where the verbs have long vowels even when a clitic [pronoun] is present. I have no non-ad hoc analysis for the long vowels in those cases” (1998:79).



#### 4.10 Lexically conditioned deletion before the possessor agreement suffix

There is normally no deletion of any part of the root before the possessor agreement suffix. However, there is a limited set of disyllabic nouns which lose part of their root before a possessor agreement suffix. In all of these cases, if the plural suffix is present (between the root and the possessor agreement suffix), then there is no change to the root or the possessor agreement suffix.

These nouns can be divided into three classes. There are three nouns which end in [a] whose final vowel is deleted when the possessor agreement suffix is added. There are nine nouns ending in [ja] which lose the entire final syllable. There are eleven nouns (all with a heavy initial syllable) which lose their final vowel, and also delete the initial consonant of the possessor agreement suffix. In addition, there is one exceptional noun following a similar pattern, but which may be a loan word from French.

The following are examples of the three words which lose their final [a]. Note that when the plural suffix is present, the root is not modified.

(88)	gérá	gérjù	gérájá	gérájátìgà
	gérá	gérá -jù	gérá -já	gérá -já -tìgà
	village	village POSS:1.S	village PL	village PL POSS:3.PL
	'village'	'my village'	'villages'	'their villages'
(89)	árá	árjù	árájá	árájátìgà
	árá	árá -ju	árá -já	árá -já -tìgà
	path	path POSS:1.S	path PL	path PL POSS:3.PL
	'path'	'my path'	'paths'	'their paths'

The second group of disyllabic nouns exhibits a similar pattern. The nouns in this group all end in the syllable [ja]. If the possessor agreement suffix is added to one of these words, then, not just the [a], but the entire final syllable [ja] of the root disappears. However, if the plural suffix is added, the syllable is kept in the word, even if the possessor agreement suffix is added after the plural suffix.

(90) bújá bújá mouth 'mouth'	bújù bújá -jù mouth POSS.1.S 'my mouth'	bújájàtù bújá -já -tù mouth PL POSS.1.S(PL) 'my mouths'
(91) sìjǎjá sìjǎjá nose 'nose'	sìjǎgètì sìjǎjá -gètì nose POSS.3.F 'her nose'	sìjǎjǎtìgà sìjǎjá -já -tìgà nose PL POSS.3.PL 'their noses'

The third group of disyllabic nouns end with an [a], which is removed when the possessor agreement suffix is added. The difference with this group is that, instead of deleting the final consonant of the root, the first segment of the possessor agreement suffix is deleted.

(92) òp:á òp:á forehead 'forehead'	òp:ò òp:á -gò forehead POSS:2.M 'your forehead (to a male)'	òp:ù òp:á -jù forehead POSS:1.S 'my forehead'
(93) báltá báltá back 'back'	báltò báltá -gò back POSS:2.M 'your back (to a male)'	báltù báltá -jù back POSS:1.S 'my back'

Finally, the word *mèerí* “husband” also loses its final vowel before a possessor agreement suffix. In addition, the long vowel of its root shortens to avoid a super-heavy syllable just like the process seen in verbal morphology (section 4.9). It is possible that this word is a loan from the French *mari*, which may account for its exceptional nature.

(94) mèerí mèerí husband 'husband'	mèrgètì mèerí -gètì husband POSS:3.F 'her husband'
---	---

All of the words that exhibit this pattern of dropping a syllable before the possessor agreement suffix are in the chart below. It is worth noting that most of these words are body parts or kinship terms, which suggests a correlation with inalienable possession. However, not all body parts or family member words follow this pattern, and

nowhere in the language is there a distinction between alienable and inalienable possession. Four of the words in the list have a peculiar tone pattern where the first tone-bearing unit is L followed by two H tones. This contradicts the right-to-left tone assignment pattern in the language (sections 5.2.2 and 5.3.1).

**Table 14: Words which delete one or two segments before a possessor agreement suffix**

	<i>Neutral form</i>	<i>Possessed form</i> (POSS:2.M)
cousin	mōrā	mòrgò
village	gérá	gérgò
path	árá	árgò
grandmother/ granddaughter	bò:já	bò:gò
grandfather/grandson	dàrjá	dàrgò
mother	íjá	ígò
father/paternal uncle	dèjá	dègò
body	sújá	súgò
tooth	sèj́já	sèj́gò
mouth	bújá	búgò
nose	sìj́já	sìj́gò
self	kòójá	kòógò
stomach	àt:á	àt:ò
arm	át:á	át:ò
penis	dàk:á	dàk:ò
eye	ìt:á	ìt:ò
neck	màatá	màatò
forehead	ùp:á	ùp:ò
back	báltá	báltò
ear	lùútá	lùútò
children.PL	nándí	nándò
leg	béndí	béndò

	<i>Neutral form</i>	<i>Possessed form</i> (POSS:2.M)
refusal	séntì	séntò
husband (F)	mèerí	mèrgètì <sup>40</sup>

No simple phonological rule to explain these changes is possible since the vowel [a] is not regularly deleted before the possessor agreement suffix.

(95) sòt:á                      sòt:ájù                      \* sot:u  
sòt:á                      sòt:á -jù                      sòt:á -jù  
liver                      liver POSS:1.s                      liver POSS:1.s

(96) kák:á                      kák:ájì                      \* kak:i  
kák:á                      kák:á -jì                      kák:á -jì  
stir.stick                      stir.stick POSS:3.M                      stir.stick POSS:3.M

One other suffix that can be added to nouns, besides the plural and possessor agreement suffixes, is the adjectival suffix which transforms nouns into adjectives (section 6.2.2). When this suffix is added to this class of nouns, the root-final [a] remains.

(97) áragú  
árá -gú  
path N:M

However, this deletion may not be limited to only occurring before the possessive marker. In one recording, a root-final vowel is deleted when followed by a monomoraic function word (section 3.3). This is not an obligatory process. Word-final vowel deletion is not a regular phonological process in the language.

(98) tò kī pīdètì                      jáamé                      árdē                      pàatú ná  
tò kī pīd- -ē -tì                      jaamije                      árá dē                      pàa- -tú ná  
COND S:2.M take PRF DO:3.F mosque(A) path REL:F big N:F EQ  
'When you have taken the path by the big mosque...' (appendix 8)

<sup>40</sup> The possessor agreement suffix in this example is the third person feminine -gètì.

## Chapter 5 : Tone

Barain, like all known Chadic languages, is tonal (Newman 2006:193; Frajzyngier & Shay 2012:246). Three levels of tone are contrastive in the lexicon. No grammatical tone has been discovered other than the phrase-final effects described as intonation below (section 5.5).

There is just one example in the data of a minimal triplet contrasting all three levels of tone.

- (99) [át:á] 'arm'  
[āt:á] '(number of) times'  
[àt:á] 'stomach'

There is a near minimal triplet only differing in the voicing of the initial consonant or vowel length. There is no predictable relationship between tone and vowel length or tone and voicing (i.e., no consonant-tone interference).<sup>41</sup>

- (100) [kólól] 'to go'  
[góólól] 'jar'  
[gōlōl] 'to turn the head'  
[gòlòl] 'type of fruit'

The following table gives examples of contrast for tone patterns seen in the language. Contrasts between high and low tones are plentiful in the data, and there are a number of examples of contrast between low and mid or mid and high tones. The series ML never occurs. A LM pattern only occurs with a small group of nouns (sections 5.2 and 5.4).

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<sup>41</sup> Consonant-tone interference is attested in the closely-related language Dangla (Burke 1995), as well as many other Chadic languages (Pearce 1999; Pearce 2006:273; Schuh 1988; Wolff 1987).

Table 15: Minimal pairs for tone

HL	[dálà]	'umbilical cord'	H	[ká]	'also'
LH	[dàlá]	'a drum'	L	[kà]	'he (S:3.M)'
LL	[wùrò]	'in front of'	HH	[sídí]	'home'
HH	[wúró]	'to insult'	HL	[sídi]	'two'
LL	[dùpù]	'ghost'	MM	[gōlō]	'to turn the head'
HH	[dúpú]	'thousand'	LL	[gòlò]	'a fruit'
HL	[níl:à]	'you (PRO:2.PL)'	HH	[túp:ó]	'to mix'
LL	[níl:à]	'they (PRO:3.PL)'	MM	[tūp:ō]	'to spit'
HH	[sáa]	'Come!'	HH	[kéeló]	'to circle'
LL	[sàa]	'Drink!'	LH	[kèeló]	'to pierce'
MH	[bōtó]	'to get lost'	HH	[bák:ó]	'to open'
LL	[bòtò]	'millet beer'	HM	[bák:ō]	'to skin'
HH	[tídó]	'to boil'	MH	[bītó]	'to extinguish'
MH	[tīdó]	'to place on top of'	LH	[bìtó]	'to sell'

### 5.1 Tone-bearing units

The tone-bearing unit (TBU) is the mora. A short vowel is one mora and a long vowel contains two moras. Most bimoraic syllables in the data have only one tone, but there is a small class of nouns which have surface contour tones (examples (101), (102), and (103) in section 5.2). In these cases, the syllable with the surface contour tone is always bimoraic. Tone assignment in verbs is also sensitive to moras, as can be seen in examples (114) and (115) of section 5.3.1. These examples also demonstrate that a sonorant in the coda position can qualify as a TBU, but these segments are not always used as TBUs in tone assignment. This is discussed further in section 5.3.1. When a consonant carries a tone, there is a slight phonetic lengthening.

A syllabic nasal can carry contrastive tone. The first person singular and dual pronouns *íŋ* and *ìŋ* (section 8.2), as well as the two preposition *íŋ* and *ìŋ* (sections 9.3.1 and 9.3.2), often elide their vowel (section 4.6); in which case the contrastive tone remains on the nasal. In some cases, this nasal is pronounced as the coda of a previous word, but in other environments (e.g., phrase-initial) it is syllabic.

## 5.2 Nominal tone patterns

This section presents the surface tone patterns that have been found for various noun syllable structures. These patterns only account for nouns without suffixes, and exclude compound nouns and loanwords.

### 5.2.1 One tone

Table 16 begins with monosyllabic nouns that have only one tone.

**Table 16: Monosyllabic nouns with one tone**

	L	M	H
CVV	[kèe] 'head' (2)	[bāa] 'family' (2)	[gáa] 'health' (1)
CVC	[pìr] 'rainy season'	[sēŋ] 'anger' (1)	[kúr] 'ten'

Disyllabic and trisyllabic nouns can also have just one tone. Of nouns with only one tone, the H tone is the most common (61%), and M tone the least common (9%). Blanks in the chart signify that the pattern has not been attested. These are presumed to be accidental gaps in the data.

**Table 17: Disyllabic nouns with one tone**

	L	M	H
CVCV	[gùndò] 'wind'	[wālō] 'year'	[túrú] 'moon'
CVVCV	[gèetì] 'door' (1)		[bóobó] 'fox'
VCV	[àkà] 'fire'	[ēlā] 'last season' (2)	[árá] 'path'
CVC:V	[wòs:i] 'egg' (2)	[mīj:i] 'man' (2)	[pít:á] 'bark'
VC:V			[át:á] 'arm'
CVCCV	[màrbò] 'girl'		[béndí] 'leg'
VCCV			[índé] 'twilight'
CVCVC	[pàtál] 'turtle'	[gōŋgō] 'breast' (2)	[dúpín] 'knee'
VCVC	[àsàn] 'a fruit' (2)		
CVVCVC			[kéeján] 'soothsayer' (1)
CVCCVC	[gòmsòr] 'civet cat' (2)		[kúmsúl] 'eyebrow' (3)

Table 18 shows that trisyllabic nouns of any structure can also have the same tone on every syllable.

**Table 18: Trisyllabic nouns with one tone**

	L	M	H
CVCVCV	[sìsìrò] 'dew'	[sīkītē] 'ostrich'	[kódémé] 'serval'
VCVCV	[àbìrà] 'rat, sp.' (1)		[ákíjí] 'twin' (2)
CVCVCVC	[jàkìlám] 'chin' (1)		[sáríjáj] 'nail/claw' (2)
VCVCVC	[òpòpòn] 'winter' (1)		
CVCCVCV	[dàmbilà] 'kudu' (2)		[júŋgáří] 'chicken'
VCCVCV	[àrgòtò] 'tantalus' (3)		[úndúpú] 'cold' (1)
CVCVCCV			[túrúbá] 'sandstorm' (1)
CVCVCCVC	[bòtùŋgòr] 'defassa waterbuck' (1)		
CVC:VCV	[dòp:ùnù] 'lizard, sp.' (1)		[pút:úwí] 'leaf' (1)
CVC:VCVC			[gáp:íní] 'horn' (1)

### 5.2.2 Two tones

When nouns have two tones, those two tones can never be ML. If nominal morphology brings together the series ML, the L spreads leftward, lowering the M tone (section 5.4.2). The series LM has only been found in eleven nouns. Both sequences are rare in Chadic languages (Mary Pearce, personal communication). Since no nominal suffixes with a M tone exist, it is not possible to test if the sequence LM would be preserved at a morpheme break. The pattern LM is avoided in the verbal morphology through leftward spreading (section 5.4.3).

Only three monosyllabic nouns have been found with more than one tone. All three have the pattern LH. The last is possibly a loan word from Arabic.

- (101) [mèé] 'woman'  
 [pèj] 'speed'  
 [gàá] 'pied crow'

The following chart presents the tone patterns of two tones found on disyllabic nouns of different syllable structures.



**Table 19: Disyllabic nouns with two tones**

	LH	MH	HL	HM
CVCV	[bìj́á] 'green beans'	[bā́lá] 'tumor'	[kítà] 'work'	[kálō] 'wall' (1)
VCV	[à́rú] 'hundred' (2)			
CVVCV	[bàatú] 'chat'	[bā́arí] 'blood'	[dáajò] 'a fruit'	
CVC:V	[bès:ó] 'flower'		[wás:i] 'seed' (2)	[míj:ē] 'men' (1)
VC:V	[àb:ó] 'neighbor'	[ās:í] 'bone' (3)		
CVCCV	[bòrkó] 'calf'	[jāmpá] 'mouse' (2)	[péndè] 'small bowl'	[kíndī] 'pangolin' (1)
VCCV	[ìrwí] 'tear' (2)			
CVCVC	[sèlín] 'tooth' (2)	[bōlól] 'throat'	[búrùm] 'whip'	
VCVC				
CVCCVC	[gòrdól] 'calf muscle'			

Trisyllabic nouns most frequently have only two tones. Trisyllabic nouns have been found with LH, MH and HL tone patterns, but not with HM. When there are more syllables than tones, the first two syllables are nearly always identical. This pattern mirrors the right-to-left tone assignment seen in verbs (section 5.3.1).

**Table 20: Trisyllabic nouns with two tones**

LH	MH	HL
[gèjèré] 'trousers' (2)	[kīlāwí] 'muscle'	[sísírò] 'hoopoe (bird)' (2)
[àtìbé] 'ashes' (2)		
[kādùmúl] 'turban' (1)	[sīkīnán] 'tree, sp.' (1)	
[pùp:ìlì] 'tortoise' (1)	[kīl:āwí] 'lizard, sp.'	[mís:íjò] 'python' (1)
[kòmbòlól] 'intestinal worm' (1)		
	[kūlāakí] 'bird, sp.' (1)	
		[tíjánkò] 'bird, sp.'
[bòrùmbíl] 'fruit, sp.'		
		[díikìlè] 'white heron' (1)
[màabúrkú] 'hartebeest (antelope)'		

There are two trisyllabic words that have an identical tone on the final two syllables and a different tone on the first syllable. Both of these words could be compound words (section 6.1.5).

- (102) [díkìlè] 'white heron' [kílè] 'parrot'  
[màabúrkú] 'hartebeest (antelope)'

There are five disyllabic words with three tone bearing units that have the same tone on the last two TBUs and a different tone on the first (LHH). Four of these words are of a small class of nouns which lose a syllable before the possessor agreement suffix (section 4.10). The other is the number “five”. This morpheme drops its second TBU when combined with other morphemes to create the digits six through nine (section 6.3).

- (103) [sìjǎ́] 'nose'  
[sèjǎ́] 'tooth'  
[lùú́tá] 'ear'  
[kòóǎ́] 'self'  
[dà́wǎ́sú] 'five'

### 5.2.3 Three tones

There are two disyllabic nouns with three tones. They both have the pattern LHL with the H on the sonorant coda of the first syllable.

- (104) [bòńtè] 'morning/tomorrow'<sup>42</sup>  
[kò́sì] 'stone partridge (bird)'

The following table shows the possible tone patterns for nouns with three tones. All of the patterns conform to the restrictions seen above. The absence of a HLH pattern can be accounted for by a process raising the L tone in this environment (section 5.4.1).

**Table 21: Trisyllabic nouns with three tones**

LHL	[dùkúlò] 'stone' (2)
MHL	[nōpúnò] 'goat' (3)
MHM	[gōmáajī] 'clothing' (1)
HMH	[pútūwí] 'leaf'

<sup>42</sup> The word “morning” or “tomorrow” may be more accurately described as an adverb (section 9.5.1). Nonetheless, its tone pattern is exceptional.

### 5.3 Verbal tone melodies

Verb roots are lexically assigned an underlying tone pattern (or melody) of one or two tones. If the verb is assigned two tones, those tones cannot be identical, as predicted by the Obligatory Contour Principle.<sup>43</sup> No underlying melodies of more than two tones have been attested for verb roots. Of the nine logical possibilities, only five tone melodies have been identified in polyverbs. One additional pattern, L, only occurs with monoverbs. Among CVVC- verbs, the only verb that does not end with a H tone is *paaso* “to iron” which presumably comes from the French *repasser*.<sup>44</sup>

**Table 22: Tone melodies and verb structures**

	C-	VC-	VC:-	VCC-	CVC-	CVVC-	CVC:-	CVCC-	total
H	4	4	3	5	23	10	17	1	67
HM	0	1	2	0	19	0	5	1	28
MH	0	3	1	0	6	9	3	10	32
M	0	2	0	0	31	1	5	1	40
LH	1	2	3	1	16	17	16	5	61
L	6	0	0	0	0	0	0	0	6

#### 5.3.1 Assigning tone melody

Surface tone patterns on verbs are analyzed using an autosegmental approach. In this approach, the underlying tone or tones of the verb are not in a fixed relationship with any particular TBU of the surface form. This tonal behavior is unique to verbs. The association between a tone in the underlying tone melody with a TBU of the surface structure is predictable by rules of assignment and spreading. In the verbal morphology, some suffixes have an underlyingly assigned tone. In this case, the underlying tone

<sup>43</sup> While the Obligatory Contour Principle (OCP) helps account for limitations on possible underlying tone melodies, the language seems to allow adjacent identical tones in a stem when a suffix with a pre-assigned tone is attached to a root ending with the same tone: /wɔn:-go, MH-H/ → [wɔn:úgó]. Of course, there are plausible, if superfluous, deletion and spreading rules which could be posited in order to claim that the OCP holds in all contexts.

<sup>44</sup> In this chapter, underlying tones are represented autosegmentally using capital letters. Parentheses indicate an underlying tone left unassigned in the surface structure. Vertical lines represent association, and slanted lines represent spreading rules. See footnote 29 on page 31 for an explanation of how underlying verbal tone melodies are represented in interlinearized examples elsewhere in this work.

melody of the verb root cannot be assigned to that particular TBU. However, other suffixes are unmarked for tone (represented by  $\emptyset$  in the phonemic form) and receive their surface tone from the underlying tone melody of the root. Epenthetic vowels are also unmarked for tone.

Verbal tone melodies are assigned right-to-left. This is evident in the small class of verb stems which insert an epenthetic vowel inside the verb stem (section 3.2.2). This creates a scenario in which a verb with a complex tone melody has more TBUs than tones to assign. In these cases, the second tone of the melody is assigned to the rightmost unmarked vowel (in this case, the epenthetic vowel), and the first tone of the tonal melody is assigned to the preceding TBU. In addition, the first tone of the tone melody spreads left to the remaining TBU.

(105) /makd-nu, MH-L/ → [mākūdúnù]	M H L
push-DO:1.s	/
	ma ku du nu

The Infinitive suffix is unmarked for tone. Its tone changes with the underlying tone melody of the verb stem as seen in (106). In this way, the Infinitive form reveals the underlying tone of the verb.<sup>45</sup>

(106)	[gásó]	H	'to say'
	[dójō]	HM	'to study'
	[gīnó]	MH	'to refuse'
	[gōmō]	M	'to hit'
	[gàló]	LH	'to fall'

When the infinitive suffix is present, the rightmost tone is assigned to it, and the preceding TBU takes the first tone (which also spreads left to the remaining toneless TBU).

(107) /botɲ-o, MH- $\emptyset$ / → [bōtūɲó]	M H
forget-INF	/
	bo tu ɲo

<sup>45</sup> This is not true of the Infinitive forms of monoverbs. Infinitive monoverbs are always H, regardless of the underlying tone melody of the verb root.

Another scenario that leaves an unmarked TBU to the right of the verb root is when a suffix has more TBUs than tones. No suffix has more than one tone, and several have two syllables. In these cases, the tone of the suffix is assigned to its final TBU, and the first TBU is left open for the rightmost tone of the verb to be assigned to it.

(108) /jaar-ati, LH-L/ → [jàarátì]                      L H L  
 drag-IO:3.F    / | | |  
     ja a ra ti

(109) /doos-eji, H-M/ → [dóoséji]                      H M  
 guard-IMPF    / / | |  
     do o se ji

The same right-to-left analysis is assumed for those cases where the number of unmarked syllables is equal to the number of unassigned tones.

(110) /gor-o, LH-Ø/ → [gòró]                      H  
 run-INF

(111) /jek:-ti, LH-L/ → [jèk:ítì]                      H  
 leave-DO:3.F

When a verb stem has only one underlying tone, it must be assumed that the tone assigns to the rightmost unmarked syllable and spreads left.

(112) /sul-o, H-Ø/ → [súló]                      H  
 sit-INF

(113) /tot:-ga, H-L/ → [tót:ígà]                      H  
 cut-DO:3.M

If the syllable following the verb stem is marked for tone, but the verb stem has more than one tone-bearing unit (i.e., a long vowel, sonorant coda, or epenthetic vowel), then the second tone of the verb is assigned to its second TBU. The first tone of the tone melody is assigned to the preceding TBU.

(114) /wool-a-go, LH-M-H/ → [wòólāgò]                      L H M H  
 slaughter-IMPF-DO:2.M                                      | | | |  
     wo o la go

(115) /gow-ga, LH-L/ → [gòwǎgà]                      H  
 attach-DO:3.M

(116) /botɲ-ge, MH-H/ → [bōtíngé]  
 forget-DO:2.F

As seen above in (115), when the stem structure is CVC- with a stem-final sonorant, the second tone of a complex tone melody will dock on the sonorant, if the sonorant is in a coda position, and the following syllable is already marked for tone. The same is normally true if the verb stem has the structure CVC:- or CVCC-.

(117) /kumb-a-ti, MH-M-L/ → [kūmbàtì]<sup>46</sup>  
 bury-IMPF-DO:3.F

M	H	M	L
ku	m	ba	ti

(118) /bol:-M-ga, LH-M-L/ → [bòl:ìgà]<sup>47</sup>  
 vomit-IMPF-DO:3.M

L	H	M	L
bo	l	li	ga

If there is no unmarked syllable following the verb stem, and the stem has only one tone-bearing unit available, the second tone of the tone melody is left unassigned. This contradicts the right-to-left assignment pattern seen elsewhere.

(119) /tid-e-ne, MH-M-H/ → [tidēné]  
 make.climb-PRF-DO:EXCL

M	(H)	M	H	<sup>48</sup>
ti		de	ne	

(120) /aɣ-a-ti, LH-M-L/ → [àɣàtì]  
 dry-IMPF-DO:3.F

When there are not enough TBUs available to assign both tones in a complex tone melody, the second tone can surface at the phonetic level on a following nasal onset. In these cases there is a slight phonetic lengthening of the nasal. This has only been observed in instances involving vowel shortening (section 4.9).

(121) /tiip-nu, MH-L/ → [tīpnú]  
 dam-DO:1.S

M	H	L
tip	n	u

<sup>46</sup> This example and the following are also affected by leftward spreading of the final L tone, ML → LL (section 5.4.2).

<sup>47</sup> The M in the segmental side of the phonemic representation represents an underlying floating tone—a suppletive form of the Imperfective suffix (section 8.6).

<sup>48</sup> The parentheses around a tone signify an underlying tone that is not assigned and not pronounced in the surface form of the word. These tones are presumably deleted and have no phonological affect on the word.

(122) /poot-nu, MH-L/ → [pōtnù]  
 shell-DO:1.s

There are a few exceptional cases where the second tone of the verb is not assigned, even though a sonorant coda is available as a TBU. These exceptions only occur when the stem ends in a long consonant or a consonant cluster. Fourteen verb roots were examined of the structure CVC- or CVCC- where the second C is sonorant and the underlying tone melody is complex. In three of the fourteen cases, the second tone is dropped instead of being placed on the sonorant coda of the first syllable of the verb. Examples (123), (125), and (127) show that when there is an unmarked TBU (epenthetic vowel) following the verb stem, the second tone of the melody docks there. Examples (124), (126), and (128) show that when the TBU following the verb stem is already marked for tone, the second tone of the melody is left unassigned (no phonological effect) even though the sonorant coda is a viable tone-bearing unit.

(123) /won:-go, MH-H/ → [wōn:úgó]  
 know-DO:2.M

M	H	H
wo	n	ni go

(124) /won:-a-go, MH-M-H/ → [wōn:āgó]  
 know-IMPF-DO:2.M

M	(H)	M	H
wo	n	na	go

(125) /wol:-ga, LH-L/ → [wòl:ígà]  
 pass-DO:3.M

L	H	L
wo	l	li ga

(126) /wol:-a-ga, LH-M-L/ → [wòl:àgà]<sup>49</sup>  
 pass-IMPF-DO:3.M

L	(H)	M	L
wo	l	li	ga

(127) /jɪŋ-ti, LH-L/ → [jìŋgítì]  
 make.descend-DO:3.F

L	H	L
ji	ŋ	gi ti

<sup>49</sup> This word is also affected by a spreading of the word-final L: ML → LL (section 5.4.2).





tones are closer to each other in pitch than either is to H. The fourth section describes a more complex tonological issue involving the tonal behavior of two verbal suffixes. Other irregular tone alternations are described elsewhere, such as the raising effect of the nominalizing suffix (section 6.1.4).

#### 5.4.1 *L raising (HLH→HMH)*

A L tone between two H tones appears to raise to a M tone. This change is observed in the nominal morphology when the plural suffix (section 6.1.2) is added to nouns ending in the pattern HL. It is not clear whether this process should be considered a true phonological rule or a phonetic realization of L in this environment.

(132) ìsílà	ìsílājá	nōpúnò	nōpúnējá
ìsílà	ìsílà -já	nōpúnò	nōpúnò -já
wrist	wrist PL	goat	goat PL

#### 5.4.2 *ML → LL*

The sequence ML is never allowed inside a word boundary. When the morphology brings these two tones together, the second tone spreads left and delinks (lowers) the M tone.

(133) bāa	bàagò	bàajù
bāa	bāa -gò	bāa -jù
brother	brother POSS:2.M	brother POSS:1.s

(134) [gōmō]	/gom-nu, M-L/ → [gòmnù]
hit-INF	hit-DO:1.s

(135) [sūkō]	/suk-ti, M-L/ → [sùkti]
smell-INF	smell-DO:3.F

#### 5.4.3 *LM → MM*

The sequence LM does not occur in verbs and rarely occurs in nouns (section 5.2). When the verbal morphology brings this sequence together, the second tone spreads left, delinking (raising) the L tone. Spreading the second tone left is the same pattern seen above to avoid ML sequences.

- (136) /d-ee-jo, L-M-H/ → [dēejó]  
 kill-PRF-DTRV
- |    |   |    |   |     |   |    |
|----|---|----|---|-----|---|----|
| L  | M | H  | → | (L) | M | H  |
|    |   |    |   | /   |   |    |
| de | e | jo |   | de  | e | jo |

Only monoverbs can have a tone melody ending in L, but this process also affects verbs with a LH tone melody if there is no TBU for the H tone (section 5.3.1). In this case, the remaining L tone is raised to M by a following M tone.

- (137) /aɣ-a-ne, LH-M-H/ → [ājāné]  
 dry-IMPf-DO:EXCL
- |    |     |   |    |   |     |   |    |
|----|-----|---|----|---|-----|---|----|
| L  | (H) | M | H  | → | (L) | M | H  |
|    |     |   |    |   | /   |   |    |
| aɣ |     | a | ne |   | aɣ  | a | ne |
- (138) /is:-a-ŋ, LH-M-H/ → [is:āŋ]  
 pour-IMPf-DO:2.PL

In the case where three or more M or L tones are adjacent in the underlying form, the rightmost tone will be the surface tone for the entire sequence. In other words, the spreading rules appear to be recursive.

- (139) /gom-a-ti, M-M-L/ → [gòmàtì]  
 hit-IMPf-DO:3.F

#### 5.4.4 Weak L tone (Subjunctive and Perfective suffixes)

The Perfective and Subjunctive suffixes<sup>51</sup> behave irregularly in regards to their tone. After a H tone they behave as if they are unmarked for tone.

- (140) /doos-a, H-?/ → [dóosá]  
 gaurd-PFV

- (141) /mij-a, LH-?/ → [mìjǎ]  
 slap-PFV

- (142) /wool-a, LH-?/ → [wòolá]  
 harvest-PFV

After a M tone, they behave as a L tone, lowering any preceding M (section 5.4.2), and taking precedent in tone assignment over a M tone in the second position of the verbal tone melody (section 5.3.1). It is not possible to test how this suffix behaves following a L tone since no polyverb has a tone melody ending in L.

<sup>51</sup> This section only describes the Perfective and Subjunctive suffixes for polyverbs. The Perfective and Subjunctive suffixes for monoverbs have different tonal behavior (section 7.2.1).

(143) /gom-a, M-?/ → [gòmà]  
hit-PFV

(144) /pas-a, HM-?/ → [pàsà]  
miss-PFV

If the Perfective suffix is immediately followed by the Perfective discourse particle *jē* (section 7.3.1), then its L tone is “strengthened” and will remain L following a H.<sup>52</sup>

(145) /jɪŋgr-a, LH-? jē/ → [jɪŋgírà jè]  
descend.CAUS-PFV DISC

This strengthening only happens before this one particular particle and not before other monomoraic function words (cf. (327) and (328) of section 7.3.1).

(146) /jɪŋgr-a, LH-? dō/ → [jɪŋgírà dō]  
descend.CAUS-PFV NEG

Another peculiarity of these suffixes is that they delete (or supplete to null) before the inclusive clitic (section 8.13). The first example below can only be Subjunctive in this context (section 7.1.4). The second must be Perfective since only Perfective verbs can be followed by the particle *jē*.

(147) súl=nà      lápíjà  
súl- -ù =nà aafíja  
sit SBJV INCL health(A)<sup>53</sup>  
'Be well!'

(148) íŋ kól=nà      jē bálál  
íŋ kól- -à =nà jē bálál  
S:1.S go PFV INCL DISC Balili  
'We went to Balili.'

Deletion can also be caused by a monomoraic function word (section 3.3) directly following the Subjunctive suffix. Unlike the deletion before the inclusive clitic, deletion in this context is not obligatory.

<sup>52</sup> The Perfective particles normally have a M tone. The irregular lowering of the tone in example (145) is discussed in section 7.3.1.

<sup>53</sup> This word is commonly used in many languages in Chad with a similar pronunciation and may not be a true loan from Chadian Arabic, or may have passed through other languages.

- (149) k̄ā j̄áp:ā ñ kóldō ~ kólú dō  
 k̄ā j̄áp:- -à ñ kól- -ù dō  
 S:3.M want PFV S:1.S go SBJV NEG  
 'He doesn't want me to leave.'

### 5.5 Intonation

There are two environments where the last vowel of a phrase is lengthened and its tone raised. One environment is asking yes/no questions without an explicit question word. This is discussed in section 11.2.1. Vowel lengthening and tone raising also occur on the final vowel of any word immediately before a phrase-final demonstrative. This often occurs in an identification construction (section 11.1.3) or after a relative clause (section 10.1). The presence of the demonstrative is not obligatory, so the effect can be seen by comparing a phrase without the demonstrative (150) with a phrase including the phrase-final demonstrative (151).

- (150) gérđē ñ súlúg:ò  
 gérá đē ñ súl- -ùg:o  
 village REL:F S:1.S sit OBL  
 'the village I live in'
- (151) gérđē ñ súlúg:òó ðì  
 gérá đē ñ súl- -ùg:o ðì  
 village REL:F S:1.S sit OBL DEM:F  
 'that village I live in'
- (152) k̄al:à bàajùú ḡì  
 k̄al:à b̄āa -jù ḡì  
 PRO:3.M relative POSS:1.S DEM:M  
 'He is my brother.'

## **Part II : Lexical categories and morphology**

The following three chapters examine some of the lexical categories of the language, including noun, adjective, quantifier, verb, pronoun, as well as the morphology associated with each of these categories. The primary focus is on nouns and verbs. Nouns and verbs can be easily distinguished by their morphological properties. Nouns are unbound roots and verbs are bound roots. The surface tone of a noun is consistent, only varying on the final syllable when affected by the tone of a suffix. The surface tone of a verb varies considerably and can only be predicated by positing underlying tone melodies that are assigned systematically to the surface form. Nouns and verbs take different sets of inflectional suffixes. Nouns and verbs accept different classes of modifiers. Chapter 6 presents nouns and lexemes that can modify nouns in a noun phrase (adjectives and quantifiers). This is followed by a look at the verbal system and TAM morphology in chapter 7. Chapter 8 introduces the reference system, including several types of pronouns and verbal suffixes, and outlines the suppletive TAM markings that co-occur with direct object suffixes on verbs.

## Chapter 6 : Nouns, adjectives, and quantifiers

This chapter describes nouns (section 6.1) and some lexemes that can modify nouns in a noun phrase: adjectives (section 6.2) and quantifiers (section 6.3). Nouns always precede any modifiers (i.e., head-initial), as is generally the case in Chadic languages (Newman 2006:200). No other strict ordering patterns have been determined for noun phrases. The coordination of noun phrases is briefly discussed in the final section (section 6.4).

### 6.1 Nouns

Nouns are crucially distinguished from other lexical categories by their gender value (section 6.1.1), and inflectional suffixes for plurality (section 6.1.2) or to index a possessor (section 6.1.3). Nouns can be formed using a derivational suffix (section 6.1.4). In a noun phrase, nouns can be modified by adjectives (section 6.2), quantifiers (section 6.3), and relative clauses (section 10.1).

#### 6.1.1 Gender

Nouns are not morphologically or phonologically marked for gender. In other words, the gender system is “covert” (Corbett 1991:62, 117).<sup>54</sup> Gender is reflected in the reference system and in the nominal agreement suffixes of adjectives, as seen in (154) through (161). As is typical in Chadic languages, agreement markers only distinguish between masculine and feminine when singular (Schuh 2003:57; Newman 2006:194; Frajzyngier & Shay 2012:259). Plural markers do not reflect any agreement for gender. In Baraïn, masculine agreement markers frequently begin with [k] or [g], feminine with [t] or [d], and plural with [n]. This pattern (k-t-n) is a mix of what has been observed as the general pattern for West Chadic languages (n-t-n) and East Chadic languages (k-t-k)

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<sup>54</sup> The languages of the Guera subbranch are split as to whether nouns are morphologically unmarked for gender, like Baraïn and Dangla (Shay 1999:83), or marked by an obligatory inflectional suffix, like Mukulu and Migaama (Jungraithmayr 1990:22; Jungraithmayr & Adams 1992:21).



(159) *námá gē járànù dópònù*  
*námá gē jār- -ā -nù dóp- -ē -nù*  
 child REL:M look.for IMPF DO:1.S find PRF DO:1.S  
 'The **boy** who was looking for me, found me.'

(160) *námá dē járànù dópònù*  
*námá dē jār- -ā -nù dóp- -ē -nù*  
 child REL:F look.for IMPF DO:1.S find PRF DO:1.S  
 'The **girl** who was looking for me, found me.'

Another way to specifically indicate the natural gender of a person or animal is to use another noun directly following the head noun.<sup>56</sup> Four nouns can be used in this way: “man” and “woman”, only distinguishing for gender, and “boy” and “girl”, also specifying youth. The nouns specifying the gender agree in number with the noun they are modifying.<sup>57</sup>

(161) *nándí mǐj:ē sídì*  
 children.PL men.PL two  
 'two male children'

(162) *nándí márbē sídì*  
 children.PL girl.PL two  
 'two female children'

(163) *nōpúnò mēé*  
 goat woman  
 'nanny goat'

(164) *nōpúnò mǐj:i*  
 goat man  
 'billy goat'

<sup>56</sup> A similar use of nouns in apposition is seen in Lele, Mina, and Margi (Frajzyngier 2001:75; Frajzyngier, Johnston & Edwards 2005:35; Hoffman 1963:66).

<sup>57</sup> For evidence that these words are nouns, see examples (153) through (156) above as well as the list of irregular plurals on page 75.



### 6.1.2 Plural

Singular nouns are unmarked. The plural, when marked, is formed almost exclusively with the suffix *-já*.<sup>58</sup> Many Chadic languages use multiple strategies for forming plurals (Newman 2006:195). It has been claimed that the most common strategy for forming plurals in Chadic is some form of reduplication or gemination (Frajzyngier 1977:38). If that claim is true, then Baraïn belongs to a significant minority of Chadic languages that mark the plural primarily with a suffix.<sup>59</sup>

(165) sùu                      sùu -já  
       animal                animal PL  
       'animal'              'animals'

(166) bújá                    bújá -já  
       mouth                mouth PL  
       'mouth'               'mouths'

(167) pút:ūwí                pút:ūwí -já  
       leaf                    leaf        PL  
       'leaf'                   'leaves'

For nouns referring to non-living things, the suffix is not required if the noun co-occurs with a quantifier. This is common in Chadic languages.<sup>60</sup>

(168) gólmó síidì tél- -gá        ~        gólmó -já síidì tél- -gá  
       house two big.PL N:PL        house PL two big.PL N:PL  
       'two big houses'

(169) kórtó síidì                ~        kórtó -já síidì  
       pot two                    pot        PL two  
       'two pots'

<sup>58</sup> Rendinger's notes indicate that the plural was once formed by a vowel he transcribed *é*, which replaced the final vowel of the noun. However, he only gives two examples, "horse" and "dog" (1949:168). In the language as it is spoken now, both of these form the plural with the regular suffix shown here.

<sup>59</sup> Languages of the Guera subbranch which primarily use a suffix to mark plural nouns include Ubi (Alio 2004:265–266), Migaama (Jungrathmayr & Adams 1992:24–28), Mukulu (Jungrathmayr 1990:25), and Mawa (Hissène, Khamies & James Roberts 2010). In Mawa the post-nominal plural marker has been analyzed as a separate nominal particle—not a suffix. Languages in other Chadic branches which use a suffix include Hdi (Frajzyngier 2002:46), Gidar (Frajzyngier 2008:86–87), Margi (Hoffman 1963:57), and Lamang (Wolff 1983:89). Mupun uses a post-nominal particle (Frajzyngier 1993:160).

<sup>60</sup> A similar pattern is noted other Chadic languages: Gidar (Frajzyngier 2008:111), Kanakuru (Newman 1974:82), Margi (Hoffman 1963:57), Lamang (Wolff 1983:89), Hdi (Frajzyngier 2002:47).

However, a noun referring to a living thing must always morphologically reflect plurality (suffix or irregular plural form), even if it is quantified.<sup>61</sup>

(170) \* m̀̀s:ò tél- -gá sídì  
boy big.PL N:PL two

(171) \* b̀̀nà tél- -gá sídì  
dog big.PL N:PL two

This restriction is especially evident in the two examples below where the word “tree” requires the plural suffix, but the word “branch”, which consists of the same material, but in a non-living form (i.e., a dead branch which has fallen from the tree), does not require the presence of the plural suffix.

(172) \* ìt:í tél- -gá sídì  
tree big.PL N:PL two

(173) át:á tél- -gá sídì      ~      át:á -já tél- -gá sídì  
branch big.PL N:PL two      branch PL big.PL N:PL two  
'two big branches'

The singular form is the only form for referring to one item, but the same form is also used for some items which would be grammatically plural in other languages. For example, the words for eyes, arms, ears, etc. are grammatically singular if referring to a pair belonging to a person or animal.<sup>62</sup> Other nouns, often in the food domain, are mass nouns in the singular form. However, if they are modified by a quantifier then they receive a quantifiable interpretation. If the plural suffix is added, then the word refers to “many instances of/types of...” as is also the case in Miya (Schuh 1998:199).

(174) mák:à                      mák:à pánín                      mák:ā -já  
bean(A)                      bean(A) one                      bean(A) PL  
'some beans'                      'one bean'                      'piles of beans'

<sup>61</sup> “As in many languages, human nouns [in Hdi] are more likely to be marked for plural than non-human nouns” (Frajzyngier 2002:47).

<sup>62</sup> This is noted as a characteristic of Nilo-Saharan, not Chadic languages (Creissels et al. 2008:119) .

There are eight nouns, all referring to people, which have an irregular plural form.<sup>63</sup> All of the plural forms can optionally be followed by the plural suffix.

	SINGULAR	PLURAL	
(175) person	[mìj:ó]	[mèjèrè]	or [mèjèrèjá]
(176) woman	[mèé]	[míná]	or [mínájá]
(177) man	[mīj:ī]	[mīj:ē]	or [mīj:ējá]
(178) child	[námá]	[nándí]	or [nándíjá]
(179) girl	[màrbò]	[márbē]	or [márbējá]
(180) boy	[mìs:ò]	[mís:ē]	or [mís:ējá]
(181) maternal relative	[mōrā]	[mòorá]	or [mòorájá]
(182) relative	[dārā]	[dàará]	or [dàarájá]

### 6.1.3 Possessor agreement suffix<sup>64</sup>

The possessor agreement suffix attaches to the possessum, and indexes the person, gender (if singular), and number of the possessor of the noun to which the marker is suffixed. It can express ownership or immediate possession. It can also express intangible attributes or a relationship to a person or thing.

(183) tì kólá dūwē ò gégètì sídí  
 tì kól- -à dōw- -ē ò gérá -gètì sídí  
 S:3.F go PFV go.to.bed PRF PREP home POSS:3.F own  
 'She went to bed in her own house.' (appendix 13)

(184) áb:ējátijā āl:í nā gàndà tìgà  
 àb:ó -já -tìjā āl:í ná gàndà t-, L -ī -gà  
 friend PL POSS:DUAL there EQ inside eat IMPF DO:3.M  
 'Our neighbors are eating it.' (appendix 13)

(185) kà tēj íjó íj át:ì mèsìngà  
 kà t-, L -ēji íjó íj át:á -jì mèsìngà  
 S:3.M eat IMPF *boule*<sup>65</sup> ASOC arm POSS:3.M left  
 'He's eating *boule* with his left hand!'

<sup>63</sup> At least two other Chadic languages have some of the same irregular plurals: “man”, “woman”, “child”, and “daughter” in Lamang (Wolff 1983:89), and “woman” and “girl” in Gidar (Frajzyngier 2008:89).

<sup>64</sup> A similar marker is frequently called a “possessive suffix” or “possessive pronoun” in descriptions of other Chadic languages (Creissels et al. 2008:123).

<sup>65</sup> *Boule*, pronounced [bul], is the French word used in Chad for the standard method of preparing millet, sorghum, and other grains into a dough of soft, pliable consistency, and packing it into a bowl to create a dome shape, which is presumably the reason for the French name—translated “bowl” or “ball”. Shay gives the translation “mush” (Shay 1999). Traditionally, it is eaten without any utensils, but only using the right hand.

The possessor agreement suffix follows the same pattern as the pronominal system (chapter 8) indexing the person, gender (if singular, second or third person), and number of the possessor. As in the rest of the reference system, the first person plural inclusive marker is formed by adding the inclusive clitic *nà* to the dual (inclusive) marker (section 8.13). All possessor agreement suffixes have a low tone. The following table presents the possessor agreement suffixes. All possessor agreement suffixes have a morphologically conditioned suppletive allomorph when preceded by the plural suffix.

**Table 23: Possessor agreement suffixes**

	<i>Singular</i>	<i>Plural</i>
<i>1<sup>st</sup> person</i>	-jù / -tù	(DUAL) -jìjà / -tìjà
		(EXCL) -jìnè / -tìnè
		(INCL) -jìjà=nà / -tìjà=nà
<i>2<sup>nd</sup> person</i>	(MASC) -gò / -tò	-jìŋ / -tìŋ
	(FEM) -gè / -tè	
<i>3<sup>rd</sup> person</i>	(MASC) -jì / -tì	-jìgà / -tìgà
	(FEM) -gètì / -tètì	

Unlike most Chadic languages, Baraïn does not distinguish between alienable and inalienable possession (Newman 2006:198). Saba, a neighboring Chadic language, does not make the distinction either (Sauer 2007a; 2007b).

(186) gólmójù                      sìŋgò                                      làawígè  
 gólmó -jù                      sìŋjá                      -gò                      làawí                      -gè  
 house POSS:1.S                      nose                      POSS:2.M                      hair                      POSS:2.F  
 'my house'                      'your nose (to a male)'                      'your hair (to a female)'

gólméjì                      àségò                                      mèégò  
 gólmó -jì                      àsét                      -gò                      mèé                      -gò  
 house POSS:3.M                      plate(A/F)                      POSS:2.M                      woman                      POSS:2.M  
 'his house'                      'your plate (to a male)'                      'your wife'

All possessor agreement suffixes have a morphologically conditioned suppletive allomorph when following the plural suffix. This allomorph is identical except that it replaces the first consonant of the possessor agreement suffix with [t]. When the

possessor agreement suffix and the plural suffix co-occur, the possessor agreement suffix follows the plural suffix and is replaced by its allomorph beginning with [t], instead of [g] or [j].

(187)	gólméjátù		gólméjátò		ìt:ájátìgà
	gólmó -já -tù		gólmó -já -tò		ìt:á -já -tìgà
	house PL POSS:1.S(PL)		house PL POSS:2.M(PL)		eye PL POSS:3.PL(PL)
	'my houses'		'your houses'		'their eyes'

The alternation between suffixes beginning in [j] or [g] and those beginning with [t] is morphologically conditioned, not motivated by the phonological environment. Several nouns end in [a] in their singular form, and their possessed form uses the suffix beginning with [j] or [g].

