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by

Josiah Keith Walters

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

A Grammar Sketch of Dazaga

Josiah Keith Walters
Master of Arts
with major in
Applied Linguistics
Graduate Institute of Applied Linguistics, June 2015

Supervising Professor: Dr. Paul Kroeger

In this thesis, I describe the phonology, morphology, and syntax of Dazaga, a Saharan language spoken in Niger and Chad, based on a corpus of about 2,600 lexical items, as well as hundreds of sentences, gathered by Kevin Walters and the author, over the past three decades. Phonemic /p/ is lacking from the twenty consonants. The nine vowel phonemes harmonize in ATR within the phonological word, although /a/ is transparent. Tone patterns in a pitch-accent system. The distribution of articles is determined by combinations of definiteness and specificity. In lieu of the previously proposed three class verb system for Dazaga (Lukas 1953), I analyze verbs as exhibiting split-intransitivity. S_a and transitive verbs are either simple verbs or light verb constructions. Basic word order is SOV. Transitive subjects receive optional ergative case, whose occurrence is determined by a variety of factors. Monotransitive objects receive optional accusative case. Recipients of ditransitive verbs are primary objects (based on object agreement), but obligatorily take dative case, thus displaying an uncommon pattern of mixed alignment. Causatives are either periphrastic, causative light verb constructions, or serial verb constructions. Serial verb constructions are also used to increase valency and to express an action and its purpose.

14 May, 2015

DEDICATION

To Dad (Kevin) and Mom (Colleen)

This study is largely the fruit of your many years of hard work.

"Others have done the hard work,
and [I] have reaped the benefits of their labor."

John 4:38 (NIV)

ACKNOWLEDGEMENTS

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LIST OF ABBREVIATIONS

*	ungrammatical	IPFV	imperfective
-	affix boundary	L	low tone
=	clitic boundary	LOC	locative
( )	optional	LV	light verb
(*)	parenthetical material is ungrammatical	LVC	light verb construction
		NEG	negator
*( )	omission of parenthetical material is ungrammatical	NP	noun phrase
		NP$_{mat}$	matrix noun phrase
1	first person	NP$_{rel}$	relativized noun phrase
2	second person	NSPC	non-specific
3	third person	OBJ	object
ACC	accusative	OPT	optative
ADJZ	adjectivizer	P	plural
AJCT	adjunct	p.c.	personal communication
AP	adjective phrase	POSS	possessive
C	consonant	PROG	progressive
CAUS.LV	causative light verb	PSM	possessum
CNTG	contingent	PSR	possessor
COORD	coordinator	REC	recipient
DAT	dative	REFL	reflexive
DET	determiner	REL	relativizer
DIM	diminutive	S	singular
EP	epenthetic	SOV	subject-object-verb
ERG	ergative	SUB	subordinator
GEN	genitive	SUBJ	subject
GEN.S	genitive singular	SVC	serial verb construction
H	high tone	THM	theme
HORT	hortative	V	vowel
IMV	imperative	X-COMP	complement (clause/phrase)
INDF	indefinite	YNQ	yes/no question
INTS	intensive		

Chapter 1: Introduction

1.   Introduction

1.1   The Daza people and the Dazaga language

Dazaga (ISO 639-3: dzg) is a Nilo-Saharan (though classified in Jourdan (1935:1) as "nilo-tchadien") language of eastern Niger and northern Chad, spoken by the Daza people (the *-ga* suffix in *Dazaga* indicates 'language of'). It has about 380,000 native speakers (Lewis et al. 2015a), mostly in Chad (about 330,000 speakers), but also in Niger (the remaining 50,000 speakers).

The Daza, and their language, Dazaga, are generally referred to by outsiders as Tubu (e.g. Lukas 1953) or Toubou. The Daza are normally referred to as Goran by the non-Daza people in Chad (originally by Arabs specifically; cf. Jourdan (1935:1) and Lukas (1953:xiv)). The name Tubu/Toubou is also used in the literature to refer collectively to the Daza and the Teda (e.g. Lukas 1953; Baroin 1997), a usage of the term that reportedly (Wolff 2011:173; cf. Lukas 1953:xv) began with Nachtigal (1879-1889).[1] In Niger, people use the name Tubu to include Teda and Daza. In Chad, Tubu refers only to the Teda (Kevin Walters, p.c.). The term Tubu is usually considered to derive etymologically from the Teda word *tu* 'mountain' and the Kanuri suffix *-bu* 'people from', and probably refers more properly to the Teda (Kevin Walters, p.c.).[2] Despite the collective use of the term Tubu, the Daza and Teda consider themselves distinct, though closely related, people.

Dazaga is a member of the immediate and small Nilo-Saharan subgroup Saharan (Greenberg 1970:130; Bender 1991; Cyffer 2000). Saharan contains nine languages (cf.

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[1] Barth mentions the term Tubu in his 1862 work, but does not use the term to include the Daza. Rather, he notes that "Teda is the only right indigenous form of what is generally called Tubu or Tebu" (1862:lxvii).
[2] Interestingly, Wolff (2011:174) says that Tubu refers more properly to the Daza.

Figure 1), which are generally broken down into two further subgroups, Eastern Saharan and Western Saharan (Cyffer 2000; also Lewis et al. 2015b).
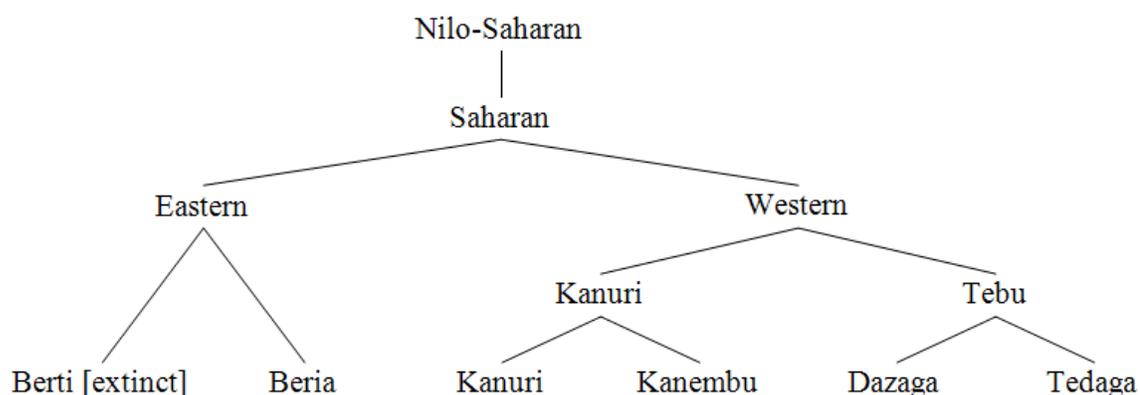
Figure 1: Genetic affiliations of Dazaga

Eastern Saharan contains only two languages, Berti (cf. Petráček 1965, 1966, 1987, 1988) and Beria (also called Zaghawa; cf. Fadoul (n.d.); Tubiana (1963); Cyffer (1991); Wolfe (2001); Jakobi & Crass (2004); Jakobi (2006, 2011); Wolfe & Adam (2015)), the former of which is now extinct. Western Saharan is further subcategorized into Kanuri and Tebu.[3] The Kanuri branch includes Kanembu and Kanuri proper (Bilma, Manga, Tumari, and Central) (cf. Koelle (1854); Lukas (1937); Hutchison (1981); Cyffer (1997, 1998a, 2007); Fannami & Mu'azu (2011)).[4] Tebu comprises Tedaga and Dazaga.

Tedaga and Dazaga have generally been treated together in descriptive work (e.g. LeCoeur & LeCoeur 1956; Lukas 1953), even though they are distinct (but closely related) languages (cf. Lukas 1937:x; LeCoeur & LeCoeur 1956:16). There is lexical and grammatical evidence for this distinction (Kevin Walters, p.c.; cf. also Awagana (2011)), as well as a definite distinction in the minds of the speakers of Tedaga and Dazaga (e.g.

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[3] The origin of the term Tebu is unclear. Its use in academic work seems to be restricted to discussions of the internal structure of the Saharan language group, where it is used as a hyperonym for Tedaga and Dazaga. The term is used, however, of some of the Teda living in Libya (Mark Ortman, p.c.).
[4] Bilma, Manga, Tumari, and Central are the only four Kanuri dialects listed by the Ethnologue (Lewis et al. 2015c). However, a more detailed breakdown has been proposed by Bulakarima (1997:71), recognizing at least the following six major dialects of Kanuri (with additional subdialects of Yerwa and Mowar): Bilma, Manga, Suwurti, Yerwa, Dagera, and Mowar. See also Löhr (1997), Jarrett (1988), and Hutchison (1981:4-6).

speakers of Dazaga clearly distinguish their language from that of the Teda people, but do not further distinguish languages among the clans of the Daza people, even when there are notable dialectical differences). Though data is sometimes specified in the literature as Dazaga or Tedaga, this mixing of two distinct languages makes it potentially difficult to determine from the literature what linguistic facts characterize Dazaga, specifically.

The Daza live in eastern Niger and west-central Chad. The closely related Teda people live in north-eastern Niger, northern Chad, and southern Libya. Figure 2 shows the approximate language areas of these two people groups.
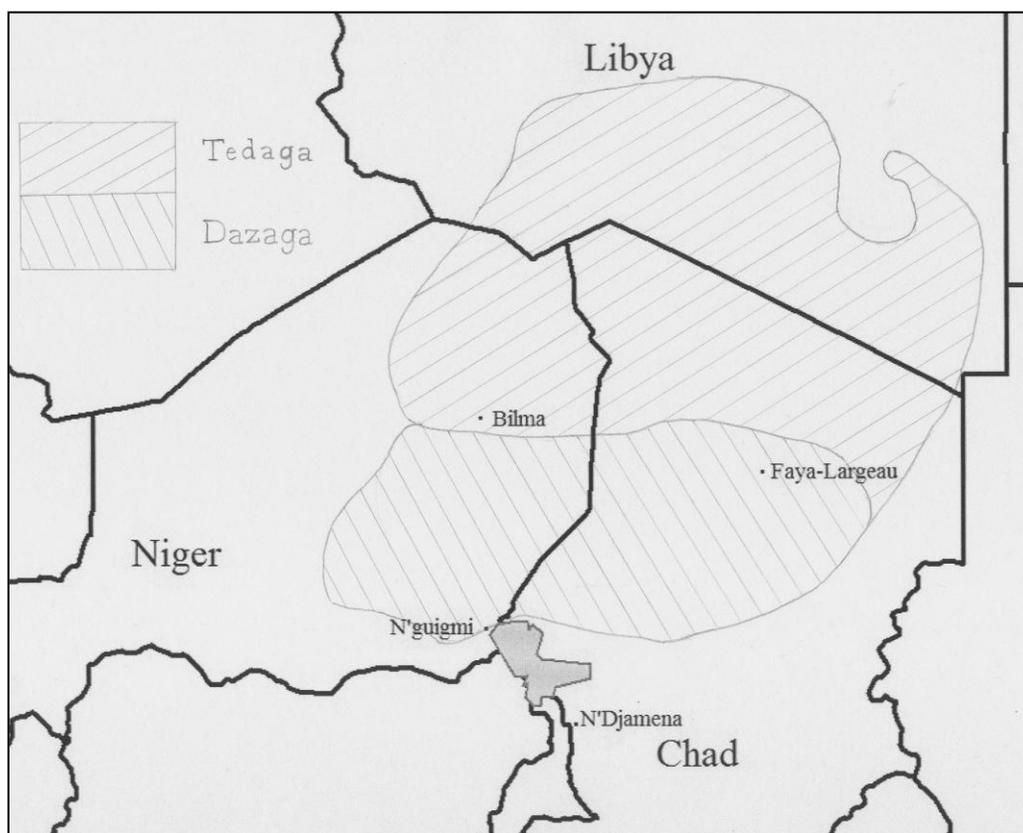
Figure 2: Map of Dazaga and Tedaga speech areas

Traditionally, the Daza were nomads of the Sahara desert, with large herds of cattle and camels (and sometimes other animals, such as sheep, goats, and donkeys), who moved about in search of suitable lands for their livestock. More recent climate and habitat changes have made it difficult for the Daza to maintain herds of cattle. The Daza

would often raid neighboring people groups, including raids on the annual Touareg salt caravans (Baroin 1997:15-16). As a result, the Daza did, and still do, control much of the eastern Sahara.

Extreme droughts in the 1970s and 1980s caused some Daza to relinquish their nomadic lifestyle and to settle in towns such as N'guigmi and Faya-Largeau.

There are several clans that comprise the Daza people, each with its own dialect. I am aware of no recent published study of the different clans and dialects of Dazaga, and my claims here come primarily from personal experience and from correspondence with Kevin Walters. The *kèèrdé* or Keshirda (also Kashirda; cf. Lukas 1953:xv) clan lives primarily in the *kèrí* region of Niger, from which their name likely derives. This region stretches from Tasker to N'gourti, to the north of N'guigmi. The Keshirda dialect is the focus of the present study.

Other clans include the Sagarda who live in the area south of Bilma, to the north of the Keshirda clan. The Wandala clan lives north of Lake Chad (cf. Lukas' *Worda* (Lukas 1953:iii)).[5] The Kreda live primarily in the Bahr el Gazel region of Chad (cf. Lukas 1953:iii), to the west of the Wandala. The Duuza are the northwestern most clan, living in the region to the north of the Kreda, toward Faya-Largeau. All these clans consider themselves to be part of the Daza ethnic group. Lukas (1953:xv) lists additional clans (*Stämme*) who are part of the Daza people, but it is difficult to determine whether these are clans distinct from the above groups or are families and other sub-groups within the primary clans. Nevertheless, all these groups consider themselves to be part of the Daza people (or *Dazagada* 'speakers of Dazaga'), and all speak Dazaga (Kevin Walters, p.c.).

The Azza are a blacksmith class associated with the Daza (cf. Tubiana 2008). They speak Dazaga, but their variety of speech is considered inferior by the Daza speakers of Dazaga, and is referred to as Azzanga. The term Azzanga is also sometimes used by Daza people for Dazaga spoken by other clans of Daza speakers of Dazaga.

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[5] This clan should not be confused with the Wandala people and language described by Barth (1862) and, mor e recently, by Frajzyngier (2012).

1.2   *Objectives and methodology of the present study*

As mentioned above, Dazaga and Tedaga are often treated together in descriptive work (e.g. Lukas 1953; LeCoeur & LeCoeur 1956). Additionally, the primary works on Dazaga, which are the only attempts at more or less comprehensive treatments of the Dazaga language, range in age (at the time of this writing) from eighty years old (Jourdan 1935) to about sixty years old (LeCoeur & LeCoeur 1956; Lukas 1953). Thus, these descriptive works predate and were not able to benefit from the major advances in syntactic and typological studies of the latter half of the twentieth century and the beginning of the twenty-first century.

My goal in the present study, then, is threefold. First, I aim to describe the state of the Dazaga language in the last couple of decades. Second, I aim to narrow the focus of my study to Dazaga (excluding Tedaga), and to the Keshirda dialect, specifically. The choice of this dialect is based primarily on pragmatic considerations: the already-collected data available to me, the best language consultant available to work with me, and the Dazaga with which I had previously been acquainted were all from the Keshirda dialect. This more narrow focus also allows for better control of the data and fewer variables than would a multi-dialect study. Third, I aim to describe the Dazaga language in the terms and categories of modern linguistic description. Though I use modern linguistic terminology and categories, my approach in this thesis is primarily descriptive and typological, rather than theoretical. My main theoretical influences are generative phonology and grammar, with some exposure to Lexical-Functional Grammar and, for phonology, Optimality Theory. However, I do not employ theory-specific formalism in my description and analysis.

In order to achieve my three stated aims, I adopt the following methodology in this thesis. First, in order to provide an up-to-date description of Dazaga, I base my description and analysis on data gathered in the past few decades. Much of the data comes from a FLEx (Fieldworks Language Explorer) database of Keshirda Dazaga provided to me by Kevin Walters. This data was collected by Kevin Walters, primarily during the 1990s and early 2000s, in N'guigmi (Niger) and the surrounding area. Some of

the data for verb paradigms and most of the data for my syntactic analysis were gathered in 2014 and 2015 from e-mail correspondence with my language consultant, Mamane El Hadj Oumar, a native speaker of the Keshirda dialect. Tone data for example sentences and some data for syntactic analysis were provided in person by Mamane El Hadj Oumar during a trip I made to Niger in February 2015.

Second, by basing my analysis on the data gathered by Kevin Walters and my own data provided by Mamane El Hadj Oumar, I ensure that the data underlying this thesis are all from the Keshirda dialect of Dazaga.

Thirdly, in order to provide a description of Dazaga useful to the modern linguist, I use the terminology and categories of recent typological work, and have also extensively cross-referenced work on related Saharan languages (cf. Chapter 2).

1.3   Typological sketch of Dazaga

Dazaga has twenty consonant phonemes (of interest: four nasal phonemes, no /p/ phoneme), and nine vowel phonemes. Vowels exhibit tongue root harmony in polysyllabic words, such that all the vowels in a word (other than the [+low] phoneme /a/) will either be [+ATR] or [−ATR], but not a mixture of both.[6] Suffixes and enclitics assimilate to the [ATR] value of the word to which they attach (no prefixes contain underlying vowels). Dazaga has phonemic tone with phonemic high tone and default low tone, patterning in a pitch-accent system. Tone functions to distinguish both lexical and grammatical differences. Dazaga displays a considerable range of morphophonemic processes in both noun and verb morphology (esp. various kinds of assimilation), which can make it difficult for an outsider to confidently decipher the morphology.[7]

Dazaga is a fairly rigidly SOV language; except for very rare exceptions, no material follows the verb, and the S constituent follows the O constituent primarily in what are probably focus constructions. As expected with such a language (Greenberg 1966:79, Univ. 4), postpositions, rather than prepositions, are used in Dazaga.

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[6] Hulst & Weijer (1995:511) note that tongue root harmony may well be an areal feature of Africa.
[7] Cf. Bryan (1971:231): "In all the [East Saharan] languages sound change tends to obscure the [verbal affixes]."

Interestingly, however, though Dazaga is strongly SOV, genitives follow the head noun (contra Greenberg 1966:78, Univ. 2). But, as predicted (Greenberg 1966:79, Univ. 5) by the violation of Greenberg's Universal 2, head nouns in Dazaga also precede any other modifiers (including determiners, possessives, demonstratives, adjectives, and relative clauses).

Concerning morphology, Aikhenvald (2007:3-8) summarizes two parameters that are useful in characterizing a given language (cf. Haspelmath 2002:4-6; Matthews 1974:17). The first has to do with the transparency of morphological boundaries, and distinguishes languages as isolating, agglutinating, or fusional. The second morphological parameter has to do with the internal complexity of (grammatical) words. It divides languages into analytic, synthetic, and polysynthetic. Assuming Aikhenvald's definition of these parameters and terms, Dazaga can be characterized as an agglutinating synthetic language. Like other Saharan languages, its morpheme boundaries are generally clearcut (cf. e.g. Cyffer 2007; Jakobi 2011), and many grammatical words (nouns, pronouns, adjectives, and especially verbs) contain more than one morpheme, but not more than six (cf. Chapter 5).[8]

Dazaga has minimal inflectional morphology on nouns and adjectives. Singular nouns or adjectives are unmarked, while the plural forms take the suffix *-a*. Adjectives agree in number with the nouns they modify. Grammatical gender is not marked in any way in the language, and the specification of biological gender requires the use of separate lexical items for "male" and "female." There are four enclitics that mark ergative (*=ì*), accusative (*=gà*), genitive (*=ŋà, =ò, =à*), and dative case (*=rò*). The ergative and accusative morphemes are optional, depending on various semantic, pragmatic, and possibly discourse factors. Grammatical relations are usually clear simply based on word order (cf. Jourdan 1935:1). The morpheme *-ŕɛ́* functions as a derivational suffix, deriving adjectives from nouns and verbs.

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[8] Jakobi (2011:87) similarly labels Beria an "agglutinative" language, but also as "polysynthetic" (2006:131) instead of "synthetic."

Verbs are morphologically the most complex part of speech in Dazaga. Verbal morphology includes subject and object agreement markers (prefixes or a mixture of prefixes and suffixes, depending on the verb), a floating plural marker, aspect suffixes, mood suffixes, and a negative suffix. Verbs include both simple verbs (a closed class) and light verb constructions (which comprise the majority of verbs). The verb system shows split-intransitivity, with some intransitives marking their subjects like the subjects of transitive verbs and some intransitives marking their subjects like the objects of transitive verbs. The basic, unmarked form of the verb is the perfective aspect, and suffixes are used to indicate imperfective and progressive aspects. The plural marker in verbs is a separate morpheme from the person agreement markers, and the encoded plurality can be understood of the object or the subject or of both the object and subject.

Intransitive clauses always have SV order, and transitive clauses are almost always SOV order. Adverbial clauses, especially temporal or locative clauses, are often fronted to the sentence-initial position. In ditransitive clauses, the recipient tends to occur closer to the verb than does the theme. When one of the objects of a ditransitive clause is first or second person, it will be indexed on the verb with object agreement. If both objects are first or second person or both third person, the object marker agrees with the person of the recipient as primary object.

Non-verbal existential clauses use the existential predicate $\widehat{t\!\int}\!i\acute{\imath}$ 'to be, exist', including for locative existentials. When an existential clause is negated, the negative existential predicate $b\grave{e}\acute{\imath}$ 'to not be' is used. The negator $\int\!i\acute{\imath}$ is used to negate non-existential non-verbal clauses. Negation is marked on indicative verbs by a negative suffix, -*ní* 'NEG', which is also used for prohibitions or "negative imperatives." Double negation is common in Dazaga, always as a combination of one of the negation morphemes mentioned above with another negative morpheme such as *gúrò* 'unable to', *ínníná* 'nothing', or $\widehat{d\!\!\!\!\!\int}\!\acute{u}k\grave{u}r$ 'never'.