(188)	bāa	bàajù		bàagò	
	bāa	bāa -jù		bāa	-gò
	relative	relative POSS:1.S		relative	POSS:2.M
	'relative'	'my relative'		'your relative (to a male)'	

(189)	gáa	gáajù		gáagò	
	gáa	gáa -jù		gáa	-gò
	health	health POSS:1.S		health	POSS:2.M
	'health'	'my health'		'your health (to a male)'	

These markers are suffixes and not clitics. They are assumed to be phonologically bound, since they trigger vowel harmony (section 4.5) and tone spreading (section 5.4.2). Like prototypical affixes, possessor agreement suffixes can only attach to one grammatical category. The suppletive form for the plural is also more characteristic of affixes than clitics (Zwicky & Pullum 1983).

There are at least two nouns which have an irregular singular form when the possessor agreement suffix is present.

(190)	námá		nójjù	
	námá		nón- -jù	
	child		child(POSS) POSS:1.S	
	'child'		'my child'	

The second example, “head”, seems as if it could be explained as a conditioned phonological process raising the vowel, yet this is the only example of this alternation. For example, the word *mèé* “woman”, with a similar phonological structure, does not change when the possessor agreement suffix is added.

(191) kèe	kìjù	
kèe	kì-	-jù
head	head(POSS)	POSS:1.S
'head'	'my head'	

When the possessor is explicitly stated, it follows the possessum with the oblique preposition *ìŋ* (section 9.3.1) preceding it (N-POSS PREP NP). The order possessum-possessor is the most common order in Chadic languages (Newman 2006:198). If the possessum follows the possessor, the most natural interpretation is that the possessum is functioning as a predicate (section 11.1.1).

(192) gérjì	ìŋ	úmàr
gérá	-jì	ìŋ
village	POSS:3.M	PREP Oumar
'the village of Oumar'		

(193) nándètì	̀	sājídè
nándí	-gètì	ìŋ
children.PL	POSS:3.F	PREP Sayide
'the children of Sayide'		

In direct elicitation of paradigms of possessor agreement suffixes, the syllable [ji] of the first person dual and inclusive possessor agreement suffixes was frequently dropped with no semantic change (i.e., free variation).

(194) gólméjà=nà	~	gólméjìjà=nà
gólmó	-jìjà	=nà
house	POSS:DUAL INCL	
'our house'		

When the noun stem consists of only one syllable, the speakers did not accept the drop for the dual possessor agreement suffix. It was allowed with the inclusive clitic *nà* attached at the end of the word.

- |                          |                  |
|--------------------------|------------------|
| (195) sùuɲjà             | *suuja           |
| sùu -ɲjà                 | sùu -ɲjà         |
| animal POSS:DUAL         | animal POSS:DUAL |
| 'our animal (two of us)' |                  |

However, in a natural text (appendix 12), the drop occurred on the same monosyllabic root with the third person plural suffix.

- |  |       |            |             |                       |
|--|-------|------------|-------------|-----------------------|
| (196) nì                               | kólēj | séj        | gówgà       | sùugà                 |
| nì                                     | kól-  | -ēji s-, H | -ēji gów-   | -gà sùu -ɲjà          |
| S:3.PL                                 | go    | IMPF come  | IMPF gather | DO:3.M meat POSS:3.PL |
| 'They went to come gather their meat.' |       |            |             |                       |

When the [ɲi] is dropped, the word will frequently have the same phonological form as the plural, but a tone difference remains to distinguish the two.

- |              |                     |
|--------------|---------------------|
| (197) pējējá | pèjèjà              |
| pējē -já     | pējē -ɲjà           |
| milk PL      | milk POSS:DUAL      |
| 'milk'       | 'our milk (us two)' |

#### 6.1.4 Nominalizing suffix

Some nouns, perhaps only abstract nouns, are formed by the addition of the derivational nominalizing suffix *-áŋ*. For example, the suffix can be added to adjectives to create the nominal version of the abstract quality described by the adjective. The possessor agreement suffix can be added after the nominalizer, giving evidence of the change of lexical category. When the nominalizing suffix is attached to a true adjective (bound stem, section 6.2) it has the effect of raising the tone of all preceding syllables in the word to H.

- |                |                |                         |
|----------------|----------------|-------------------------|
| (198) wàaɲàgú  | wáaɲáŋ         | wáaɲáŋɲi                |
| wàaɲà- gú      | wàaɲà- -áŋ     | wàaɲà- -áŋ -ɲi          |
| strong N:M     | strong NOM     | strong NOM POSS:3.M     |
| 'strong'       | 'strength'     | 'his strength'          |
| (199) wárgàgú  | wárgáŋ         | wárgáŋɲi                |
| wárgà- -gú     | wárgà- -áŋ     | wárgà- -áŋ -ɲi          |
| hospitable N:M | hospitable NOM | hospitable NOM POSS:3.M |
| 'hospitable'   | 'hospitality'  | 'his hospitality'       |

As seen in other Chadic languages, the nominalizing suffix can be attached to nouns (Margi: Hoffman 1963:46; Dangla: Shay 1999:82). The resulting noun is an abstract quality relating to the root noun. The tone of the noun does not change, except in the case of elision to avoid hiatus where the root-final vowel and its tone are deleted (section 4.7).

(200)	sìl:íjù	sìl:áj
	sìl:í -jù	sìl:í -áj
	salt POSS:1.S	salt NOM
	'my salt'	'saltiness'

(201)	nāsárājáj
	nāsárā -já -áj
	foreigner(A) PL NOM
	'French (language)'

(202)	jàlkìjáj
	jàlkì -já -áj
	Jalki PL NOM
	'Jalkiya/Baraïn (language)'

#### 6.1.5 Compound nouns

There are several words composed of more than one noun, or a noun plus one or more additional lexemes other than suffixes. Compound nouns are most frequently used for the names of plants and animals. In some cases, the component parts of the compound are quite evident, and the speakers can readily identify the meaning of each part.

(203)	[íjìnkùmà]	'insect, sp.'
	[íjì]	'its mother'
	[ìj]	PREP
	[kùmà]	'baboon'

In other cases, the parts of the compound are not all transparent to the speakers. In some of these cases, the name of one species is differentiated from another by means of an additional lexeme whose meaning cannot be identified by the speakers.

(204)	[kìsìbòbùlú]	'white-tailed mongoose'
	[kìsìbò]	'banded mongoose'



- (205) [wáwídèntúlú] 'insect, sp.  
 [wáwí] 'grasshopper'  
 [dē] REL:F  
 [ɪŋ] PREP

- (206) [búlmíbòmbòm] 'African wild dog'  
 [búlmí] 'hyena'

One grammatical test for compound words is the placement of the plural suffix. In a noun phrase, the plural suffix always attaches to the head noun and is followed by any other modifying elements (section 6.1.2). With compound words, the plural marker can attach at the end of the compound. In addition, compound nouns do not necessarily follow the same tone patterns as regular nouns (section 5.2).

- |                         |               |                    |
|-------------------------|---------------|--------------------|
| (207)                   | SINGULAR      | PLURAL             |
| 'insect, sp.'           | [íjɪŋkúmà]    | [íjɪŋkúmājá]       |
| 'white-tailed mongoose' | [kìsìbòbúlú]  | [kìsìbòbúlíjájá]   |
| 'insect, sp.'           | [wáwídèntúlú] | [wáwídèntúlíjájá]  |
| 'African wild dog'      | [búlmíbòmbòm] | [búlmíbòmbòmìjájá] |

However, at least in some cases, the speakers were also able to analyze the compound noun as a phrase, and place the plural suffix on the initial nominal morpheme

- |                    |               |                    |
|--------------------|---------------|--------------------|
| (208)              | SINGULAR      | PLURAL             |
| 'African wild dog' | [búlmíbòmbòm] | [búlmíjájá bòmbòm] |
| 'insect, sp.'      | [wáwídèntúlú] | [wáwíjájá dèntúlú] |

There is another type of compound word formed by full or partial reduplication. Reduplication—at least in a few fossilized examples—is virtually ubiquitous in Chadic languages (Al-Hassan 1998:53). Reduplication is not a productive process in Baraïn. The native speaker only accepted one of the examples in its non-reduplicated (simple) form.

- |       |                |               |
|-------|----------------|---------------|
| (209) | [kìndikíndí]   | 'zorille'     |
|       | [kíndí]        | 'pangolin'    |
|       | [gālāgālā]     | 'grey heron'  |
|       | [pédēpédél]    | 'insect, sp.' |
|       | [jòlòŋjòlòŋgò] | 'insect, sp.' |

## 6.2 Adjectives

The number of words that are inherently adjectival is relatively limited. This is true of other Chadic languages, and African languages in general (Welmers 1973:294; Creissels et al. 2008:125; Frajzyngier & Shay 2012:270).<sup>66</sup> Adjectives are marked with a nominal agreement suffix and follow the head noun they modify. However, these characteristics can, in many cases, also be true of nouns (section 6.1.1 and 6.2.2). The justification for adjectives as a separate lexical category is crucially dependent on a set of bound stems that cannot occur without a nominal agreement marker or nominalizing suffix. These stems cannot occur in isolation or with any other suffix.

(210) wúl- -gú  
kind N:M  
'kind'

### 6.2.1 Nominal agreement

Adjectives must agree in gender and number with the noun they modify by adding one of three suffixes. As seen elsewhere in the reference system, suffixes show a gender distinction in the singular form, but there is only one plural suffix unspecified for gender. All nominal agreement suffixes carry a high tone.

**Table 24: Nominal agreement suffixes**

	<i>Singular</i>	<i>Plural</i>
<i>masculine</i>	-gú	-gá
<i>feminine</i>	-tú	

(211) mīj:ī wúl- -gú  
man kind N:M  
'a kind man'

màrbò wúl- -tú  
girl kind N:F  
'a kind girl'

(212) mīj:ē súb:ù wúl- -gá  
men.PL three kind N:PL  
'three kind men'

márbē súb:ù wúl- -gá  
girl.PL three kind N:PL  
'three kind girls'

<sup>66</sup> Some Chadic examples: Lele (Frajzyngier 2001:3–4), Hdi (Frajzyngier 2002:5, 71), Dangla (Shay 1999:109), Miya (Schuh 1998:203–204), and Gidar (Frajzyngier 2008:5).

### 6.2.2 Nouns (and verbs) to adjectives

Most, if not all, nouns can take on an adjectival function by simply adding the nominal agreement suffix (section 6.2.1).

- (213) *sàaní*                      *sàaní -gú*  
 iron                              iron N:M  
 'iron'                            'metallic'
- (214) *làawí*                      *làawí -gú*  
 hair                                hair N:M  
 'hair'                             'hairy'
- (215) *jèedó*                      *jèedó -gú*  
 mountain                        mountain N:M  
 'mountain'                      'mountainous'
- (216) *lìidí*                        *lìidúgú*  
 lìidí                                lìidí -gú  
 bird                                bird N:M  
 'bird'                             'avian'

The Infinitive form of any verb (which is the nominalized form of the verb, section 7.4) can also take on an adjectival function in the same manner. Twenty verbs were arbitrarily chosen and tested. The speakers accepted every single derivation despite the occasional difficulty of finding a context in which such a word would be appropriate.

**Table 25: Forming adjectives from verbs**

<i>verb</i>		<i>adjective</i>	<i>possible gloss</i>
<i>báaró</i>	to separate	<i>báarógú</i>	separates often (from his wife)
<i>táaró</i>	to stretch out	<i>táarógú</i>	lazy
<i>dúunó</i>	to lean back	<i>dúunógú</i>	slouchy
<i>dóosó</i>	to guard	<i>dóosógú</i>	vigilant
<i>lúuló</i>	to cry	<i>lúulógú</i>	cry-baby
<i>kéeló</i>	to circle	<i>kéelógú</i>	circular
<i>kóoró</i>	to draw (water)	<i>kóorógú</i>	gathers water all day
<i>wíiló</i>	to whistle	<i>wíilógú</i>	whistles too much

pàaró	to hoard	pàarógú	miser
tìiló	to spy	tìilógú	peeping tom
tòoló	to go under	tòológú	crawls under everything (a child)
dèepó	to kneel	dèepógú	always kneeling down
sèeró	to make come	sèerógú	knows how to get things
sàabó	to bark	sàabógú	barks too much
sòobó	to light	sòobógú	pyromaniac
jòoró	to sweat	jòorógú	sweaty
jàamó	to steal	jàamógú	kleptomaniac
jòomó	to play	jòomógú	plays too much
kèeló	to pierce	kèelógú	loves to make holes
wiiró	to fly	wiirógú	flies well (a bird)

### 6.3 Quantifiers

This section discusses numbers and other quantifiers.

#### 6.3.1 Cardinal numbers

The numbers six through nine are based on five, meaning that they are a combination of multiple morphemes: five plus one, five plus two, etc. Baraïn is the only language in its subbranch to use biquinary system for digits six through nine. At least five other languages in the subbranch have composed numbers based on five for some of those four numbers, but not all.<sup>67</sup> A similar system is seen elsewhere in the Chadic family as well (Frajzyngier & Shay 2012:273).

The composed numbers are obscured by phonological changes that are not seen elsewhere in the language (i.e., not productive). The bilabial approximant seen in the number five, *dàwsú*, is dropped from the numbers six through nine. The nasal of the associative preposition *íŋ* assimilates completely before [s]. The first letter of *páníŋ* “one” deletes before the nasal of the associative preposition.

<sup>67</sup> In Mawa the number 6 is composed of 5+1 (Hissène, Khamies & James Roberts 2010). In Bidiya and Ubi, the numbers 6 and 7 (field notes of Emma Kuipers, field notes of Simon Neuhaus). In Mogum, the number 7 (field notes of Emma Kuipers). In Sokoro, 7, 8, and 9 (field notes of Gordon Martin, accessed online December 22, 2011: <http://lingweb.eva.mpg.de/numeral/>)

- (217) [dàsúmáníŋ] 'six'  
 [dàsís:íidì] 'seven'  
 [dàsús:úb̀:u] 'eight'  
 [dàsúmpúdú] 'nine'

There are two words for “one”. The word *pánnà* is only used in counting. It cannot modify a noun. The word *páníŋ* is used as a quantifier modifying a noun, but, unlike adjectives, does not take a nominal agreement suffix. For all other numbers, the same form is used for counting or modifying a noun.

For the numbers eleven through nineteen, the word for “ten” is followed by the morpheme *kē*, then the second digit.

- (218) kúr kē páníŋ  
 ten ??? one  
 'eleven'

However, for numbers twenty through the hundreds the connector *íŋ bújá* is used. The word *bújá* means “mouth”. Ubi uses the word for “mouth” in a similar fashion (field notes of Simon Neuhaus).

- (219) àrú m bújá páníŋ  
 àrú íŋ bújá páníŋ  
 hundred ASOC mouth one  
 'one hundred and one'

For the numbers twenty through ninety, the word for ten takes a plural suffix *-já*, and is followed by the number noting how many tens make up that number: *kúríjá síidì* “twenty”. The same pattern is used for the hundreds. Loan words from Bagirmi are also used for the numbers twenty (*duksap*) and thirty (*dogmota*). The connector following the thousands is the associative preposition used in coordination (section 6.4).

**Table 26: Numbers**

[páníŋ] / [pán:à]	1
[síidì]	2
[súb̀:ù]	3
[púdú]	4

[dàw'sú]	5
[dàsúmáníŋ]	6
[dàsís:íidì]	7
[dàsús:úb'u]	8
[dàsúmpúdú]	9
[kúr]	10
[kúr kē páníŋ]	11
[kúrjájá síidì]	20
[àrú]	100
[àrú m bújá páníŋ]	101
[dúpú íŋ àrú ím páníŋ]	1101

### 6.3.2 *Ordinals*

Ordinals are normally preceded by a relative marker (section 10.1). For most numbers, the relative marker is followed by what would appear to be the preposition *tà* (section 9.3.3), except that it differs in tone, and then the cardinal number. For “first” and “last”, the construction is a relative marker followed by the word for “in front” or “behind” respectively. In addition, the word “behind” is preceded by the oblique preposition (section 9.3.1).

(220) [wùrò]	'first (front)'
[tá síidì ]	'second'
[tá súb:ù]	'third'
[tá púdú]	'fourth'
[m̀ bálíjáj]	'last (behind)'

### 6.3.3 *Other quantifiers*

There are two non-numeric quantifiers that can occur in the noun phrase in the place of a number.

(221) nōpúnò páajìgà	
goat all	
'all the goats'	

- (222) nōpúnò kōjágá  
 goat many  
 'many goats'

One word functions as an intensifier of nouns, adjectives, or verbs.

- (223) àm:í bàatá  
 water very  
 'a lot of water'

- (224) námá kūlwógú bàatá  
 námá kūlw- -o -gú bàatá  
 child be.dirty INF N:M very  
 'The boy is very dirty.'

- (225) kà wàanéj bàatá dō  
 kà wǎan- -ēji bàatá dō  
 S:3.M sleep IMPF very NEG  
 'He doesn't sleep much.'

#### 6.4 Coordination of noun phrases

Two noun phrases can be joined together into one noun phrase by using one of the three coordinating words in the following table.

**Table 27: Coordinating conjunctions**

íŋ	'and'/'with' (ASSOCIATIVE PREPOSITION)
sánē / sénē	'or' (INTERROGATIVE)
áw	'or' (DECLARATIVE)

The coordinating conjunction meaning “with” or “and” is the associative preposition *íŋ*—also used in prepositional phrases (section 9.3.2).

- (226) ìnú m̀ bàajù ñ kóló  
 ìnú íŋ bāa -jù ñ kól- -o  
 PRO:1.S ASOC relative POSS:1.S FUT go INF  
 'My brother and I will go.'

Two distinct words can be translated as “or”. Without a specific context, the two words appear to be syntactically interchangeable.

(227) tá ñ gòrò ò táwá sánē rís  
 tá ñ gōr- -o ìñ táwá sánē rís  
 CERT FUT buy INF PREP millet or rice(A)  
 'Are you going to buy millet or rice?'

(228) tá ñ gòrò n táwá áw rís  
 tá ñ gōr- -o ìñ táwá áw rís  
 CERT FUT buy INF PREP millet or rice(A)  
 'You are going to buy millet or rice.'

However, in certain contexts only one of the two words is deemed acceptable. For example, only the word *sánē* (also pronounced *sénē*) can be added at the end of a sentence to form a question. It is inherently interrogative in mood (section 11.2.1).

(229) kà ñ kóló sánē  
 kà ñ kól- -o sánē  
 S:3.M FUT go INF or  
 'Is he going to go?'

(230) \*ka ñ kolo aw  
 kà ñ kól- -o áw  
 S:3.M FUT go INF or

The word *aw*, on the other hand, presents an alternative where at least one of the options is assumed to be true. This is the word naturally used to respond to a question. It is inherently declarative in mood.

(231) músà áw úmàr ñ ājó  
 músà áw úmàr ñ āj- -o  
 Moussa or Oumar FUT come INF  
 '(Who will come?) Either Moussa or Oumar will come.'

The same sentence with *sane* would be more likely a question than a declaration.

(232) músà sánē úmàr ñ ājó  
 músà sánē úmàr ñ āj- -o  
 Moussa or Oumar FUT come INF  
 'Will Moussa or Oumar come?'



Another context which brings out the difference is that of an ultimatum. A threat requires the declarative mood. Otherwise the threat would be understood as a very peculiar question.

(233) kà ò káp:òjù áw ínù ò díjì  
 kà ò káp:- -o -jù áw ínù ò d-, L -íi -jì  
 S:3.M FUT pay INF POSS:1.S or PRO:1.S FUT kill INF POSS:3.M  
 'He's going to pay me or I'll kill him!'

(234) # kà ò káp:òjù sánē ìnù ò díjì  
 kà ò káp:- -o -jù sánē ìnù ò d-, L -íi -jì  
 S:3.M FUT pay INF POSS:1.S or PRO:1.S FUT kill INF POSS:3.M  
 'Is he going to pay me or am I going to kill him?'

## Chapter 7 : Verbs

The lexical category of verb is defined by both its primary function as a predicate and by its morphological traits. The verbal morphology grammaticalizes six primary tense, aspect, and mood (TAM) categories. TAM morphology is encoded in suffixes, except for the Future, which is encoded with an auxiliary. Alternatively, the Future marker could be analyzed as a prefix (section 3.3). TAM suffixes are subject to suppletion before direct object suffixes, and may even be completely neutralized (section 8.6).

The supposed norm for Chadic verbs is the use of “stem modification” to mark TAM and two basic stem forms marking perfective and imperfective TAM (e.g., Jungraithmayr 1977; Wolff 1977; Wolff 1979; Newman 2006:199). This is not the case in Baraïn. The only verb-internal modification is fossilized in causative verbs (section 7.6). The grammaticalization of “plurality” is also conspicuously absent. The verbal morphology of other Chadic languages frequently includes some mechanism for encoding either the plurality of the absolutive argument or the repetition of action (Newman 1990; Al-Hassan 1998; Wolff 2001).

The first section below introduces the meaning and function of the six TAM markings. The second section presents irregular TAM marking for monoverbs and the verb “to come”. The third section presents three difficult-to-define particles which are linked to certain TAM. The fourth section covers the use of Infinitive, or nominal verbs. The final two sections present special verb classes: labiles and causatives.

## 7.1 Tense, aspect, and mood<sup>68</sup>

This section describes the function and meaning of six verbal suffixes and one auxiliary. The suffixes all have the same morphosyntactic distribution. They all occur immediately after the verb stem and do not co-occur. The Future auxiliary functions as a pair with the Infinitive suffix. The Future auxiliary does not co-occur with any other TAM suffixes. These six markers (considering the Future auxiliary and the Infinitive suffix a pair) delimit six concepts of tense, aspect, and mood. They do not co-occur to create compositionally derived TAM meaning.

The TAM markers are presented in the table below with their descriptive label. When referring to the language-specific form, the descriptor is capitalized. When lower case, the word refers to the abstract concept. The TAM concepts are presented as summarized by Comrie, except where explicitly noted otherwise (1976; 1985).

**Table 28: The six verbal TAM markings**

STEM-ēji	Imperfective
STEM-gà	Progressive
STEM-à	Perfective <sup>69</sup>
STEM-ē	Perfect
STEM-ù	Subjunctive
ḥ STEM-O	Future (with Infinitive)

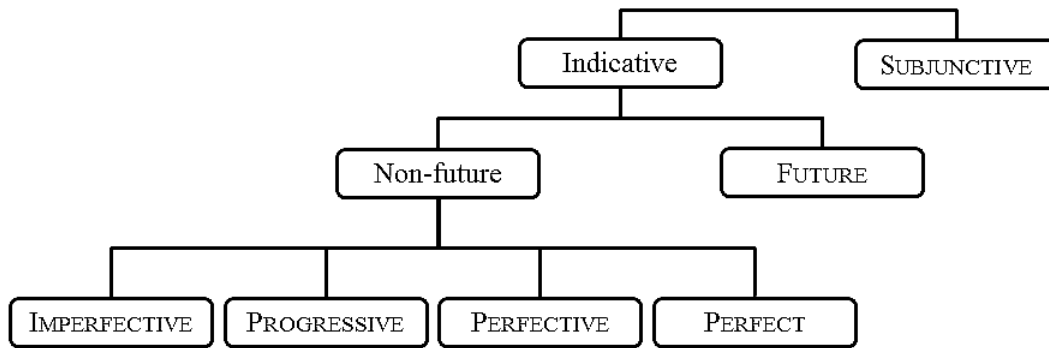
The TAM marking shown is that used for polyverbs with no other suffixes attached to the verb. If followed by a direct object suffix, the Perfect and Imperfective suffixes undergo morphologically conditioned suppletion (section 8.6). The other TAM suffixes supplete to null before direct object suffixes. In addition, TAM marking for monoverbs follows an alternate paradigm (section 7.2.1).

<sup>68</sup> The terms “mood” and “modality” are used interchangeably by Frajzyngier (2001:261; 2008:269). In his grammar of Miya, Schuh defines TAM as tense, aspect, mood (1998). I use the term “mood” here, since the primary modal element is the Subjunctive suffix. Subjunctive is traditionally considered a minor mood, in contrast with the indicative and other major moods. I use the word “modality” when referring to the secondary meaning of the Future auxiliary (deontic modality) and a dubitative marker (section 9.7). I make no attempt to define “mood” or “modality”.

<sup>69</sup> The Perfective suffix behaves as if it is unmarked for tone before a H tone, losing its L tone. The same is true of the Subjunctive suffix (section 5.4.4).

The six different grammaticalized TAM distinctions are: Imperfective, Progressive, Perfective, Perfect, Subjunctive (including imperative), and Future. The Subjunctive is modal, with no reference to time or aspect, except that stated outside the verb or implied in the context. It is the only marker of non-indicative mood, including the imperative mood. The Subjunctive can also be used to express deontic modality, but, in certain constructions, both Future and Imperfective verbs can also express deontic modality. The Future is primarily temporal, and not aspectual. Imperfective, Progressive, Perfective, and Perfect are aspect markers, yet they also encode a non-future meaning.

**Figure 3: Possible hierarchical organization of TAM marking**



It may be possible to organize the TAM markings into a hierarchical diagram as in figure 3. This diagram highlights the uniqueness of the Subjunctive marker as the only non-indicative marker. It further contrasts the Future marker with the four other TAM markers, which are all non-future in tense. Those four non-future markers could further be divided into two groups. One possibility would be to consider Imperfective and Progressive subtypes of imperfective, although it's not clear that Perfective and Perfect could as easily be grouped together under one TAM concept. In any case, this organizational scheme is, at best, a helpful oversimplification of the facts. When interacting with adverbs or negation, both the Future and the Imperfective can express deontic modality (section 7.1.5) and the Imperfective can also express future tense (section 7.1.1). The discussion of TAM markings begins with the four “non-future” markers, then the Subjunctive suffix, and finally the Future auxiliary.

### 7.1.1 Imperfective

The label “Imperfective” is used here to describe the verb form ending in the suffix *-ēji*. Comrie defines imperfective by comparing it with the concept of the perfective: “...perfectivity indicates the view of the situation as a whole, without distinction of the various separate phases that make up that situation; while the imperfective pays essential attention to the internal structure of the situation” (1976:16).

When the Imperfective form is used without any other element defining its time reference, it is understood as present tense, as in (235). The present time reference can be reinforced by a present time adverbial, as in example (236). The examples below also show that intransitive Imperfective verbs are frequently followed by an Infinitive verb. The function of these cognate complements are not fully understood (section 7.4.2).

(235) *kà déj díi*  
*kà d-, H -ēji d-, H -íi*  
 S:3.M walk IMPF walk INF  
 'He is walking.'

(236) *sòndé kà déj díi*  
*sòndé kà d-, H -ēji d-, H -íi*  
 now S:3.M walk IMPF walk INF  
 'He is walking right now.'

If a past time reference adverbial is added to the sentence, the Imperfective form has a past time reference.

(237) *tàndē kà déj díi*  
*tàndē kà d-, H -ēji d-, H -íi*  
 yesterday S:3.M walk IMPF walk INF  
 'Yesterday he was walking.'

If a specific period of time is encoded lexically (even without a past time reference adverbial) that length of time is understood as the period of time for which the event was true in the past. In isolation, the hearer would make the interpretation that the event has ceased, as seen in (238). In section 7.1.3, examples (285) and (286) apply the same test to the Perfective and Perfect suffixes. For the Perfective, the period of time refers to the amount of time since the event ceased. For the Perfect, the period of time

refers to the amount of time since the event began, up to and including the time of speech.

- (238) kà sùléjī mánḡò wàlèjì kúr  
 kà sùl- -ēji mónḡò wālō -jì kúr  
 S:3.M sit IMPF Mongo year POSS:3.M ten  
 'He lived in Mongo for ten years (but is not there now).'

The Imperfective can be used as a mainline verb in the narratives included in the appendices—especially in the traditional fables (appendices 12 and 13).

- (239) kà kólēj dēj  
 kà kól- -ēji d-, L -ēji  
 S:3.M go IMPF kill IMPF  
 'He went and killed something.'

nì séj téj  
 nì s-, H -ēji t-, L -ēji  
 S:3.PL come IMPF eat IMPF  
 'They came and ate.' (appendix 12)

Comrie's model includes a hierarchy of aspectual concepts. The top levels are imperfective and perfective. Under imperfective he adds several subcategories such as habitual, continuous, and progressive (1976:25). Most of the above examples are of the continuous or progressive type. In this meaning, the Imperfective suffix overlaps with the Progressive suffix (section 7.1.2). The following are examples of habitual aspect expressed by the Imperfective form. The use of the Imperfective with the adverbial phrase “in my childhood/youth” requires a habitual reading.

- (240) ìm mís:áṅjù ò sùléj bálál  
 ìḡ mís:ò -áḡ -jù ìḡ sùl- -ēji bálál  
 PREP boy NOM POSS:1.S S:1.S sit IMPF Balili  
 'In my youth I lived in Balili.'

- (241) ìm mís:áṅjù m̀ būḡéjī m̀ m̀òró  
 ìḡ mís:ò -áḡ -jù ìḡ būḡ- -ēji ìḡ m̀òró  
 PREP boy NOM POSS:1.S S:1.S dive IMPF PREP stream  
 'In my youth I swam in the streams.'

The following example shows both a habitual action that has ceased and a current habitual action, both expressed by the Imperfective.

(242) ìṅ nándíjájù                      ìṅ gárējī                      ñ jàp:á  
 ìṅ nándí -ájù -jù                      ìṅ gár-                      -ēji ìṅ jàp:á  
 PREP children.PL NOM POSS:1.S S:1.S study(A) IMPF PREP church<sup>70</sup>

wò sòndé jó ñ dójéjī málùmiján  
 wò sòndé jóo ìṅ dój- -ēji málùm -já -áj  
 and now NEG<sup>71</sup> S:1.S study IMPF muslim PL NOM  
 'During my childhood, I went to church, but now I follow Islam.'

The Imperfective suffix cannot co-occur in an independent clause with the future tense adverb “tomorrow”.

(243) \* bonte ka deji dii  
 bòntè kà d-, H -ēji d-, H -íi  
 tomorrow S:3.M walk IMPF walk INF

In a context where two actions will take place in the future, it is perfectly acceptable to use the Imperfective in a subordinate clause for one of those future actions. However, the Imperfective in the subordinate clause remains non-future in relation to the time reference of the independent clause.

(244) ìnù jì jòomó tò kà gánéjī kítà  
 ìnù ñ jòom- -o tò kà gán- -ēji kítà  
 PRO:1.S FUT play INF COND S:3.M do IMPF work  
 'I am going to play while he works.'

(245) bòntè tò sēt:ā  
 bòntè tò s-, H -ēt:a  
 tomorrow COND come PRF

ìnù ñ dópéjìgà                      téjī tíi  
 ìnù ñ dóp- -o -jìgà                      t-, L -ēji t-, L -íi  
 PRO:1.S FUT find INF POSS:3.PL eat IMPF eat INF  
 'When I arrive tomorrow I will find them eating.'

<sup>70</sup> The speaker said this word comes from the trade language Sango (CAR).

<sup>71</sup> See section 9.6 for a discussion of this use of the negation marker.

(246) kà m̀ mótó b̀òntè  
 kà ñ̀ mót- -o b̀òntè  
 S:3.M FUT die INF tomorrow

tò kà (gàndà) g̀anéjì kítà m̀ b̀ájájì  
 tò kà g̀andà g̀ǎn- -ējì kítà ñ̀ b̀ájá -jì  
 COND S:3.M inside do IMPF work PREP field POSS:3.M  
 'He will die tomorrow as he works in his field.'

One other situation in which the Imperfective suffix can be used with a future time adverbial is when the clause is negated. However, the interpretation of the Imperfective suffix varies significantly when interacting with negation. With a future time adverbial and negation, the Imperfective expresses a negated future action (declarative) or a future negative obligation (deontic modality). In an affirmative sentence, the Future marker is used to express these two meanings (section 7.1.5).

(247) ñ̀ kóléjì r̀úkúm b̀òntè d̀ō  
 ñ̀ kól- -ējì r̀úkúm b̀òntè d̀ō  
 S:1.s go IMPF Roukoum tomorrow NEG  
 'I am not going to Roukoum tomorrow.' /  
 'I shouldn't go to Roukoum tomorrow.'

When negated without any time adverbials, the Imperfective can express “never”. This interpretation is presumably related to the habitual reading of Imperfective.

(248) ñ̀ kóléj bálál d̀ō  
 ñ̀ kól- -ējì bálál d̀ō  
 S:1.s go IMPF Balili NEG  
 'I never go to Balili.' / 'I will never go to Balili.'

With a present time reference adverbial and negation, the interpretation is “not now”, leaving open that the action may have taken place in the past, or could place in the future.

(249) s̀ondé kà g̀anéjì kítà d̀ō  
 s̀ondé kà g̀ǎn- -ējì kítà d̀ō  
 now S:3.M make IMPF work NEG  
 'He is not working now.'



With a past time adverbial, the Imperfective cannot be negated. Instead, the speakers insist on employing the Perfective suffix to speak of a negated event in the past.

(250) \* tande ka ganeji kita do  
 tàndē kà gǎn- -ēji kítà dō  
 yesterday S:3.M make IMPF work NEG

(251) tàndē kà gànà kítà dō  
 tàndē kà gǎn- -à kítà dō  
 yesterday S:3.M make PFV work NEG  
 'He didn't work yesterday.'

### 7.1.2 *Progressive*

The suffix *-gà* is the marker of progressive aspect.<sup>72</sup> Progressive aspect is a subtype of imperfective aspect excluding habitual and stative interpretations, and only allowing the description of dynamic events (Comrie 1976:25, 32-40; Bybee, Perkins & Pagliuca 1994:138). The existence of a Progressive marker does not necessarily exclude the use of the Imperfective marker to express progressive meaning (Comrie 1976:33; Bybee, Perkins & Pagliuca 1994:148). There is an apparent overlap in the usage of the Imperfective and Progressive markers.

(252) ìŋ gèjì kà kólǵà ìn mánǵá  
 ìŋ gèr- -jì kà kól- -gà ìŋ mánǵá  
 ASOC POSS POSS:3.M S:3.M go PROG PREP bush  
 'From his place, he is going to the bush.'

(253) ìŋ kólǵà wòsùgó  
 ìŋ kól- -gà wòsùgó  
 S:1.S go PROG far  
 'I'm going far away.'

<sup>72</sup> A similar marker in other Chadic languages has been analyzed as an “allative” verbal extension. “The term *verbal extension* in Chadic linguistics refers to verbal affixes with a variety of functions, which do not include coding of participants or the coding [of] tense, aspect, and modality” (Frajzyngier 2008:192; Newman 2006:198). Several Chadic languages have been described as having extensions related to motion (Frajzyngier 1987a; 2008:197; Frajzyngier, Johnston & Edwards 2005:195). This possible analysis is further strengthened by an apparent preference to use this marker on verbs of motion. The disadvantage to such an analysis here is that the suffix behaves morphosyntactically like a TAM marker. There is a likely a diachronic link, since progressive markers may be derived from locative expressions (Bybee, Perkins & Pagliuca 1994:129).

The Progressive suffix is a homophone of the third person masculine object suffix (section 8.3). Example (254) demonstrates that these two are not the same morpheme, because the adjective reveals that what would be the object is feminine. A feminine object would clash with a masculine object suffix.

- (254) ñ gàndà kól-gà bálál púsátú  
 ñ gàndà kól- -gà bálál púsá- -tú  
 S:1.S inside go PROG Balili beautiful N:F  
 'I'm on my way to the beautiful village of Balili.'

Like other TAM suffixes, the Progressive suffix cannot co-occur with any other TAM marking. There are two post-verbal particles, *ǰē* and *tā*, that can only appear in Perfective aspect (section 7.3.1). The ungrammaticality of these markers following the *-gà* suffix indicates that it cannot co-occur with Perfective aspect.

- (255) \* ka kolga ǰe/ta balal  
 kà kól- -gà ǰē/tā bálál  
 S:3.M go PROG DISC Balili  
 for: 'He is going to Balili.'

It also cannot co-occur with the Future auxiliary (section 7.1.5) or in a syntactic environment which requires subjunctive mood (section 7.1.4).

- (256) \* inu ñ kolga  
 ñ ñ kól- -gà  
 PRO:1.S FUT go PROG  
 for: 'I will go.' / 'I should go.'

- (257) \* ɲ ǰap:a ki kolga  
 ñ ǰáp:- -à kì kól- -gà  
 S:1.S want PFV S:2.M go PROG  
 for: 'I want you to go.'

The adverb *gàndà*, which can function as a preverbal adverb with the Imperfective (section 9.5.3), can also precede Progressive verbs. These are the only two TAM that can co-occur with this adverb.

- (258) ìj gàndà jàŋgígà rùkúm  
 ìj gàndà jǎŋg- -gà rùkúm  
 S:1.S inside descend PROG Roukoum  
 'I'm going down to Roukoum.'

Although the Imperfective suffix and the Progressive suffix appear to overlap in meaning, a verb describing motion with present time reference will almost always use the Progressive suffix. When the Imperfective suffix is used with a verb of motion with present time reference, it is most naturally understood with a habitual interpretation.

- (259) kà kólejī bálál  
 kà kól- -ēji bálál  
 S:3.M go IMPF Balili  
 'He often goes to Balili.'

The Progressive suffix cannot be used with verbs that describe states. However, when the Progressive suffix is attached to a verb which, in other TAM, is used to describe states, instead of rejecting the construction, the speakers reinterpret the verb. The coerced interpretation is that the subject is progressing toward reaching the state lexically encoded in the verb.<sup>73</sup> The state is not yet in effect, but the agent is somehow progressing towards being in that state.

- (260) dōo gē kà súlgà (\*tàndē)  
 dōo gē kà súl- -gà tàndē  
 place REL:M S:3.M sit PROG yesterday  
 'the place where he is going to stay'

- (261) ánē súlgà máŋgò wàlò kúr  
 ánē súl- -gà mójgò wālō kúr  
 PRO:EXCL sit PROG Mongo year ten  
 'We are going to live in Mongo for ten years.'

- (262) gólmó gē kà dōwǎá gì  
 gólmó gē kà dōw- -gà gì  
 house REL:M S:3.M sleep PROG DEM:M  
 'the house he is going to sleep in'

<sup>73</sup> In a similar fashion, the “allative extension” in Hdi can also be added to non-motion verbs in which case it adds “direction meaning” (Frajzyngier 2002:260).

### 7.1.3 *Perfect and Perfective*

The Perfect, marked by the suffix *-ē*, and the Perfective, marked by the suffix *-à*, are considered here together, because their difference in meaning can be slight, and is best understood in juxtaposition.

It has been claimed that Chadic languages are characterized by an imperfective-perfective distinction (Jungraithmayr 1977; Newman 1977b:179; Wolff 1979:9). A definition of perfective was already given above: "...perfectivity indicates the view of the situation as a whole, without distinction of the various separate phases that make up that situation..." (Comrie 1976:16). In other words, the perfective sees the beginning, the duration, and the end of the action or state as if it were one inseparable concept.

Although the Imperfective is the most common TAM for the mainline in a narrative, the Perfective marker is also frequently used for describing a sequence of past events, particularly in the two narratives that record true events from the recent past (appendices 9 and 11).

(263) η      gòrà      jē      súu  
           ìη      gōr- -à      jē      sùu  
           S:1.s buy PFV DISC meat  
           I bought some meat. (appendix 9)

The Perfective is also the unmarked (perhaps the only) TAM used in negated indicative past clauses.

(264) nì      àp:éj      kée nì      dópá      dō  
           nì      àp:- -ēji      kée nì      dóp- -à      dō  
           S:3.PL dig IMPF DUR S:3.PL find PFV NEG  
           They drilled and drilled and didn't find any.

The concept of perfect is defined by Comrie as the aspect which stresses "the continuing relevance of a previous situation." Linguists generally accept the idea that there are at least four uses of "continuing relevance" seen in the use of perfect constructions cross-linguistically (McCawley 1971:104; Comrie 1976:56–61; McCoard 1978:64-65, 187-190; Binnick 1991:98–104). The following table presents the labels given to these categories by three different authors. Kiparsky's terminology is used in this

section since he includes a fifth category which is relevant here, but not labeled by the other two authors (2002).

**Table 29 : Labels of “uses” or “readings” of perfect by three authors**

(McCawley 1971:104)	(Comrie 1976:56–61)	(Kiparsky 2002)
stative	perfect of result	resultative
universal	perfect of persistent situation	universal
existential	experiential perfect	existential
hot news	perfect of recent past	recent past
---	---	present state

“Opinions differ on whether [these categories] are semantically distinct, or are pragmatic interpretations of a basic perfect meaning” (Kiparsky 2002). In support of the claim that the uses of perfect are semantically distinct, Kiparsky points out “the fact that languages can distinguish morphologically among the readings.” This is the case in Baraïn. Four of Kiparsky's categories appear to be expressed with the Perfect suffix.<sup>74</sup> One category, existential, is expressed with the Perfective suffix. The remainder of this section will define and give examples of the four uses of perfect that can be expressed with the Perfect suffix. Then the evidence will be given that suggests that the existential is expressed with a different TAM marker. This analysis is not comprehensive, but it does present some justification for the terminology used in labeling the suffix.

### **Resultative**

The resultative reading may have been first defined by Jespersen under the name “retrospective present” (1931:47). It is also known as the “perfect of result”. Comrie defines it as the use in which “a present state is referred to as being the result of some past situation.” He describes it as “one of the clearest manifestations of ... present relevance” (1976:56). The Perfect marker in Baraïn, the suffix *-ē*, undoubtedly encodes the resultative use of perfect. When the Perfect is used in Baraïn, it is often applied to verbs which describe actions that create a change of state in one of the arguments of the verb (i.e., bounded or telic events).

<sup>74</sup> It is rare for perfect meaning to be encoded morphologically instead of periphrastically (Dahl 1985:129).

- (265) kà dèetì kòójì  
 kà d-, L -ēē -tì kòójá -jì  
 S:3.M kill PRF DO:3.F self POSS:3.M  
 'He killed himself.'

- (266) àm:á nèegà íjò  
 àm:á n-, L -ēē -gà íjò  
 Amma cook PRF DO:3.M *boule*  
 'Amma cooked the *boule*.'

The Perfect can be used with verbs of movement when describing displacement (i.e., a change of location).

- (267) kà gūsē ándì  
 kà gūs- -ē ándì  
 S:3.M go.out PRF Andi  
 'He left Andi.'

Contrasts between the Perfect and the Perfective illustrate the use of the Perfect to express a continuing result. In the sentence “My arm was removed (or amputated)” the speaker used the Perfect.

- (268) át:ù tōklē  
 át:á -jù tōkl- -ē  
 arm POSS:1.S remove PRF  
 'My arm was removed.'

When the speaker was presented with the same sentence using the Perfective instead of the Perfect, his reaction was, “Then who put it back on?” His response illustrates that the Perfect marker gives the sense that the result of the action or event is still in effect. In contrast, the Perfective, which sees the whole action including its end as one concept, gives the sense that the state resulting from the action is somehow no longer in effect.

- (269) át:ù tōklá tā  
 át:á -jù tōkl- -à tā  
 arm POSS:1.S remove PFV DISC  
 'My arm was removed once (but somebody reattached it).'

The verb “to die” has similar connotations. The Perfect is used to speak of someone who has died, unless the desired implication is that the person is no longer dead,

in which case the Perfective would be appropriate. The sense of the Perfective is much like the English sentence “He *was* dead.”

(270) kà mótē  
 kà mót- -ē  
 S:3.M die PRF  
 'He died.'<sup>75</sup>

(271) ? ka mota  
 kà mót- -à  
 S:3.M die PFV  
 'He *was* dead.'

The Perfective is appropriate in a context where the person is miraculously no longer dead. In the same context, the Perfect is unacceptable. These examples also illustrate that the same verb can have a Perfective or a Perfect marker without any change of *Aktionsart* or “situational aspect”. The suffix is not selected by the *Aktionsart* of the verb.

(272) kà mótá tā wò kà jīrē  
 kà mót- -à tā wò kà jīr- -ē  
 S:3.M die PFV DISC and S:3.M resurrect PRF  
 'He died, but he was resurrected.'

(273) # ka mote wo ka jire  
 kà mót- -ē wò kà jīr- -ē  
 S:3.M die PRF and S:3.M resurrect PRF

The verb “to return” shows a similar pattern. With the Perfect marker, it is understood that the result of the action (the presence of the person) is still in effect. With the Perfective marker, it is understood that the result is no longer in effect.

(274) kà kólá wò kà láawē  
 kà kól- -à wò kà láaw- -ē  
 S:3.M go PFV and S:3.M return PRF  
 'He left but he returned (and is still here).'

<sup>75</sup> The translation equivalent for this particular example in French is *Il est mort* which could be rendered “He is dead” in English. Comrie mentions that English translation equivalents of “perfect of result” verbs in other languages often use a stative adjective or verb (1976:57).

- (275) kà kólá wò kà láawá tā  
 kà kól- -à wò kà láaw- -à tā  
 S:3.M go PFV and S:3.M return PFV DISC  
 'He left and he returned (but he is not here now).'

Another difference between Perfect and Perfective is that the marker of continuation *kée* (section 9.5.3) can be used with a Perfect verb, but it has not been attested with a Perfective verb. Several linguists have pointed out that there is a cross-linguistic correlation between markers of continuation and the resultative use of perfect (Nedjalkov & Jaxontov 1988:15; Bybee, Perkins & Pagliuca 1994:54; Lindstedt 2000:367).<sup>76</sup>

- (276) kī jàngē kée:  
 kī jǎŋ- -ē kée  
 S:2.M descend PRF DUR  
 'Having gone farther down...' (appendix 8)

With verbs describing semelfactive events (such as “to sip” or “to cough”) it is not easy, if at all possible, to find a context where the Perfect would be acceptable, since the event does not include any change of state or location (i.e., atelic). This restriction (that the event must be telic) is considered a distinguishing feature of the resultative use, as opposed to other uses of perfect (Nedjalkov & Jaxontov 1988:15; Bybee, Perkins & Pagliuca 1994:54, 65; Kiparsky 2002).

- (277) kà ás:á tā āt:á páníŋ  
 kà ás:- -à tā āt:á páníŋ  
 S:3.M cough PFV DISC time one  
 'He coughed once.'

- (278) # ka as:e at:a paníŋ  
 kà ás:- -ē āt:á páníŋ  
 S:3.M cough PRF time one

The resultative meaning of the Perfect marker refers to a state that is the result of a past action, but more precisely it should be said that the result must be something

<sup>76</sup> Some authors make two groups out of the traditional four uses of perfect. Nedjalkov and Jaxontov appear to group the resultative and the universal under the label “resultative”, and reserve the label “perfect” for the other two uses. In addition, they extend the abstract meaning “resultative” to all types of constructions, not just those grammatical forms traditionally labeled “perfect”. Bybee, Perkins, and Pagliuca separate the resultative reading (labeled “resultative”) from the other three uses of perfect, which they label “anterior”.



inherent to the action lexically encoded in the verb (Dahl 1985:135). For example, the result of “to die” is that the person is dead. The result of “to come” is the presence of the person. In example (279) below, there is a sense in which we could say that the result of having taken a sip of wine is that the person is drunk. However, in this sentence, the speaker used the Perfective and would not accept the Perfect. Here, the Perfective is appropriate because the action of taking a sip is finished and is viewed in its totality. The secondary consequence of what happened because of what the person drank is not something inherent to the action of drinking.

(279) kà gīl:ē kà kùm:à tòotō  
 kà gīl:- -ē kà kūm:- -à tòotō  
 S:3.M get.drunk PRF S:3.M sip PFV alcohol  
 'He is drunk because he took a sip of wine.'

(280) # ka gīl:e ka kum:e tooto  
 kà gīl:- -ē kà kūm:- -ē tòotō  
 S:3.M get.drunk PRF S:3.M sip PRF alcohol

### Present state

The Perfect can be used with verbs that describe stative situations. In the case of a stative situation, the definition of the resultative use, which includes a past action, is no longer adequate. Kiparsky proposes that this use of the perfect be called “present state” (or “stative present”) (2002). In this use, a change of state is not “assigned to any temporal parameter,” but could be pragmatically implied.

(281) rāmà āt:ē mǎlpì  
 rāmà āt:- -ē mǎlpì  
 Rama remain PRF Melfi  
 'Rama stayed in Melfi (and is there now).'  
 French: *Il est resté à Melfi.*

Another example which illustrates the present state reading is the verb “to sit”, which also means “to live (to reside)”.<sup>77</sup> If the Perfect form is used, the sentence gives the sense that the person is still there.

<sup>77</sup> It is not certain whether this posture verb is used metaphorically to describe a process (moving or settling down somewhere) or if it is polysemous with a stative meaning “to live”. However, in example (261) on page 99, the verb interacts with the Progressive marker in the same way as other “stative” verbs.

- (282) kà sùlē mángò  
 kà sùl- -ē móngò  
 S:3.M sit PRF Mongo  
 'He lives in Mongo.'

If the Perfective form of the verb is used, then the sentence gives the sense that the person is no longer there. The state of living somewhere is viewed as a whole and complete event, and this framing of the event gives the interpretation that the state has ceased.

- (283) kà sùlá tā mángò  
 kà sùl- -à tā móngò  
 S:3.M sit PFV DISC Mongo  
 'He lived in Mongo (but he is no longer there).'

### Recent past

“In many languages, the perfect may be used where the present relevance of the past situation referred to is simply one of temporal closeness” (Comrie 1976:60). The data available does not reveal much about “recent past” use of the Perfect suffix.<sup>78</sup> However, there is one example of the Perfect suffix used with the adverbial “now”, which is interpreted as an action which has just occurred.

- (284) kà kólē sòndé kāj  
 kà kól- -ē sòndé kājē  
 S:3.M go PRF NOW here  
 'He just left this moment.'

### Universal

When a specific period of time is indicated lexically, the interpretation of the adverbial phrase varies with each TAM. With the Perfect, it refers to the duration of the action. The Perfect also indicates that the action is still in effect (i.e., he still lives there).<sup>79</sup>

<sup>78</sup> Several linguists have suggested that the recent past use should not be considered a separate reading. McCoard claims that it is really a variation of the experiential use (1978:188), and McCawley later modified his view to agree with him (1981). Kiparsky supports the view that the recent past is a variant of the resultative use (2002).

<sup>79</sup> The same adverbial clause was used with the Imperfective above (section 7.1.1) in which case it refers to the duration of the situation, just like the Perfect. However, with the Imperfective marker, the interpretation of the sentence is that the person is no longer living at that place.

This interpretation corresponds to the universal use, or “perfect of persistent situation” (McCawley 1971:104; Comrie 1976:60). Comrie gives the definition: “the use of the perfect to describe a situation that started in the past but continues (persists) into the present.” The universal reading is only possible when the perfect is accompanied by an adverbial phrase (McCoard 1978:142; Iatridou, Anagnostopoulou & Izvorski 2001:199; Kiparsky 2002).

- (285) kà sùlē máṅgò wàlèjì kúr  
 kà sùl- -ē mǒṅgò wālō -jì kúr  
 S:3.M sit PRF Mongo year POSS:3.M ten  
 'He has lived in Mongo for ten years (and lives there now).'

With the Perfective, the time period refers to the amount of time since the event or situation ceased.

- (286) kà sùlá tā máṅgò wàlèjì kúr  
 kà sùl- -à tā mǒṅgò wālō -jī kúr  
 S:3.M sit PFV DISC Mongo year POSS:3.M ten  
 'He lived in Mongo ten years ago.'

### Experiential

Since the data on this language is limited and the analysis still in its preliminary stages, it is unlikely that all the possible uses of the Perfect suffix have been discovered. However, it appears that what is labeled the “existential” or “experiential” perfect is not expressed with the Perfect, but instead with the Perfective marker (McCawley 1971:104; Comrie 1976:58–59). Comrie's definition is: “The existential perfect indicates that a given situation has held at least once during some time in the past leading up to the present.” The following example appears to be precisely this meaning, yet the speaker used the Perfective suffix, and not the Perfect suffix.

- (287) kì kólá āt:á ān:áj j̀jàmèná  
 kì kól- -à āt:á ān:áj j̀jamèna  
 S:2.s go PFV time how.many N'Djamena(A)  
 'How many times have you been to N'Djamena?'

A remarkable feature of the Perfect suffix, is that a verb using this suffix normally cannot be negated (section 9.6). Paul Newman considers this a common trait of the

Perfect in Chadic languages (personal communication in Wolff 1979:194). It has been suggested that in some languages, forms which express resultative meaning cannot be negated (Nedjalkov & Jaxontov 1988:36).<sup>80</sup>

(288) kà súlē mójò (\*dō)  
 kà súl- -ē mójò dō  
 S:3.M sit PRF Mongo NEG

So far, all of the examples of the Perfect and Perfective have been non-future. Like the Imperfective and the Progressive, it appears that the Perfect and Perfective carry a non-future tense meaning. In a subordinate clause, the time reference can be future in relation to the time of speech. Nonetheless, in all the examples below, the time reference remains non-future in relation to the time reference of the independent clause.

(289) tì tá ò gánó ò íjò  
 tì tá ò gǎn- -o ò ò íjò  
 S:3.F CERT FUT make INF PREP *boule*

tò tì gánà jè tì ò jòomó  
 tò tì gǎn- -à jè tì ò jòom- -o  
 COND S:3.M make PFV DISC S:3.F FUT play INF  
 'She is going to prepare the *boule*. Once she has made it, she will go play.'

(290) tò ò gánē pàagú ò ò tì m mán:á  
 tò ò gǎn- -ē pàa -gú ò ò t-, H -í ò mán:á  
 COND S:1.S make PRF big N:M PRO:1.S FUT be INF PREP chief  
 'When I have become big, I will be the chief.'

(291) tò ò sētā  
 tò ò s-, H -ētā  
 COND S:1.S come PRF

ò ò gánéjìgà ò ò nándù  
 ò ò gǎn- -o -jìgà ò ò ò nándí -jù  
 PRO:1.S FUT make INF POSS:3.PL *boule* PREP children.PL POSS:1.S  
 'When I've arrived, I will make *boule* for my children.'

<sup>80</sup> One could speculate that a clash of negation and resultative aspect could point to a historical relationship between realis and resultative. Both concepts share the idea of combining present and past tense. The restriction against negation could be a historical remnant of a previous constraint against negating realis mood. In terms of synchronic analysis, the evidence against a current realis-irrealis distinction in the language is presented in section 7.1.5.

- (292) (tō) kà t̄aa j̄è kà ñ̄ kóló  
 tò kà t-, L -à j̄e kà ñ̄ kól- -o  
 COND S:3.M eat PFV DISC S:3.M FUT go INF  
 'Once he has eaten, then he will leave.'

#### 7.1.4 Subjunctive (imperative)

This form of the verb is used for the imperative, but it also has other functions. It is common in Chadic languages for the same form to be used for imperative and non-imperative functions. Frajzyngier describes this as the “mood of obligation with respect to the subject, in Chadic literature referred to as subjunctive” (Frajzyngier 1996:15; 2001:269). Wolff refers to it as the “imperative-jussive modal category” (1982).

In the imperative use, no pronoun appears before the verb. When giving an order to one person, the Subjunctive suffix *-ù* is added to the verb.<sup>81</sup>

- (293) kólú  
 kól- -ù  
 go SBJV  
 'Go (singular)!'

The imperative is also used to express a desire.

- (294) d̄owú l̄áfj̄à  
 d̄ow- -ù aafija  
 sleep SBJV health(A)  
 'Sleep well!'

- (295) kólú l̄ápíj̄à  
 kól- -ù aafija  
 go SBJV health(A)  
 'Have a good trip!'

When the (unspoken) subject of the imperative is plural, the inclusive clitic *n̄à* is attached to the verb, deleting the Subjunctive suffix (section 5.4.4). The functions of the inclusive marker are discussed in section 8.13.

<sup>81</sup> The same suffix *-u* is used in Migaama and Dangla—both East Chadic B (Jungraithmayr & Adams 1992:54; Burke 1995:51).

(296) kól=nà  
 kól- -ù =nà  
 go SBJV INCL  
 'Go (plural)!'

(297) súl=nà lápíjà  
 súl- -ù =nà aafija  
 sit SBJV INCL health(A)  
 'Be well!'

There is a similar subjectless form used in an exhortative (or optative) function in the first person. The suffixes used are identical to the first person dual and inclusive direct object markers, except that they carry a low tone instead of a high tone (section 8.3).

(298) kólíjà	kólíjà=nà
kól- -jà	kól- -jà =nà
go ???:DUAL	go ???:DUAL INCL
'Let's go (the two of us)!'	'Let's go!'

When the Subjunctive is used with an overt subject in an independent clause, it expresses deontic modality. In this case, it is not limited to the second person.

(299) nándánǵá dǒó nǒomú íǵ àkà dǒ  
 nándánǵá dǒó nǒom- -ù íǵ àkà dǒ  
 children NEG play SBJV ASOC fire NEG  
 'Children should not play with fire.'

(300) kà tàa jè (ná) kà kólú  
 kà t-, L -àa jē ná kà kól- -ù  
 S:3.M eat PFV DISC EQ S:3.M go SBJV  
 'When he has eaten, (then) he should leave.'

The Subjunctive can also be used in a subordinate clause. Subjunctive sentential complements occur with the verbs “to want” and “to allow”. The latter verb has a direct object suffix which is coreferential with the subject of the complement, and is discussed in section 10.4. The verb “to want” can also be used to mean “to decide”, “to convince”, and “to persuade”.

- (301) ìŋ jáp:à kí kólú  
 ìŋ jáp:- -à kí kól- -ù  
 S:1.S want PFV S:2.M go SBJV  
 'I want you (singular) to go.'

If the subject of the complement clause is first person plural inclusive, the inclusive clitic is obligatory. If the subject is second person plural, the inclusive suffix is optional. This use of the inclusive clitic is further discussed in section 8.13.

- (302) ìŋ jáp:à ní kólú / kól=nà  
 ìŋ jáp:- -à ní kól- -ù (=nà)  
 S:1.S want PFV S:2.PL go SBJV INCL  
 'I want you all to leave.'

As in the deontic use, the subject is not limited to the second person when in a complement clause.

- (303) ìŋ jáp:à nì kólú  
 ìŋ jáp:- -à nì kól- -ù  
 S:1.S want PFV S:3.PL go SBJV  
 'I want them to leave.'

- (304) kī jáp:à ánē kólú  
 kī jáp:- -à ánē kól- -ù  
 S:2.M want PFV PRO:EXCL go SBJV  
 'You want us to leave.'

#### 7.1.5 *Future tense and deontic modality*

There is one TAM formed with an auxiliary followed by the verb in its Infinitive form. The Infinitive form without the Future auxiliary has other uses (section 7.4). The auxiliary is a syllabic nasal whose point of articulation assimilates to the following consonant. It can be resyllabified as the coda of the previous word.

- (305) bòn̩tè kà ñ̩ kóló  
 bòn̩tè kà ñ̩ kól- -o  
 tomorrow S:3.M FUT go INF  
 'He will leave tomorrow.'

- (306) músà ò ò pālō  
 músà ò ò pāl- -o  
 Moussa FUT swim INF  
 'Moussa will swim.'

The Future auxiliary does not always indicate future time reference. According to the context, it either indicates future tense or deontic modality. Other Chadic languages such as Pero (West Chadic), Gidar (Central Chadic), and East Dangla (East Chadic) have a future marker with both a temporal and modal function (Frajzyngier 1989:108; 2008:280; Shay 1999:218). It is common cross-linguistically for the future tense marker to also have a modal function (Comrie 1976:2; Bybee, Perkins & Pagliuca 1994:258; Bhat 1999:176).

- (307) ònù ò ò kóló  
 ònù ò ò kól- -o  
 S:1.S FUT go INF  
 'I will go.' / 'I should go.'

When used with present or future time adverbials, the Future auxiliary can have either future or deontic meaning.

- (308) bònṭè kà ò ò kóló  
 bònṭè kà ò ò kól- -o  
 tomorrow S:3.M FUT go INF  
 'He will leave tomorrow.' / 'He should leave tomorrow.'

- (309) sòndé kà ò ò kóló  
 sòndé kà ò ò kól- -o  
 now S:3.M FUT go INF  
 'He will leave now.' / 'He should leave now.'

However, with a past time adverbial the future interpretation is impossible. Only the deontic interpretation is allowed.

- (310) tàndē kà ò ò kóló  
 tàndē kà ò ò kól- -o  
 yesterday S:3.M FUT go INF  
 'He should have gone yesterday.'

The Future marker can only be negated when it is restricted to deontic meaning. A future event (or future deontic modality) can only be negated using the Imperfective



suffix and negation, as was seen in example (247) above. In the example below, the future time adverbial forces a non-deontic interpretation of the Future marker, which clashes with negation.

(311) \* bòntè      kà    ñ    kól- -o dō  
 tomorrow S:3.M FUT go    INF NEG  
 For: 'He will not go tomorrow'

(312) tàndē      kà    tà    ñ    gánó      ñ    kítà dō  
 tàndē      kà    tà    ñ    gǎn- -o ñ    kítà dō  
 yesterday S:3.M CERT FUT make INF PREP work NEG  
 'He didn't have to work yesterday.'

Keeping in mind the deontic meaning of the marker, another possible analysis is that the auxiliary could be an irrealis modal marker. The deontic modality reading then may be explained as an implicature resulting from context or from speaking of irrealis events in the past, i.e., the only reason to speak of a non-existing past event is because the speaker had expected it to happen. However, descriptions of language-specific uses of irrealis mood include: inductive generalizations, habitual aspect, imperatives, counterfactuals, conditionals, and negated clauses (Comrie 1985:45; Bhat 1999:65–67). There is no evidence that this auxiliary is used in any of these other unrealized or potential situations. For example, habitual aspect is expressed with the Imperfective suffix (section 7.1.1), imperatives have a separate form (section 7.1.4), and other TAM forms can be negated.

As mentioned above, in order to express a future negated action or negative deontic modality, the Imperfective suffix is used (section 7.1.1). In future time reference, the Imperfective functions as the negative counterpart of the Future marker. When both are combined in one sentence, as in (313), one must take the future meaning, and the other the deontic meaning. Only the context can reveal which interpretation is correct.

(313) kà    ñ    kóló    wò kà    kóléjī    dō  
 kà    ñ    kól- -o wò kà    kól- -ējī dō  
 S:3.M FUT go    INF and S:3.M go    IMPF NEG  
 'He should go, but he won't go.' / He will leave, but he shouldn't'

Three possible grammatical forms for expressing deontic modality have now been discussed: the Future marker, a negated Imperfective verb, and a Subjunctive verb with an overt subject in an independent clause. There is one other possibility for expressing deontic modality. At least in some contexts, a nominal predicate can indicate a deontic relationship between the possessed noun and the possessor.

- (314) mèé mèrgètì pánúṅgú  
 mèé mèerí -gètì páníṅ -gú  
 woman husband POSS:3.M one N:M  
 'A woman must have only one husband.'

The deontic interpretation can also arise when a nominalized (infinitive) verb has a possessor agreement suffix agreeing with the subject.

- (315) kólójù díjò  
 kól- -o -jù díjò  
 go INF POSS:1.S none  
 'I should not leave.'

## 7.2 Irregular TAM marking

### 7.2.1 Monoverb TAM marking

Monoverbs (roots consisting of a single consonant, section 3.2.1) follow a slightly different paradigm for TAM marking. They take the same Imperfective suffix, but have an alternate form for other TAM suffixes. The expression of Progressive TAM with monoverbs has not been observed. Monoverbs also have variant suppletive TAM morphology when direct object suffixes are present (section 8.6).

**Table 30: TAM suffixes of monoverbs**

/n-, L/	<i>Infinitive</i>	<i>Imperfective</i>	<i>Perfective</i>	<i>Perfect</i>	<i>Future</i>	<i>Subjunctive</i>
<i>to cook</i>	níí	nèjí	nàa	nēetā	ṅ níí	nàa

The tonal behavior of the Infinitive suffix for monoverbs is unique in that it is always H regardless of the underlying tone of the monoverb root. Normally, the H tone of the suffix would be expected to attach to the final mora of the word, allowing at least one tone of the verb root's melody to attach to the first mora (section 5.3.1).



### 7.2.2 Conjugation of the verb “to come”

Irregularity in the verb “to come” is a common feature among Afroasiatic languages (Newman 1980:21). In Baraīn there are two verb roots which both mean “to come”. However, these two roots are each limited in their possible conjugations, only overlapping in that they both can take an Infinitive and an Imperfective suffix.<sup>82</sup>

**Table 31: Conjugations of the verbs “to come”: *sī* and *ājō***

Infinitive	sī	ājō
Subjunctive	sáa	---
Imperfective	sèjī	ājéjī
Perfective	sáa	---
Perfect	sēt:ā	---
Future	---	η ājō

Although the verb *sī* has an Infinitive form, this word cannot be used after the Future tense marker. To speak of “to come” in the Future tense one must use the verb *ājō*. Table 31 shows the limitations of the conjugation of each verb root.

Where possible conjugations overlap, the speakers were not able to identify a difference in meaning between the two verbs. The second verb in each example is a cognate complement (section 7.4.2).

(320) kà sèjī sī  
 kà s-, H -ēji s-, H -í  
 S:3.M come IMPF come INF  
 'He comes here sometimes.'

(321) kà ājéjī ājō  
 kà āj- -ēji āj- -o  
 S:3.M come IMPF come INF  
 'He comes here sometimes.'

<sup>82</sup> One of the speakers once accepted the verb *ājō* with a Perfective suffix, but later disallowed that possibility.

### 7.3 Verbal particles (Perfective and Future)

This section presents three verbal particles which are difficult to define. Two of these particles are restricted to Perfective aspect. The other appears to be restricted to Future tense.

#### 7.3.1 *Perfective particles: t̄ā and jē*

The term “particle” is used here in its broadest sense to refer to morphemes which are difficult to classify into a grammatical category. In a short monologue where one of the speakers recounts what she did the day before (appendix 9), there are fifteen verbs with Perfective aspect. Eleven of those are followed by *jē*. The speakers were unable to translate this morpheme or to discern any difference in meaning if it was removed. The verbal particle *t̄ā* also follows Perfective verbs, and it has no apparent translatable semantic or grammatical content. The two particles have the same morphosyntactic distribution. They occur immediately after any verbal suffixes, and before any other constituents.<sup>83</sup> The two Perfective particles can never co-occur. Neither can co-occur with the negation marker.

(322) kà gànà jè kítà (\*dō)  
 kà gǎn- -à jē kítà dō  
 S:3.M make PFV DISC work NEG  
 'He worked.' (\*'He did not work.')

(323) kà gáná t̄ā kítà (\*dō)  
 kà gǎn- -à t̄ā kítà dō  
 S:3.M make PFV DISC work NEG  
 'He worked.' (\*'He did not work.')

In searching for a meaning for these particles, few contexts were found where the speakers consistently did not accept one or both morphemes. The provisional label used for both of these particles is DISC(OURSE) to signify that their function must be studied at a higher level of discourse than the simple sentence.

<sup>83</sup> There is one example in a recorded story where a nominal direct object occurs before the Perfective particle (appendix 13).

The tone of the particles strongly suggests that they are not suffixes. They normally have a M tone even when directly following a verb whose final tone is L. The sequence LM is prohibited inside a word boundary (section 5.4.3).

- (324) *kà lèjì jē kórtó ìj ùmàr*  
*kà l-, L -èjì jē kórtó ìj ùmàr*  
 S:3.M send IO:3.M DISC pot PREP Oumar  
 'He sent a pot to Oumar.'

The Perfective particles can occur either before or after the inclusive clitic (section 8.13). When followed by the inclusive clitic, the L tone of the suffix spreads left to the Perfective particle (section 5.4.2).

- (325) *ń lúulá tà=nà*  
*ìj lúul- -à tã =nà*  
 S:DUAL cry PFV DISC INCL  
 'We cried out.'

- (326) *ń lúulà jè=nà*  
*ìj lúul- -à jē =nà*  
 S:DUAL cry PFV DISC INCL  
 'We cried out.'

There is one case where one of the particles has a phonological relationship with the preceding verb. The particle *jē* always has a L tone (instead of a M tone) when it directly follows the Perfective aspect suffix, e.g., no direct object suffix intervening. This is not true of *tã*. The particle *jē* also has an effect on the tone of the Perfective suffix. When the Perfective suffix is followed by *jē* it always has a L tone. This “strengthening” of the tone of the Perfective suffix is discussed in section 5.4.4.

- (327) *ń tàdà jè*  
*ìj tãd- -à jē*  
 S:1.s climb PFV DISC  
 'I climbed.'

- (328) *ń tãdá tã*  
*ìj tãd- -à tã*  
 S:1.s climb PFV DISC  
 'I climbed.'

The explanation the speakers offered for these particles is that one means the action was further in the past, and the other indicates a more recent event. However, it is not difficult to show that there is no direct temporal link between the two particles, since one can report two sequential events with either particle before the other.

(329) *m̄ bōntè kà kólá dúugà t̄a*  
*íj̄ bōntè kà kól- -à dúw- -gà t̄a*  
 ASOC morning S:3.M go PFV see DO:3.M DISC

*ń dántè kà gànà jè kítà*  
*íj̄ dántè kà gǎn- -à jē kítà*  
 ASOC afternoon S:3.M make PFV DISC work  
 'In the morning he went to see him. In the afternoon he worked.'

(330) *m̄ bōntè kà gànà jè kítà*  
*íj̄ bōntè kà gǎn- -à jē kítà*  
 ASOC morning S:3.M make PFV DISC work

*ń dántè kà kólá dúugà t̄a*  
*íj̄ dántè kà kól- -à dúw- -gà t̄a*  
 ASOC afternoon S:3.M go PFV see DO:3.M DISC  
 'In the morning he worked. In the afternoon he went to see him.'

Every example of the Perfective in a conditional or temporal clause (section 10.7) is followed by *jē*, and cannot be followed by *t̄a*.

(331) *tì tá ɲ gànó ò j̄nó*  
*tì tá ɲ gǎn- -o ò j̄nó*  
 S:3.F CERT FUT make INF PREP *boule*

*tò tì gànà jè tì j̄nòomó*  
*tò tì gǎn- -à jē tì ɲ j̄nòom- -o*  
 COND S:3.M make PFV DISC S:3.F FUT play INF  
 'She is going to prepare the *boule*. Once she has made it, she will go play.'

(332) *bōntè kà tàa jè/\*ta dàá kà ɲ kóló*  
*bōntè kà t-, L -à jē/t̄a dá kà ɲ kól- -o*  
 tomorrow S:3.M eat PFV DISC then S:3.M FUT go INF  
 'Tomorrow, when he has eaten, he will leave.'

### 7.3.2 *The Future tense particle: tá “certainty”*

The morpheme *tá* can be added before the Future auxiliary, but it does not appear to be used regularly with other TAM marking.<sup>84</sup> The speakers were unable to explain the meaning of this morpheme or when and why they use it. Only one context was found where there was a clear semantic difference if this additional morpheme was present or not. This context indicates that the auxiliary is a marker of epistemic modality encoding the certainty of the future event in the mind of the speaker.

If *tá* appears before the Future auxiliary in the sentence “The tree will fall”, then the implication is that tree has already been cut, and is at the tipping point, ready to fall to the ground. If the particle *tá* is not in the sentence, then the interpretation is that the tree is still standing, but that somebody has the intention to cut it down. For this reason the particle has been given a label CERT(AINTY).<sup>85</sup> This type of grammatical marker can be described as an “epistemic qualification of future” (Bybee, Perkins & Pagliuca 1994:247).

(333) *īt:í tá ñ gəló*  
*īt:í tá ñ gəl- -o*  
 tree CERT FUT fall INF  
 'The tree is about to fall. (It's already been cut.)'

(334) *īt:í ñ gəló*  
*īt:í ñ gəl- -o*  
 tree FUT fall INF  
 'The tree will fall. (Someone will cut it down.)'

This interpretation cannot be accredited to a simple temporal distinction (e.g., immediate future) since the additional auxiliary can be present with any future time adverb, such as “tomorrow” or “next year”.

(335) *bòntè/pájídí músà (tá) ñ dí*  
*bòntè/pájídí músà (tá) ñ d-, H -fi*  
 tomorrow/next year Moussa CERT FUT walk INF  
 'Tomorrow/Next year Moussa will walk.'

<sup>84</sup> The same particle appears to co-occur with a Perfective verb in appendix 13, lines 26 and 65.

<sup>85</sup> Another Chadic language, Gidar, also grammaticalizes a distinction between a certain and hypothetical future (Frajzyngier 2008:261).



#### 7.4 Infinitive/nominal verbs

The Infinitive form of the verb is formed by adding the suffix *-o*.<sup>86</sup> The suffix has no underlying tone (chapter 5). Monoverbs take the suffix *-í*, and always have a H tone. There are three verbs which have the root structure of a polyverb, but, in the Infinitive form, use an *-í* suffix—similar to monoverbs, but shorter. Those verbs are: *búkí* “to speak”, *èlí* “to help”, and *bèdí* “to give”. All other suffixes of these three verbs follow the pattern of regular polyverbs.

The use of the Infinitive to form the Future tense is discussed above (section 7.1.5). This section discusses three other uses of the Infinitive verb.

##### 7.4.1 Noun

The Infinitive form of the verb is identical to the nominalized form. As a noun it can take a plural suffix, an adjectival suffix, or a possessor agreement suffix.

(336) *sāadéjá*  
*sāad- -o -já*  
 dance INF PL  
 'dances'

(337) *sāadógú*  
*sāad- -o -gú*  
 dance INF N:M  
 'good dancer'

(338) *sāadójù*  
*sāad- -o -jù*  
 dance INF POSS:1.S  
 'my dance'

##### 7.4.2 Cognate complement

In an intransitive clause, the Infinitive form of the verb often follows a conjugated verb. Infinitival verbs in this position are called “cognate complements” or “cognate objects” (Schuh 1998:183; Frajzyngier 2002:161). This repetition of the verb can occur in any tense or aspect, but, without being explicitly asked if a sentence was acceptable, the

<sup>86</sup> An identical suffix is used to mark the infinitive in Migaama (Jungrathmayr & Adams 1992:53).

speakers only naturally added a cognate complement in the Imperfective and Future forms. There are no examples in the data of a cognate complement co-occurring with object marking on the verb or a full object noun phrase. The presence or absence of a cognate complement does not change the translation equivalent of the sentence. Its function in the language is unknown. Schuh suggests that in Miya the cognate complement indicates focus on the verb, among other functions (1998:186).

- (339) músà súlēj súló  
 músà súl- -ēji súl- -o  
 Moussa sit IMPF sit INF  
 'Moussa is sitting.'

#### 7.4.3 Verbal participle

With a possessor agreement suffix agreeing with a preceding noun phrase, the Infinitive functions as a verbal participle.<sup>87</sup> These verbal participles can be used to form non-finite adjunct clauses. In the following example, the sentence-initial noun functions as the subject of the verbal participle and the main verb.

- (340) rāmà ājējì ñ gérá dúwètì àm:á  
 rāmà āj- -o -jì ñ gérá dúw- -ē -tì àm:á  
 Rama come INF POSS:3.M PREP village see PRF DO:3.F Amma  
 'Rama, coming into the village, saw Amma.'

The subject of the verbal participle can be controlled by (or functionally identified with) the subject or the object of the main clause. In the following example, the object of the main verb also functions as (controls) the subject of the verbal participle.

- (341) rāmà dúwètì àm:á ājégètì ñ gérá  
 rāmà dúw- -ē -tì àm:á āj- -o -gètì ñ gérá  
 Rama see PRF DO:3.F Amma come INF POSS:3.F PREP village  
 'Rama saw Amma coming into the village.'

The proper noun *Amma* in the above example is the direct object of the main verb, and not the subject of the non-finite adjunct clause. In other words, the above example is not a sentential complement. This can be seen by the ungrammaticality of trying to insert a subject pronoun in the same position. In the following example, the unstated (pro-

<sup>87</sup> The same form, in an independent clause with an overt subject, can be used to convey deontic modality (section 7.1.5).

dropped) direct object of the main clause is functionally identified with (controls) the subject of the non-finite clause.

- (342) ñ dúugà (\*kà) kóléjì  
 ìŋ dúw- -gà kà kól- -o -jì  
 S:1.s see DO:3.M S:3.M go INF POSS:3.M  
 'I saw him leave.'

Verbal participles modifying direct objects are superficially similar to non-finite complement clauses (section 10.3). While the analysis of complex sentences remains tentative at this point, there are a few traits that distinguish verbal participles (adjuncts) from non-finite complement clauses. Complement clauses do not take a possessive suffix, and (those discussed in section 10.3) do not allow for object control of their subject. Complement clauses are restricted to the position after the matrix verb. Also, there are no examples in the data of a matrix verb taking a direct object suffix when a non-finite complement clause is present.

A sentence-final negation marker takes scope over the matrix verb. It cannot be interpreted as negating just the verbal participle. This confirms that the verbal participle forms a subordinate clause (chapter 10).

- (343) ñ dúwgà kóléjì dō  
 ìŋ dúw- -gà kól- -o -jì dō  
 S:1.s see DO:3.M go INF POSS:3.M NEG  
 'I didn't see him leave.'

There is only one example of a transitive verbal participle in the data. In this case, the possessor agreement suffix does not index the subject, but the object of the adjunct clause. This suggests that the possessor agreement suffix on verbal participles could possibly agree with the absolutive argument of the verbal participle, even though absolutive-ergative patterns are not seen elsewhere in the language.

- (344) j̄ jègà (\*kà) wòlégètì ñ m̀òsò  
 ìŋ j-, LH -ēē -gà kà wòl- -o -gètì ìŋ m̀òsò  
 S:1.s hear PRF DO:3.M S:3.M slaughter INF POSS:3.F PREP COW  
 'I heard him slaughtering the cow.'

There is one example of a construction similar to the verbal participle, but in an independent clause and with a subject pronoun. However, the speakers did not allow the same construction with a negation marker.

- (345) *kà gàndà gòmèjì ò námá (\*dō)*  
*kà gàndà gòm- -o -jì ò námá dō*  
 S:3.M inside hit INF POSS:3.M PREP child NEG  
 'He's hitting the child.' (\*'He's not hitting the child.')

### 7.5 Labile verbs

Labile (or ambitransitive) verbs form a class of verbs which have two alternating argument structures. In one structure (the transitive structure), the agent of the verb is marked as the subject and the patient as the direct object, as seen in (346), (348), and (350). The other structure (intransitive/unaccusative) encodes the patient as the subject, and does not associate the semantic role of agent with any grammatical constituent, as in (347), (349), and (351). No morphological features mark the difference between the two argument structures—only the presence or absence of a second argument. A similar class of verbs is seen in other Chadic languages (Frajzyngier 2002:147; 2008:130).

- (346) *àm:á nèegà íjó*  
*àm:á n-, L -ēē -gà íjó*  
 Amma cook PRF DO:3.M *boule*  
 Amma cooked the *boule*.
- (347) *íjó nēetā*  
*íjó n-, L -ēēta*  
*boule* cook PRF  
 'The *boule* is cooked.'
- (348) *sàjìdó áràj gárwí*  
*sàjìdó ár- -ā j gárwí*  
 Sayido burn IMPF DO:3.PL wood  
 'Sayido burns the wood.'
- (349) *gárwí árēj áró*  
*gárwí ár- -ēji ár- -o*  
 wood burn IMPF burn INF  
 'The wood is burning.'

(350) kà tòkílètì át:ù  
 kà tǒkl- -ē -tì át:á -jù  
 S:3.M detach PRF DO:3.F arm POSS:1.S  
 'He removed my arm.'

(351) át:ù tǒklē  
 át:á -jù tǒkl- -ē  
 arm POSS:1.S detach PRF  
 'My arm has been removed.'

The following example demonstrates that the patient is a grammatical subject, and not simply an alternate word order used when subjects are not present. In example (352), a direct object suffix has been added to the unaccusative (labile verb) clause (351). The co-occurrence of the direct object suffix with a nominal object is obligatory when the direct object is definite (section 8.3.2). However, in this case, the only possible interpretation is that the arm is the agent acting upon some other pro-dropped patient argument indexed by the direct object suffix. The direct object suffix cannot be coreferential with the preverbal patient.

(352) ? at:u tokileti  
 át:á -jù tǒkl- -ē -tì  
 arm.F POSS:1.S detach PRF DO:3.F  
 ? 'My arm has removed her.'

Example (353) shows that the agent of an unaccusative clause cannot be added to the sentence, as in a prototypical passive clause, whether or not it is preceded by a preposition of any sort.

(353) # at:u tokle (m) musa  
 át:á -jù tǒkl- -ē ìŋ músà  
 arm POSS:1.S detach PRF PREP MOUSSA

A grammatical construction can be created with the preposition *tà* (section 9.3.3). However, in this construction, the constituent in the prepositional phrase cannot be the agent of the action.<sup>88</sup>

<sup>88</sup> The Imperfective suffix in the following example is unexpected, and could possibly be erroneous.

- (354) át:ù            tòkùléjī    tà            músá  
 át:á -jù        tǒkl-    -ēji    tà            músà  
 arm POSS:1.S detach IMPF because Moussa  
 'My arm was removed because of Moussa.'  
 \*'My arm was removed by Moussa.'

## 7.6 Causatives

There are pairs of verbs whose meaning only differs in that the subject encodes the agent (or undergoer) of an intransitive verb in one case, while in the other case, the subject is the causer, with the direct object encoding the causee (agent of the non-causative verb). Similar pairs are seen in other Chadic languages (Frajzyngier 1984:142–145). The restricted set of verbs that have a causative form, and a number of irregular forms, suggest that causative verbs are fossilized remnants of a now defunct derivational process.

There are two different phonological traits that mark causative verbs. In one class of causative verbs, the vowel of the verb root is exchanged for a front high vowel.<sup>89</sup> The other class of causatives are marked by an apparent derivational suffix *-r* which attaches to the root before any other suffix. An epenthetic vowel appears before the causative suffix so that the stem conforms to the CV patterns of the language (section 3.2). Most of the causative verbs marked with *-r* have also replaced the vowel of their stem with a high front vowel. In addition, the *-r* form adds a M tone to the tone melody of the verb, at least in the Infinitive form where it docks on the underlyingly unmarked Infinitive suffix.

Some verbs have two possible causative forms with no apparent difference in meaning. It may be the case that the *-r* form of the causative is used more commonly in the Giliya dialect. The *-r* form of causatives also differs from the *-i-* form in that it selects its direct object suffix from a special set of pronouns (section 8.3.3).

<sup>89</sup> The same phonological trait marks causatives in Migaama (Jungraithmayr & Adams 1992:47).

Table 32: Causatives

<i>gloss</i>	<i>intransitive</i>	<i>causative</i>	
'to immerse'	tàmbó	tìmbó	--
'to descend'	jàngó	jìngó	jìngúrō
'to climb'	tādó	tīdó	tīdíró
'to separate'	báaró	bíiró	--
'to cool down'	dàl:ó	dìl:ó	--
'to fall'	gàló	gìló	--
'to get up'	ták:ó	tík:ó	tík:úrō
'to lose/be sold'	bòtó	bìtó	--
'to be dark'	kōlmó	kìlmò <sup>90</sup>	--
'to go out'	gūsō	gīsō	gīsúrō
'to establish'	gàasó	--	gàasúrō
'to enter'	tōpó	--	tīpūrō
'to turn and go'	láawó	--	lávúrō
'to go'	kóló	--	kóoró
'to come'	síi	--	sèeró

The final two examples in table 32 are irregular. The verb root *kól-* “to go” loses its lateral consonant and lengthens its vowel. The verb “to come” is a monoverb (section 3.2.1) whose root is *s-* with a H tone. It is the only monoverb known to have a causative form. In the causative form, two different (non-epenthetic) vowels can occur between the *s-* root and the *-r* morpheme. In most TAM, the vowel between the root and the second morpheme is a long [ee]. There is no phonological explanation for this vowel.

(355) sèeró  
 seer- -o  
 come.CAUS INF  
 'bring'

<sup>90</sup> This verb is peculiar in that its Infinitive form has a L tone pattern not seen in any other polyverb. However, in its conjugations the verb behaves like a MH verb.

- (356) kà sèeràgí dō  
 kà seer- -ā -gí dō  
 S:3.M come.CAUS IMPF DO:3.M NEG  
 'He won't bring him.'

A short vowel [a] appears in the root when the Perfective suffix is present, even though there is no motivation for this type of vowel harmony or a change in length.

- (357) sàrà  
 sar- -à  
 come.CAUS PFV  
 'brought'

The root-internal [a] is present whenever the verb is in Perfective aspect. Even when the Perfective suffix deletes or suppletes to a null morpheme before a direct object suffix (section 8.6), the vowel in the root remains [a] when the verb is in Perfective aspect.

- (358) n sàràgà jēe: zìgēgē tá: pàṅgàsú ŋ át:ū  
 ìṅ sar- -àgà jē zigeegē tà fàṅgaasu ìṅ át:á -jù  
 S:1.S come.CAUS IO:3.PL DISC snack(A) PURP beignet(A) PREP arm POSS:1.S  
 'I brought them some fried bread as a gift.' (appendix 9)

- (359) kà sàrgí dō  
 kà sar- -gí dō  
 S:3.M come.CAUS DO:3.M NEG  
 'He didn't bring it.'

In contrast, when the suffix *-a* is not Perfective, but the suppletive the form of the Imperfective suffix which appears before a direct object suffix (section 8.6), the vowel of the root is [ee]. This rules out any natural phonological explanation for this alternation.

- (360) wò kī kólē máná ków gárgō kī sèeràgá  
 wò kī kól- -ē máná ków gárwí -gò kì seer- -ā -gá  
 and S:2.M go PRF bush also wood POSS:2.M S:2.M come.CAUS IMPF DO:3.PL  
 'You can also go to the bush and get firewood.' (appendix 7)



## Chapter 8 : Reference system (pronouns)

The typical Chadic reference system consists of eight categories distinguishing grammatical gender in the second and third person singular forms (Newman 2006:195–196). Nearly all the languages of the Guera subbranch also have an inclusive-exclusive distinction in the first person (Lovestrland 2012). Baraïn has a more rare ten pronoun system which includes a first person dual (inclusive) pronoun. In this system, the dual pronoun is distinguish from the plural inclusive pronoun by an additional morpheme—the inclusive marker (section 8.13).

There are three types of pronouns: independent pronouns (section 8.1), subject pronouns (section 8.2), and possessive pronouns (section 8.10). None of these co-occur with the noun phrase they index. Direct and indirect object suffixes (sections 8.3 and 8.4) distinguish the same agreement features as the pronouns, but when the noun phrase they index is definite, they can co-occur in the same clause. In this way, they are similar to possessor agreement suffixes which follow the same paradigm (section 6.1.3). In fact, possessor agreement suffixes are use in the same function as direct and indirect object pronouns when the verb is Infinitive (section 8.7).

Demonstratives (section 8.12) are restricted to the third person, differentiating for gender when singular, but not distinguishing gender when plural. The same restriction is seen in relative markers (section 10.1).

The reflexive pronoun (section 8.8) is a pronominal element which indicates that the object is co-referential with the subject. The valence-decreasing detransitivizing suffix (section 8.9) overlaps in function with the reflexive pronoun, but it allows for a different interpretation of the assignment of semantic roles. The oblique suffix (section 8.11) encodes that the verb has at least one non-subject argument, other than a direct or indirect object.

## 8.1 Independent pronouns

The table below presents the ten independent pronouns. The first person inclusive form is composed of two morphemes: the dual (inclusive) pronoun followed by the inclusive marker *nà* (section 8.13).

**Table 33: Independent pronouns**

	<i>Singular</i>	<i>Plural</i>
<i>1<sup>st</sup> person</i>	ìnù	(DUAL) ájà
		(EXCL) ánē
		(INCL) ájà=nà
<i>2<sup>nd</sup> person</i>	(MASC) kí:l:à	níl:à
	(FEM) kél:à	
<i>3<sup>rd</sup> person</i>	(MASC) kà:l:à	nìl:à
	(FEM) tí:l:à	

The independent pronoun is the form given in isolation, for example, to respond to a question. It behaves syntactically like a noun phrase, in that it can also be used as a subject or following a preposition.

- (361) níl:à àláj  
 níl:à àláj  
 PRO:2.PL where  
 'Where are you (all) ?'

- (362) nìl:á jàlkijá nì  
 nìl:á jàlkì -já nì  
 PRO:3.PL Baraïn PL DEM:PL  
 'They are Baraïn.'

- (363) ìnù ñ kóló íj kí:l:à sáj  
 ìnù ñ kól- -o íj kí:l:à sáj  
 PRO:1.S FUT go INF ASOC PRO:2.M Q  
 'Can I go with you?'

- (364) m̀ b̀kà j̀è ń tí:l:à  
 ìj b̀k- -à j̀ē íj tí:l:à  
 S:1.S speak PFV DISC ASOC PRO:3.F  
 'I spoke with her.'

- (365) kà ñ kóló ñ ájà=nà  
 kà ñ kól- -o ñ ájà =nà  
 S:3.M FUT go INF ASOC PRO:DUAL INCL  
 'He will go with us.'

The independent pronoun can be a direct object in the Imperfective, but was not acceptable to the speakers in other TAM.

- (366) kà gōmēj ìnù  
 kà gōm- -ēji ìnù  
 S:3.M hit IMPF PRO:1.S  
 'He is hitting me.'

- (367) ñ kīsāgé kél:à  
 ñ kīs- -ā -gé kél:à  
 S:1.S think IMPF DO:2.F PRO:2.F  
 'I'm thinking of you (to a woman).'

- (368) \* ka goma je inu  
 kà gōm- -à jē ìnù  
 S:3.M hit PFV DISC PRO:1.S  
 for: 'He hit me.'

## 8.2 Subject pronouns

The following table presents the ten forms of subject pronouns.

**Table 34: Subject pronouns**

	<i>Singular</i>	<i>Plural</i>
<i>1<sup>st</sup> person</i>	ìñ	(DUAL) íñ
		(EXCL) ánē
		(INCL) íñ ... =nà
<i>2<sup>nd</sup> person</i>	(MASC) kì	ní
	(FEM) kè	
<i>3<sup>rd</sup> person</i>	(MASC) kà	nì
	(FEM) tì	

Subject pronouns are all a shortened version of their independent counterparts, with the exception of the first person plural pronouns. They normally preserve only the

first two segments of their independent counterpart, e.g., *kàllà* and *kà*. First person plural inclusive is expressed in two morphemes: the dual pronoun before the verb and the inclusive clitic after the verb (section 8.13). There are two pairs of subject pronouns which differ from each other only in tone: first person singular and first person dual inclusive; second person plural and third person plural.

Subjects are primarily encoded by word order, being the only argument before the verb. Subject pronouns appear to occur in the same syntactic position as other subjects. Subject pronouns are free words, not affixes. An affix normally attaches only to stems of a certain grammatical category (Zwicky & Pullum 1983). The subject pronoun most often directly precedes a verb, but can also precede the Future auxiliary (section 7.1.5), adverbials (369), demonstratives (370), and nonverbal predicates (371).

(369) *kà gàndà gòm-gà gòm- -o*  
*kà gàndà gòm- M -gà gòm- -o*  
 S:3.M inside hit IMPF DO:3.M hit INF  
 'He is hitting him.'

(370) *tìdná nóŋjūú dī*  
*tì dī ná nón- -jù dī*  
 S:3.F DEM:F EQ child(POSS) POSS:1.S DEM:F  
 'This is my daughter.'

(371) *kà m̀ máŋá*  
*kà ìŋ máŋá*  
 S:3.M PREP bush  
 'He is out in the bush.'

Like other monomoraic words (section 3.3), subject pronouns are likely phonologically bound (clitics). This is seen when subject pronouns ending in a nasal assimilate in place of articulation to the following consonant, even in careful speech, as seen in section 4.1 and in (372) below.

(372) /ɪŋ d-ēji d-íi/	[ɪn déjī dí]	'I walk.'
/kì d-ēji d-íi/	[kì déjī dí]	'You walk (to a woman).'
/kè d-ēji d-íi/	[kè déjī dí]	'You walk (to a man).'
/kà d-ēji d-íi/	[kà déjī dí]	'He walks.'
/tì d-ēji d-íi/	[tì déjī dí]	'She walks.'
/ɪŋ d-ēji d-íi/	[ɪn déjī dí]	'The two of us walk.'
/ánē d-ēji d-íi/	[ánē déjī dí]	'We (not you) walk.'
/ɪŋ d-ēji-nà d-íi/	[ɪn déjɪnà dí]	'We (and you) walk.'
/ní d-ēji d-íi/	[ní déjī dí]	'You all walk.'
/nì d-ēji d-íi/	[nì déjī dí]	'They walk.'

Subject pronouns are not obligatory whenever the speaker assumes that the context is sufficient to identify the subject.<sup>91</sup> In just a few sentences in the narrative texts, subject pronouns seem to co-occur with the full noun phrase they index. The uses of this construction are not yet understood.