Content questions are identified by the use of question words, such as *ɲàá* 'who', *ínní* 'what', *kìnná* 'when', *kɔ́ɔ́* 'where', and *íɲà* 'why'. Question words occur *in situ* or in an immediately preverbal position. Yes-no questions are marked by a special morpheme,

the yes-no enclitic =*rà*, which occurs clause finally, immediately following the main verb.

The bisyndetic enclitic coordinator =*jὲ* 'and' is used for phrasal coordination, and is repeated with each coordinand in multiple coordination. The coordinator *wàllá* 'or' is used for both phrasal and clausal disjunction. For clausal coordination, the coordinator *ní* 'and', rather than =*jὲ* 'and', is used. The coordinator *t͡ʃíírὸ* 'but' is used for adversative clausal coordination; adversative phrasal coordination is ungrammatical.

Relative clauses in Dazaga are postnominal, and all levels of the Accessibility Hierarchy (Keenan & Comrie 1977) can be relativized, from subject to possessor. Relativization may be achieved by either the gap strategy or pronoun retention for any relativized noun phrase. Relative clauses end either with the clitic determiner =*mà* (or one of its more frequent allomorphs) or with the relativizer =*ŋà*.

Adverbial clauses in Dazaga (especially time, manner, and purpose) are usually formed by a clause ending with the subordinator =*rὸ*. Reason clauses are formed with a postposed subordinator *d͡ʒíŋkàllὸ* 'because'. The contingent mood enclitic =*ɔ̀* can also be used for logically or temporally subordinate (contingent) clauses.

Causative clauses are formed from simple verbs by means of biclausal periphrastic constructions. Causative light verb constructions, which are monoclausal, use a special causative light verb in lieu of the non-causative light verb *n* 'say'. Causatives from simple verbs can also be formed using a serial verb construction.

Serial verb constructions always include only two verbs. Mood and aspect are obligatorily marked on the second, and only the second, verb in a serial verb construction. Serial verb constructions are used to indicate beneficiaries, to show purpose, and to form causative constructions, among other uses.

1.4 Explanation of certain conventions

A few conventions used in this study warrant explanation. First, because tone is marked above vowels, I have marked nasalization with a tilde under the nasalized vowel, rather than over it, to avoid the conjunction of too many diacritics.

Second, in example sentences, I have glossed the subject agreement markers only with numbers corresponding to the number of the person (first, second, or third), such as '3'. In contrast, object agreement suffixes are glossed with the number of the person as well as an abbreviation of "object," such as '1.OBJ'.

Third, due to morphophonemics which sometimes obscure the morpheme boundaries, I have frequently given a second transcription line in example sentences with the underlying forms of the morphemes.

Fourth, while most of the example sentences have both English and French free translations, some have only English. When French translations were already available to me from my data, or where I used French sentences to elicit the Dazaga data, I have included them with the example sentence for comparison with the Dazaga and English. In other cases, I have simply given my English translation of the Dazaga. English quotations from French works are my own translations. English quotations from Lukas (1953) are from an (unofficial, unpublished) translation into English graciously (and anonymously) provided by a member of Wycliffe Associates UK.

Chapter 2: Literature Review

2. Literature Review

In this chapter, I provide a brief review of previously produced (but not always published) studies of Dazaga. Abdoulaye (1985:2) notes that the three primary linguistic works that have been written about Dazaga are Jourdan (1935), Lukas (1953), and LeCoeur & LeCoeur (1956), and, thirty years later, this is still the case. Each of these major works attempts to provide a description of the language as a whole. Some work of lesser scope was produced in the decades preceding and following these major studies (cf. Lukas 1953:iii-v; Wolff 2011:173-174). I survey the literature in more or less chronological order.

2.1 Early minor works

Lukas (1953:iv) reports that Gerhard Rohlfs (in the 1860s) compiled some vocabulary lists of the "northern dialect" (*Norddialekt*), by which Lukas is probably referring to Tedaga. In 1862, as part of a more general work on central African vocabularies, Heinrich Barth published some word lists and a brief grammar overview of "Tubu" (Barth 1862). In the 1870s, Gustav Nachtigal collected vocabulary lists from the Tibesti region of northern Chad, which would have almost certainly represented Tedaga, rather than Dazaga. These lists were never published, but were made available to Lukas personally (1953:iii). About the same time, Leo Reinisch published his *Der einheitliche Ursprung der Sprachen der alten Welt* (Reinisch 1873), arguing for Tedaga as the source of the languages of the old world.[9] Some years later, in 1912, Henri Carbou published his *La région du Tchad et du Oudaï: études ethnographiques, dialecte Toubou* (Carbou

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[9] Lukas (1953:iv) simply calls the language *die Tubusprache*, but Reinisch himself (1873:3) mentions that the people call themselves "Teda" (*die Heimat eines Volkes welches sich selbst den namen Teda beilegt* "the home of a people which calls itself by the name Teda"). He states that in the west (possibly into Niger?) they are also called Tibbu, Tibbo, Tibu, or Tebo, perhaps including the Daza people.

1912). This work included an *Étude pratique de la langue Toubou*, a collection of vocabulary lists and short sentences.

2.2   The major works

The mid twentieth century saw great advances in the description of Dazaga, which have not been updated or superseded. Jourdan (1935), a captain in the French colonial infantry, was the first to attempt a systematic and more or less comprehensive (but not in-depth) description of Dazaga. His work, at a mere thirty pages of grammatical description, focuses especially on the verbs of Dazaga, providing many verb paradigms. He also includes a brief description of nouns, adjectives, numerals, pronouns, and adverbs. While short, his work is systematic and informative. A brief French-Dazaga lexicon and short collection of phrases, proverbs, and stories bring the book to fifty-seven pages (plus brief introductory material). As Jourdan himself states, syntax is barely addressed in the book: "The syntax [of Dazaga], which is entirely based on position, is very simple and is not mentioned in this grammar manual" (Jourdan 1935:1). His fullest description of Dazaga syntax comes in the following paragraph, where he notes that "the subject precedes the verb, the object is placed between the subject and the verb," probably providing the first explicit identification of Dazaga as an SOV language. He continues and concludes his syntactic description by noting that "the direct object precedes the indirect object [that is, the theme precedes the recipient], the adjective follows the noun, the adverb is placed before the term to which it is related, the nominal complement follows the noun" (Jourdan 1935:1-2). In his lexicon, Jourdan identifies the class of each of the verbs, using his three class system. However, his three class system is not related to the later three class system proposed by Lukas (1953), which prevailed in Saharan studies until more recent studies suggested re-evaluation of the verbal system (cf. §5.1). Rather, Jourdan's Class 1 and Class 2 are comprised of verbs in Class 3 of the standard system (what I analyze as light verb constructions; cf. §5.3.2 and §5.5.1), and his Class 3 corresponds to the standard Class 2 (what I analyze as simple verbs; cf. §5.3.1 and §5.5.1). Like LeCoeur & LeCoeur (1956), he does not identify as a distinct group those verbs which comprise the standard Class 1 (what I analyze as S_p verbs; cf. §5.5.2).

Lukas (1953) provides the longest and most comprehensive description of Dazaga produced to date, though some data and discussion is included which is identified as representing the "northern dialect," referring to Tedaga. He provides a sketch of Tubu phonology (1953:1-30), including detailed discussion of morphophonemics and other (diachronic and synchronic) phonological processes. He describes nouns (*substantiv*), adjectives, numerals, pronouns, verbs, postpositions, (so-called) prepositions, conjunctions, and adverbs. The last thirteen pages are given to a discussion of Tubu syntax, including topics such as subject and predicate, pairing of verbs, uses of *Aktionsarten*, uses of prepositions, word order, interrogatives, relative clauses, conditional clauses, etc. Due to the complexity of the verbal systems in Saharan languages, Lukas devotes nearly a hundred pages to his treatment of Tubu verbs. The detail of his description and the clear organization of his work (much more clearly organized than LeCoeur & LeCoeur (1956)) are strong points in his work. Nevertheless, his most important contribution is his analysis of the verb system, and his three-class categorization of Dazaga verbs, a categorization that has been widely accepted for Dazaga and other Saharan languages since his work (though with recent challenges; cf. Ortman (2003); Jakobi & Crass (2004); Kellenberger (2008), etc.).

LeCoeur & LeCoeur (1956) give a treatment of Tedaga and Dazaga of just over one hundred and twenty pages. They also include a "second book" (*livre deuxième*) in the middle of their volume which gives one hundred and thirty pages of Tedaga texts. A "third book," at the end of their volume, provides a "French-Tedaga lexicon" (*lexique français-teda*) of about another one hundred and thirty pages (with approximately 1,600 entries), which includes separate columns for the Dazaga, Tedaga, and (sometimes) Kanuri equivalents of the French headwords. After a brief thirteen page sketch of the phonology of Tubu, a more lengthy second chapter (about thirty pages) deals with the morphology of nouns and pronouns. As with Lukas (1953), LeCoeur & LeCoeur (1956) devote the most space (about forty pages) to verbs. Though published a few years after Lukas' influential work, they divide Tubu verbs into only two classes, based on the position of the third person subject agreement marker relative to the "root" (LeCoeur &

LeCoeur 1956:80), dividing verbs into what I will call simple verbs and light verb constructions (cf. Chapter 5). Like their French predecessor, Jourdan (1935), LeCoeur & LeCoeur fail to distinguish the standard Class 1 verbs (my S_p intransitives) from the other verbs. Their fourth chapter (about twenty pages) deals with an eclectic selection of topics in the syntax of Tubu, including comparatives, questions, negation, and "modality."

2.3   Recent minor works

In the years since Lukas (1953) and LeCoeur & LeCoeur (1956), numerous smaller studies of Dazaga have been published, often heavily reliant on the earlier major works.

Bougnol (1975) is a brief and preliminary sketch of Dazaga phonology, based on his own research in Niger in 1972 in the region around Gouré.

In the 1980s, three MA theses were produced at the Université de Niamey (but not by native speakers of Dazaga), under the supervision of Kevin Jarrett and H. Ekkehard Wolff. Abdoulaye (1985) is a study of the morphophonemics of verbs. Amani (1986) is a description and analysis of Dazaga phonology, focusing on the Dazaga of the N'gourti region (north of N'guigmi). Alidou (1988) provides a description of the morphophonemics of nouns and noun phrases of Dazaga from the Tasker region of Niger, northwest of Zinder.

Ekkehard Wolff and Hassana Alidou later coauthored a study of desegmentalization (which they use to refer to the loss or reduction of segments) and tone in Dazaga, focusing on the definite marker in Dazaga from the Tasker region (Wolff & Alidou 1989). Wolff later produced a few more studies of aspects of Dazaga phonology, two on tone (1990, 1991) and one on the origin and status of nasal vowels (2011).

König's extensive work on case systems in Africa (König 2008) includes sections dealing with the agreement marking and case marking in Tubu (dependent on Lukas (1953)) and Kanuri. She was the first, to my knowledge, to suggest that Dazaga possibly exhibits split-intransitivity, an analysis that has been adopted for Beria (e.g. Jakobi & Crass 2004; Jakobi 2006, 2011), and which I follow in my own analysis of Dazaga verbs (cf. Chapter 5).

Based on decades of his own fieldwork, Kevin Walters has produced an unpublished draft description of Dazaga phonology (Walters 2013), focusing on the Keshirda dialect of eastern Niger (N'guigmi area). My own phonological description, provided in Chapter 3, relies heavily on Walters (2013), both for data and for some analysis. In August of 2014, I published a study of relative clauses in Dazaga, including a comparative study with the better-described Saharan language Kanuri (Walters 2014). The section on relative clauses in the present study (§8.2.3) draws heavily on Walters (2014), but also represents significant improvements in my understanding of Dazaga as a whole and of Dazaga relative clauses specifically.

Other Saharan languages have also seen a recent resurgence of published studies, which have variously benefited my own work on Dazaga. Ortman (2003) offers an analysis of the Tedaga verbal system that differs significantly from the traditional classification proposed by Lukas (1953). Ortman's study has proven very influential in the recent study of verbal systems in Beria (cf. Jakobi & Crass 2004; Jakobi 2006, 2011; Kellenberger 2008; Maha El-Dawi 2010), and I interact with his analysis at length in §5.1.

In Kanuri, several recent studies have focused on case marking. These studies — Cyffer (1983), Hutchison (1986), and Bondarev et al. (2011) — have been important in demonstrating the kinds of factors influencing case marking in Saharan languages. Other recent studies of Kanuri include Wolff & Löhr's (2006) study of focus in Kanuri verb morphology, Rothmaler's (2011) article on converbs (clause-chaining) and Ziegelmeyer's (2011) study of argument focus in Kanuri.

The primary descriptive work for Beria is Jakobi & Crass (2004). Previous to their grammar of Beria, Andrew Wolfe produced a BA thesis study of Beria phonology (Wolfe 2001). Recent work by Jakobi (2006) and Wolfe & Adam (2015) have proven useful to me in my analysis of Dazaga case marking; my analysis is particularly indebted to Wolfe & Adam (2015). Jakobi's work on Beria's verb system (2011), along with other previous works on Beria verbs (Kellenberger 2008; Maha El-Dawi 2010), have aided my analysis of Dazaga's verb system, particularly with reference to split-intransitivity.

Other works have been concerned with the Saharan languages as a group. Cyffer has produced a prodigious number of publications in this regard (1981a; 1981b; 1991; 1996; 1998b, 2000), primarily reconstructing various elements of Proto-Saharan through comparative analysis. Bryan (1971) offers an analysis of the verb systems of East Saharan languages (namely, Kanuri, Dazaga, and Tedaga, which are now classified as Western Saharan). She synthesizes and organizes data from previous studies. Wolff (1992) is a study of the verbal systems of Western Saharan (Kanuri and Tubu). Awagana (2011) provides a comparative study of word roots from Saharan languages, reconstructing many Proto-Saharan roots.

Chapter 3: Phonology

3. Phonology

Due to space limitations and the primary focus of this study on morphology and syntax, this chapter on Dazaga phonology is not intended to be an exhaustive or in-depth description and analysis. Rather, I provide an introduction to the fundamentals of the phonology of Dazaga as part of the basis for my morphological and syntactic analysis in later chapters. A phonological description of Dazaga is complicated by the fact that Dazaga exhibits perhaps a higher than usual rate of variation, both within the speech of a single person and between different speakers. There are many variations in the phonology of Dazaga, which are not always consistent or predictable. LeCoeur & LeCoeur (1956:33) point out, "From one moment to the next, from one sentence to another, the same person does not always pronounce the same word in the same way."[10] In this chapter, I largely pass over such variation without discussion, instead giving a simple presentation of what seem to be the most common pronunciations. For a fuller treatment of Dazaga phonology, see Lukas (1953:1-31, who includes a fair amount of information about dialect differences) and Amani (1986).

3.1 Consonant phonemes

Dazaga has twenty consonant phonemes, as represented in Table 1, where parentheses indicate that a phoneme is marginal. The phonemic inventory is largely symmetrical, with a few notable exceptions. The voiceless bilabial stop /p/ is missing from the series of phonemic stops, breaking the pattern that is observed for the alveolar and velar points of articulation, of pairs of stops differing only in voice. Additionally, while /s/ has a voiced phonemic counterpart /z/, the non-alveolar voiceless fricative

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[10] *D'un moment à l'autre, d'une phrase à l'autre, le même homme ne prononce pas le même mot de la même façon.*

phonemes /f/ and /ʃ/ lack such voiced phonemic counterparts. Dazaga has four phonemic nasals.

Table 1: Consonant phonemes of Dazaga

	bilabial	labiodental	alveolar	alveopalatal	palatal	velar	glottal
stops	b		t d	t͡ʃ d͡ʒ		k ɡ	
fricatives		f	s z	(ʃ)			h
nasals	m		n		ɲ	ŋ	
flaps			ɾ				
laterals			l				
glides	w				j		

A brief and select presentation of the evidence for the phonemic status of some phonemes in Table 1 is given in Table 2. A fuller presentation of the evidence for the phonemic status of each phoneme is presented in Walters (forthcoming). Much of the evidence in Table 2 comes from Walters (2013).

Table 2: Sample evidence for phonemic status of consonants

b/f	[bìɾé]	'jug, bidon'	[fìɾé]	'assistant'
	[dúbú]	'one thousand'	[dùfó]	'year-old camel'
	[ànâb]	'grape'	[lɔ́f]	'smoking pipe'
d/ɾ[11]	[gáddɛ̀]	'after having made bleed'	[gáɾdɛ̀]	'after having braided'
	[dɔ́ddɛ̀]	'after having seen'	[díɾdɛ̀]	'after having removed'
t͡ʃ/d͡ʒ	[t͡ʃìɾɛ́]	'behind'	[d͡ʒíɾɛ̀]	'truth'
	[fóɾt͡ʃì]	'dung'	[ɔ̀wɔ́ɾsáɾd͡ʒíŋì]	'heartburn
	neither [t͡ʃ] nor [d͡ʒ] occur word-finally			
s/z	[síɾtí]	'to curse'	[zíɾtí]	'to scatter'
	[tòsʊ̀ʊ́]	'to sew'	[tòzʊ̀ʊ́]	'to pack up and leave'
	[z] does not occur word-finally			
m/n	[màná]	'squirrel'	[nàná]	'mint'
	[dúmúɾ]	'brother'	[dúnùɾ]	'gold'
	[ŋáɾàm]	'crocodile'	[ŋáɾàn]	'water buffalo'
n/ɲ	[nááná]	'each'	[ɲààná]	'everyone'
	[kínídí]	'patience'	[kìɲìlí]	'ethnicity, race'
	[ɲ] does not occur word-finally			
n/ŋ	[nááná]	'each'	[ŋáánà]	'upper back'
	[màná]	'squirrel'	[màŋá]	'region north of N'guigmi'
	[ŋ] does not occur word-finally			
ɲ/ŋ	[ɲàá]	'who'	[ŋáánà]	'upper back'
	[íɲà]	'why'	[íŋà]	'young boy'
	neither [ɲ] nor [ŋ] occur word-finally			
l/ɾ	[ólú]	'melon'	[óɾú]	'meat broth' /d/ in Duuza
	[dɔ́ŋɔ̀l]	'stake'	[dɔ́mɔ́ɾ]	'blossom (palm)'
	no unambiguously native words with initial [ɾ]			
w/j	[wálì]	'unripe date'	[jálì]	'child'
	[dùwí]	'widow'	[dùjí]	'swing for children'
	neither [w] nor [j] occur word-finally			

3.1.1   Phones [b] and [p]

The segment [p] is not included as a phoneme in Table 1. In my corpus, [p] occurs

sixty-five times in uninflected forms, with the distributions shown in (1).

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[11] It is difficult to find evidence for this phonemic contrast, since /d/ often lenites to [ɾ] intervocalically, and /ɾ/ does not occur word-initially.

(1) *Distribution of [p]*

Environment	*Tokens*	*Comments*
#__	2	([púktí] 'break out, explode'; [pòttó] 'spotted')
V__V	1	([kàpágà] 'hand-breadth')
C__V	20	(always following [m])
V__C	41	(always preceding a voiceless coronal obstruent)
__#	1	([kùɾkúp] 'machete')

This distribution suggests that [p] is an allophone of /b/, and that the distribution of [p] can be accounted for by two rules, one of post-nasal devoicing and another of obstruent voice assimilation. The four exceptions in (1) to these two processes include three words with are of marginal significance in phonologcial analysis, namely the borrowed word [kùɾkúp] 'machete' (from French *coupcoup*) and the probable onomatopoeias [púktí] 'break out, explode' and [pòttó] 'spotted' (Kevin Walters, p.c.). This leaves only the intervocalic exception [kàpágà] 'hand-breadth'.[12]

Though post-nasal devoicing seems phonetically implausible given the voicing of the nasal, this proccess is not unattested in the languages of the world. Specifically, Hyman (2001), Coetzee et al. (2007), Coetzee & Pretorius (2010), and Solé et al. (2010) claim this process is productive in a number of Bantu languages (for opposing analyses, see Zsiga et al. (2006, 2007), Gouskova et al. (2011), and Boyer & Zsiga (2013)). A post-nasal devoicing rule explains certain occurrences of [p], but also explains why sequences [mb], [nd], and [ŋg] are unattested in Dazaga, apart from a single occurrence of [ŋg] (in [t͡ʃĩŋgáltí] 'mince, dice').[13]

The second rule needed to explain the other occurrences of the allophone [p] is a very natural rule of obstruent voicing assimilation, where C_1 in an obstruent CC sequence assimilates to the voicing of C_2. This process is observed frequently when the voiceless obstruent /t/ of the verbal plural morpheme *-t* triggers devoicing of a preceding obstruent

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[12] It is possible (though by no means sure) that [kàpágà] 'hand-breadth' is underlyingly /kabTága/, where T represents a voiceless stop. The sequence /bT/ may then assimilate to [pp] by adjacent obstruent mutual assimilation (cf. §3.6.1), and then reduce to [p], via a degemination rule which is known to apply in some other cases.

[13] It is possible that this is actually [t͡ʃĩŋáltí] or [t͡ʃĩŋkáltí].

(and then itself assimilates to the manner of articulation of the preceding obstruent). This is illustrated in (2), where the underlying sequence /bt/ surfaces as [pp].