(373) mījó	kà	kòlè	gèjì
mìj:ó	kà	kól-	-ē gèr- -jì
person S:3.M	go	PRF POSS	POSS:3.M
'Each one went to his home.' (appendix 13)			

### 8.3 Direct object suffixes<sup>92</sup>

Direct object suffixes index the person, number, and gender features of the direct object, following the same paradigm seen in independent pronouns. The presentation of these morphemes begins with a brief justification of their morphological status. Since the pattern of co-occurrence of the direct object suffix with a co-referential nominal noun phrase does not fit the canonical pattern of agreement markers, the morphosyntactic distribution of the direct object suffixes is discussed at length in the second subsection. A third subsection presents an alternate paradigm for object suffixes used with a class of causative verbs. Another alternate paradigm, limited to the third person, is used for a

<sup>91</sup> This was also noted by Rendinger (1949:167)

<sup>92</sup> This term is intentionally neutral in regards to the morphosyntactic function of the suffix, to allow for the discussion below (section 8.3.2). Similar markers are frequently called “object markers” in Bantu languages. The marker also fits the definition of “pronominal marker” used by some Africanists (Creissels et al. 2008:91). Frajzyngier & Shay explicitly state that they use the term “pronoun” to refer to a grammatical marker whose functions “differ significantly” from the standard (Indo-European) use of the term (2012:268, 322). For example, in a description of Dangla, the direct object suffix is described as “pronominal” despite its co-occurrence with a co-referential noun (Shay 1999). Other syntacticians reject the use of the term “pronominal” for a marker that can co-occur in a clause with the constituent it indexes (Bresnan 2001:145; Corbett 2006:102).

direct object suffix following an indirect object suffix. These are presented in section 8.5, after the presentation of indirect object suffixes (section 8.4). Yet another system is used to index direct objects on Infinitive verbs (section 8.7).

### 8.3.1 Morphophonemics of object suffixes

As is commonly seen in Chadic languages, direct object markers are suffixes, viz., phonologically and syntactically bound to the verb.<sup>93</sup> Direct object suffixes only attach to verbs (or verbal TAM suffixes) with other phonologically-bound morphemes following. Direct object suffixes trigger tone spreading on the verb (section 5.4). There is a restriction on co-occurrence between the direct and indirect object suffixes, which requires that the direct object suffix be selected from an alternate paradigm which only includes the third person, i.e., significant gaps in the paradigm (section 8.5). These patterns coincide with prototypical affixes (Zwicky & Pullum 1983).

The direct object suffix immediately follows the TAM suffix on the verb, although the TAM suffix often suppletes to null, in which case the direct object suffix immediately follows the verb root (section 8.6). The second and third person plural suffixes are both a single nasal and only differ in tone. The first person plural inclusive consists of two morphemes: the dual (inclusive) direct object marker followed by the inclusive clitic (section 8.13).

**Table 35: Direct object suffixes**

	<i>Singular</i>	<i>Plural</i>
<i>1<sup>st</sup> person</i>	STEM-TAM-nù	(DUAL) STEM-TAM-já
		(EXCL) STEM-TAM-né
		(INCL) STEM-TAM-já=nà
<i>2<sup>nd</sup> person</i>	(MASC) STEM-TAM-gó	STEM-TAM-ń
	(FEM) STEM-TAM-gé	
<i>3<sup>rd</sup> person</i>	(MASC) STEM-TAM-gà	STEM-TAM-ń
	(FEM) STEM-TAM-tì	

<sup>93</sup> For example, the term “suffix” or “affix” is used by Alio (Alio & Jungrathmayr 1989:23), Caron (2003), Frajzyngier (1989:109; 2002:135), Friesen & Mamalis (2008), Schuh (2005), and Shay (1999:129).

The presentation of direct object suffixes in table 35 assumes a bimorphemic analysis of verb endings. As Creissels points out, it is not uncommon in African languages for agreement/pronominal markers and TAM markers to amalgamate forming what he calls “tense-person complexes”. It is not always easy to decipher whether these complexes are monomorphemic or bimorphemic (Creissels 2005:57–58). In a monomorphemic analysis, direct object markers would be portmanteau morphemes with three separate paradigms according to their TAM features. A bimorphemic analysis is followed here since it is more economical. It simplifies the direct object paradigm and puts the burden of complexity on the TAM suffixes, which are often subject to suppletion before a direct object suffix (section 8.6).

### 8.3.2 *Morphosyntactic distribution (discourse-dependent object marking)*

Direct object suffixes obligatorily appear on the verb when a definite (or referential) nominal direct object is present.

(374) *rámà gòm-gà mám:àt*  
*rámà gòm- -gà mám:àt*  
 Rama hit DO:3.M Mammat  
 'Rama hit Mammat.'

(375) \* *rama goma mam:at*  
*rámà gòm- -à mám:àt*  
 Rama hit PFV Mammat  
 for: 'Rama hit Mammat.'

(376) *músà tòkílètì át:ì*  
*músà tòkl- -ē -tì át:á -jì*  
 Moussa remove PRF DO:3.F arm POSS:3.M  
 'Moussa removed his arm.'

(377) \* *musa tokile ati*  
*músà tòkl- -ē át:á -jì*  
 Moussa remove PRF arm POSS:3.M  
 for: 'Moussa removed his arm.'

In the absence of a direct object noun phrase, direct object suffixes can index an argument of the verb which is not otherwise stated in the clause (i.e., pro-drop).

(378) *rámà gòmètì*  
*rámà gōm- -ē -tì*  
 Rama hit PRF DO:3.F  
 'Rama hit her.'

(379) *rámà dópàgà*  
*rámà dóp- -ā -gà*  
 Rama find PRF DO:3.M  
 'Rama found him.'

(380) *námá gē nárànù dópònù*  
*námá gē nār- -ā -nù dóp- -ē -nù*  
 child REL:M look.for IMPF DO:1.S find PRF DO:1.S  
 'The boy who was looking for me, found me.'

When the direct object is indefinite (or non-referential), no direct object suffix can appear on the verb. In the following examples, the direct object suffix co-occurs with definite nominal objects, but cannot co-occur with an indefinite direct object. This demonstrates that the co-occurrence of direct object suffixes with nominal objects is a case of “conditioned agreement” or “discourse-dependent” marking (Corbett 2006:5, 176; Creissels et al. 2008:93).<sup>94</sup>

(381) *rámà gòmga tā bàṅà*  
*rámà gōm- -gà tā bàṅà*  
 Rama hit DO:3.M DISC dog  
 'Rama hit the dog.'

(382) *rámà gòmà tā bàṅà*  
*rámà gōm- -à tā bàṅà*  
 Rama hit PFV DISC dog  
 'Rama hit a dog.'

<sup>94</sup> The pattern seen here could be considered a type of Differential Object Marking (Morimoto 2002). The main difference is that, like in Bantu languages, it involves object marking on the verb. In the prototypical case of Differential Object Marking, the analysis concerns case marking on the noun (Riedel 2009:6).



(383) ráàmà dópètì kítà  
 ráàmà dóp- -ē -tì kítà  
 Rama find PRF DO:3.F work  
 'Rama found the job.'

(384) ráàmà dópà jè kítà  
 ráàmà dóp- -à jē kítà  
 Rama find PFV DISC work  
 'Rama found a job.'

It is possible, though unnatural, to construct a sentence with a proper noun as the direct object without a direct object suffix. However, such a sentence could only be acceptable under a *de dicto* reading.<sup>95</sup> That is, the noun phrase does not denote a definite referent. In other words, the speaker is not thinking of a specific person named Mammat, but any person who has the quality of being named Mammat.

(385) músà járēji mām:àt  
 músà jār- -ēji mām:àt  
 Moussa search IMPF Mammat  
 ? 'Moussa is looking for people named Mammat.'

The referential, or *de re*, reading is only possible with the presence of the direct object suffix.

(386) múusà járgà mām:àt  
 músà jār- -gà mām:àt  
 Moussa search DO:3.M Mammat  
 'Moussa is looking for Mammat.'

Discourse-dependent object markers are very common in African languages and occur in many Chadic languages (Creissels et al. 2008:93–94; Frajzyngier & Shay 2012:322). Dangla, Bidiya, Migama, Gidar, and Hdi have discourse-dependent object markers which co-occur with definite or referential nominal direct objects (Shay 1999:255; Frajzyngier 2002:143–147; 2008:164, 345; Frajzyngier & Shay 2012:268, 323).

<sup>95</sup> The terms *de dicto* and *de re* are used here and elsewhere in this work as they are understood in formal semantics (Allwood, Andersson & Dahl 1977:114–117; Kearns 2000:108–111), and not in the sense of the *de dicto* domain proposed by Frajzyngier (1991).

Cross-linguistically, discourse-dependent object markers are commonly analyzed diachronically as a transitional stage between free pronouns and obligatory object agreement markers (Givón 1984:362; Creissels et al. 2008:92). In this view, independent pronouns (free words that do not co-occur with the noun phrase they index) are grammaticalizing into obligatory bound morphemes that can co-occur with the nouns they index. Discourse-dependent object markers still behave like independent pronouns in some aspects (anaphoric agreement, not always obligatory), but behave like grammatical agreement markers in a certain discourse environment (e.g., when the nominal direct object is definite or referential).

The precise description of what factors trigger obligatory object marking in a particular language is a frequent topic of investigation—particularly in Bantu languages.<sup>96</sup> However, those studies have not revealed any clear typology (Riedel 2009:43, 209). The condition “definite” has not only been proposed for the Chadic languages mentioned above, but also for several Bantu languages including Zulu and Swahili (Doke 1971:299; Wald 1979:510; Givón 1984:372; Morimoto 2002; Creissels et al. 2008:94; Riedel 2009:51).<sup>97</sup> The definiteness or referentiality of the direct object is used here as a first approximation of the distribution patterns seen in this particular language. The use of discourse-dependent object marking to signal definiteness or referentiality is functionally motivated in this language because there are no definite markers.

One disadvantage of the criteria of definiteness or referentiality is that in the case of indirect object suffixes, co-occurrence with a definite nominal indirect object appears to be optional, not obligatory (section 8.4). An alternative, more discourse-focused explanation may be able to account for the morphosyntactic distribution of both direct and indirect object suffixes. Another problematic piece of data for this analysis is from

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<sup>96</sup> Some of this work has been inspired by the Lexical-Functional Grammar approach, which gives a concise theoretical account for the patterns described (Bresnan & Mchombo 1987; Bresnan & Moshi 1990; Bresnan 2001; Morimoto 2002).

<sup>97</sup> However, others have offered alternative explanations for Zulu and Swahili claiming that co-occurrence is only allowed when the nominal object is “outside the IP” or is conditioned by other discourse factors (Buell 2005:63–70; Seidl & Dimitriadis 1997).

section 8.1, repeated below, where an independent (referential) pronoun is used in the object position without any object suffix appearing on the verb.

(387) *kà gōmēj ìnù*  
*kà gōm- -ēji ìnù*  
 S:3.M hit IMPF PRO:1.S  
 'He is hitting me.'

### 8.3.3 *Direct object suffix on causative verbs*

One class of causative verbs, those marked by a fossilized rhotic morpheme (section 7.6), select their direct object suffixes from an alternate paradigm. All causative object suffixes have a high tone. The first person plural and second person singular suffixes are identical to the standard paradigm. Other object suffixes carry a low tone in the standard paradigm. In addition to the tone change, the first person singular suffix exchanges its nasal onset for a voiced velar stop. The same consonant is added to the second person plural object suffix, which is only a nasal in the standard paradigm. The third person masculine suffix has changed its vowel and tone, while the third person feminine object suffix only changes its tone. The third person plural suffix is now identical to the third person masculine singular object suffix from the standard paradigm, apart from the change in tone. However, it is also reminiscent of the third person plural indirect object pronoun *-àga*.

**Table 36: Causee direct object suffixes**

	<i>Singular</i>	<i>Plural</i>
<i>1<sup>st</sup> person</i>	STEM-TAM-gú	(DUAL) STEM-TAM-já
		(EXCL) STEM-TAM-né
		(INCL) STEM-TAM-já=nà
<i>2<sup>nd</sup> person</i>	(MASC) STEM-TAM-gó	STEM-TAM-gíŋ
	(FEM) STEM-TAM-gé	
<i>3<sup>rd</sup> person</i>	(MASC) STEM-TAM-gí	STEM-TAM-gá
	(FEM) STEM-TAM-tí	

TAM suffixes follow the same pattern of suppletion before the causative object suffixes, except that there are no irregular changes for the third person masculine object suffix. The TAM before this suffix follows the same pattern as before other object suffixes (section 8.6).

(388) kóorāgí	gīsérāgí
koor- -ā -gí	gír- -ā -gí
go.CAUS IMPF DO:3.M	go.out.CAUS IMPF DO:3.M

#### 8.4 Indirect object suffixes

The forms of the indirect object suffixes are shown in table 37.

**Table 37: Indirect object suffixes**

	<i>Singular</i>	<i>Plural</i>
<i>1<sup>st</sup> person</i>	STEM-àw	(DUAL) STEM-àja
		(EXCL) STEM-àne
		(INCL) STEM-àja=nà
<i>2<sup>nd</sup> person</i>	(MASC) STEM-àgo	STEM-àŋ
	(FEM) STEM-àge	
<i>3<sup>rd</sup> person</i>	(MASC) STEM-èji	STEM-àga
	(FEM) STEM-àti	

All of these forms begin with [a] except the third person masculine singular (which only differs from the Imperfective suffix in tone). Some Chadic languages use a bimorphemic approach to indirect object suffixes, with one morpheme distinguishing indirect objects from direct objects. The vowel [a] is used in Miya, Kera, and other Chadic languages as a pre-pronominal marker to distinguish direct and indirect objects (Schuh 1998:189; Frajzyngier 1982b:326–328). Despite the apparent cross-linguistic similarities, a monomorphemic analysis is more economical here, since three of the indirect objects suffixes (first person singular, third person masculine, and third person plural) differ from the direct object suffixes by more than their initial vowel. In addition, all indirect object suffixes have a L tone, while only half the direct object suffixes have a L tone. As seen with other pronouns, the marking for a first person inclusive indirect

object is bimorphemic—combining the dual indirect object suffix with the inclusive clitic (section 8.13).

These forms are suffixed to the verb before the direct object noun phrase (if present). This order differs from the SVOX pattern when all arguments are represented by full noun phrases. Cross-linguistically, it is not uncommon for pronominal/agreement markers to have different ordering patterns than full noun phrases, and this is, in fact, the general tendency for indirect object markers in Chadic languages (Comrie 1989:89; Schuh 2003:58; Newman 2006:200).

In ditransitive clauses, the theme argument is encoded as the direct object and the recipient as an indirect object.<sup>98</sup> This strategy for encoding ditransitive arguments is not common in African languages, but it is common in Chadic languages (Creissels 2005:66–67; Newman 2006:200).

(389) tàndē      kà      bèdàgà      t̄ā      kórtó      n̄      nándì  
           tàndē      kà      bèd- -àga      t̄ā      kórtó      ìŋ      nándì      -jì  
           yesterday S:3.M give IO:3.PL DISC pot      PREP children.PL POSS:3.M  
           'Yesterday he gave a pot to his children.'

The indirect object suffix can encode recipient and beneficiary roles. Recipients and beneficiaries in the nominal form are preceded by the oblique preposition *ìŋ* (section 9.3.1). The indirect object suffix can co-occur in a clause with the full prepositional phrase that it indexes, as seen in examples (389) and (390). The pattern of marking indirect objects with both a preposition and verbal inflection is seen in all Chadic languages where the preposition used is not unique to indirect objects (Frajzyngier & Shay 2012:287).

(390) làatì      jē      wōjō      ò      sàjídè  
           l-, L -àti      jē      wōjō      ìŋ      sàjídè  
           send IO:3.F DISC message PREP Sayide  
           'He sent a message to Sayide.'

<sup>98</sup> This pattern of flagging arguments (both patient and theme as direct object) can be called “indirect object alignment or indirective alignment”, as opposed to “secondary object alignment, or secundive alignment” and “neutral alignment” (Malchukov, Haspelmath & Comrie 2010:3–4).

Unlike direct objects, where the co-occurrence of the suffix is obligatory with definite objects, with indirect objects, the co-occurrence is only a preference. When the indirect object is a proper noun (and thus, definite or referential), the speakers naturally give sentences including the indirect object suffix, but they were not able to identify any semantic or grammatical difference when queried concerning a sentence that did not include the indirect object suffix.

(391) *kà làa t̄a w̄ōj̄ō ñ sàjídè*  
*kà l-, L -àa t̄a w̄ōj̄ō ìŋ sàjídè*  
 S:3.M send PFV DISC message PREP Sayide  
 'He sent a message to Sayide.'

The indirect object pronoun can also encode the purpose or motivator of the action. In the lexical noun phrase form, causes are preceded by the purpose preposition *t̄a* (section 9.3.3). When an indirect object pronoun is attached to a verb that is not ditransitive, the referent is considered the purpose/motivator. In (392), an oblique (indirect object) prepositional phrase is not accepted, demonstrating that, in this case, the indirect object suffix does not index an indirect object. If the translation equivalent was simply another interpretation of an indirect object, the indirect object suffix should be able to co-occur with the lexical form of an indirect object it indexes.

(392) *kà mótáw̄ (\* ìŋ ìnù )*  
*kà mót- -àw̄ ìŋ ìnù*  
 S:3.M die IO:1.S PREP PRO:1.S  
 'He died because of me.'

### 8.5 Direct object marker after an indirect object suffix (3<sup>rd</sup> person only)

The indirect object suffixes do not co-occur with the direct object suffixes listed in section 8.3. There is a separate paradigm of direct object markers which can occur after the indirect object. These forms are listed in table 38. This paradigm is limited to the third person.<sup>99</sup> In the singular, their forms are identical to the standard direct object suffixes, but the third person plural marker has a different form. The limitation in the paradigm suggests that these markers are suffixes, not clitics (Zwicky & Pullum 1983). However,

<sup>99</sup> The same restriction is seen in Migaama (Jungrathmayr & Adams 1992:40).

they are transcribed as clitics because of their interaction with the inclusive clitic, discussed in section 8.13.

**Table 38: Direct object marker after an indirect object suffix**

	<i>Singular</i>	<i>Plural</i>
<i>3<sup>rd</sup> person</i>	(MASC) =gà	=nì
	(FEM) =tì	

These direct object markers directly follow the indirect object suffix. Only the inclusive clitic has been attested between the indirect object suffix and the direct object marker (see section 8.13).

- (393) gòmàw=tì  
 gōm- -àw =tì  
 hit IO:1.S DO:3.F  
 'Hit her for me!'

Other verbal particles occur after the direct object marker.

- (394) músà bèdàgà=tì t̄a  
 músà bèd- -àga =tì t̄a  
 Moussa give IO:3.PL DO:3.F DISC  
 'Moussa gave it to them.'

Like other direct object suffixes, these markers co-occur with a definite direct object noun phrase (section 8.3.2).

- (395) kà lègàw=tì àm:á  
 kà l-, L -ēga -àw =tì àm:á  
 S:3.M send IMPF IO:1.S DO:3.F Amma  
 'He sent Amma to me.'

Without the direct object suffix, the sentence is, at best, unnatural.

- (396) #? ka legaw am:a  
 kà l-, L -ēga -àw àm:á  
 S:3.M send IMPF IO:1.S Amma  
 for: 'He sent Amma to me.'

## 8.6 Suppletion of TAM suffixes before direct object suffixes

The presence of a direct object suffix attached to a verb can greatly alter the form of the TAM suffix. In the Progressive, Perfective, and Subjunctive forms, there is no TAM marking before a direct object suffix, except in monoverbs (table 40). The Imperfective marker changes from *-ēji* to *-ā* before a direct object suffix, except before the third person masculine singular, in which case, it becomes a floating M tone. The third person masculine direct object suffix also triggers a unique suppletive form in the Perfect—the TAM becomes *-ā* before the suffix. This is the same form as all other suppleted Imperfective suffixes, and the same as the neutral (i.e., no direct object suffix) Perfective suffix.

**Table 39: Suppletion of TAM suffixes before direct object suffixes**

		<i>Progressive Perfective Subjunctive</i>	<i>Imperfective</i>	<i>Perfect</i>
<i>No pronominal marker</i>		STEM-gà (PROG) STEM-à (PFV) <sup>100</sup> STEM-ù (SBJV)	STEM-ēji	STEM-ē
<i>1<sup>st</sup> person</i>	SINGULAR	STEM-∅-nù	STEM-ā-nù	STEM-ē-nù
	DUAL	STEM-∅-já	STEM-ā-já	STEM-ē-já
	EXCLUSIVE	STEM-∅-né	STEM-ā-né	STEM-ē-né
	INCLUSIVE	STEM-∅-já-nà	STEM-ā-já-nà	STEM-ē-já-nà
<i>2<sup>nd</sup> person</i>	MASC SG	STEM-∅-gó	STEM-ā-gó	STEM-ē-gó
	FEM SG	STEM-∅-gé	STEM-ā-gé	STEM-ē-gé
	PLURAL	STEM-∅-ń	STEM-ā-ń	STEM-ē-ń
<i>3<sup>rd</sup> person</i>	MASC SG	STEM-∅-gà	<b>STEM-M-gà</b>	<b>STEM-ā-gà</b>
	FEM SG	STEM-∅-tì	STEM-ā-tì	STEM-ē-tì
	PLURAL	STEM-∅-ń	STEM-ā-ń	STEM-ē-ń

There is a slightly different pattern of suppletion of TAM marking for the small subclass of verbs with only one consonant in the stem (monoverbs, section 7.2.1). The

<sup>100</sup> The Perfective and Subjunctive suffixes behave as if unmarked for tone before a H tone (section 5.4.4)



TAM marking for Perfective and Subjunctive, *-aa*, does not delete, but changes its underlying tone. The Imperfective suppletes to *-ēga*. The Perfect suppletes to *-ēe*. TAM marking before the third person masculine direct object suffix is again an exception to the pattern. Before this suffix, Perfective and Subjunctive marking suppletes to *-ī* (unmarked for tone), and Imperfective marking suppletes to *-ī̄*. Both suffixes are identical to the monoverb Infinitive suffix except for tone. The behavior of TAM marking on monoverbs before an indirect object pronoun has not been sufficiently examined. Neither has the effect of the Progressive suffix on monoverb TAM marking.

**Table 40: Suppletion of TAM suffixes before direct object suffixes for monoverbs**

/C-/		<i>Perfective and Subjunctive</i>	<i>Imperfective</i>	<i>Perfect</i>
<i>No direct object suffix</i>		C-àa (PFV) C-aa (SBJV)	C-ēji	C-ēt:a
<i>1<sup>st</sup> person</i>	SINGULAR	C-āa-nù	C-ēga-nù	C-ēe-nù
	DUAL	C-āa-já	C-ēga-já	C-ēe-já
	EXCLUSIVE	C-āa-né	C-ēga-né	C-ēe-né
	INCLUSIVE	C-āa-já-nà	C-ēga-já-nà	C-ēe-já-nà
<i>2<sup>nd</sup> person</i>	MASC SG	C-āa-gó	C-ēga-gó	C-ēe-gó
	FEM SG	C-āa-gé	C-ēga-gé	C-ēe-gé
	PLURAL	C-āa-ń	C-ēga-ń	C-ēe-ń
<i>3<sup>rd</sup> person</i>	MASC SG	<b>C-īi-gà</b>	<b>C-ī̄i-gà</b>	C-ēe-gà
	FEM SG	C-āa-tì	C-ēga-tì	C-ēe-tì
	PLURAL	C-āa-ń	C-ēga-ń	C-ēe-ń

Before the second and third person plural object suffixes, the Perfective, Subjunctive, and Perfect TAM markers are shortened by a phonological process to avoid super-heavy syllables (section 4.9.2).

The suppletion of TAM suffixes is summarized in table 41. The suppletion pattern is fairly regular, with alternate forms for monoverbs, and four exceptional forms that occur before the third person masculine singular direct object suffix.

**Table 41: Summary of TAM suppletion before direct object suffixes**

	<i>Progressive Perfective Subjunctive</i>		<i>Imperfective</i>		<i>Perfect</i>	
	POLYVERB	MONOVERB	POLYVERB	MONOVERB	POLYVERB	MONOVERB
<i>no direct object suffix</i>	-gà (PROG) -à (PFV) <sup>101</sup> -ù (SBJV)	-àa (PFV) -aa (SBJV)	-ēji		-ē	-ēt:ā
<i>direct object</i>	∅-DO	-āa-DO	-ā-DO	-ēga-DO	-ē-DO	-ēe-DO
<b>DO:3.M</b>		<b>-ii-DO:3.M</b>	<b>M-DO:3.M</b>	<b>-īi-DO:3.M</b>	<b>-ā-DO:3.M</b>	

It is assumed that the same suppletive forms occur underlyingly before indirect object suffixes even though the TAM vowel is deleted by a phonological process of truncation (section 4.7). Since all indirect object suffixes begin with a vowel, they always truncate a preceding vowel. Since most suppletive TAM marking consists of a single vowel, there is often no surface evidence of the underlying form. However, one suppletive TAM marker consists of more than one syllable. In this case, the suppletion is evident in the surface form in spite of the truncation.

(397) kà lègàw=tì àm:á  
kà l-, L -ēga -àw =tì àm:á  
S:3.M send IMPF IO:1.S DO:3.F Amma  
'He sent Amma to me.'

When the vowel of the TAM is truncated, its tone remains. Because of this, a TAM marking which suppletes to null (Perfective or Subjunctive) can be compared with a TAM marking that suppletes to a vowel with a M tone (Imperfective or Perfect, section 8.6) and then truncates, leaving its tone behind. The L tone of the indirect object suffix docks to the final tone-bearing unit (TBU) of the suffix. When no TAM marker is present, a verb with a complex tone melody will then assign its second tone on the unmarked TBU of the suffix (section 5.3.1).

<sup>101</sup> The Perfective and Subjunctive suffixes behave as if unmarked for tone before a H tone (section 5.4.4)

(398) /jib-ati, LH-L/ → [jìbátì]      L H L  
 throw-IO:3.F                            | | |  
   jì ba ti

If there is a TAM marking present which truncates, then its tone is assigned on the first TBU of the indirect object suffix. The second tone of the complex tone melody of the verb cannot be assigned to that TBU.<sup>102</sup>

(399) /jib-a-ati, LH-M-L/ → [jìbàtì]      L (H) M L  
 throw-IMPF-IO:3.F                            |        | |  
   jì        ba ti

### 8.7 Infinitive direct and indirect object suffixes

The Infinitive form of the verb is used to form the Future tense (section 7.1.5), adverbial expressions (section 10.2), and participles (section 7.4.3). When the verb is in the Infinitive form, it cannot take the direct or indirect object suffixes of the other verb forms. Instead, its direct and indirect object suffixes take the same form as the possessor agreement suffix (section 6.1.3). The verb retains the Infinitive suffix, and adds the possessor agreement suffix. The use of possessor agreement suffixes as object markers on infinitival verbs is seen in other Chadic languages as well (Mina: Schuh 1998:78; Gidar: Frajzyngier 2008:164).

(400) tì    ò    dópéjà=nà  
       tì    ò    dóp- -o -jà        =nà  
       S:3.F FUT find INF POSS:DUAL INCL  
       'She will find us.'

The possessor agreement suffix functioning as a direct object suffix can co-occur with the nominal object, just like regular direct object suffixes (section 8.3.2). Following an Infinitive verb, the nominal direct object is preceded by an oblique preposition (section 9.2.2).

(401) kà    ò    gòmèjì                    ò    m̀j:í  
       kà    ò    gòm- -o -jì                ò    m̀j:í  
       S:3.M FUT hit INF POSS:3.M PREP man  
       'He will hit the man.'

<sup>102</sup> There is one additional process in the example given. The M tone becomes L preceding a L tone (section 5.4.2).

- (402) ájà=nà            ò    dóséjì=nà                    òj    gérgò  
 ájà            =nà òj    dóos- -o -jì                    =nà òj    gérá -gò  
 PRO:DUAL INCL FUT guard INF POSS:3.M INCL PREP home POSS:2.M  
 'We will guard your home.'<sup>103</sup>

The speakers allowed the indirect object suffixes (section 8.4) to be attached to the verb in the Future, but suggested that this is more common in Giliya—a closely related dialect. Normally, indirect object suffixes in the Infinitive form are identical to possessor agreement suffixes, just like direct object suffixes in the Infinitive form. With an Infinitive verb, the indirect object marker is normally identical to the direct object marker.

- (403) tì    òj    gáséjà=nà  
 tì    òj    gás- -o -jìjà                    =nà  
 S:3.F FUT say INF POSS:DUAL INCL  
 'She will tell us.'

Other verbal suffixes such as the detransitivizing (section 8.9) and oblique suffixes (section 8.11) do not occur on Infinitive verbs.

## 8.8 Reflexive pronoun

To encode a reflexive action, where the agent is also the patient of the action, the word for “self” is used in place of the direct object, with a possessor agreement suffix indexing the subject. This grammaticalized lexeme indicates the coreferentiality of the subject and the object.<sup>104</sup> The choice of the noun “self” as a reflexive pronoun is rare in Africa, appearing in only five of 71 languages surveyed (Schladt 1999:110). The more commonly used noun is “body”.

- (404) ìm    mìnàtì                    kòójù  
 òj    mǐj- -ā -tì    kòójá -jù  
 S:1.S slap IMPF DO:3.F self POSS:1.S  
 'I slapped myself.'

<sup>103</sup> Unlike the inclusive clitic in (400), which is part of the possessor agreement suffix, the inclusive clitic in this example is triggered by the first person inclusive subject, and has no bearing on the possessor agreement suffix (see section 8.13).

<sup>104</sup> I do not have any examples of the reflexive pronoun used as an indirect object.

- (405) tì ò dǐ ò kòógètì  
 tì ò d-, L -í ò kòójá -gètì  
 S:3.F FUT kill INF PREP self POSS:3.F  
 'She will kill herself.'

When the subject is plural, this marking remains reflexive (each subject acts on him or herself), and not reciprocal (plural subjects act on each other). Similar markings in other Chadic languages are sometimes used only for reflexive marking, sometimes for reciprocal only, and sometimes for both meanings (Frajzyngier 1999:187).

- (406) ní tá ò dǐ kōójìgà  
 nì tá ò d-, L -í kòójá -jìgà  
 S:3.PL CERT FUT kill INF self POSS:3.PL  
 'They are going to kill themselves.'  
 \*'They are going to kill each other.'

### 8.9 Detransitivizing suffix (passive, reflexive, and reciprocal)

The function of the detransitivizing (or intransitivizing) suffix *-jɔ* is to transform transitive verbs into intransitive verbs (valence decreasing). The detransitivizing suffix takes the same morphological position as direct and indirect object suffixes, directly following the same suppletive TAM marking (section 8.6). A similar marker exists in other Chadic languages.<sup>105</sup> Frajzyngier states that they are rare and normally limited in their function (1984:149). In Baraïn, however, this suffix can occur with any transitive verb. One possible restriction is that this marker is only seen with third person subjects in the data.

The intransitivized verbs are either passive (the subject is the patient), reflexive (subject is both agent and patient), or reciprocal (plural subjects act on each other) according to the semantic context. Givón notes that “shared morphology among passive, reflexive and reciprocal constructions, indicating a shared diachronic source, is widespread” (1990:602). This shared morphology means that a sentence can be ambiguous between two interpretations (only interpretable by its context).

<sup>105</sup> One language with a similar marker is the closely-related Mawa (Hissène, Khamies & James Roberts 2010).

- (407) nándáŋgá nárōjó  
 nándáŋgá nār- -ē -jó  
 children search PRF DTRV  
 'The children were looked for.' / 'The children looked for each other.'

When the subject is inanimate (or otherwise incapable of performing the action), the interpretation is always passive voice.

- (408) gárwí árōjó  
 gárwí ár- -ē -jó  
 wood burn PRF DTRV  
 'The wood is burnt up.'

- (409) gólmójù dóosōjó  
 gólmó -jù dóos- -ē -jó  
 house POSS:1.S guard PRF DTRV  
 'My house is guarded.'

- (410) m̀òsó ẁòlōjó  
 m̀òsó ẁòl- -ē -jó  
 cow slaughter PRF DTRV  
 'The cow has been slaughtered.'

A reflexive action is most naturally expressed with a reflexive pronoun (section 8.8), as in example (411).

- (411) kà d̀èetì k̀òójì  
 kà d-, L -ēē -tì k̀òójá -jì  
 S:3.M kill PRF DO:3.F self POSS:3.M  
 'He killed himself.'

Even when a singular subject is animate, the reflexive interpretation of the intransitive suffix is less natural than the passive interpretation.

- (412) kà d̀ēejó  
 kà d-, L -ēē -jó  
 S:3.M kill PRF DTRV  
 'He was killed' / '?He killed himself.'

When the subject is plural, the intransitivized verb normally receives a reciprocal interpretation. As with singular subjects, the reflexive interpretation is more naturally expressed with a reflexive marker.

- (413) nándáṅgá gōmājó            gōmō  
 nándáṅgá gōm- -ā -jó gōm- -o  
 children hit IMPF DTRV hit INF  
 'The kids are fighting each other.'

- (414) nì gājājó            gājō  
 nì gāj- -ā -jó gāj- -o  
 S:3.PL love IMPF DTRV love INF  
 'They love each other.'

There is one example in a narrative text of the intransitive suffix with a plural subject that was interpreted as reflexive (and not reciprocal) according to its context. Though the suffix is cut off in the phonetic transcription, the speaker himself gave the detransitivizing suffix as the underlying form.

- (415) nì kólej ísáj            gílì  
 nì kól- -ēji ís- -ā -jó gílì  
 S:3.PL go IMPF turn IMPF DTRV Gili  
 '...they turned (themselves) towards Gili.' (appendix 10)

In the Future form, the verb follows an auxiliary in the Infinitive (or nominalized) form. The Infinitive form of the verb cannot take the detransitivizing suffix. Passive and reciprocal meanings are expressed without any marker, with only the context indicating that the verb is intransitive.

- (416) nì ñ gōmō  
 nì ñ gōm- -o  
 S:3.PL FUT hit INF  
 'They will fight (each other).'

### 8.10 Possessive pronoun

The possessive pronoun (mine, yours, etc.) is a bound stem that always takes a possessor agreement suffix. The root is /gèr-/ followed by a possessor agreement suffix.<sup>106</sup>

- (417) mījò kà kòlè gèj:ì  
 mīj:ó kà kól- -ē gèr- -jì  
 person S:3.M go PRF POSS POSS:3.M  
 'Each one went to his home.' (appendix 13)

- (418) gèejà ká ájà ñ tíjì  
 gèr- -jìjà ká ájà ñ t-, L -í -jì  
 POSS POSS:DUAL also PRO:DUAL FUT eat INF POSS:3.M  
 'We should eat ours also.' (appendix 13)<sup>107</sup>

There is a phonological change that takes place here that does not occur elsewhere (i.e., not productive). Before a [j] or [n], the /r/ of the stem assimilates completely to the following consonant. In the first person dual and inclusive possessive pronouns, a syllable is normally deleted from the suffix (section 6.1.3). In this case, the /r/ is dropped, and the vowel of the stem lengthened.

**Table 42: Possessive pronouns**

	<i>Singular</i>	<i>Plural</i>
<i>1<sup>st</sup> person</i>	gèj:ù	(DUAL) gèj:ìjà / gèejà
		(EXCL) gèn:è
		(INCL) gèj:ìjà=nà / gèejà=na
<i>2<sup>nd</sup> person</i>	(MASC) gèrgò	gèj:ìŋ
	(FEM) gèrgè	
<i>3<sup>rd</sup> person</i>	(MASC) gèj:ì	gèj:ìgà
	(FEM) gèrgètì	

<sup>106</sup> The possessive pronoun in Migaama is also composed of a bound stem plus a possessor agreement suffix (Jungraithmayr & Adams 1992:43).

<sup>107</sup> This example from a narrative text is one of the few cases where the SVO order is not respected. In this case, the object (possessive pronoun) has been fronted.



It may not be a coincidence that the word *gérá* “village” or “home” is sometimes nearly identical. It drops its final vowel before the possessor agreement suffix (section 4.10). However, it always retains the second consonant [r]. In addition, the possessive pronoun root has a low tone, opposed to the high tone of the noun *gérá* (as in example (421) below). The possessive pronoun can function on its own as a noun phrase, but is often preceded by a relative marker in the role of a possessive adjective (my, your, etc.).

(419) *súk*            *dē*    *gèn:è*  
*súk*            *dē*    *gèr- -jìnè*  
 market(A) REL:F POSS POSS:EXCL  
 'our market'

(420) *súk*            *dē*    *gèj:ìŋ*            *m̄*    *bòntè*  
*súk*            *dē*    *gèr- -jìŋ*            *ìŋ*    *bòntè*  
 market(A) REL:F POSS POSS:2.PL PREP tomorrow  
 'Your local market is tomorrow.'

The possessive pronoun can occur inside a headless relative clause.

(421) *gérjù*            *pàagú*    *wòl:ìgà*            *gē*    *gèrgò*  
*gérá -jù*            *pàa- -gú wól:- M*    *-gà*    *gē*    *gèr- -gò*  
 home POSS:1.S big N:M pass IMPF DO:3.M REL:M POSS POSS:2.M  
 'My house is bigger than yours.'<sup>108</sup>

### 8.11 Oblique suffixes<sup>109</sup>

There are two verbal suffixes, each with two variants, which can index oblique arguments. The suffix *-rò/-dò* has only been attested with Perfective TAM. The suffix *-uggo/-eggo* has only been attested with Imperfective and Perfect TAM. No oblique suffix has been attested with Progressive, Subjunctive, or Future TAM. The suffixes index any constituent that, in its nominal form, is encoded by an associative or oblique preposition (sections 9.3.1 and 9.3.2), including locative arguments (section 9.4), but excluding indirect objects and purpose prepositional phrases, which are indexed with a separate suffix paradigm (section 8.4).

<sup>108</sup> The use of a verb meaning “to surpass” to express comparison is considered an areal feature that spreads across all of Sub-Saharan Africa (Greenberg 1983:12–15).

<sup>109</sup> The use of the term “oblique suffix” should not be confused with the use of the same term for a nominal suffix in Dangla which has a function similar to case marking (Shay 1999).

The suffixes are most frequently seen in relative clauses, but can also occur in an independent clause.

- (422) *bās ánē súl:ò jè*  
*bas ánē súl- -rò jē*  
 only(A) PRO:EXCL sit OBL DISC  
 'That's it... we live here.' (appendix 7)

In an independent clause, the oblique suffix can co-occur with the oblique argument it indexes (see also examples (443), (445), and (487) below). However, it is clear that this co-occurrence is not obligatory (sections 9.3 and 9.4). In this way, the morphosyntactic distribution of the oblique suffix in independent clauses is similar to that of the indirect object suffix.

- (423) *kà sàadò jē ìj gérá*  
*kà s-, H -àa -dò jē ìj gérá*  
 S:3.M come PFV OBL DISC PREP village  
 'He came to the village.'

One of the oblique suffixes, which has only been attested with Perfective TAM, has two variants: *-rò* and *-dò*. It appears that the older speaker prefers the former, and the younger speaker the latter. TAM marking only co-occurs with the Perfective oblique suffix if the verb is a monoverb, as in (423). This is the only time another suffix co-occurs with the oblique suffix. The Perfective aspect of verbs with the *-rò/-dò* suffix can also be revealed by the particle *je*, which can only be used in the Perfective (section 7.3.1).

- (424) *dòo gē ánē súldò jē*  
*dòo gē ánē súl- -dò jē*  
 place REL:M PRO:EXCL sit OBL DISC  
 'the place where we moved'

The oblique suffix that is used with Imperfective and Perfect verbs has two variants: *-uggo* and *-eggo*.<sup>110</sup> The latter is only used with monoverbs (section 3.2.1). This suffix never co-occurs with TAM marking on the verb.

<sup>110</sup> One could equally analyze the initial vowel of the suffix as epenthetic and claim that the underlying form is *-ggo*. However, the monoverb oblique suffix cannot be *-ggo*. The initial [e] is the TAM marking of Perfect verbs, but not Imperfective verbs.

- (425) *námá gē kà nòómúg:ò*  
*námá gē kà nǒom- -ùg:o*  
 child REL:M S:3.M play OBL  
 'the child he plays with'

The suffix *-uggo/-eggo* cannot be followed by the Perfective discourse particles, indicating that it cannot be used with Perfective aspect.

- (426) *dòo gē ò tēg:òó (\*je) gì*  
*dòo gē ò t-, L -èg:o jē gì*  
 place REL:M S:1.S eat OBL DISC DEM:M  
 'the place where I ate'

- (427) *tàndē dòo gē ò sēg:òó (\*je) gì*  
*tàndē dòo gē ò s-, H -èg:o jē gì*  
 yesterday place REL:M S:1.S come OBL DISC DEM:M  
 'the place where I came (to/from) yesterday.'

The following two examples indicate that the suffix can be used in the Imperfective and Perfect. Example (428) conveys habitual meaning which is encoded by the Imperfective (section 7.1.1).

- (428) *dòo gē ò bùṅùg:òó gī*  
*dòo gē ò bùṅ- -ùg:o gī*  
 place REL:M S:1.S dive OBL DEM:M  
 'the place where we used to swim'

The verb “to die” in (429) is normally used with Perfect aspect (section 7.1.3).

- (429) *dòo gē kà mótúg:òó gì*  
*dòo gē kà mót- -ùg:o gì*  
 place REL:M S:3.M die OBL DEM:M  
 'the place where he died'

In all of the elicited examples, the noun phrase indexed by the oblique suffix is also overtly stated. The suffix can be used anaphorically, as seen in the following example, which comes from a narrative text (appendix 12).

- (430) *mìj:ó kà gì dē dég:ò ná*  
*mìj:ó kà gì dē d-, L -èg:o ná*  
 person S:3.M DEM:M REL:F kill OBL EQ  
 “The man, what he kills with...” (appendix 12)

The following are examples of the suffixes indicating different semantic roles.

### Accompaniment

- (431) mèjèrè nē ò t̃àadò j̃éè nì  
 mèjèrè nē ò t-, L -āa -dò j̃é nì  
 people REL:PL S:1.S eat PFV OBL DISC DEM:PL  
 'the people I ate with'

- (432) nāmá gē kà j̃òómúg:ò  
 nāmá gē kà j̃òom- -ùg:o  
 child REL:M S:3.M play OBL  
 'the child he plays with'

### Instrument

- (433) kórtó dē kà dúkúrúg:ò íj̃óo d̃ì  
 kórtó dē kà dúkr- -ùg:o íj̃óo d̃ì  
 pot REL:F S:3.M prepare OBL *boule* DEM:F  
 'the pot I make *boule* with'

### Temporal

- (434) j̃àa dē kà ség:ò  
 j̃àa dē kà s-, H -èg:o  
 day REL:F S:3.M come OBL  
 'the day that he came'
- (435) j̃àa dē kà s̃àadò j̃é  
 j̃àa dē kà s-, H -āa -dò j̃é  
 day REL:F S:3.M come PFV OBL DISC  
 'the day he came'
- (436) wókí dē kà j̃úkúg:ò  
 wakit dē kà j̃úk- -ùg:o  
 time(A) REL:F S:3.M stand OBL  
 'the moment he got up'
- (437) j̃àa dē kà mótúg:ò  
 j̃àa dē kà mót- -ùg:o  
 day REL:F S:3.M die OBL  
 'the day he died'

**Goal**

(438) gérá dē kà sàadò jē íj bálál  
 gérá dē kà s-, H -āa -dò jē íj bálál  
 village REL:F S:3.M come PFV OBL DISC ASOC Balili  
 'the village which he came to from Balili'

(439) gérá dē kà lāwdò jē m bálál  
 gérá dē kà lāw- -dò jē íj bálál  
 village REL:F S:3.M return OBL DISC ASOC Balili  
 'the village which he returned to from Balili'

(440) gérá dē kà ség:óó dī  
 gérá dē kà s-, H -èg:o dī  
 village REL:F S:3.M come OBL DEM:F  
 'the village he came from/to'

**Source**

(441) gérá dē kà sàadò jē bálál  
 gérá dē kà s-, H -āa -dò jē bálál  
 village REL:F S:3.M come PFV OBL DISC Balili  
 'the village from which he came to Balili'

(442) gérá dē kà lāwdò jē bálál  
 gérá dē kà lāw- -dò jē bálál  
 village REL:F S:3.M return OBL DISC Balili  
 'the village from which he returned to Balili'

(443) kà sèg:dò bálál  
 kà s-, H -èg:o bálál  
 S:3.M come OBL Balili  
 'He came from Balili.'

**Stative location**

(444) dòo gē ñ tàadò jēé gí  
 dòo gē ñj t-, L -āa -dò jē gí  
 place REL:M S:1.S eat PFV OBL DISC DEM:M  
 'the place where I ate'

(445) kà gándò kítà m máná  
 kà gǎn- -dò kítà ñj máná  
 S:3.M make OBL work PREP bush  
 'He worked in the bush.'

- (446) gérdē      ò      súlúg:ò  
 gérá   dē   ìŋ   súl- -ùg:ò  
 village REL:F S:1.S sit OBL  
 'the village I live in'

### 8.12 Demonstratives

There are three demonstratives in the language. The two singular demonstratives index gender. There is just one plural demonstrative which does not differentiate for gender. There are no clear examples in the data of demonstratives functioning pronominally. Demonstratives typically follow a noun phrase (or pronoun).

**Table 43: Demonstratives**

3.M.S	gì
3.F.S	dì
3.PL	nì

Demonstratives do not differ according to distance. Another construction, the relative marker followed by a deictic adverb (section 9.5.2), is used to distinguish distances.<sup>111</sup>

- (447) dē    āl:í  
 REL:F there  
 'that one over there'

- (448) nē    āl:í  
 REL:PL there  
 'those ones over there'

### 8.13 Inclusive marker

It has been noted several times that the first person plural inclusive reference markers are all bimorphemic.<sup>112</sup> The two morphemes are the dual (inclusive) marker,<sup>113</sup>

<sup>111</sup> A similar strategy is used in Mawa (Hissène, Khamies & James Roberts 2010).

<sup>112</sup> Bimorphemic inclusive pronouns are also seen in Migaama and Lele (Jungrathmayr & Adams 1992:37; Frajzyngier 2001:109–110).

<sup>113</sup> Technically, the dual pronouns are also inclusive (first and second person). A dual exclusive meaning (first and third person) must be expressed with the (plural) exclusive form. However, as a shorthand, the term “inclusive” is used to refer to the first person *plural* inclusive pronoun. In another dialect, Jalking, there is no dual marker. The first person plural pronouns are limited to an inclusive-exclusive distinction. It

which does not present any immediate descriptive or theoretical complications, and an additional morpheme *nà*.<sup>114</sup> This morpheme is also used in the formation of the plural imperative, to be discussed below. The argument for analyzing this morpheme as a clitic is presented in this section. The explicit analysis of this morpheme as a clitic is not meant to suggest that it is the only clitic in the language. It is likely that several other grammatical markers, such as subject pronouns, could also be analyzed as clitics. However, in those cases, the evidence for phonological boundedness is not as overwhelming as in the case of the inclusive marker.

The clitic *nà* is seen in all first person inclusive markers: independent pronouns, subject pronouns, direct and indirect object suffixes (chapter 8), and possessor agreement suffixes (section 6.1.3). The evidence for a bimorphemic analysis is strongest in the subject pronouns, where the inclusive subject pronoun is formed by the combination of a dual subject pronoun before the verb and the inclusive clitic *nà* after the verb (section 8.2). Whether the subject, direct object, or indirect object are first person inclusive, the inclusive clitic occurs after the verb. In the case of the independent pronoun, the inclusive clitic attaches directly to the first person dual independent pronoun to create the first person (plural) inclusive independent pronoun (section 8.1). In the case of the possessor agreement suffix, the inclusive clitic immediately follows the first person dual possessor agreement suffix.

There are at least two environments that show that this morpheme is phonologically bound to the preceding morpheme. When the inclusive marker follows one of the “discourse” particles which can occur after the verb in Perfective TAM, the M tone of the particle is lowered by the L tone of the inclusive marker (see (325) and (326) in section 7.3.1). The other example is the obligatory suppletion (or deletion) of the Perfective and Subjunctive suffixes before the inclusive marker (see (147) and (148) in section 5.4.4).

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may be significant to a diachronic analysis of these markers to note that the plural inclusive pronoun in that dialect (Jalking) has the same form as the dual pronoun in the Jalkiya dialect presented in this work.

<sup>114</sup> Not to be confused with the conjunction *ná* (with H tone) which I have provisionally labeled “equative”.

Despite being phonologically bound, the morphosyntactic behavior of the inclusive marker suggests that it is a clitic, not a suffix. Unlike prototypical affixes, this morpheme can attach to four grammatical categories. Affixes normally attach to only one grammatical category (Zwicky & Pullum 1983). This morpheme can follow an independent pronoun, a verb and its suffixes (chapter 8), the possessor agreement suffix (section 6.1.3), and the Perfective discourse particles (section 7.3.1). The peculiarity of the position of the inclusive marker and the discourse particles is that either order is acceptable. In the few rare examples of the inclusive marker occurring after the discourse particles (examples (325) and (326) in section 7.3.1), it modifies the subject and there are no non-TAM suffixes (e.g., direct or indirect object suffixes) on the verb. Regardless of how this construction may be restricted syntactically, the fact that the inclusive marker and the discourse particles can occur in either order is strongly suggestive that both are syntactically free morphemes, viz., clitics.

One reason to hesitate with an analysis of the morpheme *nà* as a clitic, not an affix, is that it can occur between an indirect object suffix and the marker for third person direct objects following an indirect object suffix (section 8.5). Examples have been found of the inclusive marker before and after the direct object marker when the inclusive marker is modifying the indirect object suffix. (It is not certain that the same flexibility in the ordering exists when the inclusive marker modifies the subject.) This forces either an analysis of the direct object markers as clitics (as they are presented here) or a claim that the inclusive clitic can infix in this particular construction.

(449) ka gomija=na=ga ~ ka gomija=ga=na  
 ka gom- -ja =na =ga ka gom- -ja =ga =na  
 S:3.M hit IO:DUAL INCL DO:3.M S:3.M hit IO:DUAL DO:3.M INCL  
 'He hit him for us.'<sup>115</sup>

The inclusive clitic is also used in the Subjunctive mood, but not always for a first person inclusive subject. In the imperative mood, where there is no overt subject, the inclusive clitic on the verb indicates that the subject is second person plural. The examples below are repeated from section 7.1.4.

<sup>115</sup> These examples do not include tone marking because they were not recorded.



(450) kólú	kól=nà
kól- -ù	kól- -ù =nà
go SBJV	go SBJV INCL
'Go (singular)!'	'Go (plural)!'

Those two examples on their own might suggest that there are two Subjunctive suffixes, and that the plural Subjunctive suffix happens to be homophonous with the inclusive marker. Though the *-ù* suffix of the Subjunctive and the inclusive suffix *nà* do not co-occur, they do not occupy the same position in the morphology. Unlike the Subjunctive suffix, the inclusive *nà* remains after a direct object suffix.

(451) gòmga	gòmga=nà
gòm- -gà	gòm- -gà =nà
hit DO:3.M	hit DO:3.M INCL
'Hit him! (SG SUBJECT)'	'Hit him (PL SUBJECT)'

The explanation for the complementary distribution is that, in the plural imperative construction with no direct object suffix, *kólnà*, the Subjunctive suffix suppletes to null before the inclusive clitic, as it does before all suffixes (sections 5.4.4 and 8.6).

The Subjunctive mood is also used in complement clauses following certain verbs such as “want” and “allow” (sections 7.1.4 and 10.4). If the subject of the verb in the subordinate clause is first person inclusive, the inclusive clitic is obligatory on the subordinate verb, and the Subjunctive suffix does not appear.

(452) jì	jáp:ā	í	gàń=nà	kítà
ìŋ	jáp:- -à	íŋ	gǎn- -ù	=nà kítà
S:1.S	want PFV	S:DUAL	make SBJV INCL	work
'I want us (all) to work.'				

When the subject of the subordinate clause is second person plural, the inclusive clitic is optional.

(453) kà	jáp:à	ní	gànú/gàń=nà	kítà
kà	jáp:- -à	ní	gǎn- -ù (=nà)	kítà
S:3.M	want PFV	S:2.PL	make SBJV INCL	work
'He wants you (all) to work.'				

The inclusive clitic is not used if the subject of the subordinate clause is first person exclusive or third person plural. The examples below demonstrate that the Subjunctive suffix *-ù* is not inherently singular.

(454) kì jáp:à ánē gànú kítà  
 kì jáp:- -à ánē gǎn- -ù kítà  
 S:2.M want PFV PRO:EXCL make SBJV work  
 'You want us to work.'

(455) kì jáp:à nì gànú kítà  
 kì jáp:- -à nì gǎn- -ù kítà  
 S:2.M want PFV S:3.PL make SBJV work  
 'You want them to work.'

There is one example where the subject is an inclusive independent pronoun (including the inclusive clitic). In this example, the inclusive is repeated after the verb, even though the verbal suffix is not inclusive. In this case, the inclusive clitic appears to function as an agreement marker.

(456) ájà=nà ò dóséjì=nà ñ gégò  
 ájà =nà ñ dóos- -o -jì =nà ñ gérá -gò  
 PRO:DUAL INCL FUT guard INF POSS:3.M INCL PREP home POSS:2.M  
 'We will guard your home.'

In summary, the inclusive marker is used in combination with a first person dual marker, in both the declarative mood and the subjunctive mood, to convey a first person plural inclusive meaning. It is also used in the Subjunctive mood to convey a second person plural subject, either in the imperative use with no subject, or (optionally) in a subordinate clause with a second person plural subject pronoun.

### **Part III : Syntax**

The following three chapters cover the basic syntactic structures seen in the language. Chapter 9 outlines the properties of the most common grammatical relations, as well as the distribution of adverbs, negation, and a marker of epistemic (dubitative) modality. Chapter 10 introduces several types of subordinate clauses and uses the scope of negation as a grammatical test for distinguishing different syntactic structures. Chapter 11 briefly sketches a few possible types of nonverbal predicates and the most common strategies for formulating questions. This third part of the thesis is followed by a final conclusion in chapter 12.

## Chapter 9 : Simple sentence

This chapter briefly describes the structure of the simple sentence, viz., single-clause declarative sentences with a verbal predicate. This chapter also examines some of the defining features of grammatical relations in the language. The language is typical of other African languages in which the core grammatical relations of subject and object are relatively transparent (Creissels et al. 2008:87). Nonverbal predicates and some complex sentence types are introduced in chapters 10 and 11.

As commonly seen in Chadic languages, the basic word order is undoubtedly SVO (Frajzyngier 1996:15; Newman 2006:199; Schuh 2003:58). In direct elicitation, the speakers did not produce any other word order. However, in the natural texts found in the appendices, other word orders are used. The function of these alternate word orders will not be studied here.

### 9.1 Subject

The grammatical function of subject can be defined as any constituent that is encoded in the same way as the single argument of an intransitive verb (in an unmarked discourse context).<sup>116</sup> This function is encoded by word order (the subject precedes the predicate) and by a unique pronominal paradigm only used for subjects (section 8.2). The subject is normally associated with the agent of a verb, but it is also seen in nonverbal predicates with no agent (section 11.1) and as the patient of unaccusative (labile) verbs, section 7.5) and intransitivized verbs (section 8.9). An overt subject is not obligatory, and can be dropped whenever the speaker deems the context clear enough to determine the subject. This is true even when the subject is not the same as in a previous clause (section 10.5).

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<sup>116</sup> There are three examples in the narrative texts of the verb “remain” with what appears to be a post-verbal subject: lines 22 and 23 in appendix 12 and line 69 in appendix 13.

## 9.2 Direct object

In the unmarked word order, a nominal direct object immediately follows the verb and its particles, occurring before a nominal indirect object (if present). Direct objects are frequently the patient of transitive verbs. A direct object following an Infinitive verb is coded in a slightly different way than a direct object following a finite verb.

### 9.2.1 Objects after finite verbs

After a finite verb (all forms except the Infinitive), direct objects are unmarked (i.e., no preposition), and can be indexed by a direct object suffix (section 8.3). If a locative is a proper noun or a possessive pronoun, it can also immediately follow the verb with no preposition (section 9.4). One difference between these locative arguments and direct objects is that the locative is indexed by a separate verbal suffix (section 8.11). Therefore, following a finite verb, the direct object is crucially defined as a constituent that can be indexed by a direct object suffix.<sup>117</sup>

### 9.2.2 Objects after Infinitive verbs

When the verb is in the Infinitive (nominal) form, nominal direct objects are marked by an oblique preposition, such as in the Future tense.

(457) ìnù    ò    gǎnó    ò    íṅó  
          ìnù    ò    gǎn-    -o    ìṅ    íṅó  
          PRO:1.S    FUT    make    INF    PREP    *boule*  
          'I will make *boule*.'

An Infinitive verb is also found in an adverbial clause (section 10.2), and can function as a participle (section 7.4.3). The following examples also show that the infinitival verb in these two types of constructions does not take the direct object suffixes that occur on other verbs, but instead uses the nominal possessor agreement suffixes to index an object or indirect object (section 8.7).

<sup>117</sup> An analogous distinction between objects and locatives is seen in Mina (Frajzyngier, Johnston & Edwards 2005:92).

- (458) ìnù n kóló ò dúwéjì ò ùmàr  
 ìnù ò kól- -o ò dúw- -o -jì ò ùmàr  
 S:1.S FUT go INF FUT see INF POSS:3.M PREP Oumar  
 'I will go see Oumar.'

- (459) jì jègà wòlégètì ò mòosó  
 ò j-, LH -ēe -gà wòol- -o -gètì ò mòosó  
 S:1.S hear PRF DO:3.M slaughter INF POSS:3.F PREP COW  
 'I heard him slaughtering the cow.'

Indirect objects are also marked with an oblique preposition. Following an Infinitive verb, the only formal difference between direct objects and indirect objects is word order: direct object before indirect object.

- (460) músà ò bédíjì ò mánjò ò ùmàr  
 músà ò béd- -í -jì ò mánjò ò ùmàr  
 Moussa FUT give INF POSS:3.M PREP mango(A) PREP Oumar  
 'Moussa will give a mango to Oumar.'

### 9.3 Oblique arguments

Nominal indirect objects and other oblique arguments are marked by one of three prepositions. These prepositional phrases are placed after direct objects (if present) in the unmarked word order.

#### 9.3.1 Oblique preposition (indirect objects)

The oblique preposition marks indirect objects and other oblique arguments. Indirect objects encode the semantic roles of recipient and beneficiary, and can be indexed by an indirect object suffix (section 8.4). However, not all arguments marked by the oblique preposition can be indexed by the indirect object suffix. Co-occurrence with an indirect object suffix distinguishes indirect objects, as in examples (461) and (462), from other arguments preceded by the oblique preposition, as in example (463).

#### Recipient

- (461) kà lèjì jē kórtó ò ùmàr  
 kà l-, L -èjì jē kórtó ò ùmàr  
 S:3.M send IO:3.M DISC pot PREP Oumar  
 'Moussa sent a pot to Oumar.'

**Beneficiary**

- (462) kà gànèj kítà m̀ bàajì  
 kà gǎn- -èjì kítà ìŋ bāa -jì  
 S:3.M make IO:3.M work PREP relative POSS:3.M  
 'He works for his brother.'

The oblique preposition also precedes oblique arguments encoding location, with the exception of some inherently locative arguments discussed in section 9.4. The same preposition is used in nonverbal predicates indicating location (section 11.1.4).

**Location**

- (463) kà gàndà gànég kítà m̀ bājájì  
 kà gàndà gǎn- -ēji kítà ìŋ bājá -jì  
 S:3.M inside make IMPF work PREP field POSS:3.M  
 'He is working in his field.'

The oblique preposition is found before direct objects when the verb is in the Infinitive form (section 9.2.2). The same preposition precedes a possessor following a noun with a possessor agreement suffix (section 6.1.3).

*9.3.2 Associative preposition*

The associative preposition *íŋ* only differs from the oblique preposition in tone. It precedes oblique arguments with the semantic role of accompaniment or instrument. It is also used in some temporal and locative adverbial phrases. As in other Chadic languages, there is no distinction in the marker for the conjunction of noun phrases (section 6.4) and the associative prepositional phrase. Frajzyngier's cross-linguistic work reveals that many, if not most, Chadic languages use the same marker for both functions (1996:27).

**Accompaniment**

- (464) ìnù ñ kóló íŋ kíl:à  
 ìnù ñ kól- -o íŋ kíl:à  
 PRO:1.S FUT go INF ASOC PRO:2.M  
 'I will go with you.'
- (465) kà gànégì kítà m̀ bāajì  
 kà gǎn- -ēji kítà íŋ bāa -jì  
 S:3.M make IMPF work ASOC relative POSS:3.M  
 'He works with his brother.'

**Instrument**

- (466) kà tēj íjò íj átì mèsìngà  
 kà t-, L -ēji íjò íj átá -jì mèsìngà  
 S:3.M eat IMPF *boule* ASOC arm POSS:3.M left  
 'He's eating *boule* with his left hand!'

The associative preposition is also used in some temporal adverb phrases (section 9.5.1).

- (467) ìnù ñ kóló ìn máná m bònṭè  
 ìnù ñ kól- -o ìj máná íj bònṭè  
 PRO:1.S FUT go INF PREP bush ASOC morning  
 'I will go to the bush in the morning.'

- (468) íj géegé músà ìn máná  
 íj géegé músà ìj máná  
 ASOC today Moussa PREP bush  
 'Today, Moussa is in the bush.'

Following a locative adverb, the associative preposition introduces the element functioning as the deictic center of the locative adverb (section 9.5.2).

### 9.3.3 Purpose preposition: *tà*

The purpose preposition *tà* encodes the motivation for the predicate. This word cannot be considered a verb since it is monomoraic, cannot function as a predicate, and does not take any verbal inflection. It can function as a preposition or as a subordinating conjunction. This preposition is also used as part of the question word *tà mó* “why” (literally “for what”). A similar preposition is seen in Mupun and Gidar (Frajzyngier 1993:148, 226, 373; 2008:228, 244). When functioning as a preposition, it can be followed by noun phrase, as in (469), or an Infinitive (nominalized) verb, as in (470) and (471).

- (469) wòolēj nópúnō tà ít  
 wòol- -ēji nópúnò tà ít  
 slaughter IMPF goat PURP feast(A)  
 'They are slaughtering a goat for the feast.'



(470) *nárēj àm:í tà ís:ō ò nándí*  
*nār- -ēji àm:í tà ís:- -o ò nándí -jì*  
 search IMPF water PURP wash INF PREP children.PL POSS:3.M  
 'He's looking for water to wash his children.'

(471) *tàa bàatá tà gánó pàagó*  
*t-, L -aa bàatá tà gǎn- -o pàa- -gú*  
 eat SBJV very PURP make INF big N:M  
 'You must eat a lot to be fat.'

Like an indirect object, the purpose can also be indexed with an indirect object suffix (section 8.4).

(472) *kà mótē tà ìnù*  
*kà mót- -ē tà ìnù*  
 S:3.M die PRF PURP PRO:1.S  
 'He died because of me'

(473) *kà mótáw*  
*kà mót- -áw*  
 S:3.M die IO:1.S  
 'He died because of me.'

However, the prepositional phrase is not considered an indirect object since it can co-occur with an indirect object.

(474) *bèdèj jē nópúnò m músà tà ìnù*  
*bèd- -èjì jē nōpúnò ò músà tà ìnù*  
 give IO:3.M DISC goat PREP Moussa PURP PRO:1.S  
 'He gave a goat to Moussa for me.'

When the purpose preposition is present in a clause together with an indirect object, only the indirect object can be indexed by an indirect object suffix.

(475) \* *bedaw je nopuno m musa ta inu*  
*bèd- -àw jē nōpúnò ò músà tà ìnù*  
 give IO:1.S DISC goat PREP Moussa PURP PRO:1.S  
 for: 'He gave a goat to Moussa for me.'

More than one *tà* preposition cannot appear in the same clause. This suggests that the preposition marks oblique arguments, not adjuncts, since adjuncts can typically be freely multiplied (Kroeger 2005:58–60).

- (476) mārēj t̄à tí (\*t̄à ìnù )  
 mār- -ēji t̄à t-, L -í t̄à ìnù  
 hunt IMPF PURP eat INF PURP PRO:1.S  
 'They're hunting for something to eat (\*for me).'

When the preposition *t̄à* is followed by a noun phrase, that constituent can also be interpreted as the beneficiary of the action.

- (477) ìŋ gōrēj táwá t̄à tíl:à  
 ìŋ gōr- -ēji táwá t̄à tíl:à  
 S:1.S buy IMPF millet PURP PRO:3.F  
 'I bought millet for her.'

However, that interpretation is likely an inference, i.e., if she caused the buying, then the item purchased is likely for her benefit. The beneficiary role is more naturally encoded by the oblique preposition, as in (478). This contrasts with (479), which uses the preposition *t̄à* to explicitly encode the purpose or motivation of the action. A similar situation exists in Mupun (Frajzyngier 1993:227).

- (478) kà ḡanējī kítà ìn bàajì  
 kà ḡan- -ēji kítà ìŋ b̄aa -jì  
 S:3.M make IMPF work PREP relative POSS:3.M  
 'He works for his brother (for his brother's benefit).'

- (479) kà ḡanējī kítà t̄à bàajì  
 kà ḡan- -ēji kítà t̄à b̄aa -jì  
 S:3.M make IMPF work PURP relative POSS:3.M  
 'He works because of his brother. (His brother makes him work.)'

The noun phrase following the *t̄à* preposition cannot be the agent of the action. The unaccusative (labile verb) construction in (480) has a subject with the semantic role of patient (section 7.5). The noun phrase following the purpose preposition still cannot be the agent of the action.

- (480) gólmójù áré t̄à k̄al:à  
 gólmó -ju ár- -ē t̄à k̄al:à  
 house POSS:1.S burn PRF PURP PRO:3.M  
 'My house burned up because of him.'  
 \*'My house was burnt up by him.'

The purpose preposition can also function as a subordinating conjunction. In these constructions the preposition is optional. When absent, its meaning is inferred.

(481) kà kólǵà sídí (tà) dèjì mótē  
 kà kól- -ǵà sídí tà dèjá -jì mót- -ē  
 S:3.M go PROG home PURP father POSS:3.M die PRF  
 'He's going home because his father died.'

(482) ís:ājó ís:ō (tà) kúlúwōǵú  
 ís:- -ā -jó ís:- -o tà kúlw- -o -ǵú  
 bathe IMPF DTRV bathe INF PURP be.dirty INF N:M  
 'He's bathing himself because he is dirty.'

#### 9.3.4 Prepositions of relative location

The direction or static location of an action or state can be specified by a series of two prepositional phrases. The first specifies the relative location by giving a noun (body part) with a possessor agreement suffix indexing the noun of the second prepositional phrase, which encodes the deictic center of the expression. The use of body parts in locative prepositional phrases is seen in many other Chadic languages and is common in African languages in general (Creissels et al. 2008:124).<sup>118</sup>

(483) kà wōónìǵà péesí òn báltì ñ ǵólmó  
 kà wōon- M -ǵà péesí ñ báltá -jì ñ ǵólmó  
 S:3.M tie IMPF DO:3.M horse PREP back POSS:3.M PREP house  
 'He is tying up the horse behind the house.'

(484) súlú òn bàl:íjì ( ñ dèjù )  
 súl- -ù ñ bàl:í -jì ñ dèjá -jù  
 sit SBJV PREP side POSS:3.M PREP father POSS.1.S  
 'Have a seat next to my father.'

(485) súlú òn bàl:ígètì ( ñ íjù )  
 súl- -ù ñ bàl:í -gètì ñ íjá -jù  
 sit SBJV PREP side POSS:3.F PREP mother POSS.1.S  
 'Have a seat next to my mother.'

<sup>118</sup> Chadic examples include: Migaama (Jungrathmayr & Adams 1992:59), Mukulu (Jungrathmayr 1990:40), Kera (Camburn 1984:19), Gidar (Frajzyngier 2008:211), Margi (Hoffman 1963:254, 260), Lele (Frajzyngier 2001:151), and Miya (Schuh 1998:213).

## 9.4 Locatives

The coding of locative constituents differs significantly according to whether the locative is a common noun or proper noun.<sup>119</sup> Common nouns in a locative function are always preceded by the oblique preposition *ìṅ*. Proper nouns (e.g., names of places) are generally not marked by a preposition, except when encoding the source. In that case, they are normally marked with the associative preposition *íṅ*. Table 44 summarizes the different ways locatives are marked.

**Table 44: Encoding of locative constituents**

	<i>Common nouns</i>			<i>Proper nouns</i>		
	<i>goal</i>	<i>source</i>	<i>static</i>	<i>goal</i>	<i>source</i>	<i>static</i>
<i>non-motion</i>	--	--	PREP	--	--	∅
“go”	PREP	PREP	--	∅	ASOC	--
“come”	PREP	PREP	--	∅	∅ / ASOC	--

### 9.4.1 Common nouns

Common nouns are always preceded by the oblique preposition when in a locative function. A single locative constituent after a non-motion verb is interpreted as the static location where the event occurred.

(486) *kà gǎndò kítà ìṅ mánjá*  
*kà gǎn- -dò kítà ìṅ mánjá*  
 S:3.M make OBL work PREP bush  
 'He worked in the bush.'

Following a verb of motion encoding motion away from the deictic center (the “go” type), a single locative constituent (prepositional phrase) is interpreted as the goal.

(487) *kà kóldò jē ìṅ gérá*  
*kà kól- -dò jē ìṅ gérá*  
 S:3.M go OBL DISC PREP village  
 'He went to the village.'

When a single locative constituent follows a “go” type verb, it is always interpreted as the goal, not the source—even though the source is marked with the same

<sup>119</sup> A similar distinction between proper and common nouns is seen in East Dangla (Shay 1999:142–144).

preposition. The speakers only interpreted a locative constituent marked with the oblique preposition (common noun) as the source, if another locative constituent specified the goal.

- (488) kà gòréjì mèbrà ìn máná  
 kà gǒr- -ēji mèbrà ìn máná  
 S:3.M run IMPF Mebra PREP bush  
 'He ran to Mebra from the bush.'

There is ambiguity when a single locative constituent (common noun preceded by an oblique preposition) follows a verb of the “come” type—a verb of motion encoding motion towards the deictic center. The ambiguity is resolved by the context. If the common noun in the prepositional phrase is identical to the deictic center, it is the goal. If it is not the deictic center, it is the source.

- (489) tì sèj m máná  
 tì s-, H -ēji ìn máná  
 S:3.F come IMPF PREP bush  
 'She is coming to/from the bush.'

If the motion verb is in the Infinitive, the coding of locatives follows the same pattern. Common nouns are preceded by an oblique preposition.

- (490) bònṭè ìnù ñ kóló ìn máná  
 bònṭè ìnù ñ kól- -o ìn máná  
 tomorrow PRO:1.S FUT go INF PREP bush  
 'Tomorrow I should go out in the bush.'

#### 9.4.2 *Proper nouns*

Proper nouns (e.g., names of villages) and possessive pronouns (section 8.10) are not encoded in the same way as other locative noun phrases. A proper noun indicating the location where an event or situation takes place directly follows the verb with no preposition. This is identical to the encoding of nominal direct objects (section 9.2.1).

- (491) kà sùlè mánḡò  
 kà sùl- -ē mánḡò  
 S:3.M sit PRF Mongo  
 'He lives in Mongo.'

- (492) ràmà āt:ē mǎlpì  
 ràmà ăt:- -ē mǎlpì  
 Rama remain PRF Melfi  
 'Rama stayed in Melfi.'

A proper noun encoding the goal of a verb of motion away from the deictic center is also marked in the same way as a nominal direct object, viz., no preposition.

- (493) ìŋ kólē mǎlpì ìŋ kólē bálál  
 ìŋ kól- -ē mǎlpì ìŋ kól- -ē bálál  
 S:1.s go PRF Melfi S:1.s go PRF Balili  
 'I went to Melfi and then I went to Balili.'

To code the source, a locative in a prepositional phrase can be added after the unmarked locative constituent. Even if the locative encoding the source is a proper noun, it is encoded by the associative preposition.

- (494) kà kóléjì bálál m mǎŋgò  
 kà kól- -ējì bálál ìŋ mǎŋgò  
 S:3.M go IMPF Balili ASOC Mongo  
 'He went from Mongo to Balili.'

This prepositional phrase can also be sentence-initial. Since word ordering is generally fixed for non-subject arguments (after the verb), this suggests that the prepositional phrase encoding the source with this type of verb of motion is an adjunct, not an argument.

- (495) ìŋ gèjì kà kólga m mǎŋá  
 ìŋ gèr- jì kà kól- -gà ìŋ mǎŋá  
 ASOC POSS POSS:3.M S:3.M go PROG PREP bush  
 'From his place, he is going to the bush.'

The same structure of the verb “go” is used for all verbs that can encode motion away from the deictic center.

- (496) kà láawéjì bálál m mǎŋgò  
 kà láaw- -ējì bálál ìŋ mǎŋgò  
 S:3.M return IMPF Balili ASOC Mongo  
 'He returns to Balili from Mongo.'

A single unmarked proper noun following the verb “come” can encode either the goal or the source. As with common nouns, this ambiguity is resolved by the context.

- (497) kà séj bálál  
 kà s-, H -ēji bálál  
 S:3.M come IMPF Balili  
 'He comes from/to Balili.'

This ambiguity can be avoided by encoding the locative with an associative preposition, which can only be interpreted as the source (as with all verbs of motion).

- (498) kà sèj m bálál  
 kà s-, H -ēji íŋ bálál  
 S:3.M come IMPF ASOC Balili  
 'He comes from Balili.'

When only one unmarked proper noun follows the verb “come” it can be interpreted as either the goal or the source. When two proper noun locatives are present, the goal is unmarked and the source marked with the associative preposition. There is no ambiguity.

- (499) kà séj bálál m máŋgò  
 kà s-, H -ēji bálál íŋ móŋgò  
 S:3.M come IMPF Balili ASOC Mongo  
 'He is coming to Balili from Mongo.'

Unlike other verbs, a single unmarked locative proper noun after the verb *gūsō* “leave/go out” encodes the source, and cannot encode the goal. The same is true if the locative is preceded by an associative preposition.

- (500) kà gūsē (í) ándì  
 kà gūs- -ē íŋ ándì  
 S:3.M go.out PRF ASOC Andi  
 'He left (from) Andi.'

However, if both an unmarked proper noun and a proper noun preceded by an associative preposition are present, this verb follows the pattern of the verb “go”. The unmarked constituent is not the source, but the goal. The locative marked by the associative preposition is the source.

- (501) kà gūsē ándì íŋ gìlì  
 kà gūs- -ē ándì íŋ gìlì  
 S:3.M go.out PRF Andi ASOC Gilli  
 'He left from Gilli to go to Andi.'

Proper nouns and possessive pronouns encoding the goal are never preceded by a preposition, even when the verb is in the Infinitive form. In contrast, nominal direct objects, which are normally unmarked, must be preceded by an oblique preposition if the verb is Infinitive (section 9.2.2).

(502) ìnù ò kóló (\*ìṅ) bálál  
 ìnù ò kól- -o ìṅ bálál  
 PRO:1.S FUT go INF PREP Balili  
 'I will go to Balili.'

(503) bònṭè ò ò kóló gèrgò  
 bònṭè ìṅ ò kól- -o gèr- -gò  
 tomorrow S:1.S FUT go INF POSS POSS:2.M  
 'Tomorrow I should go to your place.'

## 9.5 Adverbs

Adverbs are a closed set of lexical items whose primary function is to modify verbs by giving information about the time, location, or manner of the event. I distinguish adverbs from prepositional phrases with an adverbial function.

### 9.5.1 Time adverbs

Time adverbs are adverbs whose primary function is to give information about the temporal nature of the action. Time adverbs occur most frequently in clause-initial or clause-final position (before the negative marker). Notice in the following example (504) that the sentence-initial adverb is interpreted as “tomorrow”, and the same word, after an associative preposition, is interpreted as “in the morning” (an adverbial phrase).

(504) bònṭè ìnù ò kóló m bònṭè  
 bònṭè ìnù ò kól- -o íṅ bònṭè  
 morning PRO:1.S FUT go INF ASOC morning  
 'I will leave tomorrow morning.'

(505) tàndē kà bükàtì jē mēèjì  
 tàndē kà búk- -àtì jē mēé -jì  
 yesterday S:3.M speak IO:3.F DISC woman POSS:3.M  
 'Yesterday he spoke to his wife.'



- (506) sòndé kà déjī dī  
 sòndé kà d-, H -ēji d-, H -í  
 now S:3.M walk IMPF walk INF  
 'He is walking right now.'
- (507) ñ kóléjī rùkúm bòntè dō  
 ñ kól- -ēji rùkúm bòntè dō  
 S:1.s go IMPF Roukoum tomorrow NEG  
 'I'm not going to Roukoum tomorrow.'
- (508) pájídí ìnù jì pēdó m̄ mák:à  
 pájídí ìnù ñ jéd- -o ñ mák:à  
 next.year PRO:1.S FUT cultivate INF PREP peanuts  
 'Next year, I will grow peanuts.'
- (509) gànájà=nà íjò sòk:á  
 gǎn- -àja =nà íjò sòk:á  
 make IO:DUAL INCL *boule* again  
 'Make us some more *boule*.'

At least one time adverb can occur after the verb and before a locative constituent.

- (510) ñ kólga sòk:á bálál  
 ñ kól- -ga sòk:á bálál  
 S:1.s go PROG again Balili  
 'I'm going to Balili again.'

### 9.5.2 Locative adverbs

There are at least six locative adverbs which can follow the verb.

**Table 45: Locative adverbs**

gàndà	'inside'
lúwá	'above/up'
lòkùdó	'below/down'
wòntó	'close'
wòsùgó	'far'
gògó	'back'

Locative adverbs follow the verb and object (if present). They can be followed by a prepositional phrase with the oblique or associative preposition (as selected by the adverb) encoding the element that functions as the deictic center of the locative adverb.

(511) g̃anēj́ kítà g̃andà ñ gólmėj́  
 g̃an- -ēj́ kítà g̃andà ñ gólmó -j́  
 make IMPF work inside PREP house POSS:3.M  
 'He's working inside his house.'

(512) tì ìsēj́ pēj́é g̃andà ñ bulka  
 tì ìs- -ēj́ pēj́é g̃andà ñ bulka  
 S:3.F pour IMPF milk inside PREP container  
 'She pours the milk into the container.'

(513) kà ñ kóló lúwá  
 kà ñ kól- -o lúwá  
 S:3.S FUT go INF above  
 'He will go over.'

(514) kà j̃ibēj́ lúwá  
 kà j̃ib- -ēj́ lúwá  
 S:3.M throw IMPF above  
 'He throws it up in the air.'

(515) kà dēj́ lòkùdó  
 kà d-, H -ēj́ lòkùdó  
 S:3.S walk IMPF below  
 'He's walking down below.'

(516) kà j̃ibėj́ lòkùdó  
 kà j̃ib- -ēj́ lòkùdó  
 S:3.M throw IMPF below  
 'He throws it down.'

(517) kà sùlėj́ wòntó j́ jámíjè  
 kà sùl- -ēj́ wòntó ñ j̃aamije  
 S:3.M sit IMPF close ASOC mosque(A)  
 'He lives close to the mosque.'

(518) ìŋ kólǵà wòsùgó  
 ìŋ kól- -ǵà wòsùgó  
 S:1.S go PROG far  
 'I'm going far away.'

(519) kà sùléj̄ wòsùgó jí jámíjé  
 kà sùl- -ēji wòsùgó íŋ jaamije  
 S:3.M sit IMPF far ASOC mosque(A)  
 'He lives far away from the mosque.'

(520) búlmí gǎléj̄i gògó tíl  
 búlmí ǵǎl- -ēji gògó tíl  
 hyena fall IMPF back bang  
 The hyena fell back—bang! (appendix 12)

There are three deictic adverbs—one meaning “here” and two meaning “there”.

The difference between the two translated “there” is unknown.

(521) kà sùléj̄ kǎjē  
 kà sùl- -ēji kǎjē  
 S:3.M sit IMPF here  
 'He lives here.'

(522) kà sùléj̄ āl:í  
 kà sùl- -ēji āl:í  
 S:3.M sit IMPF there  
 'He lives there.'

(523) kà sùléj̄ kàk:írèŋ  
 kà sùl- -ēji kàk:írèŋ  
 S:3.M sit IMPF there  
 'He lives there.'

### 9.5.3 *Adverbs of manner*

There are very few, if any, inherent adverbs of manner. The words that have been found in an adverbial function also behave like nouns in that they can take adjectival, plural, and possessor agreement suffixes. It is common for Chadic languages to derive adverbs from other lexical categories, especially through reduplication (Al-Hassan 1998:197; Frajzyngier 2002:232). However, the few examples of reduplication seen might encode intensification, as in Gidar (Central Chadic) (Frajzyngier 2008:231).

- (524) déjī pèŋ (pèŋ)  
 d-, H -ēji pèŋ pèŋ  
 walk IMPF speed speed  
 'He walks quickly.'
- (525) kà gǎnéjī kítà pàk:áŋ  
 kà gǎn- -ēji kítà pàk:à -áŋ  
 S:3.M make IMPF work bad NOM  
 'He works badly.'
- (526) kà gǎnéjī kítà písà  
 kà gǎn- -ēji kítà písà  
 S:3.M make IMPF work beauty  
 'He works well.'
- (527) ánē téjī páníŋ n̄ dāntè  
 ánē t-, L -ēji páníŋ íŋ dāntè  
 PRO:EXCL eat IMPF one ASOC afternoon  
 'We eat together in the afternoons.'
- As in many African languages, meaning commonly conveyed by adverbs in other languages can be expressed by an oblique argument (Creissels et al. 2008:126). These adverbial expressions follow the verb and direct object (if present).
- (528) tì dōkréjī ípó m̄ málàŋ  
 tì dōkr- -ēji ípó íŋ málàŋ  
 S:3.F prepare IMPF *boule* ASOC slowness  
 'She prepares *boule* slowly.'
- (529) kà déj m̄ málàŋ  
 kà d-, H -ēji íŋ málàŋ  
 S:3.M walk IMPF ASOC slowness  
 'He walks slowly.'

The locative adverb *gàndà* “inside” can be used before the verb to explicitly encode or emphasize the continuing nature of the event or situation

(530) *kà m̀ mótó b̀òntè*  
*kà ñ̀ mót- -o b̀òntè*  
 S:3.M FUT die INF tomorrow

*tò kà g̀andà g̀anéj kítà m̀ b̀ájáì*  
*tò kà g̀andà g̀ǎn- -éjì kítà ñ̀ b̀ájá -jì*  
 COND S:3.M inside make IMPF work PREP field POSS:3.M  
 'He will die tomorrow as he works in his field.'

It can only co-occur with Imperfective or Progressive verbs.

(531) *kà (\*g̀andà) s̀ulá t̄a m̀ángò*  
*kà ( g̀andà) s̀ul- -à t̄a m̀óngò*  
 S:3.M inside sit PFV DISC Mongo  
 'He lived in Mongo.'

(532) *ìnú (\*g̀andà) ñ̀ kóló*  
*ìnú g̀andà ñ̀ kól- -o*  
 PRO:1.S inside FUT go INF  
 'I will go. / I should go.'

(533) *kà (\*g̀andà) mótē*  
*kà g̀andà mót- -ē*  
 S:3.M inside die PRF  
 'He died.'

The adverb *kée* appears to be borrowed from Chadian Arabic.<sup>120</sup> It occurs frequently in the recorded texts found in the appendices. It is often lengthened beyond the normal length of a long vowel. It encodes the continuation of the event for some unspecified amount of time. It has only been attested with Future, Imperfective, and Perfect verbs.

(534) *nì tádē kée s̄aa dópátí b̀dì dē bálál*  
*nì tád- -ē kée s-, H -àa dóp- -a -tì jē b̀dì dē bálál*  
 S:3.PL climb PRF DUR come PFV find IMPF DO:3.F DISC valley REL:F Balili  
 They climbed until they found the valley of Balili. (appendix 10)

<sup>120</sup> The gloss given in the Chadian Arabic-English lexicon is: “*adv.* like that” (Heath 2006).

- (535) kī n dí kée:  
 kì ñ d-, H -íi kée  
 S:2.M FUT walk INF DUR(A)  
 'You will continue walking.' (appendix 8)

9.5.4 *Predicate-focused and constituent-focused “also”*: *ká* and *ków*

There are two words for “also”: *ká* and *ków*. The words are essentially synonymous, but differ in their grammatical function. The word *ká* normally modifies a predicate (adverbial), while *ków* modifies a specific constituent of the clause, e.g., a noun phrase or adverb. The adverbial *ká* always occurs before the verb (or the Future auxiliary if present). It normally occurs after the subject, but in example (542) it occurs before a pronominal subject. The focus of this marker is on the predicate. Example (536) would be the appropriate response to the question, “What else will Moussa do?”

- (536) músà ká ñ kóló  
 músà ká ñ kól- -o  
 Moussa also FUT go INF  
 'Moussa will also go.'

Example (537) would be the answer to the question, “Who else will go?” The word *ków* focuses on the noun phrase, whereas *ká* focuses on the predicate. Despite appearing to occupy the same position, *ków* actually occurs at the end of the noun phrase. This word always follows the constituent it modifies.

- (537) músà ków ñ kóló  
 músà ków ñ kól- -o  
 Moussa also FUT go INF  
 'Moussa also will go.'

When the focus of “also” is limited to an object or indirect object, only *ków* is permitted.

- (538) músà tējī íńó músà tējī rís ków/\*ká  
 músà t-, L -ēji íńó músà t-, L -ēji rís ków/\*ká  
 Moussa eat IMPF *boule* Moussa eat IMPF rice(A) also  
 'Moussa eats *boule*. He eats rice as well.'

(539) músà ká tējī rís  
 músà ká t-, L -ēji rís  
 Moussa also eat IMPF rice(A)  
 'Moussa also eats rice (besides selling it.)'

(540) músà m̀ b̀d̀íj̀ì m̀ m̀ánj̀ò ñ úm̀àr  
 músà ñ b̀d̀- -í -j̀ì ñj̀ m̀ánj̀ò ñj̀ úm̀àr  
 Moussa FUT give INF POSS:3.M PREP mango(A) PREP Oumar

kà m̀ b̀d̀íg̀èt̀ì ñ s̀áj̀ìd̀è ków/\*ká  
 kà ñ b̀d̀- -í -g̀èt̀ì ñj̀ s̀áj̀ìd̀è ków/\*ká  
 S:3.M FUT give INF POSS:3.F PREP Sayide also

'Moussa will give a mango to Oumar, he will give to Sayide also.'

The word *ków* can also focus on adverbs.

(541) ñj̀ g̀éeg̀è kà m̀ m̀ánj̀á b̀ònt̀è ków kà m̀ m̀ánj̀á  
 ñj̀ g̀éeg̀é kà ñj̀ m̀ánj̀á b̀ònt̀è ków kà ñj̀ m̀ánj̀á  
 S:1.s today S:3.M PREP bush tomorrow also S:3.M PREP bush  
 'Today he is in the bush. He will be in the bush tomorrow as well.'

Both *ków* and *ká* can co-occur in the same clause. The context for (542) is a discussion of which days someone has been in the bush, as in (541) above. Then a second individual was brought up in the conversation, who had, like the first individual, been in the bush today as well as yesterday. The sentence has two focused constituents: the adverb (followed by *ków*) and the subject (preceded by *ká*). In this example, the modifier *ká* appears before, instead of after, the subject pronoun. The alternate ordering could be explained as a result of the modifier being focused exceptionally on the subject instead of the predicate.

(542) t̀ànd̀è ków ká t̀ì m̀ m̀ánj̀á  
 t̀ànd̀è ków ká t̀ì ñj̀ m̀ánj̀á  
 yesterday also also S:3.F PREP bush  
 'She was also in the bush yesterday as well (as today).'

## 9.6 Negation

As has already been seen in several examples above, most clauses are negated by adding a negation marker *dō* to the end of the clause. A clause-final marker is the most common negation strategy in Chadic languages (Newman 2006:200; Frajzyngier & Shay

2012:317). A clause-final negation marker normally takes scope over the immediately preceding clause. Exceptions to this involving embedded clauses are discussed in chapter 10.

(543) *músà kà séj àm:í dō*  
*músà kà s-, H -ēji àm:í dō*  
 Moussa S:3.M drink IMPF water NEG  
 'Moussa does not drink water.'

(544) *músà dúwgà bàṅà dō*  
*músà dúw- -gà bàṅà dō*  
 Moussa see DO:3.M dog NEG  
 'Moussa does not see the dog.'

Some nonverbal predicates can be negated with the same marker. The marker can be used with attributive clauses (AP predicates, sections 11.1.5 and 11.1.6) and stative location clauses (PP predicates, section 11.1.4).

(545) *músà ìn máná dō*  
*músà ìṅ máná dō*  
 Moussa PREP bush NEG  
 'Moussa is not out in the bush.'

(546) *mīj:ī wúlgú dō*  
*mīj:ī wúl- -gú dō*  
 man kind N:M NEG  
 'The man is not kind.'

NP predicates are negated by the quantifier *díjò* (see sections 11.1.2 and 11.1.1). While this appears to be the preferred negation marking for NP predicates, there are several scenarios in which the standard negation marker can be used with an NP predicate. One exceptional nominal predicate that is negated with the negation marker, and not with the negative quantifier, is *séntì* “refusal”.

(547) *kà séntì dō*  
*kà séntì -jì dō*  
 S:3.M refusal POSS:3.M NEG  
 'He didn't refuse.'



In nearly all examples elicited, the scope of negation is over the predicate. This may be the result of a neutral or unmarked focus. In (548) the Perfect tense cannot be negated (section 7.1.3), so the scope of negation is interpreted as being over the adverbial phrase.

- (548) kà sùlē máŋgò wàlèjì kúr dō  
 kà sùl- -ē móngò wālō -jì kúr dō  
 S:3.M sit PRF Mongo year POSS:3.M ten NEG  
 'He has lived in Mongo for some time, but not ten years.'

In (549), the interpretation of this sentence in isolation requires that the scope of negation be over the quantifier.

- (549) nándì súb:ù dō  
 nándí -jì súb:ù dō  
 children.PL POSS:3.M three NEG  
 'He doesn't have three children. (He may have one or two.)'

The Perfect (section 7.1.3) and the nominal predicate denoting existence (section 11.1.2) cannot normally be negated with the negation marker. When queried concerning hypothetical sentences involving the Perfect and negation or nominal predicates and negation, the speakers were able to imagine that there may be some context in which these constructions would be appropriate. From their description, it appears that the negation marker could be employed if the scope of the negation is over what is said (e.g., a direct quote). This construction could be used to contradict a statement made by another person. Whatever the interpretation, it is clear that this is a pragmatically marked construction. It is similar to metalinguistic negation defined by Horn as “a means for objecting to a previous utterance on any grounds whatsoever...” (1985:134, 157; based on Ducrot 1972). In fact, the examples (548) and (549) above, could also be interpreted as a type of metalinguistic negation where what is being negated is an implicature arising from the Grice's Maxim of Quantity (Horn 1985:139–143).

- (550) #? kà sēt:ā dō  
 kà s-, H -ēt:a dō  
 S:3.M come PRF NEG  
 ? 'No, he did *not* come.' / 'He came... NOT!'

- (551) #? kà àpàjì dō  
 kà àpà -jì dō  
 S:3.M presence POSS:3.M NEG  
 ? 'No, he is *not* here.' / 'He's here... NOT!'

An additional negation marker is seen when the Subjunctive is used in an independent clause (imperative or deontic use). It appears before the verb. One speaker pronounced the word *dòó* differing from the sentence-final negation marker only in vowel length and tone. The older speaker pronounces the word *jàó*.<sup>121</sup> A preverbal negation marker co-occurring with a sentence-final negation marker is not uncommon in Chadic languages (Newman 2006:200; Frajzyngier & Shay 2012:317).

- (552) jòó /dòó kólú dō  
 jòó /dòó kól- -ù dō  
 NEG go SBJV NEG  
 'Don't go!'

- (553) nándánǵá dòó pōomú ǵ àkà dō  
 nándánǵá dòó pǒom- -ù ǵ àkà dō  
 children NEG play SBJV ASOC fire NEG  
 'Children should not play with fire.'

The preverbal negation marker can occur without the sentence-final marker indicating a contrast, but not negating the following predicate.

- (554) ò nándíjǵjù ìǵ gárējī ò jàp:á  
 ìǵ nándí -ǵj -jù ìǵ gar- -ēji ìǵ jàp:á  
 PREP children.PL NOM POSS:1.S S:1.S study(A) IMPF PREP church<sup>122</sup>

wò sòndé jó ò dójéjī málùmìjǵ  
 wò sòndé jòó ìǵ dój- -ēji málùm -já -ǵj  
 and now NEG S:1.S study IMPF muslim(A) PL NOM  
 'During my childhood, I went to church, but now I follow Islam.'