(2) káɾtà   wá**pp**ògì
     káɾt-à   Ø-j-bá**b**-**t**-ɡɪ
     card-P   3.OBJ-3-hit-P-IPFV
     'They are playing cards.' [lit. 'They are hitting cards.']
     'Ils jouent aux cartes.'

This rule predicts that when /b/ is followed by a voiced obstruent, /b/ will remain voiced. This is confirmed by the [bd] sequence in [dúbdé] 'divorce party'.

Because of the predictability of [p], based on these two rules, and the dubious nature of apparent exceptions, I consider [p] to be an allophone of /b/. The absence of phonemic /p/ (when the other five stops are attested), though possibly physiologically motivated (cf. Ohala 1983), is an areal feature of the Saharan region, possibly motivated by other, even non-linguistic, factors (Maddieson 2013). The lack of phonemic /p/ has been claimed for Kanuri (Cyffer 1998a:19; Hutchison 1981:17-18) and suggested as a possibility for Tedaga (Ortman 2000) and Beria (Wolfe 2001:32-33).

3.1.2   Phones [s] and [ʃ]

Out of sixty-eight occurrences of word-initial [ʃ] in my database, only twelve precede a [+back] vowel. Furthermore, of these twelve, at least five ([ʃàɾíjà] 'law'; [ʃàhá] 'salvation, deliverance'; [ʃáhábà] 'population, people'; [ʃáì] 'tea'; [ʃŏkòràn] 'thank you') are clearly loan words from Arabic, and one is clearly a loan word from French ([ʃúú] 'cabbage'). I suspect that several of the remaining six ([ʃàtáɾà] 'wall covering'; [ʃàkɨrân] 'inebriated'; [ʃágàl] 'problem, pain') are also loans from Arabic, and one is possibly a loan from English ([ʃòkʷóʃ] 'suitcase, traveling bag'). The result is that there are, at most, six native Dazaga words with word-initial [ʃ] preceding a [+back] vowel. Further, if my suspicions are correct about four of the remaining occurrences, there would be, at most, two native Dazaga words with word-initial [ʃ] preceding a [+back] vowel, certainly a notable paucity. This paucity is nearly matched by the occurrences of word-initial [s] preceding a [−back] vowel — nine in my corpus.

The situation is not much different intervocalically, where [s] occurs before a [−back] vowel nine times, and [ʃ] occurs before a [+back] vowel seven times. Word-finally, there is virtually no contrast, as [ʃ] occurs word-finally only twice, once following [ʊ] and once following nasalized [ɪ], neither of which ever precedes word-final [s]. This restricted distribution of [ʃ] suggests a very marginal phonemic status for /ʃ/.[14]

3.1.3   Phones [kʷ] and [gʷ]

The segments [kʷ] and [gʷ] occur occasionally in my data, but I have not included them in Table 1 as phonemes of Dazaga (following LeCoeur & LeCoeur (1956:23), but contra Amani (1986:50) and Abdoulaye (1985:4)).[15] The environments in which [kʷ] and [gʷ] occur are not predictable. Ten out of eighteen occurences in my data are before [+round] vowels, but the other eight instances precede [i], [ɪ], or [a]. Both [kʷ] and [gʷ] occur word initially (e.g. [gʷɔ̀ní] 'camel') and word medially (e.g. [kɔ̀gʷɔ́jɛ̀] 'chicken').

Due to variable pronunciation of such words by the same speaker, I analyze the alternations between [k] and [kʷ] and between [g] and [gʷ] as free variation. In recordings of the same speaker, I found that the velar stops were pronounced with and without perceived labialization, as illustrated in (3).

(3)   [gʷɔ̀ní] 'camel'
       [gɔ̀ní] 'camel'

This analysis is supported by the perception of native speakers, who do not perceive a difference between [kʷ] and [k] or between [gʷ] and [g] and do not consider them separate sounds (Kevin Walters, p.c.). Educated speakers also do not write labialization in these cases, though they do use the grapheme *w* for the phoneme /w/.

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[14] Significantly, native speakers perceive and write [s] and [ʃ] as distinct sounds, supporting my analysis of these segments as distinct phonemes.
[15] Amani (1986:17, 50) and Alidou (1988:22) also list [ŋʷ] as a phoneme of Dazaga. This would be symmetrical with the other labialized velar consonants, but I have not encountered any instances of [ŋʷ]. Alidou (1988:22) lists the three labialized velar consonants as marginal.

3.1.4 Rhotics

The number and articulation of rhotics in Dazaga is not agreed upon in the literature. LeCoeur & LeCoeur (1956:23) and Abdoulaye (1985:4) posit only one rhotic, the alveolar flap [ɾ]. On the other hand, Alidou (1988:22) and Amani (1986:17) claim that Dazaga has two rhotics, an alveolar flap (*vibrante*) [ɾ] and a retroflex flap [ɽ]. Jourdan (1935:3-4) states that Dazaga has an alveolar flap [ɾ] and a retroflexed [ɖ], probably agreeing with Alidou and Amani, since [ɖ] is often manifested phonetically as a flap intervocalically.

The evidence from related Saharan languages is also divided. Wolfe (2001:19-22) argues that Beria (Zaghawa) has two rhotics, the alveolar flap [ɾ] and [ɽ], which he claims is actually more of an approximant in Beria. On the other hand, Kanuri has only a "rolled" (it is not clear whether [ɾ] or [r] is intended) rhotic sound per Cyffer (1997:22), with no mention of a retroflexed rhotic.[16]

In listening to recordings of Dazaga words that contain rhotics, I have not encountered any retroflexed rhotic (nor have I encountered a voiced retroflexed coronal stop [ɖ]). My data include many clear cases of the alveolar flap [ɾ], word-medially and word-finally, and some fairly clear cases of alveolar trills [r].

The actual articulation of what is perceptually a trill [r] is not clear to me, and can probably not be confidently identified without instrumental measurements and analysis that are outside the scope of the present study.

At least one near minimal pairs exists, presented in (4), which illustrates contrast between [r] and [ɾ] (though the [ɾ] here may actually be /d/ underlyingly) .

(4) [áró]   'male goat'
     [àɾó]   'custom, tradition'

However, there is little other evidence for the contrastive nature of the trill [r], and, most importantly, little evidence of its phonemic status relative to [ɾ]. A more attractive explanation (suggested by Kevin Walters, p.c.) for the phonetic presence of the

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[16] However, Cyffer (1997:22; 1998a:19) does mention an allophonic retroflexed lateral approximant [ɭ].

trill [r] is that it is underlyingly a geminate flap /ɾɾ/. In this case, there is only one rhotic phoneme, /ɾ/, with a phonetic realization of [r] when geminated. Thus, the underlying segmental contrast between the two nouns in (4) could be represented as below, in (5).

(5) /áɾɾ/   →   [áró]   'male goat'
     /aró/   →   [àró]   'custom, tradition'

     This is the analysis adopted in Table 2, as indicated by the absence of /r/.

3.2 *Vowel phonemes*

     The number of claimed vowel phonemes in Dazaga has varied widely in the literature (cf. Wolff 2011). Thus, LeCoeur & LeCoeur (1956) posit seven vowel phonemes, Jourdan (1935) and Abdoulaye (1985) posit eight, Lukas (1953) posits eleven, Alidou (1988) posits twelve, Bougnol (1975) posits sixteen, and Amani (1986) posits twenty-two.

     In my analysis (following Walters (2013)), Dazaga has nine vowel phonemes, which are shown in Table 3. The vowel inventory demonstrates clear symmetry. Apart from /a/, which stands out from the other vowels in several ways, the vowel phonemes could each be distinguished by the three features [±high], [±ATR], and [±back]. The phoneme /a/ requires that one of the distinctive features [±low] or [±round] be used as well, to distinguish it from /ɔ/. I have used [±round] for this purpose, rather than [±low], in the following table.

Table 3: Vowel phonemes of Dazaga

	ATR	[−back]	[+back]	
		[−round]	[−round]	[+round]
[+high]	+	i		u
	−	ɪ		ʊ
[−high]	+	e		o
	−	ɛ		ɔ
	−		a	

There are a couple of redundant, or predictable, vowel feature values. Specifically, [+back] is redundant for the [+round] vowels and [−round] is redundant for [−back] vowels.

Because Dazaga exhibits tongue root harmony (see §3.5), vowels that are distinguished only by their [ATR] values (such as [i] versus [ɪ], [u] versus [ʊ], etc.) do not contrast in identical environments unless 1) they are in monosyllabic words (which rarely provide #_C or C_C environments), or 2) the only other vowel in the word is the non-harmonizing [−ATR] vowel /a/. This creates some difficulty in finding strong contrast between these [±ATR] pairs (see §3.2.2).

As with the consonants, a brief and select presentation of the evidence for the phonemic status of some phonemes in Table 3 is provided in Table 4. A fuller presentation of the evidence is provided in Walters (forthcoming), which is heavily dependent on the information provided in Walters (2013).

Table 4: Sample evidence for phonemic status of vowels

i/ɪ	[ínní]	'what'	[ìní]	'thing'
	[ŋílí]	'jaw bone'	[ŋílí]	'rainy season'
	[dí]	'female camel'	[dí]	'handle'
e/ɛ[17]	[èɾí]	'pearl'	[ɛ̀ɾɛ́]	'natron'
	[béɾì]	'empty'	[béɾɛ̀]	'flock, herd'
	[bìɾé]	'jug'	[bìɾɛ́]	'food'
e/o	[èjìí]	'rock, mountain'	[òjíí]	'untamed, free'
	[tèskí]	'star'	[tóskí]	'doughnut, beignet'
	[cùɾògé]	'vast, expansive'	[gògó]	'(on) back'
u/ʊ	[ùrùptí]	'to bury, inter'	[ʊ̀ɾʊ̀dí]	'to write'
	[gúm]	'silently'	[nʊ́m]	'2.POSS'
	[wú]	'theft'	[mʊ́]	'lie'
o/ɔ	[òsú]	'wood pieces in well'	[ɔ̀sɔ́n]	'side'
	[dôɾ]	'flock, herd'	[wɔ̂ɾ]	'competent, industrious'
	[sùgó]	'bag (for tea, etc.)'	[sʊ́gɔ̀]	'stake, picket, pole'

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[17] For further discussion of the [±ATR] pairs [e,ɛ], [o,ɔ], see §3.2.2.

3.2.1   Nazalized vowels

Nasalized vowels are not phonemic, and derive from the deletion of intervocalic /m/, both diachronically, as a comparison with Tedaga shows, as well as synchronically, where there is much variation between speakers.[18] Wolff (2011:186) states that the presence of nasalized vowels, other than in definite forms, may be attributed "to the presence of lexical /m/ which, for diachronic or shallow phonological reasons, does no longer occur in the (synchronic) phonetic realizations."[19] Diachronically, many words which are normally now pronounced with nasalized vowels previously had a full bilabial nasal consonant /m/. This is demonstrated from the comparison of Dazaga forms with the current equivalent Tedaga forms (no tone data), as in (6).

(6)   *Dazaga*   *Tedaga*
       [níĩ́] 'village'   [nʊ**m**ɔ] 'village'
       [kʊ̀ʊ́n] 'elephant'   [ku**m**on] 'elephant'
       [tíĩ́] 'tooth'   [tʊ**m**ɔ] 'tooth'
       [à̰ʊ́] 'man'   [o**m**uri] 'man'

Synchronically, vowel nazalization is the result of an underlying (abstract) intervocalic /m/. However, vowel nasalization as a result of this abstract intervocalic /m/ is not consistent, and varies from speaker to speaker, with some speakers nazalizing the vowels, and some speakers no longer doing so, as illustrated in (7).

(7)   [dḭ̀ĩ́] ~ [dìí] 'flour'
       [t͡ʃɔ̰̀ɔ̰́ɾ] ~ [t͡ʃɔ̀ɔ́ɾ] 'rabbit'

3.2.2   [±ATR] vowel pairs [e,ɛ], [o,ɔ]

As reported in Walters (2013), the phonemes /e/ and /o/ are somewhat marginal, because the great majority of their occurrences could be explained as assimilation of the

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[18] I have not found any evidence that vowel nazalization is the result of the loss of any other intervocalic nasal consonant, and my findings are confirmed by Kevin Walters (p.c.).

[19] Similarly, LeCoeur & LeCoeur (1956:30) claim, "If a consonant in a weak position is a nasal, it is not pronounced, but its nasality persists by attaching to the adjacent vowel." Assuming phonemic nazalized vowels, Amani (1986:75) notes, "Historically, long nasal vowels are the result of the voiced bilabial nasal consonant /m/ dropping out between two identical nasalized vowels."

[–ATR] vowel phonemes /ɛ/ and /ɔ/, respectively, to other [+ATR] vowels that are clearly phonemic, namely, /i/ and /u/. This cannot reasonably be considered an accident of my data, as an even more extreme situation is reported for the closely related Eastern Saharan language Beria (or Zaghawa; cf. Jakobi & Crass (2004), Anonby (2007); cf. also Wolfe 2001:35-37). In Jakobi & Crass' (2004) Zaghawa data, [e] and [o] never occur independently of another [+ATR] vowel in the same word (Anonby 2007:219), favoring an analysis in which [e] and [o] are merely [+ATR] allophones, respectively, of /ɛ/ and /ɔ/, and the phonemic vowel inventory includes only seven vowels.[20] Such a seven vowel inventory with [ATR] harmony is much more common in East Africa than in West or Central Africa (Casali 2008:503).

However, in agreement with Walters (2013), I consider /e/ and /o/ to be marginally phonemic in Dazaga, because there are examples in which no other [+ATR] vowel is present to cause underlying /ɛ/ and /ɔ/ to assimilate to their harmonic counterparts /e/ and /o/. These examples, presented in Table 5, are very few, but difficult to explain away.

Table 5: Evidence for phonemic status of /e/ and /o/

Evidence for /e/		Evidence for /o/	
[éɾè]	'currently, presently'	[gògó]	'back'
[dóólè]	'country'	[dóólè]	'country'
[gègé]	'malaria'		
[tèéɾè]	'the other'		

Other evidence is inconclusive, as variant pronunciations often include either /i/ (e.g. [wéɾèdˀ] vs. [wéɾèdì] 'heritage') or /u/ (e.g. [òrd͡ʒól] vs. [ùnd͡ʒúl] 'crafty, smart').

3.2.3   The phone [ɨ]

In addition to the vowel phonemes in Table 3, the segment [ɨ] also occurs, but, because of its limited distribution, I do not consider it to be phonemic. This segment always occurs immediately preceding a [+sonorant] consonant (cf. Alidou 1988:24),

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[20] Anonby (2007:219) says that the same analysis has been claimed by Constance Kutsch-Lojenga (her p.c. with Anonby) for Dazaga and by Mark Ortman (2000) for Tedaga.

whether in an open or closed syllable, with the exception of the following word: [wɨdɛ́n] 'gazelle'.

While [ɨ] only occurs preceding a [+sonorant] consonant, all other vowels may also occur in this environment, so the environment "preceding a [+sonorant] consonant" does not predict the occurrence of [ɨ]. However, the reverse prediction — that a [+sonorant] consonant consonant always follows [ɨ] — holds. I analyze this as a case of conditioned free variation between allophonic [ɨ] and the phonemic vowels preceding a [+sonorant] consonant.

Though I do not consider [ɨ] to be phonemic, there are some words with [ɨ] for which I do have evidence for what the underlying vowel is. In these cases, I have retained [ɨ], even in some underlying forms.

3.3 Syllable and word structure

Syllable structure is not complex. The examples in (8) illustrate the canonical syllable types (cf. Amani 1986:77), which are unambiguously attested. Underlining indicates the relevant syllable in each example.

(8)	CV	bè.dí.gè	'beginning'	gá.là	'advice'
	CVC	bʊ́.lòm	'porridge'	fɛ́ɾ.dɛ̀	'loincloth'
	CVV	tíí	'food, a meal'	bàá	'paternal aunt'
	CVVC	ɡééɾ.tɨ́.ɾé	'sad'	lààp.tí	'to befriend'
	V	è.bí.bí	'wasp, bee'	àn.t͡ʃà.ʊ́	'twin'
	VC	ɛ̀ɾ.fɛ́	'animal skin'	ɔ̀ɾ.kɔ́	'goat'
	Ṇ	ń.tà	'2s'	ǹ.tʊ́ɾ	'1P.POSS'

Syllable type Ṇ has a fairly restricted distribution, occurring only word-initially, and primarily in certain first and second person pronouns, second person forms of S$_p$ intransitive verbs (cf. §5.5.2), as the second person object marker in some simple transitive verbs, and in the conjunction [ǹ.tá] 'and' (cf. [ń.tà] '2s'). However, the nasal (always coronal, preceding [t], in my data) is clearly syllabic, since it bears tone (and the underlying high tone in [ń.tà] '2s'). Syllable type VC is only attested word-initially. Syllable types CV and CVC represent the overwhelming majority of syllables in Dazaga.

CVV occurs fairly frequently, but CVVC occurs only nine times in my data, including one loan word.[21]

Consonant clusters in Dazaga are almost completely restricted to heterosyllabic sequences consisting of a nasal or liquid (not "sonorant," because glides never occur in coda position in Dazaga) followed by an obstruent, as illustrated in (9).[22]

(9) [kèm̱.pè.ɾí] 'chaff'   [gɨ̀.ɾì̱n.tí] 'hippopotamus'
     [kíṉ.t͡ʃì]   'captive'   [dóŋ̱.kò]   'shed, hangar'
     [kùɾ̱.fò.ú] 'dog bowl'   [féɾ̱.tí.ɾì] 'carpet type'
     [áɾ̱.dí.gí] 'wealth'   [bóɾ̱.sà]   'trust, loyalty'
     [ŋí.ŋíɾ̱.ʃí] 'louse'   [kóɾ̱.t͡ʃé.lì] 'morning heat'
     [búɾ̱.d͡ʒìk] 'chicken pox'   [bèɾ̱.kɛ́]   'next year'
     [tàɾ̱.gà.zí] 'branch'   [fáɾ̱.hà]   'cheerful, merry'
     [bɛ́ḻ.kɛ́] 'morning'

There are a few occurrences of (non-geminate) heterosyllabic sonorant-sonorant sequences, as illustrated in (10). In these sequences, the first consonant is always a liquid, and the second a nasal (an ordering we expect based on the Syllable Contact Law; cf. Parker 2011, Murray & Vennemann 1983).

(10) [fóɾ̱.má.ʃĭ] 'vacation, furlough'   [t͡ʃɛ́ɛ́ɾ̱.ní] 'obstacle, difficulty'
      [àɾ̱.nɛ́l.lí] 'porcupine'   [múḻ.múl.tí] 'to lightning'
      [nɔ́ḻ.nɔ́l.tí] 'hop, skip'

Rarer than sonorant-sonorant clusters, (non-geminate) [sC] clusters (cf. Goad 2011) occur only in the sequence [sk] (twenty-four occurrences in my data). These are best analyzed as heterosyllabic due to the rare and ambiguous attestation of other onset clusters. These [sk] clusters are illustrated in (11).

(11) [tès̱.kí]   'star'   [jɛ́s̱.kò]   'black'
      [ŋòs̱.kí]   'yesterday'   [kɔ́s̱.kɔ̀l] 'lower-leg'

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[21] Kevin Walters has pointed out (p.c.) that these nine instances were almost surely historically CVCVC sequences. For instance, similar alternations are observed today between dialects of Dazaga, as between Keshirda [sὺ̀ɡɾ̱] and Duuza [sὸɡóɾ] or [sὸhóɾ] for 'navel'. Also, cf. Dazaga (Keshirda dialect) [t͡ʃɔ̀ɔ́ɾ] versus Tedaga [t͡ʃɔ̀móɾ] for 'rabbit, hare' and Dazaga [kùún] versus Tedaga [kùmón] for 'elephant'.
[22] This is partially a matter of interpretation, but the ability to bear tone also helps distinguish the high vowels from the glides.

Heterosyllabic sequences [pt] and [kt] are also common, but occur primarily in the infinitive form of verbs,[23] as illustrated in (12).

(12) [dáp̲.tí]   'to sweat, perspire'   [t͡ʃáp̲.tí]   'to gather'
      [fík̲.tí]   'to jump'   [hàk̲.tí]   'to find, obtain'

A summary of attested (phonetic) heterosyllabic consonant clusters in lexical forms is given in Table 6, where the vertical column gives C_1 consonants and the horizontal row gives C_2 consonants. A number in a box marks an attested cluster type, and the number indicates the frequency of each cluster type (in lexical forms). As expected for heterosyllabic consonant clusters, the vast majority of attested cluster types (all but two) are either sonority plateaus or drops in sonority. Each of the two sonority rises is attested only once, and both in words that seem to involve reduplication. The sequence [pt͡ʃ] occurs only in the word [t͡ʃàt͡ʃàpt͡ʃĭnɛ́] 'sour' and the sequence [ml] only in the word [múlmúltí] 'to make lightning'. Notably lacking are most sequences of nasals and homorganic voiced stops. Such sequences that are attested, namely, [ŋg] and [ɲd͡ʒ], are each only attested in a single word, [ŋg] in [t͡ʃíŋgáltí] 'to dice, mince' and [ɲd͡ʒ] in the borrowing [ìɲd͡ʒîl] 'gospel' (cf. §3.1.1).

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[23] Out of 105 occurrences of [pt] or [kt] in my corpus, only six were not verbs, and one of those six is a borrowing.

Table 6: Heterosyllabic consonant clusters (phonetic)

	p	t	k	b	d	g	t͡ʃ	d͡ʒ	f	s	ʃ	h	z	m	n	ɲ	l
p		40					1										
t		12															
k		65	4														
b				10	1												
d					21												
g						2											
s			24							34							
z													6				
m	20	21								1	1			10			1
n		57										1			41		
ɲ							15	1									
ŋ			27			1											
l		41	5				5							1		1	43
ɾ		78	33		34	6	4	3	4	10	5	1		3	1	1	

There is some evidence of complex onsets in monomorphemic words, though these are rare (cf. Amani 1986:79-80), are always of the type obstruent-liquid (cf. Parker 2012), and are always word-initial (with the possible exception of some [sk] sequences; cf. Amani 1986:82). However, with these apparent CC sequences it was very difficult for me to determine that these were not actually C^{V}C sequences,[24] where the inter-consonantal vowel has become very brief and centralized (cf. Lukas 1953:25). In character, the inter-consonantal vowel is very like an excrescent vowel (cf. Hall 2011:1584-1585), but this term would not be fitting if the inter-consonantal vowel is a reduction of a full underlying vowel rather than a reduced kind of epenthetic vowel (understanding excrescent vowels to be a kind of epenthetic vowel; cf. Hall 2011:1584). Below are examples of possible word-initial onset clusters, with both possible transcriptions given (keeping in mind that the alternative transcriptions represent differing interpretations, not perceptibly different pronunciations).

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[24] Kevin Walters (p.c.) notes that even "educated native speakers seem to have a hard time deciding [whether to write these as CC or CVC sequences]."

(13) [flák.tí] or [fʲlák.tí]   'to split lengthwise'
      [frɔ́k.tí] or [fʲrɔ́k.tí]   'to be afraid'
      [klás.sí] or [kʲlás.sí]   'to whet, hone'
      [krák.tí] or [kʲrák.tí]   'take off, unpick'
      [trɔ́k.tí] or [tʲrɔ́k.tí]   'to throb'
      [trá] or [tʲrá]   'a, one, a certain one'
      [trɔ̌n] or [tʲrɔ̌n]   '(numeral) one'

The majority of possible onset consonant clusters in Dazaga are in polymorphemic words, occur word-medially, and are the result of the suffixation of [ɾé/ɾɛ́], which derives an adjective from a noun or verb. In these cases, the possible sequence is always a coronal stop [t, d] followed by the flap [ɾ], as illustrated in (14).

(14) [làn.trɛ́] or [làn.tʲrɛ́]   'open'   (from [làn.tí] 'an opening')
      [bà.nà.drɛ́] or [bà.nà.dʲrɛ́]   'ruined'   (from [bà.nà.dí] 'to ruin')

If these are analyzed as onset clusters, then their distribution is unusual, limited to a few word-initial occurrences, as well as many word-medial occurrences across a particular morpheme boundary. On the other hand, if these are not underlyingly onset consonant clusters, it would be difficult to explain why certain vowels in certain words have undergone this reduction to an excrescent-like vowel, and others have not. Given the infrequency of apparent onset consonant clusters in monomorphemic words, I do not consider these to be true underlying consonant clusters (cf. Lukas 1953:26-7).[25]

Consonant clusters do not occur in codas (cf. Amani 1986:82).[26]

Given these unambiguous syllable types and the discussion above, I posit a maximal syllable template of [CVVC] for Dazaga, where VV represents a long vowel.

The vast majority of words in Dazaga end with a vowel (cf. Lukas 1953:5). Of the occurrences of word-final consonants in my data (in lexical forms), only about ten percent (36 out of 362) are obstruents. Many obstruent-final words are borrowings (cf.

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[25] In the case of [trɔ̌n] or [tʲrɔ̌n] 'one', this non-cluster analysis seems to be supported by 1) the rising tone contour which, as proposed in §3.3, suggests that another full vowel was historically present, and 2) the corresponding Tedaga word [tʊrɔ] 'one' (tone data not available), which still contains a full vowel between the [t] and the rhotic.
[26] The only exception to this in my data is the borrowing [kárt] 'playing card', from French *carte*.

Lukas 1953:5) from Arabic (e.g. [dáhàb] 'gold'), French (e.g. [káɾt] 'playing card'), or English (e.g. [ʃòkʷóʃ] 'suitcase') or (in non-lexical forms) imperative singular verb forms ending in [b] or [bˀ]. Overwhelmingly, word-final consonants are nasals (but only /m/ and /n/, never /ɲ/ or /ŋ/) or liquids (/l/ and /ɾ/). Glides do not occur word-finally in Dazaga.

Every possible combination of four syllables (of types CV or CVC) is attested in non-reduplicated, monomorphemic words, with the exception of CV.CVC.CVC and any quadrisyllabic words with more than one CVC syllable. Two uninflected nouns with five syllables are attested in my data, but these include reduplication: [dì.ɾì.dí.ɾí.dí] 'a walk' and [ʃì.gí.lì.gí.lì] 'striped polecat'.

3.4 Tone

There are four phonetic tones (allotones): high, low, falling, and rising (cf. Amani 1986:82; Lukas 1953:7-8; Wolff 1990, 1991; Wolff & Alidou 1989). Falling and rising tones are heavily restricted in environment, as described below. The high and low tones pattern in a pitch accent system (contra Alidou (1988:33), who claims Dazaga has two tonemes, a high and a low, and contra Amani (1986:85-87), who considers each phonetic realization a separate toneme, but analyzes rising and low tone as allotones of a single toneme). The high tone(s) is part of the underlying form of a word, and the low tone is assigned afterward, by default, to any unassociated vowels. No words occur in my data in which all tones are low (cf. Amani 1986:83, 87). Dazaga exhibits tonal "downdrift" (cf. e.g. Connell (2011:838), Hombert (1974); also called "automatic downstep," Stewart (1965)).

Harry van der Hulst (2011:1007, following Hyman (2006, 2009)) describes two typical "properties" of pitch accent languages. The "obligatoriness" property requires that every word have at least one accented syllable,[27] or high tone; the "culminativity" property requires that every word have only one accented syllable. These typical

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[27] "Accent" is here used as "a place marker for the insertion of a tone or word melody" (Gussenhoven 2004:36).

properties are found in Dazaga, if "culminativity" is extended to require only one accented syllable or series of syllables per word. Thus, each word in Dazaga must have at least one syllable bearing high tone, but may have more than one syllable bearing high tone, provided all high tones occur in a contiguous sequence, uninterrupted by intervening low tones.[28] Although multiple syllables can bear high tone, the data are congruent with an analysis with the two pitch accent language properties mentioned by van der Hulst (2011:1007). Indeed, the fact that all high tones in a given word must be adjacent supports an analysis in which a series of adjacent syllables bearing high tone is really a single high tone value multiply associated (Hyman 2011; Goldsmith 1990:66) with one or more adjacent syllables. This can be graphically represented as in (15), for the adjective [túɾútù] 'similar'.

(15)   H   L
          ∧ |
        t u ɾ u t u

     If high and low tones were both phonemic, we would expect to find examples of four way tonal contrasts on segmentally identical disyllabic words. The analysis of Dazaga's tone system as pitch accent predicts that such a four way tonal contrast on disyllabic words will not occur — a prediction confirmed by the data. There are multiple examples of three way contrasts between high and low tones, as illustrated in (16), but no occurrences in which a disyllabic word with LL tone contrasts with the other three possible configurations (in fact, no words with all low tones occur in Dazaga).

(16) [fìdí]   'knowledge'   [kɔ̀ɾɛ́]   'lid, top'
      [fídì]   'tail'   [kɔ́ɾɛ̀]   'brush fire'
      [fídí]   'ask'   [kɔ́ɾɛ́]   'short'

      [nèskí]   'powdered'   [t͡ʃàjá]   'deception'
      [néskì]   'soul, life'   [t͡ʃájà]   'gift'
      [néskí]   'newness'   [t͡ʃájá]   'gambling'

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[28] The only violation of this in my data is the word [ʃigíligìlì] 'striped polecat', and the violation here appears to be a result of reduplication. Apart from this word, and even in other occurrences of reduplication, the pattern described above is not broken.

Under the pitch accent analysis, the three way contrasts illustrated in (16) would be analyzed as differences in placement and attachment of the underlying high tone, and not as phonemic contrast between high and low tones. Thus, the underlying forms of the three way contrast of tonal patterns on the segmental sequence [kɔɾɛ] could be represented as in (17). Default low tones would then be assigned to unassociated vowels by a phonological process prior to phonetic realization.

(17)   H   H   H
          | | /\
      k ɔ ɾ ɛ   'lid, top'   k ɔ ɾ ɛ   'brush fire'   k ɔ ɾ ɛ   'short'

Monomorphemic words have tonal melodies that remain on the word even if it is shortened (tonal "stability" (Goldsmith 1990:227-28)), resulting, for example, in monosyllabic words with falling tone due to apocope in (CVCV) disyllabic words that had high and low tones. This variable segmental surface representation of words and the constant tonal melody is illustrated in (18), suggesting an ordering of default low tone association before optional apocope.

(18)   [gúɾò]   'able to'   vs.   [gûɾ]   'unable to'
       [bóɾò]   'very'   vs.   [bôɾ]   'very'
       [jálì]   'child'   vs.   [jâl]   'child'

In the examples in (18), a vowel segment is apocopated, but the tone with which it was associated does not disappear. Rather, after becoming disassociated with the apocopated vowel, it re-links to, or associates with, the preceding vowel. This results in a single vowel segment with multiple associations on the tonal tier (Hyman 2011; Goldsmith 1990:39-40), surfacing as a tonal contour.

Falling (e.g. [mùlòfûɾ] 'hyena') tones occur only on a final vowel or, more commonly, a vowel immediately preceding a word-final consonant (which is almost always a sonorant; cf. Alidou (1988:33); Amani's (1986:83) transcriptions are faulty on this point). This suggests that the falling contour is due to a deleted word-final syllable or vowel, which leaves behind its tonal melody, which in turn combines with the tone of the preceding vowel to create a falling contour (cf. Alidou 1988:33-34). The same process

explains the few occurrences of rising tones (cf. Lukas 1953:7), which, again, only occur on word-final vowels or on vowels immediately preceding a word-final consonant (e.g. cf. [ɛ̀jɛ̌n] vs. [àjàná] for 'fruit of *salvadora persica* bush').

This analysis of falling and rising tones as the result of the deletion of stem-final segments or syllables is further corroborated by the effect of adding a vowel suffix or clitic, such as the plural suffix [a] or the clitic determiner [u] or [ma]. When a word's last vowel bears a falling or rising tone, this contour is spread out over the suffix or clitic, resulting in a high-low or low-high tonal sequence over two vowels. This is illustrated in (19).

(19) [òjûl]²⁹   'cardinal direction'
      [òjúlà]   'cardinal directions'
      [òjúlù]   'the cardinal direction'

      [àlâm]   'flag'
      [àláà]   'flags'
      [àlámà]   'the flag'

Dazaga has lexical tone, as demonstrated in (16). It also has grammatical tone, though this is not a common way of distinguishing grammatically distinctive forms (as opposed to Beria; cf. Jakobi & Crass (2004)). The most frequently occurring use of grammatical tone is the tonal difference between the plural imperative and third person plural perfective verb forms for simple verbs (cf. Chapter 5). This is illustrated below in (20).

(20) [gɔ́rtò]   'they cut it'   [wíttù]   'they acquired it'
      [gɔ̀rtó]   '(2P) cut it!'   [wìttú]   '(2P) acquire it!'

      [fɔ́rtò]   'they detached it' [d͡ʒúmpù]   'they refilled it'
      [fɔ̀rtó]   '(2P) detach it!'   [d͡ʒùmpú]   '(2P) refill it!'

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²⁹ There are a few words, like [òjûl], for which I do not have a record of a synchronic vowel-final variant. If these forms are underlyingly consonant-final and also have underlying falling tones, there would be a handful of apparent contradictions to my analysis of Dazaga's low tone as part of the phonetic spell-out (and not underlying).

In these cases, the imperative morpheme that distinguishes the plural imperatives from the third person plural indicatives is a floating high tone (a "not uncommon" phenomenon in African languages (Gussenhoven 2004:35); cf. Goldsmith 1990:20-27). This floating high tone associates with the word-final epenthetic vowel, triggering the Obligatory Contour Principle (OCP; cf. Leben 1973; Goldsmith 1976; McCarthy 1986; Bye 2011, etc.), which causes the deletion of the preceding high tone. A default low tone rule then associates with the toneless root syllable. The derivational process for both [gɔ̀ɾtó] '(2P) cut it!' and [gɔ́ɾtò] 'they cut it' is illustrated in (21), where an H indicates a floating high tone.

(21)

	Plural imperative	*3rd plural indicative*
Underlying representation	/gɔ́ɾ-t-H/	/gɔ́ɾ-t/
Vowel epenthesis	gɔ́ɾtʊH	gɔ́ɾtʊ
Associate H tones	gɔ́ɾtó	------
Obligatory Contour Principle	gɔɾtó	------
Associate default L tones	gɔ̀ɾtó	gɔ́ɾtò
Phonetic representation	[gɔ̀ɾtó]	[gɔ́ɾtò]
	'(2P) Cut it!'	'They cut it.'

Another case of grammatical tone is the tonal difference that distinguishes nouns and adjectives with closely related senses, such as the examples in (22). In these pairs, the noun form always has a constant high tone melody, and the adjective form has a mix of high and low (or low and falling) tones (this perhaps suggests that the adjectival form is basic, and the constant high tone derives the nominal form from the adjective).

(22)

[d͡ʒàhál]	'ignorant'	[kìnnîl]	'jealous'
[d͡ʒáhál]	'ignorance'	[kínníl]	'jealousy'
[kʷíjà]	'curious'	[mìgìzí]	'insensible'
[kʷíjá]	'curiosity'	[mígízí]	'insensibility'
[tàggɔ̂ɾ]	'prudent'	[wàsâl]	'identifiable'
[tággɔ́ɾ]	'prudence'	[wásál]	'identifying trait, mark'
[wɔ̀sʊ́]	'healthy'	[zɔ̀ntʊ́]	'bad'
[wɔ́sʊ́]	'health'	[zʊ́ntʊ́]	'bad thing, badness'

This same tonal contrast is sometimes exhibited between noun-adjective pairs with unrelated meanings. However, many adjectives are derived from nouns by means of the derivational adjectivizer suffix *-ré/rɛ́*, and are easily distinguishable from their nominal counterparts, even apart from tonal differences. These two phenomena are illustrated in (23).

(23)   [bírí]   'pedestrian'   [búɾsà]   'trust, loyalty'
         [bìrí]   'cheap'   [bòɾsàɾɛ́]   'trust worthy'

3.5 *Vowel harmony*

Dazaga exhibits vowel harmony based on the feature [ATR] (cf. Hulst & Weijer 1995). This is not surprising given Casali's (2008, 2003) claim that [ATR] vowel harmony may well be an areal feature of sub-Saharan languages, especially Niger-Congo and Nilo-Saharan languages. The domain of [ATR] vowel harmony in Dazaga is the phonological word (i.e. including affixes and clitics).

The [ATR] vowel harmony system has nine vowel phonemes (cf. Table 3), including four pairs of harmonic counterparts [i, ɪ; u, ʊ; o, ɔ; e, ɛ]. This [ATR] pattern is one of the most common in sub-Saharan Africa (Casali 2008:501). Unlike most nine (phonemic) vowel systems with [ATR] harmony (Casali 2008:502), the [−ATR] phoneme /a/ in Dazaga does not occur with [+ATR] vowels in root morphemes, but can occur in suffixes and clitics attached to [+ATR] roots. In these cases, /a/ can pattern with [+ATR] vowels, but the quality of the vowel does not consistently change to [+ATR].[30]

The vast majority of affixes and clitics (perhaps all) are "stem-controlled" (Casali 2008:514), assimilating to the stem vowels' feature value for [ATR]. Because the allomorphs of these affixes and clitics are phonologically predictable, I normally mention only the [−ATR] allomorph in subsequent chapters. These kinds of harmonizing affixes

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[30] However, Kevin Walters (p.c.) believes he hears a consistent difference in [ATR] values when [a] is suffixed to stems whose vowels differ in [ATR]: [a] on [−ATR] stems and [ə] on [+ATR] stems. This is difficult to determine with certainty, apart from instrumental measurements (e.g. with ultrasound or MRI imaging) of the position of the tongue root of low vowels in [+ATR] environments (cf. Gick et al. 2006; Starwalt 2008).

and clitics are illustrated in (24) to (27), where the affixes and clitics are shown in bold type.

(24)   *Imperfective aspect suffix*
      [+ATR]   [bùɾtíɾí**gì**]   'we jump / we will jump'
      [−ATR]   [fìlìjìntí**gì**]   'they herd [animals]'

(25)   *Adjectivizer (derivational) suffix*
      [+ATR]   [nùgòò**ré**]   'sticky, glue-like'
      [−ATR]   [àmpà**rɛ**]   'useful'

(26)   *Dative case enclitic*
      [+ATR]   [kíɾú**rù**]   'to the dog'
      [−ATR]   [àgíɾʊ́**rʊ̀**]   'to the donkey'

(27)   *Determiner enclitic*
      [+ATR]   [bòt**ú**]   'the cat'
      [−ATR]   [kàl**ʊ́**]   'the boy'

In my research, the only affix that does not seem to harmonize with the [ATR] value of its stem's vowels is the nominal plural suffix [a]. Rather, [a] is transparent to [ATR] vowel harmony (cf. Gafos & Dye 2011). It remains [a] on [+ATR] words, as shown in (28),[31] and does not block [ATR] harmony, as shown in X, where =ɾʊ̀ harmonizes to [+ATR] =ɾù, and =ì harmonizes to [+ATR] =ì, even though separated from the [+ATR] root by the plural suffix [a].

(28)   [+ATR]   [bìkí]   'invitation'   [bìk**á**]   'invitations'
      [+ATR]   [bòtú]   'cat'   [bòt**á**]   'cats'

(29)   [kʷèj**áɾ**u] 'at places'   [bòt**á**ì]   'cats (ERG)'

The suffix [a] 'P' is not dominant, but simply transparent to [ATR] harmony. I have encountered no examples of dominant affixes.[32]

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[31] But see footnote 30.

[32] Kevin Walters (p.c.) suspects that the verbal suffix [i] may be dominant, but is unsure. I have not been able to confirm or refute this possibility at this point.

However, my data contain at least two examples where the [ATR] value of a noun's vowels differs between the singular and plural forms. In each example, the singular form of the word is of syllable structure CV.V, with the first V /o/ and the second /u/. The noun [kó.ú] 'date.pit' is [+ATR] in the singular, but [–ATR], [kɔ́.wà], once the [–ATR] plural morpheme [a] is added. Similarly, [dò.ú] 'girl' is [dɔ́.wá] 'girls'. However, as illustrated in (28), this plural morpheme does not productively change the [ATR] value of nouns' vowels in this way, and should not be considered a dominant affix.

Nouns, adjectives, and adverbs tend to also exhibit vowel harmony in terms of the feature [round] (cf. Rose & Walker 2011). Unlike [ATR] harmony, this is only a strong tendency, and not an exceptionless process. Thus, in my database, 74% (109 out of 147) of disyllabic CVCV nouns, adjectives, and adverbs whose first vowel was [+round] also had a [+round] vowel as the nucleus of the second syllable. Example (30) illustrates the tendency toward [+round] harmony, and (31) gives some exceptions to this tendency.

(30) [búsù] 'cloth'   [tògú] 'white camel'   [bɔ̀sɔ́] 'fish'
      [t͡ʃúɾò] 'work'   [gògó] 'back'   [sʊ́gɔ̀] 'stake, picket'

(31) [kɔ́ɾɛ́] 'short'   [fʊ́ʃì] 'viper'   [wúɾè] 'thief'

3.6 *Other Phonological processes*

Dazaga exhibits many phonological processes (and unpredictable variations),[33] especially at morpheme boundaries. Below I briefly present several of the most common such processes. I refer the reader to Lukas (1953:8-31),[34] Amani (1986), Abdoulaye (1985), and Alidou (1988) for fuller treatment of the phonology and morphophonemics of Dazaga.

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[33] This is often pointed out in the literature. Lukas (1953:8) states that in studying the grammatical forms and dialects of Tubu, "we come across an abundance of sound changes" (*stoßen wir auf eine Fülle von Lautveränderungen*). LeCoeur & LeCoeur (1956:17; cf. Amani 1986:6) write, "We come upon differences from village to village, and almost family to family. This anarchy makes precise philological study of a dialect very difficult ..." (*On tombe dans des différences de village à village, presque famille à famille. Cette anarchie rend très difficile l'étude philologique précise d'un dialecte ...*). Bryan (1971:227) claims, "In [Class II verbs], sound change often obscures the elements in Teda-Tubu."

[34] This lengthy section in Lukas (1953:8-31) contains a lot of interesting information, but includes many diachronic phonological changes that are of little importance in a synchronic description of Dazaga.

3.6.1 Assimilation

When a rhotic and another sonorant become adjacent (through vowel deletion, etc.), the rhotic totally assimilates to the sonorant.

(32) *Rhotic assimilation*

/dɛ́ɾ-ní/	→	[dè**n**ní]	'I didn't go'
/bék-t-ní-ɾé-a=a/	→	[bèkkìn**n**áá]	'the ones who were not (there)'
/amán-ɾɛ́/	→	[àmàn**n**ɛ]	'faithful'
/dílɪm-ɾɛ́/	→	[dìlìm**m**ɛ]	'leprous'
/áŋkal-ɾɛ́/	→	[àŋkàl**l**ɛ́]	'intelligent'

When a stem ends in a vowel, the vowel (if it does not first delete) assimilates completely to the vowel of a suffix or enclitic.