<sup>121</sup> Rendinger transcribed this preverbal negation marker *dio*, probably the same as *jàó* (1949:171).

<sup>122</sup> The speaker said this word comes from the trade language Sango (CAR).

### 9.7 Epistemic modality

The word *tégē* is a marker of epistemic modality which denotes the speaker's lack of certainty regarding the truth value of the statement (dubitative modality). It has only been seen in a clause-initial position.<sup>123</sup>

- (555) *tégē* *kà* *kólē*  
*tégē* *kà* *kól-* *-ē*  
 maybe S:3.M go PRF  
 'Maybe he left.' / 'I think he left.' / 'I hope he left.'

It is also used in reported speech following the complementizer (section 10.6).

- (556) *tìjà* *tégē* *kà* *kólē*  
*tì* *-jà* *tégē* *kà* *kól-* *-ē*  
 S:3.F COMP maybe S:3.M go PRF  
 'She thinks that he left.'

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<sup>123</sup> Gidar (Central Chadic) also has a clause-initial marker of dubitative modality which Frajzyngier labels a “hypothetical adverb” (2008:273).

## Chapter 10 : Subordinate clauses

This chapter introduces a few types of complex sentences. Relative clauses are finite subordinate clauses that modify nouns. The adverbial clause presented is a non-finite indicator of intention. Two types of non-finite verbal complements are presented: infinitival complements and subjunctive sentential complements. The distribution of negation with these constructions distinguishes them from cases of parataxis involving finite verbs (section 10.5). Reported speech constructions involve a specially marked type of sentential complement which does not interact with negation in the same way as finite complements, but is distinguished from paratactic constructions by a complementizer and the distribution of adverbs. The final section presents the use of the conditional marker to conjoin two clauses.

### 10.1 Relative clauses

Relative clauses in Baraïn, as in all known Chadic languages, are post-nominal (Frajzyngier 1996:416). They always have a relative marker in the initial position. The relative marker indexes the number and gender of the head noun. As elsewhere in the language, gender is not distinguished in the plural form.

**Table 46: Relative markers**

MASC SG	gē
FEM SG	dē
PL	nī

Relative markers do not indicate the grammatical function of the head noun in the relative clause. The relativized function of subject is not marked in any way.

**Relativized function: subject**

- (557) kà gī ná nāmá gē gōrējī mángóo gī  
 kà gī ná nāmá gē gōr- -ēji mángò gī  
 S:3.M DEM:M EQ child REL:M buy IMPF mango(A/F) DEM:M  
 'This is the boy who bought a mango.'

- (558) tìdná nāmá dē gōrējī mángóo dī  
 tì dī ná nāmá dē gōr- -ēji mángò dī  
 S:3.F DEM:F EQ child REL:F buy IMPF mango(A/F) DEM:F  
 'This is the girl who bought a mango.'

The most common pattern in Chadic languages is to leave the relativized function of subject unmarked and to mark non-subject functions in the relative clause (Frajzyngier 1987b:34). When the head of a relative clause has the relativized function of object, the verb frequently indexes that argument with a direct object suffix. Superficially, this appears to fit the pattern of other Chadic languages, but this is only the case when the head noun is definite or referential.

**Relativized function: object**

- (559) nāmá gē ñ èpgà tàndēé gī  
 nāmá gē ñ ep- -gà tàndē gī  
 child REL:M S:1.S punish DO:3.M yesterday DEM:M  
 'the boy I punished yesterday'

- (560) nāmá dē ñ èpàtì tàndēé dī  
 nāmá dē ñ ep- -ā -tì tàndē dī  
 child REL:F S:1.S punish IMPF DO:3.F yesterday DEM:F  
 'the girl I punished yesterday'

If an indefinite head noun has the relativized function of direct object, then no direct object suffix is used in the relative clause. This is because the direct object suffix marks the definiteness of direct objects (section 8.3.2).<sup>124</sup> Therefore, direct object marking on the verb follows the same pattern in relative clauses and independent clauses.

- (561) nāmá gē ñ èpà tàndēé gī  
 nāmá gē ñ ep- -a tàndē gī  
 child REL:M S:1.S punish IMPF yesterday DEM:M  
 'a boy I punished yesterday'

<sup>124</sup> A similar pattern is seen in Lele (Frajzyngier 2001:439).

The relativized function of indirect object is always encoded with an indirect object suffix, whether the head noun is definite or indefinite. This is unlike independent clauses where the indirect object suffix appears to be optional. In a relative clause, the function of the indirect object suffix is not to signal definiteness, but to clarify the relativized function. Without the suffix, the head noun can be interpreted as an oblique function other than indirect object, as will be seen below.

**Relativized function: indirect object (oblique PP, recipient)**

- (562) *námá gē ìn bédèjì m̀òsòó g̀ì*  
*námá gē ìŋ béd- -èjì m̀òsò g̀ì*  
 child REL:M S:1.S give IO:3.M COW DEM:M  
 'the boy I gave a cow to'

- (563) *námá dē ìn bédàtì m̀òsòó d̀ì*  
*námá dē ìŋ béd- -àtì m̀òsò d̀ì*  
 child REL:F S:1.S give IO:3.F COW DEM:F  
 'the girl I gave a cow to'

If the relative clause contains both a subject and a full object noun phrase, but no non-TAM verbal suffix (e.g., direct or indirect object suffix), then the relativized function will not be understood as an indirect object (i.e., recipient), but as the purpose or motivation. In its nominal form, the purpose is marked by the purpose preposition *tà* (section 9.3.3). In an independent clause, it can be indexed by the indirect object suffix (section 8.4), but not in a relative clause.

**Relativized function: oblique (purpose PP)**

- (564) *námá dē kà bédà j̀è m̀òsò*  
*námá dē kà béd- -à j̀è m̀òsò*  
 child REL:F S:3.M give PFV DISC COW  
 'the child on whose behalf I gave a cow'

Other oblique relativized functions (besides indirect objects and purpose prepositional phrases) can be indicated using the oblique suffix (section 8.11). In this case, the use of the oblique suffix is optional.

**Relativized function: oblique (associative PP, instrumental)**

(565) kórtó dē ìj dúkúrà<sup>125</sup> jè íjónó  
 kórtó dē ìj dúkr- -à jē íjónó  
 pot REL:F S:1.S prepare PFV DISC *boule*  
 'the pot I made *boule* with'

(566) kórtó dē ìj dúkúrdò jē íjónó  
 kórtó dē ìj dúkr- -dò jē íjónó  
 pot REL:F S:1.S prepare OBL DISC *boule*  
 'the pot I made *boule* with'

The oblique suffix in a relative clause is optional for other grammaticalized functions, such as locatives. The semantic or pragmatic motivations for the choice between the the presence of absence of the oblique suffix are unknown.

**Relativized function: oblique (associative PP, source)**

(567) gérá dē kà sēt:ā  
 gérá dē kà s-, H -ēt:a  
 village REL:F S:3.M come PRF  
 'the village he came to'

(568) gérá dē sàadò jēé dì  
 gérá dē s-, H -āa -dò jē dì  
 village REL:F come PFV OBL DISC DEM:F  
 'the village I came to'

The relativized function of possessor is encoded by a possessor agreement suffix on the possessum in the relative clause. In a non-subordinate clause, the possessor is encoded with an oblique preposition following the possessum (section 6.1.3).

**Relativized function: possessor**

(569) mỳ:ó gē nójì mỳnànùú gì  
 mỳ:ó gē nón- -jì mỳj- -ā -nù gì  
 person REL:M child(POSS) POSS:3.M slap IMPF DO:1.S DEM:M  
 'the man whose son hit me'

Relative clauses appear to have a restrictive function distinguishing the head noun from others in a set. This universally unmarked characteristic of relative clauses can be illustrated by comparing the following two examples. In the first example, the head noun

<sup>125</sup> The epenthetic vowel in the verb of this example is exceptionally [u] instead of [i] even though the phonological environment does not justify the backing of the vowel (section 4.5).

is followed by a relative marker and an adjective—or an adjectival predicate. The interpretation is that the head noun “husband” must be one of a set who can be distinguished from other husbands by the attribute “tall” expressed in the relative clause. The hearer is forced to make the culturally absurd and shocking conclusion that the woman is a polyandrist!

- (570) *nárgà*            *mèrgéti*            *gē*    *jèlàṅgú*  
*nār-*    *-gà*    *mèerí*    *-gètì*    *gē*    *jèlàṅ -gú*  
 search DO:3.M husband POSS:3.F REL:M tall N:M  
 'She is looking for her tall husband. (Not the short one.)'

In a sentence identical to the example above except for the absence of the relative marker, the adjective has a nonrestrictive function. The adjective describes an attribute of the head noun without conflicting with the cultural assumption that a woman can only have one husband.<sup>126</sup>

- (571) *nárgà*            *mèrgéti*            *jèlàṅgú*  
*nār-*    *-gà*    *mèerí*    *-gètì*    *jèlàṅ -gú*  
 search DO:3.M husband POSS:3.F tall N:M  
 'She is looking for her tall husband.'

In the pair of examples below, the first example places the verb describing the action of the husband in a relative clause. This construction triggers the interpretation that the woman has more than one husband. In the second example, the verb is not in a relative clause. The second clause is best understood as a separate sentence, and does not force the interpretation that the woman has more than one husband.

- (572) *nárgà*            *mèrgètì*            *gē*    *kólē*    *tàndē*  
*nār-*    *-gà*    *mèerí*    *-gètì*    *gē*    *kól- -ē*    *tàndē*  
 search DO:3.M husband POSS:3.F REL:M go PRF yesterday  
 'She is looking for her husband who left yesterday. (Not the other.)'

- (573) *nárgà*            *mèrgètì*            *kólē*    *tàndē*  
*nār-*    *-gà*    *mèerí*    *-gètì*    *kól- -ē*    *tàndē*  
 search DO:3.M husband POSS:3.F go PRF yesterday  
 'She is looking for her husband. He left yesterday.'

<sup>126</sup> Analogously, adjectives in Dangla are described as having an “attributive function” when immediately following the head noun, and a “referential function” when preceded by a relative marker (Shay 1999:111–112).



In example (574), the nominal predicate in the relative clause again has a restrictive function. The work has been given to a specific person that the hearers presumably can identify.

- (574) ìm bèdèj kítà ìm mìj:ó gē át:ì pánínj  
 ìj bèd- -èjì kítà ìj mìj:ó gē át:á -jì pánínj  
 S:1.s give IO:3.M work PREP person REL:M arm POSS:3.M one  
 'I'm going to give the work to the man with one arm.'

If the relative marker is removed from the sentence, the nominal predicate has a nonrestrictive function. The interpretation is a rather strange situation in which the speaker does not know specifically who he wants to give the work to, but he would like to give it to a man who has only one arm.

- (575) ìm bèdèj kítà ìm mìj:ó át:ì pánínj  
 ìj bèd- -èjì kítà ìj mìj:ó át:á -jì pánínj  
 S:1.s give IO:3.M work PREP person arm POSS:3.M one  
 'I'm going to give the work to a man with one arm.'

Relative clauses can be headless functioning as a noun phrase.

- (576) gérjù pàagú wòl:ìgà gē gèrgò  
 gérá -jù pàa- -gú wól:- M -gà gē gèr- -gò  
 home POSS:1.s big N:M pass IMPF DO:3.M REL:M POSS POSS:2.M  
 'My house is bigger than yours.'

## 10.2 Adverbial clause (Future plus Infinitive)

A Future auxiliary and an Infinitive verb can function as an adverbial clause indicating the purpose of the main predicate. The analysis of this velar nasal as a Future auxiliary and not a preposition is based on the speakers' intuition and the absence of any examples containing an underlying vowel [i].

- (577) áné séjī ìj gánó ìj kítà  
 ánē s-, H -ēji ìj gǎn- -o ìj kítà  
 PRO:EXCL come IMPF FUT make INF PREP work  
 'We came to work.'

(578) *rámà kùs:àgà ótò m̀ búkí nāsárāján*  
*rámà kūs:- -ā -gà ótò ñ búk- -í nāsára -já -áj*  
 Rama teach PRF DO:3.M Oto FUT speak INF foreigner(A) PL NOM  
 'Rama taught Oto to speak French.'

(579) *àm:á gásèjì rámà ñ gànó ñ kítà*  
*àm:á gás- -èji rámà ñ gǎn- -o ñ kítà*  
 Amma say IO:3.M Rama FUT make INF PREP work  
 'Amma called Rama to work.'

(580) *àm:á sèeràgì rámà ñ gànó ñ kítà*  
*àm:á seer- -a -gí rámà ñ gǎn- -o ñ kítà*  
 Amma come.CAUS PRF DO:3.M Rama FUT make INF PREP work  
 'Amma brought Rama to work.'

The analysis of the second verb as part of a subordinate clause, is based on evidence from subject pronouns and negation. If a second subject pronoun appears between the two verbs with no negation, the interpretation of the two juxtaposed independent clauses is only slightly different from the adverbial construction in example (577).

(581) *áné séjī ánē ñ gànó ñ kítà*  
*ánē s-, H -èji ánē ñ gǎn- -o ñ kítà*  
 PRO:EXCL come IMPF PRO:EXCL FUT make INF PREP work  
 'We came. We're going to work.'

When the negation marker follows the main verb without a second pronoun between the two verbs, the function of the verb in the second clause remains adverbial. The second clause does not form a separate proposition.

(582) *áné séjī dō ñ gànó ñ kítà*  
*ánē s-, H -èji dō ñ gǎn- -o ñ kítà*  
 PRO:EXCL come IMPF NEG FUT make INF PREP work  
 'We didn't come to work.'

In contrast, when a second pronoun is present after the negation, the second clause is interpreted as a separate proposition, and is not under the scope of the negation.

- (583) *áné séjī dō ánē ñ gánó ñ kítà*  
*ánē s-, H -ēji dō ánē ñ gǎn- -o ñ kítà*  
 PRO:EXCL COME IMPF NEG PRO:EXCL FUT make INF PREP work  
 'We didn't come. We are going to work.'

When negation is sentence-final without a repeated pronoun in the second clause, it is not immediately clear if the scope of negation is over the adverbial clause or the whole sentence. The translation equivalent in the following example is hard to distinguish from example (582).

- (584) *ánē séj ñ gánó ñ kítà dō*  
*ánē s-, H eji ñ gǎn- -o ñ kítà dō*  
 PRO:EXCL COME IMPF FUT make INF PREP work NEG  
 'We came, but not to work.'

The scope of sentence-final negation is clarified by negating example (578). In the affirmative, the verb *kūssō* “to teach” is marked with a Perfect suffix. In a pragmatically neutral context, the Perfect cannot be negated. When negating this sentence, the speaker naturally changed the TAM marking on the matrix verb (to the null suppletive form of Perfective, section 8.6) to avoid the incompatibility between Perfect and negation. This change gives evidence that the matrix verb is being negated by the sentence-final negation marker.

- (585) *rámà kùs:ìgà ótò m̀ búkí nāsárājáj dō*  
*rámà kūs:- gà ótò ñ búk- -í nāsárā -já -áj dō*  
 Rama teach DO:3.M Oto FUT speak INF foreigner(A) PL NOM NEG  
 'Rama did not teach Oto to speak French.'

The above examples show that either the subject or the object of the matrix clause can be functionally identified with (control) the unstated subject of the adverbial clause.<sup>127</sup> Subject-to-subject control only occurs when the matrix verb is intransitive. Object-to-subject control is the only possibility when the matrix verb is transitive.

<sup>127</sup> I do not have any examples of control involving an indirect object or an oblique argument.

- (586) rá mà gisàtì                                      àm:á ò dówó  
 rá mà gis-                                      -ā -tì      àm:á ò dów- -o  
 Rama go.out.CAUS IMPF DO:3.F Amma FUT sleep INF  
 'Rama sent Amma out to sleep. (She will sleep outside.)'  
 \*'Rama sent Amma out so he could sleep.'

Object-to-subject control can occur even when the object of the matrix clause is not overtly stated.

- (587) tì kùs:ànù                                      ò búkí      nāsárāján  
 tì kùs:- -ā -nù      ò búk- -í nāsárā      -já -áj  
 S:3.F teach IMPF DO:3.M FUT speak INF foreigner(A) PL NOM  
 'She taught me to speak French.'

### 10.3 Bare infinitival complements

There are a few verbs (all verbs of cognition) which can be immediately followed by another verb in the Infinitive form. This construction involves obligatory control. The subject of the matrix clause is the unstated subject of the embedded clause. Unlike verbal participles (section 7.4.3), there is no possessive marker suffixed to the infinitival verb.

- (588) wòń:éjì      búkí      nāsárāján <sup>128</sup>  
 wòń:- -éjì búk- -í nāsárā      -já -áj  
 know IMPF speak INF foreigner(A) PL NOM  
 'I know how to speak French.'

- (589) ò kùs:à      jè búkí      nāsárāján  
 ò kùs:- -à jè búk- -í nāsárā      -já -áj  
 S:1.S learn PFV DISC speak INF foreigner(A) PL NOM  
 'I learned to speak French.'

Sentence-final negation takes scope over the matrix verb.

- (590) wòń:éjì      búkí      nāsárāján                      dō  
 wòń:- -éjì búk- -í nāsárā      -já -áj dō  
 know IMPF speak INF foreigner(A) PL NOM NEG  
 'I don't know how to speak French.'

<sup>128</sup> In the recording of this sentence and the following two, there does not appear to be any phonetic evidence for an oblique preposition before the noun, as would normally be expected after an Infinitive verb (section 9.2.2).

#### 10.4 Subjunctive sentential complement: “allow” (permission)

There are at least two verbs which take a subjunctive sentential complement. The verb “want” is intransitive with no overt coreference between the matrix clause and the complement (section 7.1.4). The verb *jèkkó* “allow” takes a Subjunctive sentential complement whose subject is coreferential with the direct object suffix of the matrix verb. The subject of the complement clause can be a subject pronoun or a noun phrase, but it must be overtly stated—not null.

(591) *kà jèk:ànù \*(n) sùlú kājē*  
*kà jěk:- -ā -nù ìŋ sùl- -ù kājē*  
 S:3.M allow IMPF DO:1.S S:1.S sit SBJV here  
 'He let me stay here.'

(592) *rámà jèk:ítì \*(àm:á) tàa*  
*rámà jěk:- -tì àm:á t-, L -aa*  
 Rama allow DO:3.F Amma eat SBJV  
 'Rama let Amma eat.'

The scope of negation markers gives evidence that this construction involves an embedded clause. A sentence-final negation marker negates the matrix verb, not the immediately preceding complement clause. The requirement that the verb be Subjunctive, also indicates that it is a subordinate clause.

(593) *kà jèk:únù ñ sùlú kājē dō*  
*kà jěk:- -nù ìŋ sùl- -ù kājē dō*  
 S:3.M allow DO:1.S S:1.S sit SBJV here NEG  
 'He didn't let me stay here.'

(594) *rámà jèk:ítì àm:á tàa dō*  
*rámà jěk:- -tì àm:á t-, L -aa dō*  
 Rama allow DO:3.F Amma eat SBJV NEG  
 'Rama didn't let Amma eat.'

A verb in the Perfect cannot be negated (section 7.1.3). If the matrix clause is in the Perfect, a sentence-final negation marker renders the sentence ungrammatical. The negation cannot take scope over just the complement clause.

- (595) ráàmà jèk:ítì àm:á tàa (\*dō)  
 ráàmà jèk:- -tì àm:á t-, L -aa dō  
 Rama allow DO:3.F Amma eat SBJV NEG  
 for: 'Rama didn't let Amma eat.' or 'Rama allowed Amma not to eat.'

If the negation marker is placed after the (Imperfective) matrix verb and before the complement, then the utterance can only be interpreted as two separate sentences.

- (596) kà jèk:ítì dō tì sùlú kāj  
 kà jèk:- -tì dō tì sùl- -ù kājē  
 S:3.M allow DO:3.F NEG S:3.F sit SBJV here  
 'He didn't let her. She should stay here.'

A sentence-final adverb is ambiguous in scope.

- (597) ráàmà jèk:ítì àm:á kólú sòk:á  
 ráàmà jèk:- -tì àm:á kól- -ù sòk:á  
 Rama allow DO:3.F Amma go SBJV again  
 'Rama again let Amma leave.'  
 'Rama let Amma leave again.'

### 10.5 Complements or parataxis?

Verbs of cognition or perception can appear to be followed by a sentential complement, but there is little syntactic evidence for the embedding of the second clause. These constructions fail the negation test applied above to identify subordinate clauses. In the cases of subordination above, a sentence-final negation marker negated the matrix clause. Here, it can only negate the immediately preceding verb.

- (598) wōn:éjī kà kólá dō  
 wōn:- -éji kà kól- -à dō  
 know IMPF S:3.M go PFV NEG  
 'I know he didn't leave.'
- (599) jì jàa jè kà kólá dō  
 ìj j-, LH -àa jē kà kól- -à dō  
 S:1.s hear PFV DISC S:3.M go PFV NEG  
 'I heard that he didn't leave.'

The only evidence of subordination in these cases is the appearance of the conditional conjunction before the second clause when the first is negated. However, the

conditional marker is not only used to mark hypothetical situations, but also temporal clauses.

- (600) wōn:éjī dō tò kà kólē  
 wōn:- -ēji dō tò kà kól- -ē  
 know IMPF NEG COND S:3.M go PRF  
 'I don't know if he left. / I didn't know that he left.'  
 ? 'I don't know when he left.'

- (601) jì jàa dō tò kà kólē  
 ìṅ ɟ, LH -àa dō tò kà kól- -ē  
 S:1.s hear PFV NEG COND S:3.M go PRF  
 'I hadn't heard that he left. / I didn't hear if he left.'  
 ? 'I didn't hear (anything) when he left.'

A similar pattern is seen in constructions where the speakers included a direct object suffix on the first verb. In the following example, the direct object suffix of the first verb is co-referential with the subject of the second verb. However, the sentence-final negation marker negates the second verb, not the first verb. This, again, indicates that the second verb is not a subordinate clause. The following example is most naturally translated as two independent clauses.

- (602) rāmà dúwètì àm:á kólá dō  
 rāmà dúw- -ē -tì àm:á kól- -à dō  
 Rama see PRF DO:3.F Amma go PFV NEG  
 ? 'Rama saw that Amma didn't leave.'  
 'Rama saw Amma. She didn't leave.'

Negation cannot take scope over a Perfect verb (section 7.1.3). Therefore, if there is a Perfect verb in the second clause, there is no grammatical interpretation of the utterance.

- (603) \* ñ dúwǵà (kà) kóle dō  
 ìṅ dúw- -ǵà kà kól- -ē dō  
 S:1.s see DO:3.M S:3.M go PRF NEG  
 for: 'I didn't see him leave.'

However, once again, if a negation marker appears after the first verb, the second clause is preceded by a conditional (or temporal) marker.

- (604) *rámà dúwtì dō tò àm:á kólē*  
*rámà dúw- -tì dō tò àm:á kól- -ē*  
 Rama see DO:3.F NEG COND Amma go PRF  
 'Rama didn't see if Amma left.'  
 ? 'Rama didn't see when Amma left.'

All of the above cases may be better interpreted as two separate independent clauses. Two adjacent verbs do not always have the same subject for both verbs. When not stated overtly, the subject of the second verb is determined by the discourse context.

- (605) *rámà gòmètì gálé*  
*rámà gōm- -ē -tì gǎl- -ē*  
 Rama hit PRF DO:3.F fall PRF  
 'Rama hit her. She/He fell.'

Only if the clauses are joined by a coordinating conjunction must the subject of the second verb be the same as the first.<sup>129</sup>

- (606) *rámà gòmga ótò wó gōrē*  
*rámà gōm- -gà ótò wò gōr- -ē*  
 Rama hit DO:3.M Oto and run PRF  
 'Rama hit Oto and ran away.'

### 10.6 Reported speech<sup>130</sup>

Clauses containing reported speech are normally preceded by a bimorphemic complementizer which consists of a subject pronoun and a morpheme *-jà*. The pronoun indexes the person who made the speech act. The two morphemes frequently amalgamate, preserving the initial consonant of the pronoun followed by a long vowel [aa]. The complement clause follows the matrix verb with the complementizer between the two, as is expected in Chadic languages (Frajzyngier 1996:114). Optionally, a demonstrative pronoun can also appear after the complementizer.

<sup>129</sup> An overt sentential coordinating conjunction is much more common in East Chadic languages than in other branches of Chadic (Frajzyngier & Shay 2012:333).

<sup>130</sup> Some translations of reported speech are given as direct quotes and some as indirect quotes, but I have not discovered any clear distinction between the two. The strategies for marking indirect versus direct quotation in Chadic languages are not always transparent (Frajzyngier 1996:173).



(607) kà gáséj kàjà/kàa (gìí) tì ò ãjó  
 kà gás- -ēji kà -jà gí tì ò áj- -o  
 S:3.M say IMPF S:3.M COMP DEM:M S:3.F FUT come INF  
 'He said that she will come.'

(608) tì gáséj tìjà kà ò ãjó  
 tì gás- -ēji tì -jà kà ò áj- -o  
 S:3.F say IMPF S:3.F COMP S:3.M FUT come INF  
 'She said that he will come.'

(609) nì gáséj nìjà ìnú ò ãjó  
 nì gás- -ēji nì -jà ìnú ò áj- -o  
 S:3.PL say IMPF S:3.PL COMP PRO:1.S FUT come INF  
 'They said that I will come.'

The complementizer can follow a verb of speech or occur without a verb. The omission of any verb of speech is a frequent phenomenon in Chadic languages (Frajzyngier 1996:125–127; 2008:405).

(610) nà tálān sáŋ  
 nì -jà tálān sáŋ  
 S:3.PL COMP how Q  
 'They said, "How so?"' (appendix 12)

(611) búlmí kàa gíí  
 búlmí kà -jà gí  
 hyena S:3.M COMP DEM:M  
 'The hyena said this...' (appendix 13)

The addressee, when nominal, is encoded by the oblique preposition. The prepositional phrase precedes the complement clause. The addressee can equally be encoded by an indirect object suffix. Both of these markers are seen in (612).

Negation of the main verb (the verb of speech) appears at the end of the matrix clause, before the complement. The examples below also indicate that the complementizer is optional, at least in some circumstances.

(612) ráamá gàsàtì ò àm:á dō (kàa) óotò ò ãjó  
 ráamá gás- -àtì ò ò àm:á dō kà -jà ótò ò áj- -o  
 Rama say IO:3.F PREP Amma NEG S:3.M COMP Oto FUT come INF  
 'Rama did not say to Amma that Oto will come.'

Sentence-final negation markers are interpreted as part of the reported speech. The scope of the negation marker is always over the immediately preceding clause.

- (613) *rámá gàsàtì ñ àm:á (kàa) óotò séj dō*  
*rámà gás- -àtì ñj àm:á kà -jà ótò s-, H -ēji dō*  
 Rama say IO:3.F PREP Amma S:3.M COMP Oto come IMPF NEG  
 'Rama said to Amma that Oto is not coming.'

Negation of the matrix clause cannot be marked after the complement clause. In (614), the Future form in the complement clause cannot be negated (section 7.1.5). The sentence fails because there is no other natural interpretation for the negation marker.

- (614) \* *rama gàsàtì ñ àm:á (kàa) óotò ñ ājó dō*  
*rámà gás- -àtì ñj àm:á kà -jà ótò ñ ǎj- -o dō*  
 Rama say IO:3.F PREP Amma S:3.M COMP Oto FUT come INF NEG  
 \*'Rama did not say to Amma that Oto will come.'  
 #?'Rama said to Amma, "No, Oto will not come."'

The negation pattern described above does not coincide with the negation patterns seen for other subordinate clauses (sections 10.3 and 10.4). In those cases, which involve only Infinitive and Subjunctive verbs, sentence-final negation takes scope of the matrix clause. Although sentence-final negation cannot take scope over the main verb in a reported speech construction, a sentence-final adverb is ambiguous in scope. This fact, plus the use of a complementizer, give strong evidence for considering reported speech a type of subordinate clause.

- (615) *rámà gàsàtì kàa ótò sēt:ā sòk:á*  
*rámà gás- -àtì kà -jà ótò s-, H -ēt:a sòk:á*  
 Rama say IO:3.F S:3.M COMP Oto come PRF again  
 'Rama told her that Oto came again.'  
 'Rama told her again that Oto came.'

### 10.7 Conditional and temporal clauses

The conjunction *tò* marks subordinate clauses of either conditional “if” or temporal “when” meaning. It is common in Chadic languages for the same marker to indicate both conditional and temporal meaning (Frajzyngier 1996:313, 327). Frajzyngier notes that in all Chadic languages the conditional clause may precede the apodosis (1996:373). In Baraïn this is the most common pattern, though both are acceptable.

(616) tò kī pīdètì jáamé árdē pàatú ná  
 tò kì pīd- -ē -tì jaamije árá dē pàa- -tú ná  
 COND S:2.M take PRF DO:3.F mosque(A) path REL:F big N:F EQ  
 'When you have taken the path by the big mosque...' (appendix 8)

(617) ìnù ɲ ɲòmó tò kà gánéj kítà  
 ìnù ɲ ɲóm- -o tò kà gǎn- -ēji kítà  
 PRO:1.S FUT play INF COND S:3.M do IMPF work  
 'I am going to play while he works.'

## Chapter 11 : Other clause types

This chapter is a brief look at nonverbal predicates and interrogative clauses.

### 11.1 Nonverbal predicates

This language does not employ any type of copula. Instead of a copula, nouns, adjectives, and prepositional phrases can function as the sole predicate of a clause.<sup>131</sup>

#### 11.1.1 Possession

There is no equivalent to the verb “to have” in Baraïn. All types of possession are expressed through the possessor agreement suffix (section 6.1.3). It is not possible to express possession in the future with this construction. Instead, the verb “find” can be used.<sup>132</sup>

- (618) tàndē    kà    ní    sàalíjì            nì    ɲàámètì  
tàndē    kà    íŋ    sàalú -jì            nì    ɲǎam- -ē -tì  
yesterday S:3.M ASOC knife POSS:3.M S:3.PL steal PRF DO:3.F  
'He had a knife yesterday, but somebody stole it.'<sup>133</sup>

- (619) námá kŭlwáŋjì                    bàatá  
námá kŭlw- -áŋ -jì                bàatá  
child be.dirty NOM POSS:3.M very  
The boy is very dirty. (The boy has a lot of dirtiness.)<sup>134</sup>

<sup>131</sup> One candidate for a copula is the morpheme *ná*, which I have analyzed as a clausal coordinator and provisionally labeled “equative”. However, its primary function appears to be a coordinator of clauses as well as serving a topic-related function in discourse. This morpheme is briefly discussed in section 11.1.3.

<sup>132</sup> A similar use of the verb “to find” is seen in Lele and Gidar (Frajzyngier 2001:210; 2008:308).

<sup>133</sup> Note that this example contains a preposition between the subject and the nominal predicate. More research is needed to reveal how the NP PREP NP structure differs from the NP NP structure.

<sup>134</sup> The noun in the examples below is a verb root with a nominalizing suffix (section 6.1.4).

Another strategy for expressing possession is to use a form of the verb “have” borrowed from Arabic.

- (620) wālá índàjì                      jàkàl  
 wala inda -jì                      jàkàl  
 or(A) have(A) POSS:3.M fangs  
 'Does he have fangs?' (appendix 12)

### 11.1.2 Existence (NP predicate)

Existential clauses most commonly indicate the immediate presence of a person or thing. They are formed with the nominal predicate *àṅà*. This structure gives an equivalent to the expression “there is...”.

- (621) àm:í àṅà  
 àm:í àṅà  
 water presence  
 'There is water.'

To confirm that this word is a noun, and not a verb, the following example shows that it can be modified by an adjective. The resulting sentence may be unnatural, but it does show that the gender of the noun is feminine.

- (622) àṅàgò                      ná púsátú  
 àṅà -gò                      ná púsá- -tú  
 presence POSS:2.M EQ beautiful N:F  
 'Your presence is beautiful.'

When one speaks of the presence of a specific person, or any other definite thing, the possessor agreement suffix is added, indexing the subject.

- (623) músà àṅàjì  
 músà àṅà -jì  
 Moussa presence POSS:3.M  
 'Moussa is here.'

- (624) sàjídè àṅàgètì  
 sàjídè àṅà -gètì  
 Sayide presence POSS:3.F  
 'Sayide is here.'

Even though there is no verb in the clause, this construction can equally be formed with the subject form of the pronoun. It is shown below that the same is true in nonverbal locative, attributive, and possessive clauses.

- (625) kà ànàjì  
 kà ànà -jì  
 S:3.M presence POSS:3.M  
 'He is here.'

The subject does not necessarily need to be overtly stated if the indexing in the possessor agreement suffix suffices to allow the hearer to understand who is being referred to.

- (626) ànàjù  
 ànà -jù  
 presence POSS:1.s  
 'I am here.'

The presence of the possessor agreement suffix shows the definiteness or referentiality of the subject, much like direct object suffixes (section 8.3.2). If the possessor agreement suffix is not used with the name of a person, then the implication is that it is not the presence of a specific person being spoken of, but any person who has the characteristic of having that name, i.e., *de dicto*. For example, if one wanted to know whether or not anybody in the room had the name Moussa, it could be (hypothetically) acceptable to form the question *Músà ànà* without a possessor agreement suffix. This shows a relationship between the possessor agreement suffix and definiteness. However, such a relationship is less clear for inanimate objects. More discourse level studies would be required to examine the correlation between the possessor agreement suffix and referentiality.

- |  |  |
|--|--|
| <p>(627) gérájá ànà<br/>         gérá -já ànà<br/>         village PL presence<br/>         'There are some villages.'</p> | <p>gérájá ànàjìgà<br/>         gérá -já ànà -jìgà<br/>         village PL presence POSS:3.PL<br/>         'There are some villages.'</p> |
|--|--|



(633) tò kì sēt:ā ná íjó n ní  
 tò kì s-, H -ēt:a ná íjó ò n-, L -í  
 COND S:2.M come PRF EQ *boule* FUT cook INF  
 'When you arrive, the *boule* will be cooked.'

(634) tò nì dédā jē ná nì m māaró  
 tò nì déd- -à jē ná nì ò māar- -o  
 COND S:3.PL hatch PFV DISC EQ S:3.PL FUT grow INF  
 'When they have hatched, they will grow.'

In the identification construction the referent being identified is indexed by a subject pronoun followed by a demonstrative. These two words are followed by the word *ná*, which separates the pronoun from a noun phrase describing what or who is being presented. An additional demonstrative can be added to the end of the sentence.

(635) kà gì náa jék gē ò géráa gì  
 kà gì ná jék gē ò gérá gì  
 S:3.M DEM:M EQ chief(A) REL:M PREP village DEM:M  
 'This is the village chief.'

(636) tìdná nójūú dī  
 tì dī ná nón- -jù dī  
 S:3.F DEM:F EQ child(POSS) POSS:1.S DEM:F  
 'This is my daughter.'

(637) tìdná màlpì dī  
 tì dī ná màlpì dī  
 S:3.F DEM:F EQ Melfi DEM:F  
 'This is Melfi.'

#### 11.1.4 Stative location (PP predicate)

Locative clauses are clauses with a prepositional phrase as the predicate. The prepositional phrase encodes the location of the noun phrase.

(638) músà ò mànjá  
 músà ò mànjá  
 Moussa PREP bush  
 'Moussa is out in the bush.'



The same construction is used to speak about the location of someone or something in the future or past.

(639) íj géegé músà ìn mánjá bònṭè ká kà ìn mánjá  
 íj géegé músà ìj mánjá bònṭè ká kà ìj mánjá  
 ASOC today Moussa PREP bush tomorrow also S:3.M PREP bush  
 'Today he is in the bush. He will also be in the bush tomorrow.'

(640) tàndē ków músà ìn mánjá  
 tàndē ków músà ìj mánjá  
 yesterday also Moussa PREP bush  
 'Yesterday he was also in the bush.'

#### 11.1.5 Attribution (AP predicate)

Attributive clauses are clauses with an adjective as the predicate. Attributive clauses can be superficially identical to noun phrases. Examples (154) and (155) are restated below to show that these noun phrases can also be interpreted as attributive clauses where the adjective functions as the predicate.

(641) mīj:ī wúlǵú  
 mīj:ī wúl- -ǵú  
 man kind N:M  
 'a kind man' / 'The man is kind.'

(642) màrbò wúltú  
 màrbò wúl- -tú  
 girl kind N:F  
 'a kind girl' / 'The girl is kind.'

To speak of an attribute in the future one can optionally employ the verb “to make/to do” in the Future form.

(643) bònṭè tì (ìj ǵàno ) púsátú  
 bònṭè tì ìj ǵǎn- -o púsá- -tú  
 tomorrow S:3.F FUT make INF beautiful N:F  
 'Tomorrow she will be beautiful.'

#### 11.1.6 Weather (AP predicate)

The syntactic structure of clauses describing weather also have the structure NP AP. The noun used in the NP is the word *dòo* meaning “place”, “climate”, or

“environment”. As a noun, it can be modified by an adjective and even used in the plural form.

- (644) d̀ojá  
 d̀o -já  
 climate PL  
 'climates'

This noun, plus an adjectival predicate, is used to speak about weather in the present or past.

- (645) d̀o àkàgú  
 d̀o àkà -gú  
 climate fire N:M  
 'It's hot.'

- (646) tàndē d̀o àkàgú  
 tàndē d̀o àkà -gú  
 yesterday climate fire N:M  
 'It was hot yesterday.'

- (647) túrú d̀e wòl:ē d̀o àkàgú  
 túrú d̀e wòl:- -ē d̀o àkà -gú  
 moon REL:F pass PRF climate fire N:M  
 'It was hot last month.'

To speak about the weather in the future it is preferred to use the verb “to make”.

- (648) ? bonte doo akagu  
 b̀nt̀e d̀o àkà -gú  
 tomorrow climate fire N:M  
 for: 'Tomorrow it will be hot.'

- (649) b̀nt̀e d̀o/kà ì g̀nó àkàgú  
 b̀nt̀e d̀o/kà ì g̀n- -o àkà -gú  
 tomorrow climate/S:3.M FUT make INF fire N:M  
 'Tomorrow it will be hot.'

## 11.2 Questions

### 11.2.1 Yes/no questions

Yes/no questions are interrogatives which query the truth value of the proposition. They anticipate an answer affirming or denying the truth of the proposition. Yes/no questions can be equally described as the encoding of interrogative mood. They can be formed either by adding a word to the end of the sentence or by intonation. This is true of most, if not all, Chadic languages (Frajzyngier 1996:16; Frajzyngier & Shay 2012:326). The two words which can be added to the end of a sentence to form a yes/no question are *sáŋ* or *sánē*.<sup>135</sup>

(650) úmàr kà ì kóló j̀j̀àménà sénē/sáŋ  
 úmàr kà ì kól- -o j̀jamena sénē/sáŋ  
 Oumar S:3.M FUT go INF N'Djamena(A) or/Q  
 'Is Oumar going to N'Djamena?'

(651) àm:í à̀nà sénē/sáŋ  
 àm:í à̀nà sénē/sáŋ  
 water presence or/Q  
 'Is there any water?'

The other way to form a yes/no question is to lengthen the final vowel and change its tone to a rising-falling pattern. Many Chadic languages use a similar tone-raising strategy to mark interrogatives (Leben 1989; Lele: Frajzyngier 2001:277; Hdi: Frajzyngier 2002:355; Gidar: Frajzyngier 2008:349). A similar prosodic process is seen before sentence-final demonstratives (section 5.5).

#### Question

(652) àm:í à̀nàâ  
 àm:í à̀nà  
 water presence  
 'Is there any water?'

<sup>135</sup> The word *sánē* means “or” and can also be pronounced *sénē*. In addition to being used to create yes/no questions, it is used in creating alternative questions, where the hearer is expected to choose between one or more alternatives. Examples of this type of question are given in section 6.4 where *sánē* is distinguished from another word for “or” which is used in the declarative mood.

**Response**

àm:í àṅà

àm:í àṅà

water presence

'Yes, there is water.'

(653) músá àṅàḿì

músà àṅà -ḿì

Moussa presence POSS:3.M

'Is Moussa here?'

*11.2.2 Content questions*

The following table presents the interrogatives, or question words.

**Table 47: Question words**

mà	who
mó	what
àlāṅ	where
dúṅō	when
tà mó	why
ān:áṅ	how
tālāṅ	how many

Content questions query a specific constituent of the sentence by using an interrogative pronoun. The interrogative pronouns (or question words) are presented in the following table. The interrogative “why” is a composite of the question word “what” and the purpose preposition (section 9.3.3).

All of these words stay in the same position in the sentence as the word or phrase they replace, i.e., *in situ*. This is the most common pattern for SVO Chadic languages (Schuh 2003:58–59). When the interrogative is replacing a word that can appear in multiple positions in the sentence, the interrogative word can equally be placed in each of those positions.

**Who**

(654) màá ñ wòl:ó  
 mà ñ wǒl:- -o  
 who FUT pass INF  
 'Who will win?'

(655) músà tà ñ òm:ó m màá  
 músà tá ñ ǒm:- -o ìṅ mà  
 Moussa CERT FUT marry INF PREP who  
 'Who will Moussa marry?'

(656) músà tá m bédíjì m péesí m màá  
 músà tá ñ béd- -í -jì ìṅ péesí ìṅ mà  
 Moussa CERT FUT give INF POSS:3.M PREP horse PREP who  
 'Moussa will give his horse to who?'

**What**

(657) tì gǎnéjì mó  
 tì gǎn- -ēji mó  
 S:3.F make IMPF what  
 'What is she making?'

(658) kà tóotéj m mó  
 kà tót:- -ēji ìṅ mó  
 S:3.M cut IMPF ASOC what  
 'What is he cutting with?'

(659) kà bédéj m mó jì jónjù  
 kà béd- -ēji ìṅ mó ìṅ nón- -jù  
 S:3.M give IMPF PREP what PREP child(POSS) POSS:1.M  
 'What is he giving to my son?'<sup>136</sup>

**Where**

(660) kólǵà àlǵṅ  
 kól- -gà àlǵṅ  
 go PROG where  
 'Where are you going?'

<sup>136</sup> It is not known why there is a preposition before the question word in this transcription.

- (661) kà dópéjī àm:í àláj  
 kà dóp- -ēji àm:í àláj  
 S:3.M find IMPF water where  
 'Where does one find water?'

### When

- (662) kà ñ ājó dúṅó  
 kà ñ āj- -o dúṅó  
 S:3.M FUT come INF when  
 'When will he come?'

- (663) dúṅó kà ñ ājó  
 dúṅó kà ñ āj- -o  
 when S:3.M FUT come INF  
 'When will he come?'

### Why

- (664) tà mó kí tējī dō  
 tà mó kì t-, L -ēji dō  
 PURP what S:2.M eat IMPF NEG  
 'Why don't you eat ?'

### How

- (665) dùkúrògà <sup>137</sup> íno tāláj  
 dúkr- -ē -gà íno tāláj  
 prepare PRF DO:3.M *boule* how  
 'How did you make the *boule*?'

### How many

- (666) nándò ān:áj  
 nándí -gò ān:áj  
 children.PL POSS:2.M how.many  
 'How many children do you have?'

- (667) kì kólá āt:á ān:áj ñjàménà  
 kì kól- -à āt:á ān:áj ñjamena  
 S:2.s go PFV time how.many N'Djamena(A)  
 'How many times have you been to N'Djamena?'

<sup>137</sup> The suffix and epenthetic vowel in this verb appear to be affected by vowel harmony, even though elsewhere the vowel [a] does not trigger vowel harmony (section 4.5).

## Chapter 12 : Conclusion

This study has focused on the phonology and morphology of the language and has introduced the simplest syntactic structures. The natural texts in the appendices give several examples of structures that deviate from the standard single-clause SVO pattern described here. For example, the two sentences below both appear to have sentence-initial objects (OSV). Discourse studies (topic, focus, participant reference, etc.) are needed to understand the function of these structures, as well as many other overlooked structures in the language.

(668) màpàná kǐ      òìgà                      ná tǎlá  
          màpàná kǐ      d-, L -ii              -gà      ná tǎláŋ  
          thing    S:2.M kill    IMPF/PFV DO:3.M EQ how  
          ‘How did you kill this thing?’ (appendix 12)

(669) dē    gèn:è              ánē      tètì  
          dē    gèr- -jìnè      ánē      t-, L -ēe -tì  
          REL:F POSS POSS:EXCL PRO:EXCL eat    PRF DO:3.F  
          ‘We ate ours.’ (appendix 13)

The brief introduction to a few complex syntactic structures in chapter 10 could be expanded, not only in depth, but also to cover more clause types that were not touched on in this study. One relatively common structure combines a verb of motion with another verb. This structure appears to function as a way to add directional meaning to a verb.

(670) wóré ná nū      kóléj      jéléj      bósē  
          wóré ná nì      kól- -ēji      jēl- -ēji      bósē  
          Wore EQ S:3.PL go    IMPF put IMPF Bosse  
          ‘From Wore, they put someone at Bosse.’ (appendix 10)

- (671) n̄ júkéj kóléj tílàŋ jáarátū  
 ìŋ júk- -ēji kól- -ēji tíl- -ā -ŋ jár -já -tù  
 S:1.S stand IMPF go IMPF visit IMPF DO:3.PL neighbor(A) PL POSS:1.S  
 'I went out to visit my neighbors.' (appendix 9)

Since subject pronouns are frequently dropped when recoverable from context, a further test is required to demonstrate that these two verbs do not constitute two separate clauses. An initial query showed that a negation marker after the second verb covers both verbs. This suggests that this may be an example of a serial verb construction. Serial verb constructions are not common in Chadic, but not unheard of (Frajzyngier 1987a; 1993:229; 2001:123; Shay 1999; Hellwig 2006; Frajzyngier & Shay 2012:333, 550).

- (672) n̄ séj súléj dō  
 n̄ s-, H -ēji súl- -ēji dō  
 S:3.PL come IMPF sit IMPF NEG  
 'They didn't come and stay.'

The same is not true if a second subject pronoun is present.

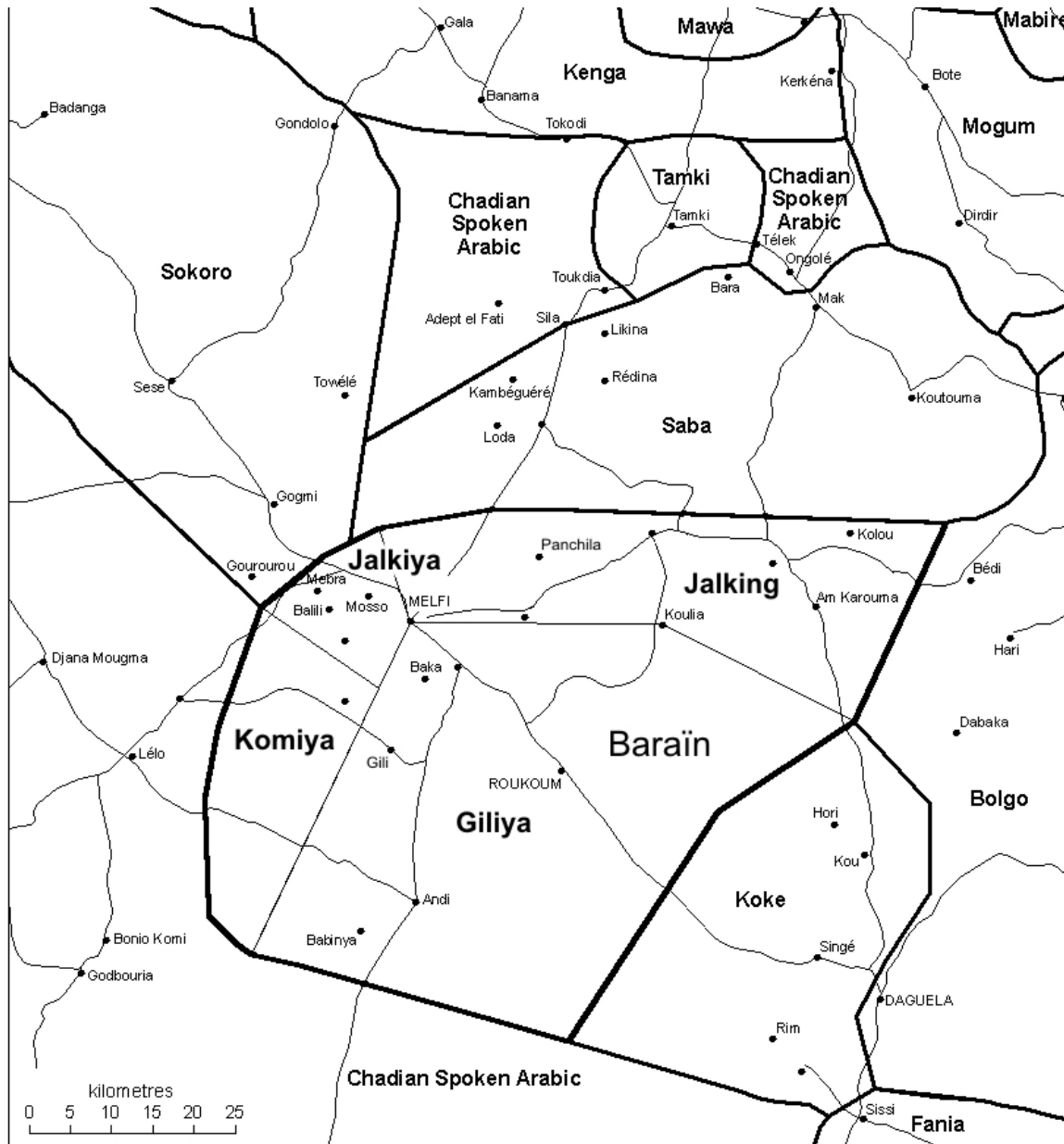
- (673) n̄ séj n̄ súléj dō  
 n̄ s-, H -ēji n̄ súl- -ēji dō  
 S:3.PL come IMPF S:3.PL sit IMPF NEG  
 'They came, but they didn't stay.'

This description of the most fundamental phonological, morphological, and syntactic building blocks of the language provides a basic understanding of the language. This first step in descriptive analysis enables linguistically-informed orthography development, provides a platform for more in-depth studies to take place in the future, and contributes to the larger field of Chadic and Afroasiatic studies.



**Appendix 1: Map of Baraïn area**

This map approximating the language area and dialect boundaries was taken from a sociolinguistic survey report done by SIL (Maass et al. 1996). The labels have been modified according to more recent research.



Used by permission, © SIL, 1996 (Rapport d'enquête sociolinguistique : Première évaluation parmi les Barein du Guéra)

## **Appendix 2: Lists of Baraïn villages**

Villages names and dialect locations are compiled from four sources, including ADPLB (*l'Association pour la promotion de la langue barain*). There are a total of 42 possible Barain villages. The population figures were compiled by a Barain speaker, Abelkarim Sabre, in 2009, based on census information he had access to. The figures suggest that about one-third of the population is Jalkiya, and one-third Giliya. The Jalking and Komiya each comprise about one-sixth of the population. There may be as many as 1000 Barain living in the town of Melfi, primarily Jalkiya and Giliya.

<i>Village name</i>	<i>(Maass et al. 1996)</i>	<i>(James Roberts 1993)</i>	<i>ADPLB</i>	<i>Population</i>
Mosso	l'oeust		Jalkiya	238
Goumi	l'oeust		Jalkiya	36
Mebra	l'oeust		Jalkiya	456
Balal (Balili)	l'oeust		Jalkiya	255
Kondol (Kidili)	l'oeust		Jalkiya	
Koulia	l'oeust, sud, est		Gilliya	82
Tabi Ahmat	sud-ouest		Komi (Arab)	
Tabi Moussa			Arab	
Komi (I, II)	sud-ouest		Komi	436
Tchipo	sud-ouest		Komi	
Kile kile	sud-ouest		Komi	84
Baka (Matmouro)	sud		Gilliya	65
Baka (Tonga)				190
Oua	sud		Gilliya	
Roukoum	sud		Gilliya	216
Gilli (Djili)	sud		Gilliya	234
Andi (Fado, Bolong)	sud		Gilliya	83
Babinya	sud		Gilliya	576
Koubi	sud		Gilliya	213
Gasara	sud?		uninhabited	
Doutoum I	est		Jalking	106

Doutoum II				137
Kolou	est	Jelkung	Jalking	
Panchila	est		Jalking	311
Djibi	est	Jelkung	Jalking	93
Nyame	est		Jalking	108
Djourourou	est			
Bonkoun			Jalkiya	418
Balinua			Jalkiya	
Essiya		Jelkung	Jalking	
Jalgi			Jalking	
Komi Hidjerat			Komi	217
Tchakro			Komi	
Toutba I (Melfi)			Jalkiya	
Toutba II (Melfi)				
Dougour			Jalkiya	
Badilo				
Am-Hillele (I, II)			Arab?	
Salamat			Arab?	
Borokla			Arab?	
Hambol				50
Walegé				52

### **Appendix 3: Consonant contrast**

	/p/ /b/	/t/ /d/ /ʃ/	/ʃ/ /k/ /g/
Word-initial	[pō:tó] 'to shell (beans)' [bōtó] 'to get lost'	[tíi] 'to eat' [díi] 'to walk' [jíi] 'to hear'	[jūló] 'to insult' [kūró] 'donkey' [gūrō] 'to chase'
	[púuró] 'grey hair' [bùuró] 'red'	[táaró] 'to stretch out' [dārō] 'to meet' [jàaró] 'to drag'	[ʃòlòŋʃòlóngò] 'insect, sp.' [kóló] 'to go' [gōló] 'turn the head'
			[kōlmó] 'black' [gólmó] 'house'
Intervocalic	[òpòpòn] 'winter' [kòbòn] 'buffalo'	[ìt:á] 'eye' [ìd:á] 'truth' [íjá] 'mother'	[jéj:ó] 'to crackle' [rāg:ó] 'to put together' [dāk:ó] 'to found'
	[kúpō] 'to join' [kúbó] 'to have a stomach ache'	[pátō] 'clean (grain)' [tádó] 'climb' [wájō] 'to conversate'	[íjì] 'his mother' [sīkīpánj] 'a tree' [sīgītē] 'ostrich'
After/Before consonant	[gìrpílò] 'a tree' [màrbò] 'girl'	[sīntó] 'to sweep' [sīndí] 'name' [sìjájá] 'nose'	[dàrjá] 'grandfather/ grandson' [àrká] 'war' [wárgátá] 'an insect'
		[bùrdál] 'a drum' [dàrjá] 'grandfather/ grandson'	[nónjì] 'his son' [kàŋkì] 'sorgum' [kónjígí] 'cucumber'
		[kórtó] 'pot' [gòrdól] 'calf muscle'	
Word-final	–	–	–

	/m/ /n/ /ɲ/ /ŋ/	/r/ /l/	/j/ /w/
Word-initial	[mámō] 'to touch' [nāmō] 'to help' [ɲà:mó] 'to steal'	[rískì] 'wealth' [lísíŋ] 'tongue'	[jáalò] 'eggplant' [wālō] 'year'
	[mánà] 'story' [námá] 'child' [ɲámá] 'thief'	[rúp:ó] 'to cut' [lúwá] 'above'	[jók:ūró] 'a drum' [wóró] 'to chat'
Intervocalic	[súmō] 'swallow' [gùnò] 'wind' [múŋó] 'trap' [mōrūpó] 'to soak'	[gōrō] 'to buy' [gōlō] 'to turn the head'	[gòjó] 'stick to grind millet' [gòwó] 'to gather'
	[námá] 'enfant' [ānā] 'when' [àɲà] 'presence' [májá] 'the bush'	[ɲárō] 'to look for' [ɲālō] 'to swim'	[dójó] 'to study' [dòwó] 'to go to bed'
	[dímō] 'to break' [gīnó] 'to refuse' [mìpɔ] 'to hit/slap' [dīŋō] 'to hope'		
After/Before consonant	[sármó] 'thunder' [dàrní] 'gums'	[tírsó] 'to arrive' [wílsó] 'to boil'	--
	[kúmsúl] 'eyebrow' [mònsònò] 'beans'	[sármó] 'thunder' [gólmó] 'house'	
Word-final	[gósóm] 'beard' [wósón] 'thigh'	[pìr] 'rainy season' [àbīl] 'rhinoceros'	--
	[gàrà̀m] 'white sorgum' [àsàn] 'a fruit' [dáláj] 'cheek'	[kór] 'a bird' [jòkòl] 'nape (neck)'	



## **Appendix 4: Vowel contrast**

**Table 48: Vowel contrast**

<i>Vowels</i>	<i>Word-initial</i>	<i>Word-medial</i>	<i>Word-final</i>
[o] and [u] (back)	[úp:ó] 'to wipe' [òp:a] 'forehead'	[bòojá] 'grandmother' [bùujá] 'corn'	[àrú] 'hundred' [áró] 'to burn'
[i] and [e] (front)	[índé] 'dusk' [èmbēr] 'giraffe'	[bíndí] 'a fruit' [béndí] 'leg'	[kì] 'you (S:2.M)' [kè] 'you (S:2.F)'
[i] and [u] (high)	[índé] 'dusk' [úndúpú] 'cold'	[wīrō] 'to light up' [wúró] 'to insult'	[būusí] 'fish' [búusú] 'rock badger'
[e], [o], [a] (mid & back)	[èlí] 'to help' [òlùpī] 'marrow' [ā:l:í] 'there'	[sēebó] 'to fish' [sàabó] 'to bark' [sòobó] 'to light'	[máaré] 'guinea fowl' [māaró] 'to grow' [màrà] 'crocodile'

## **Appendix 5: Distribution of consonants**

		Plosives							Nasals				Liquids		Fricative	Approximants	
		p	b	t	d	ɟ	k	g	m	n	ɲ	ŋ	r	l	s	j	w
Word-initial	#_	+	+	+	+	+	+	+	+	+	+	-	+	+	+	<sup>+</sup> <sub>138</sub>	+
Intervocalic	V_V	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
After a nasal	N_	+	+	+	+	+	+	+	<sup>-</sup> <sub>139</sub>	-	-	-	-	-	+	-	-
After a liquid	R_	+	+	+	+	+	+	+	+	+	+	-	-	<sup>-</sup> <sub>140</sub>	+	-	+
After an approximant	G_	<sup>-</sup> <sub>141</sub>	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-
After a plosive	P_	<sup>-</sup> <sub>142</sub>	-	-	-	-	-	-	-	-	-	-	<sup>-</sup> <sub>143</sub>	-	-	-	-
After a fricative	F_	-	-	-	-	-	<sup>-</sup> <sub>144</sub>	-	-	-	-	-	-	-	-	-	-

<sup>138</sup> The approximant [j] is in word-initial position in only two words in the lexicon.

<sup>139</sup> If long nasals are considered two separate segments, then, in a sense, the language allows nasals to be followed by another nasal of the same place of articulation. In addition, the verbal morphology allows two nasals to come together at a morpheme boundary (section 4.1.1).

<sup>140</sup> If the long form of [l] is considered as two segments, then this could be an example of [l] followed by a liquid.

<sup>141</sup> The plosive [p] actually follows an approximant in one word [kàjpò] 'hare'. This word is similar in most languages of the area and may have come from Bagirmi.

<sup>142</sup> If long consonants are considered two segments, then, in a sense, plosives can be followed by another plosive of identical features.

<sup>143</sup> The combination /dr/ is found in one word [kòndrèn] which is a type of stringed instrument. This word is an exception to the maximum syllable size.

<sup>144</sup> The fricative precedes [k] in two words, one of which is likely a loan word and another which may be an archaic term: [rískì] 'wealth' and [kàskàr] 'a type of sword'.

		Plosives							Nasals				Liquids		Fricative	Approximants	
Before a nasal	_N	-	-	-	-	-	-	-	<sup>-</sup> <sub>145</sub>	-	-	-	+	+	-	-	-
Before a liquid	_R	-	-	-	-	-	-	-	+	+	-	-	+	+	+	-	-
Before an approximant	_G	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-
Before a plosive	_P	<sup>-</sup> <sub>146</sub>	-	-	-	-	-	-	+	+	+	+	+	+	<sup>-</sup> <sub>147</sub>	<sup>-</sup> <sub>148</sub>	-
Before a fricative	_F	-	-	-	-	-	-	-	+	+	-	-	+	+	-	+	+
Word-final	_#	-	-	-	-	-	-	-	+	+	-	+	+	+	+	+	+

<sup>145</sup> See note 138.

<sup>146</sup> See note 141.

<sup>147</sup> See note 140.

<sup>148</sup> See note 139.

## **Appendix 6: Proposed orthography**

The proposed alphabet consists of twenty-three letters based on the Roman script. The Roman script has been used effectively in nearly every mother-tongue literacy program in the region, showing its general acceptability. While not being inherently more teachable than Arabic script (the only other widely-used script in Chad), the advantage of the Roman script in the educational sphere is that it allows some transfer of knowledge for those who have learned or will learn to read and write in French, the primary language of education.

**Table 49: Baraïn alphabet**

<i>Lower Case</i>	<i>Upper Case</i>	<i>Phoneme</i>	<i>Lower Case</i>	<i>Upper Case</i>	<i>Phoneme</i>
a	A	/a/	n	N	/n/
b	B	/b/	ṅ	Ṇ	/ɲ/
c	C	/c/, /ç/	ŋ	Ŋ	/ŋ/
d	D	/d/	o	O	/o/
e	E	/e/	p	P	/p/
g	G	/g/	r	R	/r/
h	H	/h/	s	S	/s/
i	I	/i/	t	T	/t/
j	J	/j/	u	U	/u/
k	K	/k/	w	W	/w/
l	L	/l/	y	Y	/j/
m	M	/m/			

Sixteen phonemic consonants, five phonemic vowels, and two additional sounds are represented by twenty-three letters. The consonant <h> has been added to the alphabet in anticipation of loan words and proper names from Arabic, which introduce the phoneme /h/ into regular use, especially in the case of names of people and places. Likewise, the grapheme <c> (representing a voiceless palatal [c], [ç], or possibly [tʃ]) will most likely be needed for loan words from Arabic and other neighboring languages. It may be the case that other additional letters will need to be added to the orthography to account for other loan words. The choice of the particular letters used to represent the

palatal and velar nasals is in accordance with the national standard promoted by the Chadian government, and common usage in neighboring languages. In order to facilitate the transition to French literacy, the Baraïn orthography will follow French punctuation and capitalization conventions.

The phonological analysis shows that long vowels and consonants are contrastive (sections 2.1.7 and 2.2.1). These segments will be represented in the orthography by a doubling of the letter which corresponds to the long phoneme.

**Table 50: Long consonants and vowels in the orthography**

< summo >	'to scratch'	< wiiro >	'to fly'
< bakko >	'to open'	< seero >	'to search for'
< mijji >	'man'	< maaro >	'to grow'
< wonno >	'to know'	< wooso >	'to close'

Chapter 4 describes several types of phonological processes (alternations) that occur when morphemes are joined together. The challenge for orthography design is to decide whether the morphemes in these cases should be written as they are pronounced (surface form/shallow orthography), or as they would appear in a neutral environment (underlying form/deep orthography). Since no formal testing has been done with the orthography, little can be said about these alternations. One principle to consider is to preserve consistent word shapes for common function words such as subject pronouns (section 8.2), the associative preposition (section 9.3.2), the oblique preposition (section 9.3.1), and the Future auxiliary (section 7.1.5).<sup>149</sup>

(674) < Musa ŋ duwo. > [músà ñ dùwò] 'Moussa will see.'  
           < baatu iŋ baŋa > [bàatú ñ bàŋà] 'cat and dog'

In the case of Baraïn, the number of minimal pairs for tone is relatively small. No evidence has been found for grammatical tone. It can be said that the “functional load” for tone is relatively low. For this reason, it is proposed that tone only be marked in those

<sup>149</sup> One orthography design practitioner argues that multiplicity of forms in function words is not a bad thing, since readers will quickly memorize the oft-repeated elements (Stark 2010:157). Others believe that it is a priority to preserve a consistent spelling for function words (Schroeder 2008:26).



exceptional cases where homographs would not be easily disambiguated by contextual clues such as syntactic structure and surrounding lexical content.<sup>150</sup> Proposals concerning tone marking have not been subject to testing, and therefore remain tentative.

In all of the cases in which minimal pairs could plausibly cause intolerable ambiguity, the contrast is between a H tone and a L tone. In the case of a binary contrast, it may seem economical to only mark one of each pair needing disambiguation. However, it has been pointed out that this type of underdifferentiation, when combined with the strategy of only marking minimal pairs, puts an additional burden on the reader (Kutsch Lojenga 1993:15). The combination of the two strategies would mean that the lack of tone marking on a word could either signify that the word is not a part of a minimal pair, and should be interpreted by the context, or that the word is the unmarked word in a minimal pair. In theory, this would require the reader to access a mental list of minimal pairs for every unmarked word read, to check if the word has a marked counterpart. The obvious solution to this potential difficulty is to mark both words in a minimal pair (Bird 1999:11).

Therefore, in marking minimal pairs, it is proposed that both the H and the L tone be marked, even though the H tone words will likely be rarer in written texts. The acute accent has been chosen to mark the H tone word in a minimal pair, and the grave accent chosen to mark the L tone word. The use of accent marks to mark tone harmonizes with neighboring orthographies and the guidelines of the Chadian government.<sup>151</sup>

The primary candidate for tone marking is the case of the two sets of pronouns which only differ in tone marking in most of their forms: the first person singular and the first person dual, as well as the second person plural and the third person plural.

<sup>150</sup> Several authors have pointed out potential drawbacks to this approach (Longacre 1953:9; Mfonyam 1982:306; Wiesemann 1989:16). These objections are addressed in Bird (1999:11).

<sup>151</sup> There may be good reasons to question the effectiveness of accent marks to distinguish minimal pairs (David Roberts 2009). One alternate strategy would be to add an unpronounced letter (David Roberts 2011:85). For example, the first person singular subject pronoun could be written as <ij> (L tone), and the dual pronoun written iconically as <iij> (H tone). Likewise, the third person plural subject pronoun could be written <ni> (L tone), and the second person plural as <nni> (H tone). Since no words in this dialect have word-initial long vowels or consonants, the speakers should not have to hesitate over how to pronounce these unique words.

- (675) <Íŋ deji dii.> [ín déjí díi] 'We(DUAL) walk.'  
 <Ìŋ deji dii.> [ìn déjí díi] 'I walk.'
- (676) <Ní deji dii.> [ní déjí díi] 'You(PL) walk.'  
 <Nì deji dii.> [nì déjí díi] 'They walk.'
- (677) <nílla> [níl:à] 'you(PL)'  
 <nìlla> [nìl:à] 'they/them'
- (678) <Ìŋ gayaŋ.> [ìŋ gājàŋ] 'I love you (all).'  
 <Ìŋ gayaŋ.> [ìŋ gājàŋ] 'I love them.'

There are two nouns which are the most likely to be confused if not differentiated by tone marking. The tone mark is on the first syllable because that is where the contrast occurs phonetically, and because both nouns belong to a small class of nouns that lose their final vowel before a possessor agreement suffix (section 4.10).

- (679) <áttá> [át:á] 'arm(s)'  
 <àttá> [àt:á] 'stomach'

Spaces between orthographic words in an alphabetic system separate independent morphemes, allowing the reader to more easily decipher the units of meaning, and interpret the grammatical structure of the sentence (Nida 1954:37; Dyken & Kutsch Lojenga 1993). Certain morphemes combine together in such a way that the speakers view the combination as one unit of meaning. It is assumed that affixes (morphemes phonologically and syntactically bound to another morpheme) are viewed as one unit of meaning with the morpheme they are bound to, but that clitics (phonologically bound but syntactically free) are viewed as separate units of meaning (Schroeder 2008:45).

There are several cases where the linguistic evidence for analyzing a morpheme as a clitic or affix is less than conclusive: direct object suffix after an indirect object suffix (section 8.5), verbal auxiliaries (sections 7.1.5 and 7.3.2), and the Perfective discourse markers (section 7.3.1).

At least in those cases where the speakers are still aware of the composed parts of compound nouns (section 6.1.5), it is recommended that the constituents of the

compound noun be separated by a hyphen in the orthography. In theory, this will help the readers to more quickly recognize the parts of and read these abnormally long words.

- (680) <kisibo-bulu> [kìsìbòbùlú] 'white-tailed mongoose'  
 <bulmi-bombom> [bùlmíbòmbòm] 'African wild dog'

Like compound words, many numbers appear to be composed of more than one morpheme, though perhaps diachronically composed (section 6.3.1). It must be decided whether to write the numbers as they are pronounced, or to write them in a more abstract, logical form.

- (681) [dàw̄sú] <dawsu> 'five'  
 [dàsúmáníŋ] <dasumaniŋ> or <dawsu-iŋ-paniŋ> 'six'  
 [dàsís:íidì] <dasissiidi> or <dawsu-iŋ-siidi> 'seven'

**Appendix 7: Interlinearized text “Life in Mongo”**

Life in Mongo

Told by Sayide Moussa

Translated to French by Moussa Adou

January 20, 2010 in Mongo (Chad)

1. hòndē gérá dē áné sūlūg:ō ŋ gēegē  
 sòndé géra dē ánē súl- -ùg:o ìŋ gēegē  
 now village REL:F PRO:EXCL sit OBL PREP today  
 The town where we are today...
2. ma ánē sūlūg:ō ŋ gāndā m ma...  
 ma ánē súl- -ùg:o ìŋ gāndà ìŋ mójgò  
 ???(A) PRO:EXCL sit OBL PREP inside PREP Mongo  
 ...we are in Mongo.
3. máŋgō kájí nà  
 mójgò kājē ná  
 Mongo here EQ  
 This is Mongo.
4. ìn hílé dē gēn:ē balel na m màlpì ná sáwā dō  
 ìŋ hil:e dē gèr- -jìnè bálál ná ìŋ màlpì ná sawa dō  
 PREP village(A) REL:F POSS POSS:EXCL Balili EQ PREP Melfi EQ same(A) NEG  
 In our village of Balili, as in Melfi, it is the same (as Mongo).
5. ʃaŋ ālí gēnē tīdná gàn hílé dè pàatúu dī  
 ʃaŋ ālí gèr- -jìnè tì dī ná gǎn- -ē hil:e dē pàa- -tú dī  
 ??? there POSS POSS:EXCL S:3.F DEM:F EQ make PRF village(A) REL:F big N:F DEM:F  
 For us over there, this is a big town.<sup>152</sup>
6. wánē sēt:ā súlē  
 wò ánē s-, H -ēt:a súl- -ē  
 and PRO:EXCL come PRF sit PRF  
 But we came to live here.
7. híndō ālí ná gē kī pēdējī kōw  
 dindo ālí ná gē kì pēd- -ēji ków  
 however there EQ REL:M S:2.M cultivate IMPF also  
 It's not like over there, where you can work your field.

<sup>152</sup> The double acute accent signifies a super-high tone. In this case the raised tone and long vowel is an intonation effect (section 5.5).

8. kī dōpējī  
 kī dóp- -ēji  
 S:2.M find IMPF  
 You find (work).
9. wò kī kólē máná ków gárgō kī sèràgá  
 wò kī kól- -ē máná ków gárwí -gò kī ser- -ā -gà  
 and S:2.M go PRF bush also wood POSS:2.M S:2.M come.CAUS IMPF DO:3.PL  
 You can also go to the bush and get firewood.
10. ŋ āl'í gēn:è nà  
 ìŋ āl'í gèr- -jìnè ná  
 PREP there POSS POSS:EXCL EQ  
 Over there it's like that for us.
11. wò kājéj'íj'ó j'ǒ dōo gāné kūsē gàndá wī  
 wò kājē -j'íj'ó ??? dōo gǎn- -ē kūs:- -ē gàndà g'ì  
 and here ??? ??? climate make PRF learn PRF inside DEM:M  
 But we've gotten used to this environment.<sup>153</sup>
12. bās ánē s'úl:ò j'è  
 bas ánē s'úl- -rò j'ē  
 only(A) PRO:EXCL sit OBL DISC  
 That's it... we live here.

<sup>153</sup> The double acute accent signifies a super-high tone.

**Appendix 8: Interlinearized text “Directions to Moussa's home”**

Directions to Moussa's home

Told by Sayide Moussa

Translated to French by Moussa Adou

Interjections by Moussa Adou marked in angled brackets < >

April 28, 2010

1. kólǵá n dúwéǵù ɲ gérnè ná  
 kól- -gà ɲ dúw- -o -ǵù ìɲ gérá -ǵìnè ná  
 go PROG FUT see INF POSS:1.S PREP home POSS:EXCL EQ  
 Going to see me at our house it's like this...
  
2. tò kī kólé ná < gùsò >  
 tò kì kól- -ē ná gùs- -o  
 COND S:2.M go PRF EQ exit INF  
 When you have gone ... <go out >
  
3. tò kī gùsè kǵǵè màlà m búǵì  
 tò kì gùs- -ē kǵǵè mala ìɲ búǵá -ǵì  
 COND S:2.M exit PRF here ??? PREP mouth POSS:3.M  
  
 ɲ gólméǵìɲ kǵǵè ná  
 ìɲ gólmó -ǵìɲ kǵǵè ná  
 PREP house POSS:2.PL here EQ  
 When you've excited here at the entrance of your house...
  
4. kī m pīdèǵèti ɲ árá  
 kì ìɲ pīd- -o -ǵèti ìɲ árá  
 S:2.M FUT take INF POSS:3.F PREP path  
 ...you take the main road.
  
5. kī n díi kée: kī ɲ ànò m pǒ  
 kì ìɲ d-, H -íi kée kì ɲ ān- -o ìɲ pǒ  
 S:2.M FUT walk INF DUR S:2.M FUT reach INF PREP bridge(F)  
 You will walk until you reach the bridge.
  
6. m pīdèti n ǵáréǵá ǵaré nà ǵārē àtǵǵà tì dī  
 ìɲ pīd- -o -ǵèti ìɲ ǵare ǵare na ǵare atǵǵa tì dī  
 FUT take INF POSS:3.F PREP path(A) path(A) ??? path(A) Atiya(A) S:3.F DEM:3.F  
 You will take the road... the road called “Atiya”.



7. kī ànè ná  
kì ān- -ē ná  
S:2.M reach PRF EQ  
When you've arrived...
8. kī ɲ jàngó ɲ kóló ɲ ... jàmìjè kàbír ...  
kì ɲ jǎŋg- -o ɲ kól- -o ɲ jaamije kabir  
S:2.M FUT descend INF PREP go INF PREP mosque(A) big(A)
- jàmìjè dè pàatū  
jaamije dē pàa- -tú  
mosque(A) REL:F big N:F  
You will go down to the big mosque.
9. ɲ jāmìjè dè pàatū ná ...  
ɲ jaamije dē pàa- -tú ná  
PREP mosque(A) REL:F big N:F EQ
- kī ɲ ānō ...  
kì ɲ ān- -o  
S:2.M FUT reach INF
- èe kī n ... n tírsó m bŭgètì n sŭk ...  
hija kì ɲ ɲ tírs- -o ɲ bújá -gètì ɲ suk  
so(A) S:2.M FUT FUT arrive INF PREP mouth POSS:3.F PREP market(A)
- n sŭk àaláj  
ɲ suk aalaj  
PREP market(A) Alay(A)  
Before the big mosque, you will arrive at the entrance to the market...  
the “Alay” market.
10. n sŭk àaláj ná dírékt kī ɲ jàngó  
ɲ suk aalaj ná direkt kì ɲ jǎŋg- -o  
PREP market(A) Alay(A) EQ direct(F) S:2.M FUT descend INF  
At the “Alay” market you keep going down straight.
11. kī jàngē kée:  
kì jǎŋg- -ē kée  
S:2.M descend PRF DUR  
Having gone farther down...

12. kī pìdètàārá tíl:à ná kī ɲ jàngó kee:  
 kī pīd- -ē -tì árá tíl:à ná kī ɲ jǎŋg- -o kée  
 S:2.M take PRF DO:3.F path PRO:3.F EQ S:2.M FUT descend INF DUR

nàmà kī ɲ: ānō nàgà sàlá  
 namma kī ɲ ān- -o naga sala  
 until(A) S:2.M FUT reach INF room(A) prayer(A)

When you have taken the path and gone farther down you will reach the prayer room.

13. ānē nàgā sàlá ká kī íntù kī n díi  
 ān- -ē naga sala ká kī intu kī ɲ d-, H -íi  
 reach PRF room(A) prayer(A) also S:2.M ??? S:2.M FUT walk INF  
 Having reach the prayer room, you will continue walking.

14. kī n díi kée:  
 kī ɲ d-, H -íi kée  
 S:2.M FUT walk INF DUR

nāmàn kī ɲ kóló ɲ jāamèe dè lòkùdó  
 naman kī ɲ kól- -o ɲ jaamije dē lõkd- -o  
 more(A?) S:2.M FUT go INF PREP mosque(A) REL:F descend INF  
 You will keep walking more and you will go to the lower mosque.

15. kī ānē ɲ jāamē: dè pàatú tíl:à ná  
 kī ān- -ē ɲ jaamije dē pàa- -tú tíl:à ná  
 S:2.M reach PRF PREP mosque REL:F big N:F PRO:3.F EQ  
 You've reached the big mosque...

16. <kī ɲ kóló > kī ɲ kóló  
 kī ɲ kól- -o kī ɲ kól- -o  
 S:2.M FUT go INF S:2.M FUT go INF  
 <You will go... > You will go...

17. tò kī: ... pīdètì jāamé árdē pàatú ná  
 tò kī pīd- -ē -tì jaamije árá dē pàa- -tú ná  
 COND S:2.M take PRF DO:3.F mosque(A) path REL:F big N:F EQ  
 When you have taken the path by the big mosque...

18. bàtāŋ kī m pìdò ŋ árá tìl:à tà kée:  
 bataŋ kì ñ pīd- -o ñŋ árá tíl:à ta kée  
 ??? S:2.M FUT take INF PREP path PRO:3.F ??? DUR

kī ŋ ànò m: ... p̄  
 kì ñ ān- -o ñŋ p̄  
 S:2.M FUT reach INF PREP bridge(F)

You will continue along the same path and you will arrive at a bridge.

19. p̄ ná tìl:à ná tè ēsnér dī  
 p̄ ná tíl:à ná tà esner dī  
 bridge(F) EQ PRO:3.F EQ PURP Esner(A) DEM:3.F  
 The bridge which is called “Esner”.

20. p̄ dè èsnér tìl:à ná ki ŋ kèt:ò n dākètìŋ  
 p̄ dē esner tíl:à ná kì ñ kēt:- -o ñŋ dak- -etiŋ  
 bridge(F) REL:F Esner(A) PRO:3.F EQ S:2.M FUT ask INF PREP ??? ???  
 Down at the “Esner” bridge you will ask.

21. p̄ ti na índènèe: ... āngúlō pàatú  
 p̄ tì ná indene āngúlō pàa- -tú  
 bridge(F) S:3.F EQ children(A) type of tree big N:F

nándángá sùléjí kàkírèŋ  
 nándángá sùl- -ēji kàk:írèŋ  
 children.PL sit IMPF there

At the bridge there are children and a big tree that the children sit under.

22. kī ŋ kēt:èjìgà  
 kì ñ kēt:- -o -jìgà  
 S:2.M FUT ask INF POSS:3.PL  
 You will ask them.

23. kī ŋ kēt:èjà ná hálá  
 kì ñ kēt:- -o -jìgà ná halas  
 S:2.M FUT ask INF POSS:3.PL EQ finished(A)

kī m pīdō ŋ át:ò méd:ó  
 kì ñ pīd- -o ñŋ át:á -gò méd:ó  
 S:2.M FUT take INF PREP arm POSS:2.M left

You will ask and that's it. You will take a left turn.

24. kī pìdà jè át:ò méd:ó ná  
 kì pīd- -à jē át:á -gò méd:ó ná  
 S:2.M take PFV DISC arm POSS:2.M left EQ  
 You take a left...
25. kī n díi kée:  
 kì ñ d-, H -íi kée  
 S:2.M FUT walk INF DUR  
 You will continue walking.
26. índànè mè nē sínā kàkírèṅ ká mèjèr tá árá nì  
 ind- -ane me nē sínā kàk:írèṅ ká mèjèrè tà árá nì  
 have(A) ??? ??? REL:PL other there also people PURP path DEM:PL  
 There will be another group of people there; the people who are  
 working on the road.
27. ṅ wòtìrjìgà sùléjìgà kàk:írèṅ  
 ìṅ wotir -jìgà sùl- -o -jìgà kàk:írèṅ  
 PREP truck(A) POSS:3.PL sit INF POSS:3.PL there  
 They are sitting next to their trucks.
28. tò kí wōn:ìgà nì gà gérgè dō gérnè dō ná  
 tò kì wōn:- -gà nì ga gérá -gè dō gérá -jìnè dō ná  
 COND S:2.M know DO:3.M ?? ?? home POSS:2.M NEG home POSS:EXCL NEG EQ  
 kī ṅ kèt:èjìgà nìl:à  
 kì ñ kèt:- -o -jìgà nìl:à  
 S:2.M FUT ask INF POSS:3.PL PRO:3.PL  
 If you don't know your house... our house, you will ask them.
29. mīndē kèt:ē nìl:à ná nìl:à ná  
 minde kèt:- -ē nìl:à ná nìl:à ná  
 after ask PRF PRO:3.PL EQ PRO:3.PL EQ
- hālā ṅ gáségètì m bújì ṅ gólmó  
 halas ṅ gás- -o -gètì ìṅ bújá -jì ìṅ gólmó  
 finished(A) FUT say INF POSS:3.F PREP mouth POSS:3.M PREP House
- gè dō gè n tá súldò  
 gē dōo gē ìṅ ta sùl- -dò  
 REL:M place REL:M S:1.S. ??? sit OBL  
 After having asked them they will show you where the entrance to  
 the house is where I live.

30. kī η ànò m bújí η gólménè ná  
 kì ìj̄ ān- -o ìj̄ bújá -jì ìj̄ gólmó -jìnè ná  
 S:2.M FUT reach INF PREP mouth POSS:3.M PREP house POSS:EXCL EQ  
 You will get to the entrance of our house...

31. índénè mím pàatú  
 indo -ne mim pàa- -tú  
 have(A) ??? neem(A) big N:F  
 We have a big neem tree.

32. wò kī n tòpō gàndà ná kà gì bās  
 wò kì ìj̄ tǒp- -o gàndà ná kà gì bas  
 and S:2.M FUT enter INF inside EQ S:3.M DEM:M only(A)

hójnè gè nù súlúgòo gì ...  
 hosne gē ìnù sùl- -ùg:o gì  
 wall(A?) REL:M PRO:1.S. sit OBL DEM:M

kálō gē ìnù súlúgòo gì  
 kálō gē ìnù sùl- -ùg:o gì  
 wall REL:M PRO:1.S. sit OBL DEM:M

And you will go inside there, that's it—the concession where I live.

**Appendix 9: Interlinearized text “What Sayide did yesterday”**

What Sayide did yesterday  
 Told by Sayide Moussa  
 Translated to French by Moussa Adou  
 January 28, 2010

1. tàndē ná sūk dè gèn:è kàjē àrbā dī  
 tàndē ná suk dē gèr- -jìnè kàjē arba dì  
 yesterday EQ market(A) REL:F POSS POSS:EXCL here four(A) DEM:F  
 Yesterday was the market for us. Here it's on Wednesdays.
2. ŋ kòlá sú:k  
 ìŋ kól- -à suk  
 S:1.s go PFV market(A)  
 I went to the market.
3. ŋ gòrà jēe: tàmatí:m  
 ìŋ gōr- -à jē tamaatim  
 S:1.s buy PFV DISC tomato(A)  
 I bought some tomatoes.
4. ŋ gòrà jē súu  
 ìŋ gōr- -à jē sùu  
 S:1.s buy PFV DISC meat  
 I bought some meat.
5. ŋ gòrà jēe: líjā kā té ìm:ī páajìgà  
 ìŋ gōr- -à jē líjā gē tà ìm:ī pájìgà  
 S:1.s buy PFV DISC thing REL:M PURP sauce all  
 I bought everything for making a sauce.
6. ŋ gòrèŋ ŋ sēt:ā sídí  
 ìŋ gōr- -ē -ŋ ìŋ s-, H -et:a sídí  
 S:1.s buy PRF DO:3.PL S:1.s come PRF home  
 I bought them all and I returned home.
7. n dòpèn nándù  
 ìŋ dóp- -ē -ŋ nándí -jù  
 S:1.s find PRF DO:3.PL children.PL POSS:1.s  
 I found my children.

8. n sàràgà jēe: zìgēgē tá: pàṅgàsú ŋ át:ū  
 ìṅ sar- -àga jē zìgeege tà faṅgaasu ìṅ át:á -jù  
 S:1.S come.CAUS IO:3.PL DISC snack(A) PURP beignet(A) PREP arm POSS:1.S  
 I brought them some beignets as a gift.
9. nì sáa n dùwánē jē ràg:à m: bàl:ígētì wúndóo  
 nì s-, H -àa ìṅ dǔw- -ane jē ràg:à ìṅ bàl:í -gētì wúndó  
 S:3.PL come PFV S:1.S place IO:EXCL DISC mat PREP side POSS:3.F shade  
 They came and I put a mat in the shade for us.
10. hálás mūsīlē gá sēt:à mínhíle sāa dūpēné:  
 halas mūsulā -já ká s-, H -ēt:a minhile s-, H -àa dóp- -ē -né  
 finish(A) guest PL also come PRF Minhile(A) come PFV find PRF DO:EXCL  
 Well... visitors also came from Minhile and found us.
11. ánē jēlā jē ǰájī  
 ánē jēl- -à jē ǰaahi  
 PRO:EXCL put PFV DISC tea(A)  
 We served tea.
12. ánē sàa jēe  
 ánē s-, L -àa jē  
 PRO:EXCL drink PFV DISC  
 We drank.
13. ŋ gánágā jē íjńóo  
 ìṅ gǎn- -àga jē íjńó  
 S:1.S make IO:3.PL DISC *boule*  
 I made *boule*.
14. ánē tàa jēe  
 ánē t-, L -àa jē  
 PRO:EXCL eat PFV DISC  
 We ate.
15. wò hálás ánē wājē dāṅ mārāwāj  
 wò halas ánē waj- -ē dāṅ marra wahid  
 and finish(A) PRO:EXCL pass.time PRF good very(A)  
 And, well, we had a great time.



16. índé náa ìṅ ʒúká lèṅ gérjìgà  
 índé ná ìṅ ʒúk- -à l-, L -ēe -ṅ gérá -jìgà  
 dusk EQ S:1.S stand PFV send PRF DO:3.PL village POSS:3.PL  
 At dusk I got up and I sent them to their village.
17. nì kólée hàlás  
 nì kól- -ē hàlás  
 S:3.PL go PRF finish(A)  
 They left, that's it.
18. ṅ ʒúké kólé tílàn ʒáarátū  
 ìṅ ʒúk- -ēji kól- -ēji tíl- -a -ṅ ʒaar -já -tù  
 S:1.S stand IMPF go IMPF visit IMPF DO:3.PL neighbor(A) PL POSS:1.S  
 I went out to visit my neighbors.
19. ká ṅ gànàgà bāatá  
 ká ìṅ gǎn- -àga bàatá  
 also S:1.S make IO:3.PL very  
 And I visited a lot of them.
20. wò tà lāawújū  
 wò tà lāaw- -o -jù  
 and PURP leave INF POSS:1.S  
 After that I returned home.

**Appendix 10: Interlinearized text “History of the Barāin”**

## The history of the Baraïn

Told by Arabi Yarana Adou (elderly male, brother of Moussa Adou)

Translated to French by Moussa Adou

Recorded November 13, 2010 in the village of Balili, near Melfi, Chad

1. b̄ō      j̄alkījā      ná dāk:īgā      ná júkéjì      bārō  
 b̄ō      jalki      -já ná dāk:-      -gà      ná júk-      -ēji      baro  
 good(F) Jalkiya PL EQ found PROG EQ stand IMPF Baro  
 Well, the Baraïn began with they left Baro<sup>154</sup>.
2. bārō ná nì      sējī      bārlo  
 baro ná nì      s-, H -ēji      barlo  
 Baro EQ S:3.PL come IMPF Barlo  
 From Baro, the came to Barlo.
3. bārlo ná nì      sējí      bānābā wāa bānālā  
 barlo ná nì      s-, H -ēji [mispoke]      banala  
 Barlo EQ S:3.PL come IMPF      Banala  
 After Barlo, they came to Banala<sup>155</sup>.
4. nì      séj      bānālā nì      jūkéj      n<sup>w</sup>ī:      lōkéj      gòbòrō bārā  
 nì      s-, H -ēji      banala nì      juk-      -ēji      nì      lóok-      -ēji      goboro bara  
 S:3.PL come IMPF Banala S:3.PL stand IMPF S:3.PL go.around IMPF Goboro Bara  
 They came to Banala then they left and went around to Goboro-Bara<sup>156</sup>.
5. gòbòrō bārā ná júkéjgà      dè      kàkrēn      tìl:à      ná kée  
 goboro bara ná júk-      -o      -jìgà      dē      kàk:írèŋ      tìl:à      ná kée  
 Goboro Bara EQ stand INF POSS:3.PL REL:F there      PRO:3.F EQ DUR
- nì      kólej      ísáj      gíli  
 nì      kól-      -ēji      ís-      -ā      -jó      gili  
 S:3.PL go      IMPF turn IMPF DTRV Gili  
 From Goboro-Bara, they left again from there and turned towards Gili.<sup>157</sup>

<sup>154</sup> Baro is a village in the region of Mongo currently occupied by the Dangaléat. The interpreter of this monologue said that there is some confusion as to whether the original Baraïn left this precise village or from somewhere else in the region.

<sup>155</sup> Banala is a villlage near the town of Bitkine currently occupied by the Kenga.

<sup>156</sup> Goboro-Bara is a village in the Saba region of the Guera, north of the current Baraïn territory.

<sup>157</sup> Gili is a village south of Melfi still occupied by the Baraïn. Gili is considered the central village of the subgroup called Giliya.

6. mīn: gīlì ná kālās mējērátìgà nā sínā ná júkéj ná  
 min gili ná kalas mējèrè -já -tìgà nā sínā ná júk- -ēji ná  
 from(A) Gilli EQ finish(A) people PL POSS:3.PL EQ other EQ stand IMPF EQ  
 From Gili, some of their people left...

7. nàjntō ārgō kól dúugā jèedó  
 nì jaa íj tò ánē kól- -ù dúw- -gà jèedó  
 S:3.PL COMP ASOC COND PRO:EXCL go SBJV see DO:3.M mountain

gō lúwá ga  
 gē lúwá kà gì  
 REL:M above S:3.M DEM:M

They said, “We should go see the mountain up there.”

8. nì sēj dúugà jèedó lúwá gà ná kālās  
 nì s-, H -ēji dúw- -gà jèedó lúwá kà gì ná kalas  
 S:3.PL come IMPF see DO:3.M mountain up S:3.M DEM:M EQ finish(A)  
 They saw the mountain up there...

9. tádó tádó ìj árdó wòré tìdná  
 tād- -o tād- -o ìj árá dē wore tì dì ná  
 climb INF climb INF PREP path REL:F Wure S:3.F DEM:F EQ  
 ...and climbed and climbed the path towards Wore<sup>158</sup>.

10. nì tādē kée  
 nì tād- -ē kée  
 S:3.PL climb PRF DUR

nì sāa dópátí bàdì dē bálál  
 nì s-, H -àa dóp- -a -tì jē bàdì dē bálál  
 S:3.PL come PFV find IMPF DO:3.F DISC valley REL:F Balili  
 They climbed until they found the valley of Balili<sup>159</sup>.

11. nì dópátī bàdì dē bálál ná kālās nì jùlē  
 nì dóp- -a -tì bàdì dē bálál ná kalas nì súl- -ē  
 S:3.PL find IMPF DO:3.F valley REL:F Balili EQ finish(A) S:3.PL sit PRF  
 They found the valley of Balili and, that's it, they stayed there.

<sup>158</sup> Wore is still a Baraïn village located on the mountain of Balili near Melfi.

<sup>159</sup> Balili is the location of a Baraïn village considered the center of the Jalkiya subgroup.