(33) *Stem-final vowel assimilation*

/tɪgɪsʊ́-ɔ/	→	[tìgìsɔ́ɔ̀]	'when/if it happened'
/tɛ́ɾʊ-gɪ/	→	[tɛ́ɾìgì]	'he will go'

When an obstruent occurs before the verbal plural marker –*t*, the [t] assimilates to the manner and place of articulation of the preceding obstruent, and the preceding obstruent assimilates to the voicelessness of the [t], as in (34) (cf. Lukas 1953:21). This process is attested for all stops (excluding affricates) and coronal fricatives preceding the plural marker.

(34) *Adjacent obstruent mutual assimilation*

/kís-t-m/	→	[kìss**ʊ**́m]	'you did'
/jɔ́b-t-ɾ/	→	[jɔ́**pp**ʊ̀ɾ]	'we bought'
/t͡ʃóg-t-m/		[t͡ʃò**kk**ôm]	'you drew water'

3.6.2 Dissimilation

When two rhotics are adjacent, across morpheme boundaries, the second dissimilates by fortition to a stop, as in (35).

(35) *Rhotic fortition*
/égɨɾ=ɾu/   →   [égɨ̀r**d**ù]   'for rent'
/hɛ́ɾ-ɾɛ́/³⁵   →   [hɛ̀r**d**ɛ́]   'happy'

When a high vowel, /i/, /ɪ/, /u/, or /ʊ/, occurs between two other vowels, it undergoes a gliding process and is realized as either [j] (for /i/ and /ɪ/) or [w] (for /u/ and /ʊ/), as in (36). The glide loses its tone, which may, however, be preserved on the following (suffix or enclitic) vowel.

(36) *Vowel gliding*
/toú/ 'sieve'   +   /-a/ 'P'   →   [tò**w**á] 'sieves'
/laʊ́/ 'friend'   +   /-a/ 'P'   →   [là**w**á] 'friends'
/díí/ 'maternal uncle' +   /-a/ 'P'   →   [dí**j**á] 'maternal uncles'
/awaɪ́/ 'reed, cane'   +   /-a/ 'P'   →   [àwà**j**á] 'reed-P'

3.6.3   Deletion

Affix-final vowels following sonorant consonants delete, except word-finally, as in (37).

(37) *Vowel deletion*
/bek-ti-n**i**-ɾe-a=a/   →   [bekkinnaa]   'the ones who were not (there)'
/d͡ʒuji-n**i**-ɾe/   →   [d͡ʒujinne]   'without having arranged the ground'

Root-final high vowels preceded by a liquid often delete, provided no suffixes have been attached, as seen in (38).

(38) *Post-liquid high vowel apocope*
/jálɪ/   →   [jâl]   'child'
/búɾʊ/   →   [bôr]   'very'

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³⁵ In the case of the adjectivizer suffix, it is possible that the underlying form is /-dɛ́/, and that intervocalically the [d] lenites to [ɾ], but remains [d] following a root-final consonant (cf. Lukas 1953:16). However, if /-dɛ́/ is the underlying form, we would expect it to remain as is following nasals and [l], instead assimilating as in (32). Thus, I consider /-ɾɛ́/ to be the underlying form of this suffix.

3.7 Orthography

The official Roman script orthography of Dazaga is still being refined and revised (Kevin Walters, p.c.), but has been used in various publications in provisional form (e.g. Walters & Hagar 2005).[36] Table 7 shows the current state of the basics of the orthography. Tone is not marked. Tongue root vowel harmony is indicated by the presence (for [+ATR]) or absence of a circumflex over the first vowel of a word. Thus [t͡ʃìŋàfʊ́] 'rice' is written *ciŋafu*, and [dégìl] 'monkey' is written *dêgil*. Long vowels are written with a double vowel grapheme: [kɛ́ɛ́] 'hand, arm' is written *kee*. Geminate consonants are written with double consonant graphemes: [ɛ̀kkɛ́] 'tree, wood' is written *ekke*.

Table 7: Graphemes of Dazaga

Phon.	Graph.	Phon.	Graph.	Phon.	Graph.	Phon.	Graph.
/b/	b B	/t͡ʃ/	c C	/m/	m M	/i/	i I
/t/	t T	/d͡ʒ/	j J	/n/	n N	/ɪ/	i I
/d/	d D			/ɲ/	ny Ny	/u/	u U
/k/	k K	/f/	f F	/ŋ/	ŋ Ŋ	/ʊ/	u U
/g/	g G	/s/	s S			/e/	e E
		/z/	z Z	/ɾ/	r R	/ɛ/	e E
		/ʃ/	sh Sh	/l/	l L	/o/	o O
		/h/	h H			/ɔ/	o O
				/w/	w W	/a/	a A
				/j/	y Y		

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[36] An Arabic script orthography for Dazaga has also been under development for the past several years.

Chapter 4: Nouns and Noun Phrase Constituents

4. Nouns and noun phrase constituents

In this chapter I describe the morphology of nouns and the constituent structure of noun phrases. As part of this description, I include descriptions of syntactic categories (including morphology, where relevant) used in noun phrases, namely, pronouns, demonstratives, quantifiers, and articles. In §4.1, I describe the syntactic categories which may occur in noun phrases, namely, nouns (§4.1.1), adjectives (§4.1.2), pronouns (§4.1.3), demonstratives (§4.1.4), articles (§4.1.5), and quantifiers (§4.1.6). Section 4.2 deals with the order of elements within a noun phrases, giving evidence motivating each of the orderings posited.

4.1 *Syntactic categories found in noun phrases*

In this section, my aim is to briefly describe the primary features of each proposed syntactic category.[37] I do not attempt to give detailed argumentation and linguistic evidence to support the existence of each proposed syntactic category in Dazaga as a distinct category. Given the relative lack of clearcut and universal criteria for identifying any given syntactic category (but cf. Baker 2003; Beck 2002; Bhat 1994; *etc.*), and the disagreement about the universality or legitimacy of such categories (cf. Croft 1991; 2000; Schachter & Shopen 2007; Kinkade 1983), I do not have the time and space here to try to unimpeachably motivate every distinction that I employ. Rather, I identify each syntactic category primarily along the lines of traditional definitions (e.g. those provided in Crystal (2003) or Trask (1993)). I loosely follow the categorizations of Schachter & Shopen (2007).

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[37] See Rauh (2010:1-8) for a useful discussion of terms such as "parts of speech," "word classes," "form classes," "lexical categories," "grammatical categories," and "syntactic categories," which are often used in overlapping or nearly synonymous ways. Cf. also Haspelmath (2001).

4.1.1 Nouns

4.1.1.1 Number

Nouns are inflected for number, but not for gender (cf. Jourdan 1935:5; Lukas 1953:32; LeCoeur & LeCoeur 1956:34-36). Gender is never grammatically marked in Dazaga. The singular form of a noun is unmarked; that is, it lacks any overt singular affix or suprasegmental marking. The suffix /-a/ (with varying tone) marks the noun as plural. When a noun ends with a consonant, /-a/ is directly suffixed, with no other segmental changes (though there are sometimes tonal changes, but not in a phonologically predictable manner), as illustrated in (39).

(39) /dúmúɾ/ 'brother' + /-a/ 'P'   →   [dúmúɾá] 'brother-P' / 'brothers'

An exception to this general pattern of plural affixation with consonant-final nouns is the category of nouns which end with [m] (cf. Lukas 1953:32). When a noun ends with [m] and the plural suffix is added, the [m] drops out, leaving a VV sequence (the second V of which is sometimes nasalized, with varying degrees of perceptibility). This process is illustrated by the examples in (40). The vowel preceding the deleted [m] totally assimilates to the suffix /-a/.

(40) /búlʊm/ 'porridge' + /-a/ 'P'   →   [búlàà] 'porridges'
      /dogúm/ 'hornless.cow' + /-a/ 'P'   →   [dògáá] 'hornless cows'

When a noun ends in a vowel, the suffixation of /-a/ results in the apocope of the word-final vowel. This is illustrated in (41), where the final [ɛ̀] of *jɛ́gɛ̀* is apocopated when /-a/ is suffixed. The apocopation of the stem-final vowel does not result in any lengthening of the plural suffix or any other compensatory measure.[38]

(41) [jɛ́gɛ̀] 'house' + /-a/ 'P'   →   [jɛ́gà] 'houses'

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[38] I have not confirmed this with instrumental measurements. This claim is based on my judgment from listening to audio recordings.

4.1.1.2   Diminutive

Diminutive nouns are derived from regular nouns by means of the derivational suffix *-mí*, whose allomorphs harmonize with the [ATR] value of the words to which they attach. Two other allomorphs, [í̃/ɨ̃], are the result of the /m/ being deleted, resulting in nasalization of the surrounding vowels. This derivational process is still productive, and is illustrated in (42) and (43). When a noun ends in a [+high] vowel, the vowel assimilates (on the segmental level) to the diminutive suffix (see example (42)), whereas this assimilation does not take place if the vowel is [-high], as shown in (43).

(42)   /botú/ 'cat' + /-mí/ 'DIM'   →   [bòtì̃í̃] 'kitten, kitty'
         /dɔɔ́ɾ/ 'bull' + /-mí/ 'DIM'   →   [dɔ̀ɾí̃] 'bullock'

(43)   /ɔɾkɔ́/ 'goat' + /-mí/ 'DIM'   →   [ɔ̀ɾkɔ̀í̃] 'kid'

The form of the derived diminuative is not always entirely predictable. Specifically, some shortening of the root from which the diminuative is (presumably) derived is sometimes observed, as illustrated in (44).

(44)   /kɔgʷɔ́jɛ/ 'chicken' + /-mí/ 'DIM'   →   [kɔ̀gʷɔ̀**mí**] 'chick'

When the derivational diminuative suffix is attached, the tone of the root becomes all low tones, before the high tone of the diminuative suffix. This process is exemplified in (45).[39]

(45)   /kíɾí/ 'dog' + /-mí/ 'DIM'   →   [kìɾì̃í̃] 'dog-DIM' / 'puppy, doggy'
         /gʷɔní/ 'camel' + /-mí/ 'DIM'   →   [gʷɔ̀nì̃í̃] 'camel-DIM' / 'young camel'

As expected, the derivational diminutive morpheme occurs inside of inflectional morphemes such as the plural suffix. The combination of the diminutive and plural suffix is illustrated in (46).

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[39] Beria has a similar diminutive suffix, *-nī* (Jakobi & Crass 2004:114-115), which also exhibits unpredictable shortening of diminutive forms and which is always preceded by all low tones.

(46) /gʷɔní/ 'camel' + /-mí/ 'DIM' + /-a/ 'P'   →   [gʷɔ̀nɨ̀ɨ̯á] 'young camels'

4.1.2   Adjectives

4.1.2.1   Number agreement

Morphologically, adjectives are not distinct from nouns in Dazaga. Like nouns, they are inflected for number, but not for gender. I include adjectives as a separate grammatical category primarily because the words I consider to be adjectives 1) convey meanings (such as qualities, properties, and characteristics) that are typologically consistent with adjectives, but are not verbs, and 2) primarily occur as noun modifiers, and thus are distributionally consistent with most adjectives cross-linguistically (cf. Dixon & Aikhenvald 2004:14-28; Bhat 1994:18).

Adjectives agree in number with the nouns they modify. Thus, an adjective modifying a singular noun will be singular, and an adjective modifying a plural noun will be plural. This is demonstrated in the following examples.

(47) kɛ́ɛ́   ànìgí=ɾò   Ø-wăb-Ø
      hand   left=DAT   3.OBJ-hit.IMV-2
      'Hit (it) with (your) left hand.'
      'Tape avec la gauche.'

(48) kàsʊ́gʊ̀   dìɾɔ́   bʊ̀ɾá   t͡ʃʊ́ssà   t͡ʃɨ̆kkí
      kàsʊ́gʊ̀   dìɾɔ́   bʊ̀ɾ-á   t͡ʃʊ́ssʊ̀-à Ø-t͡ʃɨ̆g-t
      market   in   food-P   good-P   3-be-P
      'In the market, there are good foods.'
      'Dans le marché il y a des bons aliments.'

Adjectives agree in number with the nouns they modify, whether used attributively, as illustrated by *t͡ʃʊ́ssà* 'good (pl.)' in (48), or predicatively, as illustrated in (49).

(49) àɾkín   jálà   sónà   t͡ʃʊ́ssà
      àɾkín   jálì-a   són-à   t͡ʃʊ́ssò-à
      tree.type   child-P   3S.POSS-P   good-P
      'Arkin (tree), its fruits (are) good.'
      'Les fruits d'arkin sont bons.'

4.1.2.2   Adjectivizer

The primary derivational morpheme in Dazaga is the suffix -ɾɛ́, which derives adjectives from nouns and verbs, and very rarely, other adjectives. In (50), the nouns d͡ʒírɛ̀, nùgòú, and ámpà become the adjectives d͡ʒìɾèɾɛ́, nùgòòɾé, and àmpàɾɛ́, respectively, by the suffixation of -ɾɛ́. In (51), the verbs tòdí, tùgùmpí, and bànàdí become the adjectives tòdìɾɛ́, túgúmpíɾé, and bànàdɾɛ́, respectively, by the suffixation of -ɾɛ́.

(50) /d͡ʒíɾɛ/ 'truth' + /-ɾɛ́/ 'ADJZ'   →   [d͡ʒìɾèɾɛ́] 'true, truthful'
      /nugoú/ 'gum, glue' + /-ɾɛ́/ 'ADJZ'   →   [nùgòòɾé] 'gummy, adhering'
      /ámpa/ 'use, utility' + /-ɾɛ́/ 'ADJZ'   →   [àmpàɾɛ́] 'useful'

(51) /tʊdí/ 'to attach' + /-ɾɛ́/ 'ADJZ'   →   [tòdìɾɛ́] 'attached'
      /tugumpí/ 'to fill up' + /-ɾɛ́/ 'ADJZ'   →   [túgúmpíɾé] 'full'
      /banadí/ 'to ruin' + /-ɾɛ́/ 'ADJZ'   →   [bànàdɾɛ́] 'ruined'

A number of phonological changes are observed with the suffix -ɾɛ́. First, because this derivational suffix always bears high tone, preceding high tones on the stem become low (cf. [d͡ʒíɾɛ̀] vs. [d͡ʒìɾèɾɛ́] in (50)), or the whole phonological word becomes high tone (cf. [tùgùmpí] vs. [túgúmpíɾé] in (51)). Additionally, the /ɾ/ of the suffix fully assimilates to preceding stem-final nasals, as illustrated in (52).[40]

(52) /tʊ́gʊ́m/ 'breast' + /-ɾɛ́/ 'ADJZ'   →   [tògòmmɛ́] 'maternally related'
      /kɨɾán/ 'fat, grease' + /-ɾɛ́/ 'ADJZ'   →   [kàɾànnɛ́] 'fat, healthy'

When a stem ends in /ɾ/, the suffix-initial /ɾ/ of the suffix -ɾɛ́ dissimilates to [d], as shown in (53).

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[40] The nasals [ɲ] and [ŋ] do not occur stem-finally (cf. §3.1), so there are no examples of this assimilatory process with these nasals.

(53) /hɛ́ɾ/ 'happiness' + /-ɾɛ́/ 'ADJZ'   →   [hɛ̀r**dɛ́**] 'happy'

The adjectivizer suffix *-ɾɛ́* can also be suffixed to verbs to produce clauses that modify a noun (translatable into English with adjectives or participles). This phenomenon, which is fairly productive in Dazaga, is illustrated in (54) and (55).

(54) ŋòskí   ìí   è̱ì̱á   dèìɾé   írì
      ŋòskí   ìí   è̱ì̱í-á   Ø-j-téi-ɾé   Ø-írì
      yesterday   water   hail-P   3.OBJ-3-have-ADJZ   3-come
      'Yesterday, rain with hail came.' [lit. 'rain having hail']
      'Hier la pluie avec de la grêle est venue.'

(55) ízìn   dèrìgìɾɛ́   táɾí
      ízìn   d-tɛ́ɾ-gì-ɾɛ́   Ø-téi-ɾ
      right   1-leave-IPFV-ADJZ   3.OBJ-have-1
      'I have the right to leave.'
      'J'ai le droit de partir.'

In (54), the phrase *ìí è̱ì̱á dèìɾé* could be rendered into English as 'hail-ful rain' or 'rain having hail', or, more naturally, but less grammatically transparently, as 'rain with hail'. Similarly, in (55), *ízìn dèrìgìɾɛ́* could be rendered 'leaving right' or 'right of leaving'. The similarity of some of the usages of *-ɾɛ́* to the usage of (active and passive) participles in some European languages is probably what lead to Lukas' (1953:136) categorization of this morpheme as a participial form (but cf. §5.8.3).

4.1.3   Pronouns

In this section I describe the various pronouns of Dazaga. Dazaga has distinct sets of personal and possessive pronouns, but does not have reflexive pronouns or relative pronouns. Rather, reflexive verbs (cf. §5.8.2) are used in lieu of reflexive pronouns, and relativization strategies other than relative pronouns are employed (cf. §8.2.3.2).

4.1.3.1   Personal pronouns

Dazaga has a simple system of personal pronouns. It distinguishes singular and plural, and first, second, and third person. It does not specify gender, and does not distinguish between inclusive and exclusive for first person.

Table 8: Personal pronouns

	Singular	**Plural**
1	tàní	tɨntá
2	ńtà	nìntá
3	mèɾέ	màɾá / mòɾá

These forms are "caseless," and case markers (cf. §6.2) may be attached to them, which usually results in morphologically transparent forms such as those in (56).

(56)   /mɛɾέ=ɾʊ/   '3S=DAT' / 'to/for/with him/her/it'
        /ńta=ŋa/   '2S=GEN.S' / 'of you'
        /mɛɾέ=ga/   '3S=ACC' / 'him/her/it'
        /mʊɾá=ŋa/   '3P=ACC' / 'them'

However, the genitive form for the first person singular pronoun is [tàŋʊ́] '1S.GEN', probably derived historically from /taní/ + /ŋa/, with the second [a] assimilating in height to [ɪ], [ɪ] then deleting, and [n] and [ŋ] coalescing to [ŋ] (or the [n] just deletes).

Because verbs already mark the person and number of the subject (cf. §5.3 to §5.5), the independent pronoun subjects for first, second, and third person are regularly omitted (pro-drop). This is illustrated below in examples (57), (58), and (59), respectively.

(57)   bíjà   sʊ́mmà   àddí   zínɨ̀r
        bíjà   sʊ́n=mà   àddí   Ø-zín-**r**
        salary   3S.POSS=DET a.little   3.OBJ-increase-**1**
        'I increased his salary a little bit.'
        'J'ai augmenté son salaire un peu.'

(58) àgʊ́   èskírù   òzûm   gònʊ́ŋì
     àgʊ́   èskí=rù   òzûm   Ø-gón-**m**-gì
     then   new=DAT   fast   3.OBJ-take-**2**-IPFV
     'Then you will fast anew.' / 'Then you will begin to fast again.'
     'Maintenant tu prends le jeûne de nouveau.'

(59) gòrú   sʊ́mmà   dáá   gì̀ìʃ̃ĩ   nàʊ̀
     gòrú   sʊ́n=mà   dáá   gì̀ìʃ̃ĩ   Ø-**j**-ná(g)
     house 3S.POSS=DET   on   straw.type   3.OBJ-**3**-put
     'He put straw on his house.'
     'Il a posé de la paille sur sa maison.'

When personal pronouns do explicitly occur as subjects, it is for the purpose of explicitly naming the subject after a preposed clause (as in (60)), or for information structuring purposes (as in (61), and (63) below; cf. §7.6 and §7.7).

(60) ŋífírírù   bárà   dìgìsá   dìgírìm   tìgìsʊ́ɔ̀   tàní   dɛ́rìgì
     ŋífírí=rù   bárà   dìgìsá   dìgírìm   Ø-tìgìsʊ́-ɔ́   tàní   d-tɛ́r-gì
     celebration=DAT   after   days   twenty   3-happen-CTNG   1S   1-go-IPFV
     'After the celebration, when twenty days have passed, I will go.'
     'Je partirai 20 jours après la fête.'

(61) tàní   ʊ́nnʊ́   bɔ̀n-ír
     1S   now   grow-1
     'Me, I have grown now.'
     'Moi, j'ai grandi maintenant.'

4.1.3.2   *Possessive pronouns*

Besides the personal pronouns described above, Dazaga has a separate set of possessive pronouns. Lukas (1953:49-51) and Jourdan (1935:6-7) each posit two separate sets of possessive pronouns (Jourdan calls these *adjectifs possessifs*), one a set of suffixes and another as free morphemes.[41] LeCoeur & LeCoeur (1956:58) give only one set of possessive pronouns (in two forms, however: singular and plural, formed with a plural suffix). However, a survey of Lukas' and Jourdan's two sets suggests that they are

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[41] This claim follows the patterns of Kanuri (Cyffer 2007:1103; Cyffer 1998a:47; Hutchison 1981:47-49; Lukas 1937:27-28) and Beria (Jakobi & Crass 2004:122-125), which have sets of clearly distinguishable (but morphologically related) suffixed and free possessive pronouns.

actually a single set of possessive pronouns, and the two differences ([tàŋʊ́] and [tɨntáʊ̀]) that lead Lukas to posit different sets are actually instances of personal pronouns with the genitive case markers. Consequently, I conclude that there is only one set of possessive pronouns in Dazaga, as presented in Table 9.