12. nì jūlē ná kée nì gànà jē wáléja  
 nì sùl- -ē ná kée nì gǎn- -à jē wālō -já  
 S:3.PL sit PRF EQ DUR S:3.PL make PFV DISC year PL  
 They stay there for many years.
13. bát nì gānē wáléjá ná  
 baad nì gǎn- -ēji wālō -já ná  
 after(A) S:3.PL make IMPF year PL EQ  
 After several years...
14. nì jà ájá=ná ná jeedéjà=nà tìdná  
 nì jà ájà =nà ná jeedo -jìjà =nà tì dì ná  
 S:3.PL COMP PRO:DUAL INCL EQ mountain POSS:DUAL INCL S:3.F DEM:F EQ  
 ..they said, “Our mountain here...”
- í dǎwègètì=nà  
 íj dǎw- -o -gètì =nà  
 S:DUAL occupy(A?) INF POSS:3.F INCL  
 ...we should inhabit it.”
15. bát dē nì gáséj nà  
 baad dē nì gás- -ēji nì -jà  
 from(A) REL:F S:3.PL say IMPF S:3.PL COMP  
 Then they said...
16. jèedó tì dì ò: dǎwégètì=nà ná  
 jèedó tì dì íj ò dǎw- -o -gètì =nà ná  
 mountain S:3.F DEM:F S:DUAL FUT occupy(A?) INF POSS:3.F INCL EQ  
 “The mountain here, we should inhabit it...”
17. ò dǎwégètì=nā ná tálá  
 ò dǎw- -o -gètì =nà ná táláj  
 FUT occupy(A?) INF POSS:3.F INCL EQ how  
 “...but how will we inhabit it?”
18. nàá nè jì jìngó=nā mèjèrè  
 nì -jà ni ò jǐng- -o =nà mèjèrè  
 S:3.PL COMP ??? FUT descend.CAUS INF INCL people  
 They said, “We will send people down..”

19. ñ gàasó=nà ñ d̀ò  
 ñ gãas- -o =nà ñ d̀ò  
 FUT occupy INF INCL PREP place  
 ...to occupy the region.”
20. b̃ ñ júkèj nā  
 b̃ ñ júk- -ēji ná  
 good(F) S:3.PL stand IMPF EQ  
 Well, they left...
21. ñ j̃l̃éj m̃j̃:ó gúmī  
 ñ j̃l̃- -ēji m̃j̃:ó gumi  
 S:3.PL put IMPF person Gumi  
 They put someone in Gumi.<sup>160</sup>
22. w̃l̃:àw gúmìj̃á  
 w̃l̃:- -ā -ñ̃ gumi -já  
 call IMPF DO:3.PL Gumi PL  
 They call them Gumiya.
23. ñ j̃l̃éj m̃j̃:ó m̃s̃:ó  
 ñ j̃l̃- -ēji m̃j̃:ó mos:o  
 S:3.PL put IMPF person Mosso  
 They put someone in Mosso.<sup>161</sup>
24. ñ w̃l̃:ām m̃s̃:éj̃á  
 ñ w̃l̃:- -ā -ñ̃ mos:o -já  
 S:3.PL call IMPF DO:3.PL Mosso PL  
 They call them Mosseya.
25. ñ j̃l̃éj m̃j̃:ó tútúbá  
 ñ j̃l̃- -ēji m̃j̃:ó tutuba  
 S:3.PL put IMPF person Tutuba  
 They put someone in Tutuba.<sup>162</sup>
26. ñ w̃l̃:àn tútúbáj̃á  
 ñ w̃l̃:- -ā -ñ̃ tutuba -já  
 S:3.PL call IMPF DO:3.PL Tutuba PL  
 They call them Tutubaya.

<sup>160</sup> Gumi is still a Baraïn village near Balili.

<sup>161</sup> Mosso is still a Baraïn village near Balili.

<sup>162</sup> Tutuba is still a Baraïn village near Balili.

27. kákrén júkėj ná nū kólėj jēlėj mī;ō dōgò bótíkí  
 kàk:írèŋ júk- -ēji ná nì kól- -ēji jēl- -ēji mī;ó doko botiki  
 there stand IMPF EQ S:3.PL go IMPF put IMPF person until Botiki  
 From there they sent someone as far as Botiki.<sup>163</sup>
28. nì jūkėjī mín bótíkí ná  
 nì júk- -ēji min botiki ná  
 S:3.PL stand IMPF from(A) Botiki EQ  
 They went out from Botiki...
29. nì sēj jélé n̄ dúŋgùr  
 nì s-, H -ēji jēl- -ēji ìŋ dúŋgur  
 S:3.PL come IMPF put IMPF PREP Dungur  
 ...and they put someone in Dungur.<sup>164</sup>
30. mín dúŋgūr ná nī séj jélé ālàw  
 min dúŋgur ná nì s-, H -ēji jēl- -ēji alaw  
 from(A) Dungur EQ S:3.PL come IMPF put IMPF Alaw  
 From Dungur they put someone at Alaw.<sup>165</sup>
31. ālàw ná nī kólėj jēlá wórè  
 alaw ná nì kól- -ēji jēl- -ēji wore  
 Alaw EQ S:3.PL go IMPF put IMPF Wore  
 From Alaw, they put someone in Wore.
32. wóré ná nū kólėj jēlėj bósē  
 wore ná nì kól- -ēji jēl- -ēji bōse  
 Wore EQ S:3.PL go IMPF put IMPF Bossé  
 From Wore, they put someone at Bossé.<sup>166</sup>
33. bósé ná nū kólėj jélé m̄ bèlà  
 bōse ná nì kól- eji jēl- -ēji ìŋ bela  
 Bossé EQ S:3.PL go IMPF put IMPF PREP Bela  
 From Bossé, they put someone at Bela.<sup>167</sup>

<sup>163</sup> Botiki is next to the town of Melfi and may be considered a part of the town itself.

<sup>164</sup> Dungur is still a Baraïn village in the region of Balili.

<sup>165</sup> Alaw is no longer inhabited.

<sup>166</sup> Bossé is no longer inhabited.

<sup>167</sup> Bela is still a Baraïn village also called Abulo.

34. m̀ bēlā ná nì sēj jēl̀t̀t̀ m̀br̀à  
 ìṅ bela ná nì s-, H -ēji jēl- -ā -t̀ m̀br̀à  
 PREP Bela EQ S:3.PL come IMPF put IMPF DO:3.F Mebra  
 From Bela, they put someone at Mebra.<sup>168</sup>
35. m̀n m̀br̀à ná nù kóléj jélé m̀j̀j̀r̀è dākro  
 min m̀br̀à ná nì kól- -ēji jēl- -ēji m̀j̀j̀r̀è dakro  
 after(A) Mebra EQ S:3.PL go IMPF put IMPF people Dakro  
 After Mebra, they put some people at Dakro.<sup>169</sup>
36. d̀k̀:ì wēl̀:àt̀t̀ bétūwé  
 d̀k̀:ì wél:- -ā -t̀ betuwe  
 foot call IMPF DO:3.F Betuwe
37. m̀n bétūwé ná nù kóléj jéléj bál:ít̀ dēe m̀hól  
 min betuwe ná nì kól- -ēji jēl- -ēji bál:í -gèt̀t̀ dē mohol  
 after(A) Betuwe EQ S:3.PL go IMPF put IMPF side POSS:3.F REL:F Mohol  
 After Betuwe, they put someone next to Mohol.
38. m̀n m̀hól ná d̀o kà ná  
 min mohol ná d̀o kà ná  
 from(A) Mohol EQ place S:3.M EQ  
 After Mohol, that place...
39. nì g̀así:g̀í jé m̀ar̀awáaaj t́j ná  
 nì gaasr- -g̀í jē marra wahid t-, H -ēji ná  
 S:3.PL occupy.CAUS DO:3.M DISC very(A) be IMPF EQ  
 ...they occupied the whole region.
40. kídá gē k̀j k̀ g̀aná j̀k̀j̀j̀á nē pá:j̀g̀à  
 kida gē k̀jē k̀ g̀án- -à jalki -j̀á nē pa:jiga  
 land REL:M here S:3.M make PFV Jalkiya PL REL:PL all  
 The land here was all Barain.
41. j̀k̀j̀j̀á nē bótígí ná  
 jalki -j̀á nē botiki ná  
 Jalkiya PL REL:PL Botiki EQ  
 The Barain from Botiki...

<sup>168</sup> Mebra is still a Barain village near Balili.

<sup>169</sup> Dakro is no longer inhabited.



42. kóléj gánéj múkúná íj ájtìgà jàlkíjǎ: ... lúwá pàncílǎ  
 kól- -ēji gǎn- -ēji mukune íj aja -tiga jalkija lúwá pancila  
 go IMPF make IMPF border ASOC same POSS:3.PL Barain up Panchila  
 ....made their border with the other Barain up by Panchila.
43. dòo gē díkí kàgnā mīj:ó gí téj áxár téj díj  
 dòo gē diki kà gí ná mīj:ó gí t-, H -ēji axar t- -ēji díjò  
 place REL:M center S:3.M DEM:M EQ person DEM:M be IMPF other be IMPF none  
 In the region their were no other people. (A)
44. kídá gē kājè kàgná gēj jàlkíjǎ gí mārāwaa  
 kida gē kājē kà gí ná gē ìj jalki -já gí marra wahid  
 land REL:M here S:3.M DEM:M EQ REL:M PREP Jalkiya PL DEM:M very(A)  
 The land here was completely for the Jalikya.
45. wò dàkì gānó gūséj bāró  
 wò dak:i gǎn- -o gùs- -ēji baro  
 and found make INF leave IMPF Baro  
 But it was started from leaving Baro...
46. ājéjìgà dōw īj wūrō dī  
 āj- -o -jìgà dē íj wùrò dī  
 come INF POSS:3.PL REL:F ASOC before DEM:F  
 ...those that came before.

**Appendix 11: Interlinearized text “The well at Mosso”**

The well at Mosso  
 Told and translated into French by Moussa Adou  
 February 8, 2011

1. ìn tá ñ gàsó m̀ búkí dē mós:ò dì  
 ñ tá ñ gás- -o ñ búk- -í dē mos:o dì  
 S:1.S CERT FUT say INF PREP speak INF REL:F MOSSO DEM:F  
 I will tell you the story of Mosso...
2. tà búkí dē tà àm:í  
 tà búk- -í dē tà àm:í  
 PURP speak INF REL:F PURP water  
 ...the story about the water.
3. tàndē mèjèrè kóléj ñ àp:ó ñ àm:í ná  
 tàndē mèjèrè kól- -ēji ñ àp:- -o ñ àm:í ná  
 yesterday people go IMPF FUT dig INF PREP water EQ  
 The other day, some people went to drill for water.
4. nì àp:éj kée nì dópá dō  
 nì àp:- -ēji kée nì dóp- -à dō  
 S:3.PL dig IMPF DUR S:3.PL find PFV NEG  
 They drilled and drilled and didn't find any.
5. wákìt dē déj nì kólá jàràgà bès:ò  
 wakit dē d-, L -ēji nì kól- -à jàr- -ā -gà beeso  
 time(A) REL:F kill IMPF S:3.PL go PFV search PRF DO:3.M Beeso  
 After some time, they went and found Beeso.
6. sáa wàràgà jē bújà  
 s-, H -àa waar- -àga jē bújá  
 come PFV take.out IO:3.PL DISC mouth  
 He came and poured out to them what was on his heart.
7. wòólà jè júnḡarí  
 wòol- -à jē júnḡarí  
 slaughter PFV DISC chicken  
 He sacrificed a chicken.

8. bèesó bèdàgà jē árá  
 beeso bèd- -àga jē árá  
 Beeso give IO:3.PL DISC path  
 Beeso sent them on their way.
9. nì kóléj ñ àm:í ná nì dópá jē àm:í  
 nì kól- -ēji ñ àm:í ná nì dóp- -à jē àm:í  
 S:3.PL go IMPF PREP water EQ S:3.PL find PFV DISC water  
 They went for water and they found it.
10. de wùrò téj bás nì dópá jē àm:í dāmà àm:í bàatá  
 dē wùrò t-, H -ēji bas nì dóp- -à jē àm:í damman àm:í bàatá  
 REL:F front be IMPF only(A) S:3.PL find PFV DISC water until(A) water very  
 The first place they dug they found water—a lot of water.
11. àm:í tìl:à ká gáléj dà nì pīléj bàatá  
 àm:í tìl:à ká gál- -ēji dà nì pīl- -ēji bàatá  
 water PRO:3.F also fall IMPF then S:3.PL move IMPF very  
 The water poured out and then they moved to another location.
12. nì fùjé sòk:á dā tódá nì  
 nì pīl- -ēji sòk:á dà towa nì  
 S:3.PL move IMPF again then now(A)<sup>170</sup> DEM:PL  
 They moved again after that.
13. àfè dē pànà dà tódá sòndé àm:í ná mós:ó ná pàrcàk  
 àp:- -ēji dē pàn:à da towa sòndé àm:í ná mos:ó ná parcak  
 dig IMPF REL:F one then now(A) now water EQ Mosso EQ much(B)  
 They dug another well and now there is a lot of water at Mosso.

<sup>170</sup> The speaker stated that the word *toda* is a word from Chadian Arabic meaning 'after'. The closest word I can find in the Chadian Arabic lexicon is *towa* which is glossed as 'now'.

**Appendix 12: Interlinearized text “The carnivores”**

## The carnivores

Told and translated to French by Moussa Adou

Feb 14, 2011, Mongo, Chad

1. ñ tá wíigèti sīdīkí  
 ñ tá ñ w-, L -íi -gèti sīdīkī  
 S:1.S CERT FUT give.birth INF POSS:3.F story  
 I'm going to tell you a story...

2. dēv m̄ mèjèrè nē téj sùu  
 dē ñ mèjèrè nē t-, L -ēji sùu  
 REL:F PREP people REL:PL eat IMPF animal  
 ...about people who eat meat.

3. dùwà  
 dùwà  
 lion  
 The lion.

4. màarúm  
 màarúm  
 panther  
 The panther.

5. búlmí  
 búlmí  
 hyena  
 The hyena.

6. kà gí síndí móo bánjá  
 kà gí sindi mo bànjà  
 S:3.M DEM:M name what dog  
 What's it called? ... The dog.

7. bàlòw  
 bàlòw  
 wolf  
 The wolf.

8. m̀ m̀j:ó  
 íj m̀j:ó  
 ASOC person  
 And a person.
9. ò ēfēj d̀oj̀gà páníj  
 ǹ ēp:- -ēji d̀o -j̀gà páníj  
 S:3.PL gather IMPF place POSS:3.PL one  
 They gathered together in their place.
10. mènè tá túu s s̀u nè gáwíj́ ǹ páaj̀gà  
 mene tà t-, L -íi íj s̀u nē gaw -j́á ǹ páaj̀gà  
 ??? PURP eat INF PREP animal REL:PL hunter(B) PL DEM:PL all  
 ??? ...to eat meat. They were all hunters.
11. ù wúrò téj ná dùwà kóléj d̀egàgà s̀u  
 íj wúrò t-, H -ēji ná dùwà kól- -ēji d-, L -ēga -àga s̀u  
 PREP front be IMPF EQ lion go IMPF kill IMPF IO:3.PL animal  
 First, the lion went out to kill an animal for them.
12. ǹ séj téj  
 ǹ s-, H -ēji t-, L -ēji  
 S:3.PL come IMPF eat IMPF  
 They came and ate.
13. dē tá sídì ná màarūm kóléj  
 dē tà sídì ná màarúm kól- -ēji  
 REL:F PURP two EQ panther go IMPF  
 Second, the panther went.
14. ǹ séj téj  
 ǹ s-, H -ēji t-, L -ēji  
 S:3.PL come IMPF eat IMPF  
 They came and ate.
15. dē tá súb:ù ná ǹ g̀isírāgí búlmí  
 dē tà súb:ù ná ǹ gisr- -ā -gí búlmí  
 REL:F PURP three EQ S:3.PL go.out.CAUS IMPF DO:3.M hyena  
 Third, they sent out the hyena.

16. kà kóléj déj  
 kà kól- -ēji d-, L -ēji  
 S:3.M go IMPF kill IMPF  
 He went and and killed something.
17. nì séj téj  
 nì s-, H -ēji t-, L -ēji  
 S:3.PL come IMPF eat IMPF  
 They came and ate.
18. dē tá púdú ná bàlòw kóléj n... déj  
 dē tà púdú ná bàlòw kól- -ēji d-, L -ēji  
 REL:F PURP four EQ wolf go IMPF kill IMPF  
 Fourth, the wolf went out and killed something.
19. nì séj téj  
 nì s-, H -ēji t-, L -ēji  
 S:3.PL come IMPF eat IMPF  
 The came and ate.
20. tā dàwsú bàṅà kóléj ... déj  
 tà dàwsú bàṅà kól- -ēji d-, L -ēji  
 PURP five dog go IMPF kill IMPF  
 Fifth, the dog went out and killed something.
21. nì séj téj  
 nì s-, H -ēji t-, L -ēji  
 S:3.PL come IMPF eat IMPF  
 They came and ate.
22. íl:à āt:ē mỳ:ó  
 íl:a āt:- -ē mỳ:ó  
 except(A) remain PRF person  
 Only the man was left.
23. āt:ē mỳ:ó ná  
 āt:- -ē mỳ:ó ná  
 remain PRF person EQ  
 When only the man was left....



24. nì sùléjì ò dō dē nì sùl:ò jē ná  
 nì sùl- -ēji ò dō dē nì sùl- -rò jē ná  
 S:3.PL sit IMPF PREP place REL:F S:3.PL sit OBL DISC EQ  
 ...they sat where they sat before...
25. nì gáséjì nàa mìj:ó ná kàl:à wàlá índàjì  
 nì gás- -ēji nì -jà mìj:ó ná kàl:à wala inda -jì  
 S:3.PL say IMPF S:3.PL COMP person EQ PRO:3.M NEG(A) have(A) POSS:3.M  
 ...and they said, “The man, he has nothing.”
26. béndí mala wàlá índàjì sáríjáj  
 béndí kàl:à wala inda -jì sáríjáj  
 leg PRO:3.M NEG(A) have(A) POSS:3.M claws  
 “His legs have no claws.”
27. wàlá índàjì jakal  
 wala inda -jì jakal  
 NEG(A) have(A) POSS:3.M fangs  
 “He has no fangs.”
28. màpàná gē tá ò kóló ò díjà=nà  
 màpàná gē tá ò kól- -o ò d-, L -í -jìjà =nà  
 thing REL:M CERT FUT go INF FUT kill INF POSS:DUAL INCL  
 “The thing he will go and kill for us...”
29. de ò ājó ò tí=nà ná mó gì sàj  
 dē ò āj- -o ò t-, L -í =nà ná mó gì sàj  
 REL:F FUT come INF FUT eat INF INCL EQ what DEM:M Q  
 “...which we will come and eat... what is it?”
30. jék:à=nà dúwgà=nà dúwó àt:ì  
 jék:- -à =nà dúw- -gà =nà dúw- -o at:ì  
 allow ??<sup>171</sup> INCL see DO:3.M INCL see INF ??  
 “Leave him and watch him.”
31. mìj:ó ná sùléjì màkídàtì pèndéjì  
 mìj:ó ná sùl- -ēji màkd- -ā -tì pèndéj -jì  
 person EQ sit IMPF arrange IMPF DO:3.F bow POSS:3.M  
 The man sat and arranged his bow.

<sup>171</sup> This marker has the form of a Perfective suffix, yet it does not follow the pattern of deleting before the inclusive marker (sections 5.4.4 and 8.13).

32. gòwàṅ                      kèsèjí  
 gǒw- -ā -ṅ              kèsè -jí  
 gather IMPF DO:3.PL arrow POSS:3.M  
 He gathered his arrows.
33. kà    ká    kóléj        tūrjì  
 kà    ká    kól- -ēji tur        -jí  
 S:3.M also go    IMPF turn(F) POSS:3.M  
 He also went out to take his turn.
34. kà    kólé    ná  
 kà    kól- -ē ná  
 S:3.M go    PRF EQ  
 He went out...
35. kà    sùlē    ṅ    túrdà  
 kà    sùl- -ē ṅ    túrdà  
 S:3.M sit    PRF PREP animal.path  
 ...and he sat on the path.
36. wìl:í    séj              kà    séntì                      díi  
 wìl:í    s-, H eji kà    séntì -jí              d-, L -íi  
 gazelle come IMPF S:3.M refusal POSS:3.M kill    INF  
 A gazelle came but he didn't kill it.
37. bōoréjá    séj              kà    séntì                      díi  
 bōoré -já s-, H -ēji kà    séntì -jí              d-, L -íi  
 deer<sup>172</sup> PL come IMPF S:3.M refusal POSS:3.M kill    INF  
 Some deer came, but he didn't kill them.
38. wákìt    dē    déj  
 wakit    dē    d-, L -ēji  
 time(A) REL:F kill    IMPF  
 Some time passed.
39. dúdú    séj              ná  
 dúdú    s-, H -ēji ná  
 antelope come IMPF EQ  
 A roan antelope came.

<sup>172</sup> Identified as a “biche-cochon,” a type of water chevrotain (*Hyemoschus aquaticus*) much smaller than a deer.

40. pīdēj sód:ìgà dúdú  
 pīd- -ēji sód:- M -gà dúdú  
 take IMPF shoot IMPF DO:3.M antelope  
 He took and arrow and shot the antelope.

41. dúdú ná kirtì krt gālē  
 dúdú ná kirti kirti gāl- -ē  
 antelope EQ ??? ??? fall PRF  
 The roan antelope stumbled and fell.

42. jèk:él séj  
 jèk:él s-, H -ēji  
 antelope(S) come IMPF  
 An antelope came...

43. màabúrkú sēj  
 màabúrkú s-, H -ēji  
 antelope come IMPF  
 An antelope<sup>173</sup> came...

44. kà ká sód:àtì  
 kà ká sód:- -ā -tì  
 S:3.M also shoot IMPF DO:3.F  
 He shot it also.

45. kà gì ná tàarí  
 kà gì ná taari  
 S:3.M DEM:M EQ however(A)  
 ??? (*Hyena's thought*)

46. búlmí ná  
 búlmí ná  
 hyena EQ  
 Hyena...

47. júkéj máalàn  
 júk- -ēji málàn  
 stand IMPF slowness  
 The hyena got up slowly.

<sup>173</sup> This word refers to an antelope of the Alcelphus genus, perhaps a Hartebeest.

48. kà ìn ná ñ kóló ò dúwéjì  
 kà -jà ìnù ná ñ kól- -o ñ dúw- -o -jì  
 S:3.M COMP PRO:1.S EQ FUT go INF FUT see INF POSS:3.M

òn búkí dē déj  
 ñj búk- -í dē d-, L -ēji  
 PREP speak INF REL:F kill IMPF

He said, “I will go and see the story behind his killing.”

49. mìj:ó kà gí dē dég:ò ná  
 mìj:ó kà gí dē d-, L -èg:o ná  
 person S:3.M DEM:M REL:F kill OBL EQ

“The man, what he kills with...”

50. ìnù ñ kóló ò dúwéjì  
 ìnù ñ kól- -o ñ dúw- -o -jì  
 PRO:1.S FUT go INF FUT see INF POSS:3.M

“I will go and see it.”

51. búlmí gòréjì cíbák cíbás tādéjì lúwá ñ àkàrí  
 búlmí gòr- eji cibak cibak tād- -ēji lúwá ñj àkàrí  
 hyena run IMPF climb IMPF up PREP termite.hill  
 The hyena ran and climbed up a termite hill.

52. kà gàndà dú:gà  
 kà gàndà dúw- -gà  
 S:3.M inside see DO:3.M

While he was watching him...

53. átì de téjì dē dúdú gáléj  
 át:á -jì dē t-, H -ēji dē dúdú gál- -ēji  
 arm POSS:3.M REL:F be IMPF REL:F antelope fall IMPF

...his arm was like that and a roan antelope fell.

54. bàtám m bál:íjáj ká téjì de  
 batan íj bál:í -já -áj ká t-, H -ēji dē  
 again(A) ASOC side PL NOM also be IMPF REL:F

Again, the last one also was like that...

55. màabúrkú gáléjī ná  
 màabúrkú gǎl- -ējī ná  
 antelope fall IMPF EQ  
 ...and an antelope fell.
56. kà gòréjī séj  
 kà gǒr- -ējī s-, H -ējī  
 S:3.M run IMPF come IMPF  
 He ran back.
57. kà mìj:ó ná  
 kà -jà mìj:ó ná  
 S:3.M COMP person EQ  
 He said, “The man...”
58. jóo jélgà ná níl:à dō  
 jòó jēl- -gà ná íŋ níl:à dō  
 NEG put DO:3.M EQ ASOC PRO:2.PL NEG  
 “You should not put him with you.”
59. mìj:ó pākāgú  
 mìj:ó pākā- -gú  
 person bad N:M  
 “The man is evil.”
60. nà tálān sánj  
 nì -jà tálānj sánj  
 S:3.PL COMP how Q  
 They said, “How so?”
61. kà mìj:ó kàgná tò kà áŋgá jē téj  
 kà -jà mìj:ó kà gí ná tò kà áŋg- -à jē t-, H -ējī  
 S:3.M COMP person S:3.M DEM:M EQ COND S:3.M point PFV DISC be IMPF  
 He said, “That man, if he points like this...”
62. dē màpànà gáléj m̀ b̀à:l̀ì  
 dē màpànà gǎl- -ējī ìŋ b̀à:l̀ì -j̀ì  
 REL:F thing fall IMPF PREP side POSS:3.M  
 “...something will fall on its side.”

63. hàlàs nì kóléj nì gàséjī nàa gí  
kalas nì kól- -ēji nì gás- -ēji nì -jà gí  
finish(A) S:3.PL go IMPF S:3.PL saw IMPF S:3.PL COMP DEM:M  
So they went and they said this...
64. sèj ná ɲ kól ɲ gówgà=nà sùujà=nà  
s-, H -ēji ná ɲ kól- -ù ɲ gǒw- -gà =nà sùu -jìjà =nà  
come IMPF EQ S:DUAL go SBJV FUT gather DO:3.M INCL meat POSS:DUAL INCL  
“Come, let's go and gather our meat.”
65. nì kóléj séj gówgà sùugà  
nì kól- -ēji s-, H -ēji gǒw- -gà sùu -jìgà  
S:3.PL go IMPF come IMPF gather DO:3.M meat POSS:3.PL  
They went to come gather their meat.
66. hàlà ní sējnà ná nàa  
halas nì s-, H -ēji ná nì -jà  
finish(A) S:3.PL come IMPF EQ S:3.PL COMP  
kèl:à mìj:ó kígná déj mó  
kíl:à mìj:ó kì gí ná d-, L -ēji ɲ mó  
PRO:2.M person S:2.M DEM:M EQ kill IMPF ASOC what  
So they came and said, “You, man, you kill [with] what?”
67. búlmí gáséj kà kíl:à ángéj ángò bás  
búlmí gás- -ēji kà -jà kíl:à áng- -ēji áng- -o bas  
hyena say IMPF S:3.M COMP PRO:2.M point IMPF point INF only(A)  
“The hyena says you just point.”
68. màpàna kí diigà ná tálá  
màpàna kì d-, L -ii -gà ná tálāɲ  
thing S:2.M kill IMPF/PFV DO:3.M EQ how  
“How did you kill this thing?”
69. kà láawéj ná kà ángígà búlmí  
kà láaw- -ēji ná kà áng- -gà búlmí  
S:3.M return IMPF EQ S:3.M point DO:3.M hyena  
He turned and pointed at the hyena.

70. búlmí kí:á kóomógò tíl:á ná  
 búlmí kí:à kóom- -o -gò tíl:à ná  
 hyena PRO:2.M lie INF POSS:2.M PRO:3.F EQ  
 [The man said,] “Hyena, that there is a lie!”
71. da ángó dē kà ángígà ná  
 da áng- -o dē kà áng- -gà ná  
 then? point INF REL:F S:3.M point DO:3.M EQ  
 [The man pointed at the hyena.]
72. búlmí gáléjī gògó tíl  
 búlmí gál- -ēji gògó tíl  
 hyena fall IMPF backwards bang  
 The hyena fell back—bang!
73. m pí:éjī ná  
 íj pí:- -o -jì ná  
 ASOC defecate INF POSS:3.M EQ  
 And crapped himself.
74. hàlàs kà dúwéj tēj ná  
 halas kà dúw- -ēji t-, H -ēji ná  
 finish(A) S:3.M see IMPF be IMPF EQ  
 So the man saw that.
75. mējèrè báaréj jèkèjgà sùu kà gì kálàs  
 mējèrè báar- -ēji jèk:- -èjì -gà sùu kà gì halas  
 people separate IMPF leave IO:3.M DO:3.M meat S:3.M DEM:M finish(A)  
 Everyone scattered and left him their meat.

**Appendix 13: Interlinearized text “About a girl”**



About a girl

Told and translated to French by Moussa Adou

Feb 14, 2011

Mongo, Chad

1. èe sòndé sīdīkī dē ñ: ... mārḃē  
 èe sòndé sīdīkī dē ñḡ mārḃē  
 yes now story REL:F PREP girls  
 Now a story about girls.
  
2. bàḡà ... ḡ m̄ búlmī áb:ējá kùm  
 bàḡà ñḡ búlmī àb:ó -já kùm  
 dog ASOC hyena friend PL ???  
 The dog and the hyena were friends.
  
3. kājē dūmá ḡ nópúnà áb:ējá kùm  
 kājē dūmā ñḡ nōpúnò àb:ó -já kùm  
 here sheep ASOC goat friend PL ???  
 Over here, the sheep and the goat were friends.
  
4. nì jáp:á mārḃō pánántú  
 nì jáp:- -à mārḃò páníḡ -tú  
 S:3.PL want PFV girl one N:F  
 They all wanted the same girl.
  
5. ḡ jāa dē páníḡ tìl:à bás  
 ñḡ jāa dē páníḡ tìl:à bas  
 PREP day REL:F one PRO:3.F only(A)  
 One day...
  
6. dūmá ... ḡ nópúnà kà  
 dūmā ñḡ nōpúnò kà -jà  
 sheep ASOC goat S:3M COMP  
  
 ḡ kólú n̄ dówtì mārḃējá  
 ñḡ kól- -ù ñḡ dúw- -tì mārḃò -jìjà  
 S:DUAL go SBJV ASOC see DO:3.M girl POSS:DUAL  
 ...the sheep said to the goat, “We should go see our girl.”

7. nì júkéjì kóléj ... dópàj  
 nì júk- -ēji kól- -ēji dóp- -ā -j  
 S:3.PL stand IMPF go IMPF find IMPF DO:3.PL  
 The got up and went and found them (her family).
8. mánájátìgà jìngàj gàndà gólmó gē páníj  
 máná -já -tiga jǐng- -ā -j gàndà gólmó gē páníj  
 in-law PL POSS:3.PL descend.CAUS IMPF DO:3.PL inside house REL:M one  
 The girl's parents put them in their own hut.
9. nì dùwàgà ràg:à  
 nì dǔw- -àga ràg:à  
 S:3.PL put IO:3.PL mat  
 They put out a mat for them.
10. bájá ... m búlímì kà ká ánē ká j kóló m màrbò  
 bàjà íj búlímì kà -jà ká ánē ká j kól- -o íj màrbò  
 dog ASOC hyena S:3.M COMP also PRO:EXCL also FUT go INF PREP girl  
 The dog also said to the hyena, "We will also go to the girl."
11. nì kó júk:éj nì kólé n tì màrbò tìl:àá dì bàs  
 nì kól- júk- -ēji nì kól- -ēji íj tì màrbò tìl:à dì bas  
 S:3.PL go stand IMPF S:3.PL go IMPF PREP S:3.F girl PRO:3.F DEM:F only(A)  
 They got up and went to that girl.
12. nì kólé ná  
 nì kól- -ē ná  
 S:3.PL go PRF EQ  
 When they went there...
13. nì dùwéj ... nì dúw nì dùwágà jē ràg:à  
 nì dǔw- -ēji nì dǔw- nì dǔw- -àga jē ràg:à  
 S:3.PL put IMPF S:3.PL put S:3.PL put IO:3.PL DISC mat  
 ...they put... they p... they put out a mat for them.
14. nìl:à ká kólē tìl:à màrbò tìl:à  
 nìl:à ká kól- -ē tìl:à màrbò tìl:à  
 PRO:3.PL also go PRF PRO:3.F girl PRO:3.F  
 They also went to the girl.

15. màrbò ná nì dúwéjī ná  
 màrbò ná nì dúw- -ēji ná  
 girl EQ S:3.PL see IMPF EQ  
 The girl they came to see...
16. mèjèrè nì nì séj tà tìl:à  
 mèjèrè nì nì s-, H -ēji tà tìl:à  
 people S:3.PL DEM:PL come IMPF PURP PRO:3.F  
 These here came for her.
17. nì nì ká séj tà tìl:à ná  
 nì nì ká s-, H -ēji tà tìl:à ná  
 S:3.PL DEM:3.PL also come IMPF PURP PRO:3.F EQ  
 Those others also came for her.
18. m̀ bódó tídná bát:án tì tòpà  
 íj bódó tì dì ná batan tì tóp- -à  
 ASOC night S:3.PL DEM:F EQ again(A) S:3.F enter PFV  
 That night she returned.
19. kólá wórá nì nì dō  
 kól- -à wór- -a nì nì dō  
 go PFV chat PFV S:3.PL DEM:PL NEG  
 She didn't go talk with them.
20. kólá wórá nì nì dō  
 kól- -à wór- -a nì nì dō  
 go PFV chat PFV S:3.PL DEM:PL NEG  
 She didn't go talk with the others.
21. tì kólá dūwē ñ gégètì sídí  
 tì kól- -à dōw- -ē ñ gérá -gètì sídí  
 S:3.F go PFV go.to.bed PRF PREP home POSS:3.F own  
 She went to bed in her own house.
22. m̀ bódó ná  
 íj bódó ná  
 ASOC night EQ  
 That night...

23. nì nì nà màrbò tìdná séntètì ājó  
 nì nì nì -jà màrbò tì dì ná séntì -gètì ā- -o  
 S:3.PL DEM:PL S:3.PL COMP girl S:3.F DEM:F EQ refusal POSS:3.F come INF  
 They said, “That girl refuses to come.”
24. nì nì ká nà màrbò tì dì ná séntètì ājó  
 nì nì ká nì -jà màrbò tì dì ná séntì -gètì ā- -o  
 S:3.PL DEM:PL also S:3.PL COMP girl S:3.F DEM:F EQ refusal POSS:3.F come INF  
 The others also said, “The girl refuses to come.”
25. ɨ́ gànè=ná sídì ɨ́ kìigèd ná  
 ɨ́ gǎn- -ē =ná sídì ɨ́ kii- -gètì ná  
 S:DUAL make PRF INCL two PREP head(POSS) POSS:3.S EQ  
 “We are two groups for the one girl.”
26. ń dów=nà sòk:á da ń tá sàa=nà  
 ɨ́ dǒw- -ù =nà sòk:á da ɨ́ tá s-, H -àa =nà  
 DUAL sleep SBJV INCL again then DUAL CERT come SBJV/PFV INCL  
 Let's go back to sleep then we will come later.”
27. ń bòdó nì dǒwɛ́ ná nópúnò júkéjì  
 ɨ́ bòdó nì dǒw- -ējì ná nōpúnò júk- -ējì  
 ASOC night S:3.PL sleep IMPF EQ goat stand IMPF  
 That night while they slept the goat got up.
28. jèkréj̄ ìsì  
 jǒkr- -ējì ìsì  
 defecate IMPF feces  
 He took a crap.
29. ràtátàtátà ná ɨs:ājó lúwá ràg:à ná ràg:à ārējì rátátátátátá  
 ràtátàtátà ná ɨs:- -ā -jó lúwá ràg:à ná ràg:à ār- -ējì ratatatatatata  
 EQ pour IMPF DTRV up mat EQ mat cry IMPF  
 Plop plop plop. It fell onto the mat and the mat made a noise: plop plop plop.
30. dūmā ká júkéj̄ bīdājó téjì ká kà ká jòkréj̄  
 dūmā ká júk- -ējì bīd- -ā -jó t-, H -ējì ká kà ká jǒkr- -ējì  
 sheep also stand IMPF stretch IMPF DTRV be IMPF also S:3.M also crap IMPF  
 The sheep also got up and stretched out like that and he also took a crap.



38. nì júkēj tìgà m̀ bálí  
 nì júk- -ēji t-, L -ii -gà ìṅ bálí  
 S:3.PL stand IMPF eat IMPF/PFV DO:3.M PREP behind  
 They got up and ate the whole thing.
39. m̀ bódó àkrè  
 íṅ bódó kàk:írèṅ  
 ASOC night there  
 That was the night.
40. m̀ bōntē ná  
 íṅ bōntè ná  
 ASOC morning EQ  
 In the morning...
41. hálàs nà nì ... nì tímēj kóló páajìgà  
 halas ná nì nì tím- -ēji kól- -o páajìgà  
 finish(A) ??? S:3.PL S:3.PL say.goodbye IMPF go INF all  
 ...they all said their goodbyes.
42. nìn jótíjá kóló  
 nì nì júk- -ēji kól- -o  
 S:3.PL DEM:PL stand IMPF go INF  
 They got up and left.
43. nì ká nì tímēj kóló  
 nì nì ká nì tím- -ēji kól- -o  
 S:3.PL DEM:PL also S:3.PL say.goodbye IMPF go INF  
 The other also said their goodbyes.
44. nì tōpēj āl:í ṅ ... dūmā ... n̄ nōpúnò ná  
 nì tōp- -ēji āl:í ìṅ dūmā íṅ nōpúnò ná  
 S:3.PL enter IMPF there PREP sheep ASOC goat EQ  
 They (the girl's parents) went in where the sheep and goat had stayed.
45. nì pìdàtì r̀g̀:à g̀s̀r̀àtì  
 nì p̀d- -ā -tì r̀g̀:à g̀s̀r- -ā -tì  
 S:3.PL take IMPF DO:3.F mat go.out.CAUS IMPF DO:3.F  
 The picked up the mat and took it out.

46. nì kóléj ālí m̀ búlmí m̀ bàṅà ná  
 nì kól- -ēji ālí ìṅ búlmí ìṅ bàṅà ná  
 S:3.PL go IMPF there PREP hyena ASOC dog EQ  
 They went where the hyena and dog had stayed.
47. ràg:à dìjò ... hàlàs  
 ràg:à díjò halas  
 mat nothing finished(A)  
 There was no mat.
48. nì kóléj júkéj ná  
 nì kól- -ēji júk- -ēji ná  
 S:3.PL go IMPF stand IMPF EQ  
 But they were already on their way.
49. nì kóléj ò̀ d̀ò tá wájó ná  
 nì kól- -ēji ìṅ d̀ò tà wáj- -o ná  
 S:3.PL go IMPF PREP place PURP pass.time INF EQ  
 They went to the place where they would spend the afternoon.
50. nà níl:à ná  
 nì -jà níl:à ná  
 S:3.PL COMP PRO:2.PL EQ  
 They said, “You there...”
51. ràg:àjìn ná àṅàgètì  
 ràg:à -jìṅ ná àṅà -gètì  
 mat POSS:2.PL EQ presence POSS:3.F  
 “Your mat was still there.”
52. dē gèn:è ánē tètì  
 dē gèr- -jìnè ánē t-, L -ēe -tì  
 REL:F POSS POSS:EXCL PRO:EXCL eat PRF DO:3.F  
 “We ate ours.”
53. wò sòndé tò ní kóléj sídí ní tá ṅ gàsó níjà m  
 wò sòndé tò ní kól- -ēji sídí ní tá ṅ gás- -o ní -jà mó  
 and now COND S:2.PL go IMPF own S:2.PL CERT FUT say INF S:2.PL COMP what  
 “And now when you go home what will you say?”

54. búlmí kàa            gíí  
 búlmí kà    -jà    gí  
 hyena S:3.M COMP DEM:M  
 The hyena said this...
55. áné        ... tò    áné      kólē    ñ    gásó    ná gíí  
 áné        tò    áné      kól- -ē ñ    gás- -o ná gí  
 PRO:EXCL    COND PRO:EXCL go    PRF FUT say    INF EQ DEM:M  
 “We... when we arrive we will say this...”
56. ràg:à ná í        tēj        tī        dō  
 ràg:à ná íṅ      t-, L -ēji t-, L -íi dō  
 mat    EQ S:DUAL eat    IMPF eat    INF NEG  
 “We didn't eat the mat.”
57. tēj            ná ñ    gōmō    dàwàjkà  
 t-, H -ēji ná ñ    gōm- -o ???  
 be    IMPF EQ FUT fight    INF ???  
 “In that case we will fight...”
58. tò    ní    tá    ñ    kóló    wúríjénè            wúríjó  
 tò    ní    tá    ñ    kól- -o wúrj- -o -jìnè    wúrj- -o  
 COND S:2.PL CERT FUT go    INF insult    INF POSS:EXCL insult    INF  
 “...if you are going to insult us.”
59. hàlàs        ... bájá ... á            kàl:à    ñ    gòmèjì            nōfúnò  
 xalas        bājà    kà    -jà    kàl:à    ñ    gōm- -o -jì        nōpúnò  
 finish(A)    dog    S:3.M COMP PRO:3.M FUT hit    INF POSS:3.M goat  
 So... The dog said he will fight the goat.
60. m̀: kà    gí    síndí m̀ó  
       kà    gí    síndí m̀ó  
       S:3.M DEM:M name what  
 Um, what's it called?
61. búlmí ... kà            kàl:à    ñ    gòmèjì            dūmā  
 búlmí ... kà    -jà    kàl:à    ñ    gōm- -o -jì        dūmā  
 hyena    S:3.M COMP PRO:3.M FUT fight    INF POSS:3.M sheep  
 The hyena said he will fight the sheep.



62. nì júkēj̄ gōmājó gōmō  
 nì júk- -ēji gōm- -ā -jó gōm- -o  
 S:3.PL stand IMPF hit IMPF DTRV hit INF  
 They got up and fought.
63. ú wùrò ná ... bàṅà ní nōpúnō gōmājó  
 íṅ wùrò ná bàṅà íṅ nōpúnò gōm- -ā -jó  
 ASOC front EQ dog ASOC goat fight IMPF DTRV  
 First it was the dog and the goat fighting.
64. bàṅà jèedēj̄ téjì: gù ... gòrē ...  
 bàṅà jèed- -ēji t-, H -ēji *mispoke*  
 dog attack IMPF be IMPF  
 The dog attacked like that...
65. gòrējì téjì gà kà tá sáa ómgà nōpúnō jē:  
 gòr- -ēji t-, H -ēji kà kà tá s-, H -àa óm- -gà nōpúnò jē  
 run IMPF be IMPF also S:3.M CERT come PFV bite DO:3.M goat DISC  
 ...running like that... and he was about to bite the goat.
66. kà ... bùl ... nōpúnō jèedējì téjì ná mìnḡà bàṅà ná  
*mispoke* nōpúnò jèed- -ēji t-, H -ēji ná mǐṅ- -gà bàṅà ná  
 goat attack IMPF be IMPF EQ slap DO:3.M dog EQ  
 The goat attacked like that and hit the dog.
67. bàṅà ārējì kán  
 bàṅà ār- -ēji kán  
 dog cry IMPF arf  
 The dog cried out... arf! arf!
68. tà wòl:ējì  
 tá wòl:- -o -jì  
 CERT pass INF POSS:3.M  
 ...and was gone.
69. àt:ējì dūmá ... m̄ búlmí  
 àt:- -ēji dūmā íṅ búlmí  
 remain IMPF sheep ASOC hyena  
 The sheep and the hyena remained.

70. búlmí ... júká } ... jè júkájŋ: ... n dúmá  
 búlmí ??? ??? ??? íŋ dūmā  
 hyena ASOC sheep  
 The hyena attacked the sheep.
71. dūmā ká dèdréj dèdréj dèdréj dèdréj  
 dūmā ká dědr- -ēji dědr- -ēji dědr- -ēji dědr- -ēji  
 sheep also back.up IMPF back.up IMPF back.up IMPF back.up IMPF  
 The sheep backed up and backed up and backed up.
72. kà sēj túpígà  
 kà s-, H -ēji túp:- -gà  
 S:3.M come IMPF punch DO:3.M  
 He came and rammed him with his horn.
73. dūmā māŋjó búlmí púm ná  
 dūmā māŋjó búlmí púm ná  
 sheep thing hyena pow EQ  
 The sheep.. no the other... the hyena... pow!
74. búlmí gālēj ālī ká m pí:l:éjì pácácácákòw  
 búlmí gāl- -ēji ālī ká íŋ pí:l:- -o -jì pacacaca  
 hyena fall IMPF there also ASOC defecate INF POSS:3.M  
 The hyena fell there and crapped himself.
75. pí:l:ēj pí:l:ó  
 pí:l:- -ēji pí:l:- -o  
 defecate IMPF defecate INF  
 He crapped himself.
76. *indiscernible* dòojìgà ná  
 wala ìŋ dò -jìgà ná  
 nobody(A) PREP place POSS:3.PL EQ  
 Nobody was left in that place.
77. nì bársē kálás  
 nì báar- -ē halas  
 S:3.PL separate PRF finish(A)  
 They separated.

78. m̀j́ó ká kólē s̀id̀ì h̀àl̀à̀  
 m̀j́:ó ká kól- -ē sídí halas  
 person S:3.M go PRF own finish(A)  
 Each one went their own way.

79. m̀j́ó kà kòlè g̀è̀j̀ì  
 m̀j́:ó kà kól- -ē g̀è̀r- -j̀ì  
 person S:3.M go PRF POSS POSS:3.M  
 Each one went to his home.

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## Vita

### Education

- 2012 MA in Applied Linguistics, Graduate Institute of Applied Linguistics, Dallas, TX
- 2008 Certificate in Applied Linguistics, Graduate Institute of Applied Linguistics
- 2007 BA in Intercultural Studies, Northwestern College, St. Paul, MN

### Fieldwork

- 2011-2012 SIL Cameroon, Yaoundé, linguistic analysis and project management
- 2010-2011 SIL Chad, Mongo, linguistic analysis and orthography design

### Teaching

- 2012 GIAL course assistant, Second Language and Culture Acquisition, Cindy Blood
- 2012 GIAL course assistant, Principles of Phonology, Dr. Steve Parker
- 2010 GIAL course assistant, Principles of Phonology, Dr. Steve Parker

### Linguistic works

- 2012 The linguistic structure of Baraïn (Chadic). MA thesis. GIAL
- 2012 Classification and description of the Chadic languages of the Guéra (East Chadic B). [www.sil.org/silewp](http://www.sil.org/silewp)
- 2012 Epenthesis, vowel shortening and tone in Baraïn verbs. Poster at WOCAL 7
- 2011 Notes on Nyokon phonology (Bantu A.45, Cameroon). [www.silcam.org](http://www.silcam.org)
- 2011 The dialects of Baraïn (East Chadic). [www.sil.org/silewp](http://www.sil.org/silewp)
- 2011 Kussiyana doyo inj jalkiya ! (Lisons le baraïn !) Literacy primer. FAPLG, Chad
- 2009 A brief introduction to Tangari phonology (co-author). [www.gial.edu/GIALens](http://www.gial.edu/GIALens)
- 2009 Prosodically motivated focus in Hausa. [www.gial.edu/OPAL](http://www.gial.edu/OPAL)
- 2009 French causatives in LFG. [www.gial.edu/GIALens](http://www.gial.edu/GIALens)