Table 9: Possessive pronouns

	Singular	**Plural**
1	nʊ́ɾ	ǹtʊ́ɾ
2	nʊ́m	ǹtʊ́m
3	sʊ́n	sʊ̀ntʊ́

I analyze the possessive pronouns as free morphemes, rather than as suffixes or enclitics. This is primarily due to the fact that they do not harmonize in [ATR] to the possessed noun, as illustrated in (62), where *nʊ̀ɾ=ʊ́* remains [−ATR] even though the possessed noun, *kʷòí*, is [+ATR].

(62) ạ̀ʊ̰́   tʲɾá   kʷòí   nʊ́ɾ=ʊ̀   Ø-íɾì
      man   INDF   place   1S.POSS=DET   3-come
      'Someone came to my place (to visit).'

As shown in Lukas (1953:49-51) and LeCoeur & LeCoeur (1956:58), these possessive pronouns also have plural forms, formed by adding the plural suffix /-a/ to the basic (singular) form of the possessive pronoun when the possessed nominal is plural. This is illustrated in (63), where *sɨ́n-á* is plural to agree with *jál-à* 'children'.

(63) tàní   jálà   sɨ́ná   kìɾìnɨ́ɾ
      tàní   jálì-a   sɨ́n-á   Ø-kiɾin-ɾ
      1S   child-P   3S.POSS-P   3.OBJ-feed-1
      'I'm the one who fed his children.'
      'C'est moi qui ai nourri ses enfants.'

The fact that possessive pronouns in Dazaga agree in number with the possessed noun may suggest that they should actually be analyzed as possessive adjectives (cf. Jourdan 1935:6-7), since this is one of the characteristics of adjectives in Dazaga (cf.

§4.1.1.2). However, I consider them to be possessive pronouns (along with Lukas 1953 and LeCoeur & LeCoeur 1956) that agree in number with the possessed noun, as do genitive nouns (cf. §6.2.3). I base this analytical decision primarily on the fact that possessives and adjectives have a set relative order in noun phrases, with the possessive necessarily occurring before the adjective, suggesting they belong to separate syntactic categories.

Possessive pronouns occur immediately after the possessed noun, preceding other NP elements, such as adjectives (64) and genitives (65). Like possessive pronouns, genitive noun phrases can also function as possessors of the head noun. However, they also have other functions (cf. §6.2.3) and fill a different slot in the noun phrase structure, as demonstrated in §4.2. The determiner, which normally follows adjectives, cliticizes to the possessive pronoun, when it is present.

(64)   áì   jɛ́gɛ̀   nòɾ=ʊ́   kʊ́bbʊ́
       this   house   1S.POSS=DET   old
       'This (is) my old house.'

(65)   kɛ́ɛ́   sʊ́mmà   bìɾʊ́ò   tʊ́gʊ́ɾtɪ́ɾɛ́
       kɛ́ɛ́   sʊ́n=mà   bìɾʊ́=ò   tʊ́gʊ́ɾ-tɪ́-ɾɛ́
       hand   3S.POSS=DET   right=GEN.S   cut-?-ADJZ
       'His right hand (is) cut.' [lit. 'His hand of (the) right (side) (is) cut.']
       'Sa main droite est coupée.'

The possessive pronouns, especially *sʊ́n*, very frequently co-occur with the determiner enclitic (cf. §4.1.5), as in (66), as well as with other noun phrase enclitics, such as the case markers (cf. §6.2), as illustrated in (67).

(66)   dìɾíí   sʊ́mmà   d͡ʒàsʊ́
       dìɾíí   sʊ́n=**mà**   Ø-j-t͡ʃás
       heifer   3S.POSS=**DET**   3.OBJ-3-sell
       'He sold his heifer.'
       'Il a vendu sa génisse.'

(67) ábbà   nòɾóì   gálà   d͡ʒɛ́n
     ábbà   nòɾ=ó=**ì**   gálà   d-j-jɛ́n
     father   1S.POSS=DET=**ERG**   advice   1.OBJ-3-give
     'My father gave me advice.'
     'Mon père m'a donné des conseils.'

4.1.4   **Demonstratives**

Dryer (2007a:162; cf. Schachter & Shopen 2007:29; Diessel 1999, esp. page 2) characterizes demonstratives as words, like English *this* and *that*, which 1) are deictic in nature (they "draw the hearer's attention to something in the perceptual space of the speaker and hearer"), and 2) usually maintain "at least a two-way contrast in terms of distance from the speaker." Dazaga demonstratives fit both of these characterizations, and are presented in Table 10.

Table 10: Demonstratives

	Proximate	**Distal**
Singular	áì	tɛ́
Plural	áɾá	táà

The form *támà* 'that (one)' was most likely originally a combination of /tɛ́/ + /=ma/ 'that=DET'. The modifier *tèéɾè* 'the other' is better categorized as an adjective.

As in most languages (cf. Dryer 2007a:162), demonstratives in Dazaga can function as modifiers of nouns or pronominally, as illustrated with the demonstrative "pronouns" in (68) and (71), and the demonstrative "adjectives" in (69) and (70).

(68) **áì**   **áì**=ɾò   kɔ́ɾɛ́
     this   this=DAT   short
     'This (is) short(er) than this.'
     'Celui-ci est plus court que celui-là.'

(69) t͡ʃúɾò   **áì**   kíjáí   ʃìí
     work   this   easy   not
     'This work (is) not easy.'
     'Ce travail n'est pas facile.'

(70)   jôm   **tɛ́**   àʊ́ʃ̃ĩ   ní   bàbàɾt͡ʃĩ
     jôm   tɛ́   àʊ́ʃ-j   ní   babaɾt-j
     day   that   be.afraid-3   and   tremble-3
     'That day, he was afraid and trembled.'
     'Ce jour là il a eu peur et il a tremblé.'

(71)   **tɛ́**ɾò   báɾà   fòɲáìmà   dáá   gànìʃ̃ĩà   dùdûɾ   ní
     tɛ́=ɾò   báɾà   fòɲáì=mà   dáá   gànìʃ̃ĩ́-à   Ø-dúd-ɾ   ní
     that=DAT   after   fire.basket=DET   on   charcoal-P   3.OBJ-put-1   and

     wíní   fùnîɾ
     wíní   Ø-fún-ɾ
     fire   3.OBJ-light-1
     'After that, I put charcoal pieces in the wire basket and lit a fire.'
     'Ensuite j'ai posé le charbon sur le brasier et je l'a allumé.'

4.1.5   Articles

Dazaga has two words which are best analyzed as "articles," understanding articles to be determiners (often occurring in pairs) whose primary function is to mark definiteness or specificity (cf. Dryer 2007a:157; Kroeger 2014a:3). The two articles in Dazaga are *=ma* and *tʲɾá*.

The article /=ma/ has four allomorphs: [=ma], [=ʊ], [=u], and [=a] (cf. Wolff & Alidou 1989). The allomorph [=ma] occurs after final [m] and VV sequences (72); [=ʊ] occurs following [−ATR] final high vowels ([ɪ, ʊ]), final liquids, and final [n] of [−ATR] words (73); [=u] is the [+ATR] counterpart of [=ʊ] (74); and [=a] occurs following final mid or low vowels (75).

(72)   /godúm/ 'hammer' + /=ma/ 'DET'   →   [gòdúm**mà**] 'the hammer'
     /tíí/ 'food' + /=ma/ 'DET'   →   [tí**mà**] 'the food'
     /saláɪ/ 'mat' + /=ma/ 'DET'   →   [sàláì**mà**] 'the mat'

(73)   /anɪʃɪ̃/ 'sand' + /=ma/ 'DET'   →   [ànìʃʊ̃**ʊ̀**] 'the sand'
     /básal/ 'onion' + /=ma/ 'DET'   →   [básàl**ʊ̀**] 'the onion'
     /kaɾán/ 'fat' + /=ma/ 'DET'   →   [kàràn**ʊ́**] 'the fat'

(74) /dugulí/ 'lion' + /=ma/ 'DET'   →   [dùgùlú**ù**] 'the lion'
/éjɨɾ/ 'reward' + /=ma/ 'DET'   →   [éjɨ̀ɾ**ù**] 'the reward'
/feɾín/ 'rope' + /=ma/ 'DET'   →   [fèɾín**ù**] 'the rope'

(75) /bɛɾɛgɛ́/ 'stream' + /=ma/ 'DET'   →   [bɛ̀ɾɛ̀gá**à**] 'the stream'
/bedíge/ 'beginning' + /=ma/ 'DET' →   [bèdígà**à**] 'the beginning'

The two articles, =*ma* 'the' (and its allomorphs) and *tʲɾá* 'a/an' are semantically differentiated by their encoding of combinations of specificity and definiteness. The article =*ma* encodes 'specific+definite', whereas the article *tʲɾá* encodes 'specific+indefinite'; the absence of any article normally indicates that the noun phrase is neither specific nor definite. Articles may occur on both plural and singular noun phrases, as demonstrated in (76) and (77), respectively.

(76) à̰ó̰   áì   káá   sɔ́nà**à**   dílìmì   gɔ́ɾò
à̰ó̰   áì   kɛ́ɛ́-a   sɔ́n-a=**à**   dílìm=ì   Ø-j-kɔ́ɾ
man   this   hand-P   3S.POSS-P=**DET**   leprosy=ERG   3.OBJ-3-cut
'This man, leprosy cut his hands.'
'Cet homme, la lèpre lui a coupé ses mains.'

The use of the article =*ma* is illustrated in (77), where *fídì sɔ́n* 'his tail' is both definite and specific — definite because it is inferable from the previously mentioned *kíɾí* 'dog' and specific because it refers to the tail of a specific dog (namely, 'this dog').

(77) kíɾí   áì   fídì   sɔ́m**mà**   kílídíɾɛ̀
kíɾí   áì   fídì   sɔ́n=**mà**   kílídí-ɾɛ̀
dog   this   tail   3S.POSS=**DET**   bend-ADJZ
'This dog, his tail (is) bent/rolled.'
'La queue de ce chien est pliée.'

In (77), it is ungrammatical to use *tʲɾá* in place of =*ma*, because the noun phrase is definite, whereas *tʲɾá* indicates indefiniteness. Similarly, the absence of any article is ungrammatical as well, because the noun phrase is both definite and specific, whereas the absence of an article indicates that the noun phrase is neither definite nor specific. These claims are demonstrated in (78).

(78) kírí   ái   fídì   sóm**mà/*tʲrá/*Ø**   kílídírè
      kírí   ái   fídì   són=**mà/*tʲrá/*Ø**   kílídí-rè
      dog   this   tail   3S.POSS=**DET/*INDF/*NSPC**   bend-ADJZ
      'This dog, his tail (is) bent/rolled.'
      'La queue de ce chien est pliée.'

A similar example of the use of the article *=ma* is illustrated in (79), where the noun phrase *fídì són* 'its tail' is definite (because textually evoked through the anaphoric possessive pronoun) and specific. In this example, *tʲrá* 'a/an' is acceptable for the first mention of *gʷɔ̀ní* 'camel', because it is unknown/indefinite at that point.

(79) gʷɔ̀ní   **tʲrá**   fídì   sóm**mà**   tógóɾtíɾɛ́
      gʷɔ̀ní   **tʲrá**   fídì   són=**mà**   tógóɾ-tí-ɾɛ́
      camel   **INDF**   tail   3S.POSS=**DET**   cut-?-ADJZ
      'A camel, its tail was cut.'
      'Un chameau, sa queue a été coupée.'

As in (78), the use of *tʲrá* or the absence of an article, in place of *=ma* would be ungrammatical in this case. Even though *gʷɔ̀ní tʲrá* 'a camel' is explicitly indefinite on first mention, it becomes definite through its first mention and so must be marked as definite when referenced again by the resumptive possessive pronoun. This is demonstrated in (80).

(80) gʷɔ̀ní   tʲɾá   fídì   sóm**mà/*tʲrá/*Ø**   tógóɾtíɾɛ́
      gʷɔ̀ní   tʲɾá   fídì   són=**mà/*tʲrá/*Ø**   tógóɾ-tí-ɾɛ́
      camel   INDF   tail   3S.POSS=**DET/*INDF/*NSPC**   cut-?-ADJZ
      'A camel, its tail was cut.'
      'Un chameau, sa queue a été coupée.'

When a noun phrase is indefinite, but specific, it is marked with the article *tʲrá* 'a/an', as in (81), where a specific soldier pierces Jesus' side, but it is not known who the soldier is (i.e. *éskɪ̀r* 'soldier' is indefinite here).

(81) jõm   nébì   ísàŋà   t͡ʃìttû   éskɨɾ   t̓ráì   éɾíɾù
      jõm   nébì   ísà=ŋà   Ø-j-jíd-t   éskɨɾ   t̓rá=ì   éɾí=ɾù
      day   prophet Jesus=ACC   3.OBJ-3-kill-P   soldier INDF=ERG   spear=DAT

      òsɔ́n   dɨɾɔ́   t͡ʃûbù
      òsɔ́n   dɨɾɔ́   Ø-j-júb
      side   in   3.OBJ-3-pierce
      'The day they killed the prophet Jesus, a soldier pierced his side with a spear.'
      'Le jour où Isa est mort, un soldat l'a piqué avec une lance sur la côte.'

In (81), the noun *òsɔ́n* 'side' lacks the article, but would be understood as definite and specific. This illustrates a pattern that is frequently observed elsewhere in which body parts often lack both a possessive pronoun and an article, as in (82) and (83), where English requires an added possessive pronoun (provided in parentheses).

(82) dàʊ́   dáá   dìfìní   dànní
      dàʊ́   dáá   dìfìní   Ø-j-téi-ní
      head   on   hair   3.OBJ-3-have-NEG
      'He doesn't have hair on (his) head.'
      'Il n'a pas de cheveux sur la tête.'

(83) mí   sɔ́mmà   èfíɾí   dáá   gɔ́ì   déì
      mí   sɔ́n=mà   èfíɾí   dáá   gɔ́-Ø-j   Ø-j-téi
      son   3S.POSS=DET shoulder   on   take-3.OBJ-3   3.OBJ-3-have
      'He carried his son on (his) shoulders.'
      'Il a pris son fils par l'épaule.'

When no article marks a noun phrase, the noun phrase is normally understood to be both indefinite and non-specific (except for the exception of body parts), as illustrated in (84), where *àɲìí* 'husband' can be neither definite nor specific.

(84) dòʊ́   sɔ́mmà   àɲìí   dànní
      dòʊ́   sɔ́n=mà   àɲìí   Ø-j-téi-ní
      girl   3S.POSS=DET husband   3.OBJ-3-have-NEG
      'His daughter doesn't have a husband.'
      'Sa fille n'a pas de mari.'

The indefinite articles in English and French preserve a specificity ambiguity that Dazaga does not have. Consequently, in English or French elicitation sentences with *a/an*

or *un/une*, the indefinite noun phrase may be understood (without other clarification) as referential or as non-referential (cf. Portner & Partee 2002:22; Kroeger 2014a:11-13). Since Dazaga distinguishes specificity by the presence or absence of articles, there are two possible constructions that can be used to translate indefinite English or French noun phrases, namely as specific, with *tʲrá*, or as non-specific, with the absence of *tʲrá* (that is, Ø). This alternation between *tʲrá* and Ø is illustrated in (85) and (86). In this case, the definite (and specific) article *=ma* on *àɣ́* 'man' is unacceptable as a translation equivalent because of the indefinite articles *un* in the original language, French.

(85) gʷɔ̀nʊ́ʊ̀   àɣ́(**mà**)   **tʲrá/Ø**   wʊ́ì
      gʷɔ̀ní=ʊ̀   àɣ́(***=mà**)   **tʲrá/Ø**   Ø-j-bʊ́
      camel=DET   man(***=DET**)   **INDF/NSPC** 3.OBJ-3-bite
      'The camel bit a man.'
      'Le chameau a mordu un homme.'

(86) àbàrí   nʊ́mmàì   àɾìí(**mà**)   **tʲrá/Ø**   nígè   dínnù
      àbàrí   nʊ́m=mà=ì   àɾìí(***=mà**)   **tʲrá/Ø**   nígè   Ø-j-tín
      pat.uncle 2S.POSS=DET=ERG   woman(***=DET**) **INDF/NSPC** marriage 3.OBJ-3-put
      'Your uncle arranged a marriage with a woman.'
      'Ton oncle a attaché une mariage avec une femme.'

Support for the specific/non-specific distinction comes from sentences where the noun phrases are clearly either specific or non-specific based on the meaning of the sentence, and not due to specific/non-specific marking in English or French. Thus, in (87), where *à̰ḭ́* 'husband' is both indefinite and non-specific (non-referential), neither *=ma* nor *tʲrá* is grammatical, and *à̰ḭ́* must be unmarked.

(87) dòú   sʊ́mmà   à̰ḭ́(**mà**)   ***tʲrá/Ø**   dànní
      dòú   són=mà   à̰ḭ́(***=mà**)   ***tʲrá/Ø**   Ø-j-téi-ní
      girl   3S.POSS=DET   husband(***=DET**) ***INDF/NSPC** 3.OBJ-3-have-NEG
      'His daughter doesn't have a husband.'
      'Sa fille n'a pas de mari.'

A similar example is given in (88), where *àfɾàí* 'winnowing basket' is non-specific. Again, as in (87), *=ma* and *tʲrá* are both ungrammatical, and the non-specific

noun phrase cannot take an article (i.e. it is marked Ø). The generalization from
examples (87) and (88) is that non-existent things do not take an article.

(88) fatime   àfràí(**ma**)   ***tˈrá/Ø**   dɔ̀ɔ́m   tɛ́n
   fatime   àfràí(***=ma**)   ***tˈrá/Ø**   Ø-dɔ̀ɔ́m-Ø   t-jɛ́n-Ø
   (name)   winnowing.basket(***=DET**)   ***INDF/NSPC**   3.OBJ-make-2   1.OBJ-give-2
   'Fatime, make me a winnowing basket.'
   'Fatime, construit-moi un van!'

    Definite, non-specific noun phrases are indicated in the same way as indefinite,
non-specific noun phrases; that is, there is no definite/indefinite distinction for non-
specific noun phrases. Thus, in (89), *dìɾdɛ́ kʷííɾɛ́* 'next chief' is definite but also non-
specific (non-referential), and so is unmarked.

(89) dìɾdɛ́   kʷííɾɛ́(***à**)   ***tˈrá/Ø**   ŋɛ́gí   àí
   dìɾdɛ́   kʷííɾɛ́(***=à**)   ***tˈrá/Ø**   ŋɛ́gí   àí
   chief   next(***=DET**)   ***INDF/NSPC**   (place)   man
   'The next chief of N'guigmi will be a man.'
   'Le prochain chef de N'guigmi sera un homme.'

    However, in (90), the noun phrase *ràjîs èskúù* 'the new president' takes the article
=ma, even though the phrase is presumably non-referential. It may be that a perceptual
verb like *dódìɾgì* 'I will see it' requires a specific, referential object, thus requiring an
article.

(90) wáláwáláɾò   báɾà   ràjîs   èskúù   ***tɨrá/*Ø**   dódìɾgì
   wáláwálá=ɾò   báɾà   ràjîs   èskí=ù   ***tɨrá/*Ø**   Ø-dód-ɾ-gì
   elections=DAT   after   president   new=DET   ***INDF/*NSPC**   3.OBJ-see-1-IPFV

   tàmànîɾ
   támá-Ø-n-ɾ
   hope-3.OBJ-LV-1
   'After the elections, I hope that I will see the new president.'
   'Après les élections, je espère que je vais voir le nouveau président.'

    The articular and anarthrous (non-articular) patterns described and demonstrated
above are summarized below in Table 11.

Table 11: Marking of NP definiteness & specificity

	Definite	**Indefinite**
Specific	=ma	tˡɾá
Non-specific	Ø	

4.1.6 Quantifiers (including numerals)

Here, under the label "quantifiers," I include quantifier words like 'all' and 'every', as well as numerals (which, in semantics, are considered "cardinal quantifiers" (e.g. Saeed 2009:330)).

Of those quantifiers that combine with nouns, Dazaga exhibits universal quantifiers such as *nááná* 'each' and *gìnná* 'all', but not negative existentials such as 'no (thing)' and 'none (of)'. These quantifiers, which follow the nouns they modify (sometimes with intervening constituents), are illustrated in (91) and (92).

(91) jôm **nááná** èɾìʃí kúɾʃíáɾò kàɾànîɾ jénìɾìgì
jôm nááná èɾìʃí kúɾʃí-á=ɾò Ø-kàɾàn-ɾ Ø-jɛ́n-ɾ-gì
day every story child-P=DAT 3.OBJ-read-1 3.OBJ-give-1-IPFV
'Every day, I read a story (to my) children.'
'Chaque jour je lit un conte aux enfants.'[42]

(92) élìgà níí̧ áìà **gìnná** ʃìkí ŋìfìɾìt͡ʃìntígì
élìgà níí̧ áì=à gìnná ʃìkí ŋìfìɾì-j-n-t-gì
population village this=GEN.P all tomorrow feast-3-LV-P-IPFV
'All the population of this village will feast tomorrow.'
'La population de ce village fêtera demain.'

To express the idea 'no-one' (for 'nothing', see below), the negative existential predicate may be used, as in (93), or *nááná* 'everyone' plus the negative existential

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[42] The lack of an article on the specific and definite NP *kúɾʃíá* 'children' may be parallel to the frequent absence of articles on body parts, and may be part of a broader marking pattern affected by alienable versus inalienable possession. This grouping of semantic domains, as well as their lack of the article, fits the general patterns of inalienable possession, where body parts and kinship terms are the prototypes of inalienable items, and where inalienable items are frequently mophologically reduced (Heine 1997:172).

predicate may be used, as in (94). The equivalent of the English quantifier 'none' is expressed by *gìnná* 'all' plus the negative existential, as illustrated in (95).

(93) mèɾéɾò   àddìí   bèí
      mèɾé=ɾò   àddìí   Ø-bé(g)
      3S=DAT   small   3-be.not
      'There is no-one smaller than him.'
      'Personne n'est plus petit que lui.'

(94) ɲááná   kòɾí   bèí
      ɲááná   kòɾí   Ø-bé(g)
      everyone   other   3-be.not
      'There is no one else.'
      'Il n'y a personne d'autre.

(95) dèéŋà   níɾà   gìnná   bèkkí
      dèéŋì-a   níɾ-à   gìnná   Ø-bég-t
      brother-P   1S.POSS-P all   3-be.not-P
      'All my brothers are not (here).' / 'None of my brothers are (here).'
      'Tous mes frères ne sont pas là.'[43]

    Dazaga has two quantifiers which do not modify nouns, and which, strictly speaking, are therefore not noun adjuncts, but which are included here because they are quantifiers. These two quantifiers are *ɲááná* 'everyone' and *ínníná* 'nothing', illustrated in (96), and (97), respectively.[44]

(96) òɾózì   **ɲááná**ì   déî
      òɾózì   ɲááná=ì   Ø-j-téi
      possession everyone=ERG   3.OBJ-3-have
      'Everyone has a possession.' / 'Everyone owns something.'
      'Chacun possède quelque chose.'

---

[43] The absence of the article from the definite and specific *dèéŋà níɾà* 'my brothers' is likely a transcriptional error. The only difference between the presence or absence of the article would be the length of the final vowel (plus a low tone), often making it difficult to hear the difference between articular and anarthrous plural noun phrases. Cf. example (76).

[44] These both likely derive from question words plus the particle *ná* 'even, also'. Thus, *ɲááná* 'everyone' probably derives etymologically from *ɲàá* 'who' plus *ná*, and *ínníná* 'nothing' probably derives etymologically from *ínní* plus *ná*.

(97) kíʃígì   sómmà   dìrɔ́ **ínníná**   bèí
      kíʃígì   són=mà   dìrɔ́ ínníná   Ø-bé(g)
      intestine   3S.POSS=DET   in   nothing   3-be.not
      'There's nothing in its intestines.'
      'Il n'y a rien dans son intestin.'

The cardinal numerals of Dazaga are presented in Table 12. The plural of *kídírí* '(one) hundred' is *kádárá* 'hundreds'. This plural form is used to form multiples of one hundred, such as *kádárá t͡ʃúú* 'two hundred'.

Table 12: Cardinal numerals

	1-10		Teens		20 & Above
1	tˤrɔ̌n	11	mɔ́rdɪ̀m sá tˤrɔ̌n	20	dìgírìm
2	t͡ʃúú	12	mɔ́rdɪ̀m sá t͡ʃúú	30	mòrtá àgòzóó
3	àgòzóó	13	mɔ́rdɪ̀m sá àgòzóó	40	mòrtá tòzɔ́ɔ́
4	tòzɔ́ɔ́	14	mɔ́rdɪ̀m sá tòzɔ́ɔ́	21	dìgírìm sá tˤrɔ̌n
5	fòú	15	mɔ́rdɪ̀m sá fòú	35	mòrtá àgòzóó sá fòú
6	dìssí	16	mɔ́rdɪ̀m sá dìssí	49	mòrtá tòzɔ́ɔ́ sá jìsíí
7	túrùsù	17	mɔ́rdɪ̀m sá túrùsù	50	mòrtá fòú
8	wóssò	18	mɔ́rdɪ̀m sá wóssò	100	kídírí
9	jìsíí	19	mɔ́rdɪ̀m sá jìsíí	101	kídírí jɛ́ tˤrɔ̌n jɛ́
10	mɔ́rdɪ̀m			200	kádárá t͡ʃúú
				1,000	dúbú
				2,000	dúbá t͡ʃúú
				10,000	dúbá mɔ́rdɪ̀m

Like other noun adjunct quantifiers, numerals follow the noun they modify (cf. §4.2), as illustrated by *kùlùŋkú tˤrɔ̌n* in (98) and *ìná t͡ʃúú* in (99).

(98) kàrágà=rò   kùlùŋkú   tˤrɔ̌n   Ø-jìt-t-îr
      bush=DAT   fox   one   3.OBJ-kill-P-1
      'We killed one fox in the bush.'
      'Nous avons tué un renard en brousse.'

(99) ìná   t͡ʃúú   áɾá   dàgîɾ
      ìní-a   t͡ʃúú   áɾá   Ø-dák-ɾ
      thing-P   two   those   3.OBJ-want-1
      'I want those two things.'
      'J'aime ces deux choses (là).'

4.2 Structure of noun phrases

The structure of noun phrases is summarized in the phrase structure rule in (100).[45] As indicated by the parentheses around the other constituents, the head noun is the only obligatory constituent of the noun phrase. The slash between ADJ and NUM indicates that these constituents may occur in either order. DEM and DET are stacked in brackets to show that they are mutually exclusive in distribution.

(100) NP   →   N   (POSS)   (ADJ/NUM)   ($\left\{ \begin{matrix} \text{DEM} \\ \text{DET} \end{matrix} \right\}$)   (GEN NP)   (Q)

Pronouns also function as full noun phrases, so a second (complementary) phrase structure rule could be formulated for noun phrases, as given in (101).

(101) NP   →   PRO

Even when a pronoun functions as a noun phrase, it can still take additional noun phrase constituents, as illustrated in (102) and (103), where pronouns co-occur with a numeral and a quantifier, respectively.

(102) [**màɾá**]PRO   [**t͡ʃúú**]NUM   kʷî   gódù
      màɾá   t͡ʃúú   kʷî   Ø-gó-t
      3P   two   between   3-fight-P
      'The two of them fought between themselves.'
      [lit. 'Between them two, they fought.']
      'Ils se sont bagarrés entre eux.'

---

[45] The order of constituents in a Dazaga noun phrase (including the head-initial order and the occurrence of the demonstrative after adjectives and numerals) follows the pattern typical of Heine's (1976:55) "Galla" subgroup of his "type D" African languages. This "Galla" subgroup includes several Nilo-Saharan languages (the Saharan languages, Mararit, Fur, Sungor, Nyimang, Nubian, Kunama, and Barea) as well as some Cushitic languages (Somali, Rendille, Boni, Elmolo, and Galla).

(103) [**màɾá**]~PRO~   [**gìnná**]~O~   t͡ʃáttò
     màɾá   gìnná   j-jád-t
     3P   all   3-die-P
     'They all died.'
     'Ils sont tous morts.'

     In the following paragraphs, I give evidence motivating the inclusion of each noun phrase constituent and its relative order in (100).

     That the head nouns occur at the beginning of their phrases is somewhat unexpected (e.g. Dryer 2007a, 2007b; Greenberg 1966) for a language that is head-final in clausal word order (SOV) and for adpositions (postpositions), and whose subordinators occur clause-finally.[46] Nevertheless, the head noun always occurs at the beginning of the noun phrase, preceding the next possible constituent, a possessive pronoun. This order is demonstrated in (104) and (105), where the head noun and possessive pronoun are identified in brackets. Example (106) further illustrates the correct order of noun and possessive pronoun, and (107) demonstrates that the opposite order is ungrammatical.

(104) tàní   [**jál-à**]~N~   [**són-á**]~POSS~   Ø-kìɾìn-íɾ
     1S   child-P   3S.POSS-P   3.OBJ-feed-1
     'I'm the one who fed his children.'
     'C'est moi qui ai nourri ses enfants.'

(105) àó̰   áì   dílìmì   [**káá**]~N~   [**sónà**]~POSS~   góɾò
     àó̰   áì   dílìm=ì   kɛ́ɛ́-a   són-à   Ø-j-kóɾ
     man   this   leprosy=ERG   hand-P   3S.POSS-P   3.OBJ-3-cut
     'This man, leprosy cut his hands.'
     'Cet homme, la lèpre lui a coupé ses mains.'

(106) [**dɛ̀ɛ́ŋà**]~N~   [**níɾàà**]~POSS~   íɾdò
     dɛ̀ɛ́ŋì-a   níɾ-a=à   Ø-íɾ-t
     brother-P   1S.POSS-P=DET   3-come-P
     'My brothers arrived.'
     'Mes frères sont arrivés.'

---

[46] Comrie (1989:95), however, does note "the widespread occurrence of NA [Noun-Adjective] basic order in OV languages."

(107) * [**níràà**]ₚₒₛₛ   [**dɛ̀ɛ́ŋà**]ₙ   írdʊ̀
    nír-a=à   dɛ̀ɛ́ŋì-a   Ø-ír-t
    1S.POSS-P=DET   brother-P   3-come-P
('My brothers arrived.')
('Mes frères sont arrivés.')

       Possessive pronouns precede adjectives and numerals, as shown in (108) and (109). Examples (110) and (111) demonstrate that the opposite order is ungrammatical.

(108) gʷɔ̀ná   [**sʊ́nàà**]ₚₒₛₛ   [**t͡ʃʊ́á**]₄ᴅᴊ   írdʊ̀
    gʷɔ̀ní-a   sʊ́n-a=à   t͡ʃʊ̀ʊ́-a   Ø-ír-t
    camel-P   3S.POSS-P=DET   white-P   3-come-P
'His white camels arrived.'
'Ses chameaux blancs sont arrivés.'

(109) míà   [**níràà**]ₚₒₛₛ   [**t͡ʃúú**]ₙᵤₘ   bʊ́rʊ̀   t͡ʃurointu
    mí-a   nír-a=à   t͡ʃúú   bʊ́rʊ̀   t͡ʃuro-j-n-t
    son-P   1S.POSS-P=DET   two   very   work-3-LV-P
'My two sons worked a lot.'
'Mes deux fils ont beaucoup travaillé.'

(110) *gʷɔ̀ná   [**t͡ʃʊ́á**]₄ᴅᴊ   [**sʊ́nàà**]ₚₒₛₛ   írdʊ̀
    gʷɔ̀ní-a   t͡ʃʊ̀ʊ́-a   sʊ́n-a=à   Ø-ír-t
    camel-P   white-P   3S.POSS-P=DET   3-come-P
('His white camels arrived.')
('Ses chameaux blancs sont arrivés.')

(111) *míà   [**t͡ʃúú**]ₙᵤₘ   [**níràà**]ₚₒₛₛ   bʊ́rʊ̀   t͡ʃurointu
    mí-a   t͡ʃúú   nír-a=à   bʊ́rʊ̀   t͡ʃuro-j-n-t
    son-P   two   1S.POSS-P=DET   very   work-3-LV-P
('My two sons worked a lot.')
('Mes deux fils ont beaucoup travaillé.')

       Adjectives and numerals can occur in either order relative to each other, as demonstrated in (112) and (113). This is indicated in (100) with the slash between Aᴅᴊ and Nᴜᴍ.

(112) kàllíàì   t͡ʃòfìrá   **[t͡ʃúú]**ₙᵤₘ   **[bá]**ₐ_DJ   wárt͡ʃìntò
       kàllí-a=ì   t͡ʃòfìrí-a   t͡ʃúú   bʊ́-a   wárt-Ø-j-n-t
       boy-p=ERG   bird-P   two   big-P   grill-3.OBJ-3-LV-P

       kàllíàì   t͡ʃòfìrá   **[bá]**ₐ_DJ   **[t͡ʃúú]**ₙᵤₘ   wárt͡ʃìntò
       kàllí-a=ì   t͡ʃòfìrí-a   bʊ́-a   t͡ʃúú   wárt-Ø-j-n-t
       boy-p=ERG   bird-P   big-P   two   grill-3.OBJ-3-LV-P
       'The boys grilled the two large birds.'
       'Les garçons ont grillés les deux oiseaux grands.'

(113) áskà   **[àgòzʊ́ʊ́]**ₙᵤₘ   **[t͡ʃʊ́á]**ₐ_DJ   túrtù
       áskí-a   àgòzʊ́ʊ́   t͡ʃʊ̀ʊ́-a   Ø-túr-t
       horse-P   three   white-P   3-go-P

       áskà   **[t͡ʃʊ́á]**ₐ_DJ   **[àgòzʊ́ʊ́]**ₙᵤₘ   túrtù
       áskí-a   t͡ʃʊ̀ʊ́-a   àgòzʊ́ʊ́   Ø-túr-t
       horse-P   three   white-P   3-go-P
       'Three white horses left.'
       'Trois chevaux blancs sont partis.'

This reversible ordering of adjectives and numerals may suggest that numerals are of the same syntactic category as adjectives. In this case, numerals would not be of the same syntactic category as quantifiers, and in fact this conclusion is supported by the fact that numerals and quantifiers are obligatorily ordered with the numeral preceding the quantifier, as demonstrated in (114) and (115), where the order numeral-quantifier is acceptable, but quantifier-numeral is ungrammatical.

(114) kàllíà   **[tòzɔ́ɔ́]**ₙᵤₘ   **[gìnná]**_Q   t͡ʃáttò
       kàllí-a   tòzɔ́ɔ́   gìnná   j-jád-t
       boy-P   four   all   3-die-P
       'All four boys died.'
       'Tous les quatre garçons sont morts.'

(115) *kàllíà   **[gìnná]**_Q   **[tòzɔ́ɔ́]**ₙᵤₘ   t͡ʃáttò
        kàllí-a   gìnná   tòzɔ́ɔ́   j-jád-t
        boy-P   all   four   3-die-P
       ('All four boys died.')
       ('Tous les quatre garçons sont morts.')

Adjectives and numerals precede demonstratives and determiners, as shown in (116) to (119).

(116) jíní   [**kʊ́bbʊ́**]_{ADJ}   [**áì**]_{DEM}   t͡ʃʊ́ssò   ʃíí
      meat   old   this   good   not
      'This old meat (is) not good.'
      'Cette ancienne/vieille viande n'est pas bonne.'

(117) fétì   [**dèrú**]_{ADJ}[**ù**]_{DET}   tɛlt͡ʃɪ
      fétì   dèrí=ù   tɛlt-Ø-j
      box   empty=DET   crush-3.OBJ-3
      'He crushed the empty box.'
      'Il a écrasé la boite vide.'

(118) ìná   [**àgòzʊ́ʊ́**]_{NUM}   [**árá**]_{DEM}   dàgîɾ
      ìní-a   àgòzʊ́ʊ́   árá   Ø-dák-ɾ
      thing-P   three   these   3.OBJ-want-1
      'I want these three things.'
      'J'aime ces trois choses.'

(119) àʊ́   [**tᶦrɔ̌n**]_{NUM}   írò[**ò**]_{DET}   dɛ́ɛ́ŋì   níɾò
      àʊ̰́   tᶦrɔ̌n   Ø-írì=ò   dɛ̀ɛ́ŋì   níɾ=ò
      man   one   3-come=DET   brother   1S.POSS=DET
      'The only/one person who came was my brother.'
      'La seule personne qui est venu était mon frère.'

However, the determiner tends to cliticize to a possessive pronoun, when present, so that the determiner sometimes precedes the adjective, as in (120).

(120) áì   jɛ́gɛ̀   nʊ́ɾ=[**ò**]_{DET}   [**kʊ́bbʊ́**]_{ADJ}
      this   house   1S.POSS=DET   old
      'This (is) my old house.'

Determiners and demonstratives cannot co-occur, and so are stacked in curly brackets in (100), indicating mutually exclusive distributions. This mutually exclusive distribution of determiners and demonstratives is demonstrated in (121), (122), and (123).

(121) àɾìí=**mà**
 woman=**DET**
 'the woman'

(122) àɾìí   **áì**
 woman   **this**
 'this woman'

(123) *àɾìí=**mà**   **áì**
  woman=**DET**   **this**
 *àɾìí   **áì=mà**
  woman   **this=DET**

Determiners and demonstratives precede genitive noun phrases, as illustrated in (124). This is demonstrated in example (125), where a demonstrative after a genitive noun phrase is ungrammatical.

(124) t͡ʃínnè   [**áì**]ᴅᴇᴍ   [**jɛ́gɛ̀ŋà**]ɢᴇɴ   làntɾɛ́
 t͡ʃínnè   áì   jɛ́gɛ̀=ŋà   lánt-ɾɛ́
 door   this   house=ɢᴇɴ.s   open-ᴀᴅᴊᴢ
 'This door of (the) house is open.'
 'Cette porte de la maison est ouverte.'

(125) *t͡ʃínnè   [**jɛ́gɛ̀ŋà**]ɢᴇɴ   [**áì**]ᴅᴇᴍ   làntɾɛ́
  t͡ʃínnè   jɛ́gɛ̀=ŋà   áì   làntɾɛ́
  door   house=ɢᴇɴ.s   this   open-ᴀᴅᴊᴢ
 ('This door of (the) house is open.')
 ('Cette porte de la maison est ouverte.')

Genitive noun phrases precede quantifiers (which come last in the noun phrase), as illustrated in (126).

(126) ŋɔ̀nàí   dɔ̀gɔ̀sɔ́   ámmá   [**kɔ́rtí**   **tàŋʊ́à**]ɢᴇɴ   [**gìnná**]_Q
 ŋɔ̀nàí   dɔ̀gɔ̀sɔ́   ámmá   kɔ́rtí   tàŋʊ́=à   gìnná
 last.night   night   people   neighborhood   1s.ᴘᴏss=ɢᴇɴ.ᴘ   all

 jɛ́gɛ̀   tàŋʊ́rò   t͡ʃábòddìntò
 jɛ́gɛ̀   tàŋʊ́=rò   t͡ʃáp-d-t-n-t
 house   1s.ᴘᴏss=ᴅᴀᴛ   gather-1-ʀᴇꜰʟ-ʟᴠ-ᴘ
 'Yesterday night, all the people of my neighborhood gathered at my house.'
 'Hier nuit, tous les gens de mon quartier, nous nous sommes réunis chez moi.'

Chapter 5: Verbs

5. Verbs

In this chapter I describe Dazaga verbal morphology. In general, it can be characterized as agglutinating and synthetic (in terms of the parameters summarized by, e.g. Aikhenvald (2007:3-8)). Verbs exhibit significantly more morphology than other syntactic categories. While adjectives and nouns have only up to two affixes (as well as clitics), verb roots can have up to five affixes (as well as clitics).

In §5.1, I review past analyses of the verbal system and introduce my own analysis, which better captures morphological patterns and recognizes the phenomenon of split-intransitivity. Instead of positing three classes of verbs, I re-analyze traditional Class 1 verbs as S_p intransitives. I analyze Class 2 and 3 intransitives as S_a verbs. I re-analyze the difference between Class 2 and Class 3 verbs as simply a difference between simple verbs and light verb constructions.

I introduce the basics of the argument agreement system in §5.2. In §5.3, §5.4, and §5.5, I describe the conjugation of transitive, ditransitive, and intransitive verbs, respectively. Aspect is described in §5.6, mood in §5.7, and voice in §5.8. In §5.9, I briefly discuss suppletive verb roots.

Because they do not technically display distinctive morphology, causative constructions are omitted from this chapter and are covered in Chapter 8.

5.1 Verb classes

In previous studies of Saharan languages, a three-class system (cf. Table 13) has been proposed and largely accepted as a suitable analysis for verbs in Dazaga and Tedaga (Bryan 1971; Lukas 1953:62; cf. Jourdan 1935:10; Nachtigal 1881) as well as in Beria/Zaghawa (Jakobi & Crass 2004:47-84; Wolfe 2001:39-41). Kanuri exhibits a similar verb class system, although it no longer distinguishes Class 1 and so now only has

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two classes of verbs, corresponding roughly to Classes 2 and 3 in other Saharan langauges (Cyffer 2007:1108; 1998a:33-35; Hutchison 1981:113-4; Jarrett 1981; Lukas 1953:62).

In this standard analysis (e.g. cf. Cyffer 1991), Class 1 verbs have prefixed subject agreement morphemes; Class 2 verbs have suffixed first and second person subject agreement morphemes and prefixed third person subject agreement morphemes; Class 3 verbs are formed in the same way as Class 2, but the morpheme *n* (traditionally identified as an auxiliary)[47] takes the place of the Class 2 verb root relative to the affixes, and the conjugated "auxiliary" is suffixed to the Class 3 root. The subject (S) and object (O) agreement morphemes for the three verb classes, according to the standard analysis, are summarized below in Table 13 (other morphemes, such as the plural marker, are excluded from this table for the sake of simplicity).[48]

Table 13: Summary of subject & object agreement morphemes per standard analysis of Saharan verbal system

Pers.	Class 1		Class 2				Class 3				
	S	Root	O	S	Root	S	Root	O	S	Aux	S
1	t/d-	---	t/d-		---	-ɾ	---	-t/d		-n	-ɾ
2	n-	---	n-		---	-m	---	-n		-n	-m
3	Ø-	---	Ø-	j-	---		---	-Ø	-j	-n	

Instead of the standard three-class system, LeCoeur & LeCoeur (1956:73-80) propose a two-class system for Tubu (Tedaga and Dazaga), calling one class "suffixing" and the second class "prefixing." They draw this distinction based on whether the third person subject agreement marker is (per the standard analysis; cf. Table 13) prefixed to the verb stem (Class 2) or suffixed to it (Class 3). They ignore the fully prefixing verbs that are grouped as Class 1 in the standard analysis.

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[47] Cf. Cyffer (2007:1108; 1998a:33) for Kanuri; Jakobi & Crass (2004:47, 65) and Wolfe (2001:67) for Beria/Zaghawa; and Lukas (1953:79) for Dazaga. Ortman (2003:113) mentions this possibility in connection with Tedaga, but is skeptical of the identification of the "auxiliary" with the (traditionally) Class 2 verb *n* 'say, think'.

[48] While Class 1 verbs do not take object agreement affixes, there are a few (four) transitive and ditransitive Class 1 verbs in Dazaga, which mark their objects with independent pronouns.

More recently, Ortman (2003) also has proposed that the Tedaga verb system is best analyzed as comprising two verb classes, one prefixing and one suffixing, each of which is subdivided into "semantically" transitive and intransitive subclasses.[49] Ortman's proposed prefixing class corresponds to what have usually been identified as Classes 1 (Ortman's prefixing intransitive) and 2 (Ortman's prefixing transitive). His proposed suffixing class comprises verbs that have usually been identified as Class 3 transitive verbs as well as a group of semantically intransitive verbs that have previously been grouped with Class 3 verbs, but which Ortman distinguishes as a sub-group of his suffixing class. This analysis is summarized in Table 14 (cf. Ortman 2003:138).

Table 14: Summary of Ortman's (2003) analysis of Tedaga verb classes

'Nominal' Forms			
Prefixing (*nd-*)		Suffixing (*-di*)	
Transitive (standard analysis Class 2)	Intransitive (standard analysis Class 1)	Transitive (standard analysis Class 3)	Intransitive (standard analysis Class 3)

Unlike LeCoeur & LeCoeur's (1956) analysis, Ortman's (2003) basic division of Tedaga verbs into two classes is based primarily on a binary distinction between prefixing (*nd-*) and suffixing (*-di*) forms observed in the "nominal forms" (something like gerunds) of verbs. Each major class is then divided into two subclasses based on "semantic" transitivity.[50] Ortman (2003) argues that the subject and object agreement markers on Tedaga verbs are best analyzed as a morphologically ergative/absolutive system, where the single argument of intransitive verbs is marked the same way as the patient of transitive verbs and differently than the agent of transitive verbs. Ortman's analysis of the ergative and absolutive agreement morphemes in Tedaga is summarized in Table 15, where A stands for Actor, S for Single argument and U for Undergoer. Other

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[49] Similar analyses have been proposed by Kellenberger (2008), Maha Abdu El-Dawi (2010), and Jakobi (2011) for Beria (Zaghawa).

[50] Significantly, Ortman employs only morphological criteria for identifying a sub-class of "semantically" intransitive prefixing verbs (2003:123). He does not list his criteria for identifying a sub-class of "semantically" intransitive suffixing verbs. Nevertheless, all of his "semantically" intransitive examples do appear to be semantically instransitive when evaluated by the criteria proposed by Hopper & Thompson (1980).

morphemes (such as the reflexive morpheme and the plural marker) are excluded for the sake of simplicity. Blank cells indicate that no morpheme fills the slot.

Table 15: Summary of Ortman's ergative/absolutive analysis

Pers.	Prefixing (*nd-*)				Suffixing (*-di*)				
	Transitive				Transitive				
	U	A	Root	A	Root	U	A	Aux	A
1	t/d-		---	-ɾ	---	-t/d		-n	-ɾ
2	n-		---	-m	---	-n		-n	-m
3	Ø-	j-	---		---	-Ø	-j	-n	
Pers.	Intransitive				Intransitive				
	S		Root		Root	S		Aux	
1	t/d-		---		---	-t/d		-n	
2	n-		---		---	-n		-n	
3	Ø-		---		---	-Ø		-n	

Clearly, given the patterns summarized in Table 15, an ergative/absolutive analysis is appropriate for the agreement markers in Tedaga. Intransitive verbs in Tedaga (with the exception of a few truly morphologically intransitive verbs) also take either a reflexivity marker or an "impersonal" third person singular A agreement marker (cf. Ortman 2003:115-121, 123-130).

Ortman's (2003) analysis of the Tedaga verb system appears persuasive based on the data he presents. However, I argue below that an analysis similars to his would not be suitable as an analysis of Dazaga's (current) verb system. Furthermore, I argue that the standard three-class analysis misses major unifying patterns, and that Dazaga's verb system is best analyzed as having no distinct "classes" (in the sense of groups of verbs that signal the same information by means of disparate morphemes). Rather, all verbs use the same set of agreement markers, but transitive verbs include both simple verbs and light verb constructions, and intransitive verbs exhibit split-intransitivity. Bryan (1971:225) hinted at this analysis when she noted that there were (per the traditional analysis) three verb classes in the Eastern Saharan languages, but only "two basic patterns of conjugation" (namely, S_a and S_p). König (2008:46) was the first (to my knowledge) to suggest a split-S analysis of the "verbal pronouns" (i.e. object "prefixes" and subject "suffixes" (König 208:46)) for Dazaga, noting a "phonological resemblance

between the subject pronouns of first and second person encoding S, and the object pronouns of class 2 verbs encoding first and second person O." A similar split-intransitivity analysis had already been proposed for Beria (Jakobi & Crass 2004; Jakobi 2011; cf. also Jakobi 2006; Kellenberger 2008; Wolfe & Adam 2015).

Argument agreement affixes on verbs in Dazaga appear to have originally followed an ergative/absolutive system, supporting Ortman's (2003) analysis of Tedaga, which generally preserves an older form of Saharan than does Dazaga. Dazaga agreement affixes still have some superficial traces of an ergative/absolutive system (namely, the identity of some intransitive subject agreement markers with transitive object agreement markers), but I argue that Dazaga's system of verbal argument agreement is best analysed synchronically as a split-intransitive system. In this system, all transitive verbs use the same two sets of subject and object agreement markers, but some intransitive subject markers match transitive subject markers while other intransitive subject markers match transitive object markers. References to Classes 1, 2, and 3 hereafter refer to the traditional (but here abandoned) classifications of verbs, and, when referenced, are used primarily in order to facilitate comparison to previous studies of Saharan languages.

At least three differences from Ortman's (2003) analysis of Tedaga suggest that Dazaga no longer has an ergative/absolutive system for subject and object agreement morphemes.

First, Dazaga does not display the uniform division of verbs into "prefixing" and "suffixing," based on the "nominal" (gerund/infinitive) forms. While the nominal forms of light verb constructions (traditionally Class 3) do consistently end in *-tí/tí*, *-dí/dí*, *-sí/sí*, or *-ʃí/ʃí* (depending on the phonological environment), the nominal forms of simple verbs (traditionally Classes 1 and 2) are not prefixed with any consistently identifiable morpheme (though many simple verbs begin with *tV-*), as demonstrated by the nominal forms of several representative simple verbs, presented in Table 16.

Table 16: Nominal forms of representative simple verbs

(trad.) Class 1	Gloss	(trad.) Class 2	Gloss
tʃìí	'to exist'	ègí	'to cry'
màʃĭ	'to hear'	kínní	'to laugh'
nìrí	'to come'	láptí	'to cause to drink again'
ŋòjí	'to fight'	nàgí	'to want'
tìʃĭ	'to repay'	ʃɛ̀rí	'to remove'
tòŋɔ̀ʃĭ	'to try'	tògòrtí	'to cook'
tòòʃĭ	'to give birth'	wàssí	'to enlighten'

Thus, the nominal forms of Dazaga verbs do not (any longer) display the clear and consistent prefixing versus suffixing division that Tedaga verbs have.

Second, semantically intransitive Dazaga verbs do not follow either of Ortman's first two "strategies" for the morphological patterns of semantically intransitive verbs. In the first strategy, semantically intransitive Tedaga verbs are formed by the same pattern of morphology as the reflexive forms of semantically transitive verbs (whether prefixing or suffixing). In contrast, semantically intransitive Dazaga verbs consistently lack reflexive morphology. In the second strategy, semantically intransitive Tedaga verbs are formed by using forms of transitive verbs with the third person singular ergative morpheme as "impersonals."[51] The various person and number absolutive morphemes function as the single argument of the verb, and the third person singular ergative morpheme is understood as a kind of "dummy" morpheme. In contrast, most (but cf. §5.5.2) semantically intransitive Dazaga verbs use the same subject agreement markers as are used for semantically transitive verbs, as illustrated by a representative pair of simple verbs in Table 17, and none exhibit a third person "dummy" subject.

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[51] Jakobi (2011:88, 106) claims that most intransitives in Beria (Zaghawa) that mark their "subject" with the same morpheme as marks the object of a transitive verb (S_p verbs) are morphologically bivalent, but have only one "referential argument." The non-referential argument is an impersonal third person marker.

Table 17: Transitive & intransitive subject agreement markers for simple verbs

	Transitive	Gloss	Intransitive	Gloss
1s	kòrtô-ɾ	'bring-1.SUBJ'	kɔ́ɾô-ɾ	'appear-1.SUBJ'
2s	kòrtô-m	'bring-2.SUBJ'	kɔ́ɾô-m	'appear-2.SUBJ'
3s	g-òɾtî	'3.SUBJ-bring'	g-ɔ́ɾòò	'3.SUBJ-appear'
1p	kòrtɔ́-t-òɾ	'bring-P-1.SUBJ'	kɔ́ɾɔ́-k-òɾ	'appear-P-1.SUBJ'
2p	kòrtɔ́-t-òm	'bring-P-2.SUBJ'	kɔ́ɾɔ́-k-òm	'appear-P-2.SUBJ'
3p	g-òɾtɔ́-tò	'3.SUBJ-bring-P'	g-ɔ́ɾɔ́-kò	'3.SUBJ-appear-P'

Ortman (2003) mentions a third strategy for forming semantically intransitive verbs, namely, to have only one argument agreement morpheme on the verb, that is, true morphological intransitivity. This is what Dazaga does for all semantically intransitive verbs, but the single argument is the same morpheme (except for a small number of S_p verbs; cf. §5.5.2) as is used for the agent of a transitive verb.

Third, and perhaps most importantly, whereas Ortman (2003) shows that all morphologically intransitive verbs in Tedaga take absolute "subject" agreement, the vast majority of morphologically intransitive verbs in Dazaga take "nominative" subject agreement, like transitive verbs.

Because of these crucial differences, Dazaga's subject and object agreement system should not be analyzed as ergative/absolutive, as Tedaga's should be. Rather than an ergative/absolutive system, I demonstrate below that Dazaga displays a split-intransitive pattern of argument agreement.

5.2 Subject & object agreement

5.2.1 Support for "agreement affix" morpheme analysis

I analyze the morphemes that mark the person of the verb's subject and object as agreement affixes rather than as (clitic) pronouns. This analysis is based on the combined results of four criteria presented in Kroeger (2005:326; cf. Haspelmath 2013:222) for helping to distinguish clitic pronouns from agreement affixes.[52]

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[52] Cf. the similar list of criteria given in Creissels (2005:50) for distinguishing bound pronominal morphemes from "separate [pronominal] words."

First, agreement markers only attach to verbs which does not particularly favor either an agreement marker or clitic pronoun analysis (a wider distribution would indicate that they were probably clitic pronouns).

Second, the co-occurrence of agreement markers with free pronouns and other full noun phrases suggests that they are agreement affixes (complementary distribution with free pronouns would support the clitic pronoun analysis). This co-occurrence is demonstrated for subjects, below, in (127), (128), and (129), where first, second, and third person pronoun subjects co-occur with first, second, and third person subject agreement markers.

(127) ŋífírírù   bárà   dìgìsá   dìgírìm   tìgìsɔ́ɔ̀   **tàní**   dɛ́rìgì
      ŋífírí=rù   bárà   dìgìs-á   dìgírìm   Ø-tìgìsɔ́-ɔ̀   tàní   **d**-tɛ́rò-gì
      celebration=DAT   after   day-P   twenty   3-happen-CTNG   **1**S   **1**-go-IPFV
      'When twenty days after the celebration have passed, *I* will go.'
      'Je partirai 20 jours après la fête.'

(128) **ǹtàí**   táàm
      ńtà=ì   d-báb-**m**
      2S=ERG   1.OBJ-hit-**2**
      '*You* hit me.'
      'Il m'a frappé.'

(129) **mɛ̀rɛ́ì**   d͡ʒááò̀
      mɛ̀rɛ́=ì   d-**j**-báb
      3S=ERG   1.OBJ-**3**-hit
      '*He* hit me.'
      'Il m'a frappé.'

The same co-occurrence is possible with free object pronouns and object agreement markers. This is demonstrated for free pronouns of all three persons in examples (130), (131), and (132).

(130) **tòntágá**   táápò̀m
      tòntá=gà   **d**-báb-t-m
      1P=ACC   **1**.OBJ-hit-P-2
      'You hit *us*.'
      'Tu nous as frappé.'

(131) **ǹtágá**   nááɾ
    ǹtà=gà   **n**-báb-ɾ
    2S=ACC   **2**.OBJ-hit-1
    'I hit *you*.'
    'Je t'ai frappé.'

(132) **màrágà**   bááɾ
    màɾá=gà   **Ø**-báb-ɾ
    3P=ACC   **3**.OBJ-hit-1
    'I hit *them*.'
    'Je les ai frappé.'

When free pronouns co-occur with subject and object agreement markers, there is either a focal or contrastive topic sense (depending on context). This is indicated in the glosses of the examples above by the italic type. However, this focal or contrastive topic sense is not necessarily present with free standing object pronouns for the three transitive (traditionally) Class 1 verbs, since the free standing object pronouns are grammatically obligatory with transitive verbs of that class.

Third, agreement markers occur nearer to the verb root than other aspectual and mood affixes and are never observed to occur outside of clitics, again supporting the agreement affix analysis. This is illustrated in (133), where the imperfective aspect suffix *-gì* occurs outside of the subject agreement suffix *-ɾ*.

(133) ʃìkí   bɛ́lkɛ́   ná   hàŋîɾɔ̀   sáà   dìssíɾò   jɛ̀ɾdîɾ**gì**
    ʃìkí   bɛ́lkɛ́   ná   hák-Ø-n-ɾ-ɔ̀   sáà   dìssí=ɾò   jɛ́ɾt-ɾ-**gì**
    tomorrow   morning   also   find-3.OBJ-LV-1-CTNG   hour   six=DAT   get.up-1-**IPFV**
    'Tomorrow morning, if possible [lit. 'if I find (it)'], I will get up at six o'clock.'
    'Demain matin aussi, si c'est possible, je vais me réveiller à 6h00.'

Finally, the agreement markers are always obligatory, which suggests that they are agreement affixes rather than clitic pronouns (which we would expect not to always be obligatory).

The results of these four criteria are summarized in Table 18, below, where a check mark indicates the analysis supported by the outcome of applying each criterion.

Table 18: Criteria for clitic pronoun vs. agreement affix analyses

Criterion	Clitic pronoun	Agreement affix
Attaches to only one part of speech?	√	√
In complementary distribution with free pronouns?		√
Can it occur inside of other affixes?		√
Obligatory?		√

In Dazaga, the agreement markers can co-occur with free pronouns, occur inside of other inflectional affixes, and are obligatory. These patterns are decidedly in favor of analyzing the morphemes that mark the person of the verb's subject and object as agreement affixes rather than as clitic pronouns.[53]

5.2.2   Terminology of split-intransitivity

As mentioned in §5.1, I analyze Dazaga verbs as patterning according to a split-intransitive system (what Jakobi (2006:130) refers to as an "active/agentive" system). Some intransitives use a subject agreement marker that corresponds to the subject agreement marker of transitive verbs, and other intransitive verbs use a subject agreement marker that corresponds to the object agreement marker of transitive verbs. Because the pattern of split-intransitivity seems to be morphological, and not clearly based on distinctions in semantics (cf. Dixon 1994:104),[54] I avoid the terms "active/inactive" (e.g. Sapir 1917) and "unergative/unaccusative" (e.g. Foley 2007:380). I also avoid the terms "subjective/objective" (Merlan 1985), because these are potentially confusing when they refer only to kinds of subject agreement.[55] Rather, I use "S_a" to refer to intransitives whose subject agreement markers correspond to the subject agreement markers of transitive verbs (traditionally, Class 2 & 3 intransitives). I use "S_p" to refer to intransitive verbs whose subject agreement markers correspond to the object agreement markers of

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[53] The evidence also suggests that the agreement markers in Dazaga should be analyzed as "Stage II" pronominal markers (obligatory, but do not require another subject/object constituent), per the criteria provided in Creissels (2005:45).

[54] Dixon (1994:124), however, claims that a split-intransitive pattern "always has a semantic basis but is never perfectly semantically determined."

[55] See Creissels (2006/07, 2007) for useful discussions on the analysis and terminology of split-intransitivity systems.

transitive verbs (traditionally, Class 1 intransitives).[56] These labels are meant to be entirely descriptive, referencing the morphological forms of the agreement markers, and are not based on semantic criteria.

5.2.3 Subject & object agreement patterns

Verbs have subject and object agreement affixes that obligatorily occur for all first and second person subjects and objects.[57] The only exceptions to this are three transitive and ditransitive verbs whose objects are only marked by separate, stand-alone pronominal objects and not by object agreement markers.[58] Third person subject agreement markers occur obligatorily on all verbs, except for S_p verbs, which do not overtly mark third person subject agreement. The absence of overt agreement in this case is indicated in underlying verb forms by $\emptyset$-.

Subject and object agreement markers do not specify the gender or number of the subject or object (like pronouns – cf. §4.1.3). Rather, they specify only the person of the subject or object. Plurality of a subject or object is marked by a single morpheme, -t, which may be taken as pluralizing either the subject or the object or both (as context allows/requires). When both subject and object are singular, this is signaled by the absence of the plural morpheme.

5.3 Agreement morphology of transitive verbs

Verbs described in sections 5.3, 5.4, and 5.5 are in the active voice and the perfective aspect (cf. §5.6). Other verb forms are described in later sections. All transitive verbs (except for four irregular verbs; cf. footnote 58) use the same two sets of agreement morphemes to indicate the person of their subjects and objects. These subject and object

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[56] In using this terminology, I am following the precedent set by Jakobi in her work on Beria (2006, 2011); cf. Andrews (2007c:217).

[57] Dimmendaal (2005) demonstrates that many Nilo-Saharan languages with verb-final constituent order also have subject or object agreement (or both, in the case of Saharan, Maban, and Kunama languages), as well as peripheral case (including "dative" and "genitive," as I propose Dazaga has; cf. §6.2).

[58] These three verbs are further irregular/exceptional because they are the only transitive verbs which take the same subject agreement markers as do S_p intransitive verbs. The three verbs are *cìnhètí* 'to forget', *màʃí* 'to hear', and *tìʃí* 'to repay' (all traditionally classified as Class 1 verbs).

agreement morphemes are presented in Table 19. Object agreement affixes are listed first, since they are all prefixes; subject agreement affixes are listed second, since they are mostly suffixes.[59]

Table 19: Subject & object agreement morphemes of transitive verbs

Pers.	Object	Subject
1	t/d-	-ɾ
2	n-	-m
3	Ø-	j-

While all transitive verbs use the same subject and object agreement markers, differences in the number of "roots" in verbs and the placement of the reflexive morpheme make it useful to distinguish two subgroups of transitive verbs, namely, "simple" transitive verbs (traditionally Class 2 transitives) and transitive "light verb constructions" (traditionally Class 3 transitives).[60] A similar distinction will be made within S$_a$ verbs (cf. §5.5.1).

5.3.1   Simple transitive verbs

Simple transitive verbs form a relatively small group of verbs (about 15% of verbs), and are a closed class of verbs in modern Dazaga. Simple transitive verbs are formed by a prefixed object agreement marker, a prefixed or suffixed subject agreement marker (depending on the person of the subject), a root, a plural marker (if relevant), and a reflexive marker (if relevant). If a verb ends with an obstruent, a final epenthetic [+high, +back] vowel is added (its [ATR] value dependent on the [ATR] value of the verb root). The affixes of simple transitive verbs and their order are presented in Table 20. The perfective aspect forms are used as the basis for all charts in §5.3 and §5.4 because they

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[59] Prefix object agreement markers and suffix subject agreement markers are typical of Heine's (1976:55) "Galla" subgroup of "type D" language. His "type D" languages include many languages from northeastern Africa (including all Ethiopian Semitic languages, most Cushitic languages, the Saharan languages and other Nilo-Saharan languages, and some Kordofanian, West African Niger-Congo, and Khoisan languages).

[60] Kellenberger (2008) uses the terms "integrated" verbs and "detached" verbs to describe what I call "simple verbs" and "light verb constructions," respectively. Jakobi (2011) suggests light verb constructions as a better analysis to "detached" verb roots.

are the basic, unmarked forms. Other aspects (cf. §5.6) are formed by adding suffixes to the unmarked forms. In Table 20, the third person subject slot is in complementary distribution with the reflexive and first and second person subject slot.

Table 20: Position class chart for simple transitive (perfective) verbs

Object	3 Subject	Root	Refl	P	1 & 2 Subject
d- '1.OBJ'	j- '3'	---	-t 'REFL'	-t 'P'	-ɾ '1'
n- '2.OBJ'					-m '2'
Ø- '3.OBJ'					

Several things should be noted about the affixes in Table 20. First, the phonetic realization of the third person subject marker /j/ is somewhat irregular. With some verbs it appears only as voicing of a root initial obstruent (e.g. *Ø-j-káɾò* '3.OBJ-3-braid'/'he braided it' is phonetically realized as [gáɾò]), but with other verbs it is not phonetically manifested. Second, any root-final consonant assimilates to the voicelessness of the plural morpheme -*t*, and the plural morpheme assimilates to the place of articulation of the root-final consonant (e.g. the sequence /gt/ becomes [kk]; cf. §3.6.1). Third, the plural morpheme -*t* is not specifically associated with the subject or the object, but can be interpreted as pluralizing one or the other, or both simultaneously (as context allows/requires). This "floating plurality" is illustrated in (134), where one verb can have three possible readings.[61]

(134) tááppòm
    d-báb-t-m
    1.OBJ-hit-P-2
    'You (S) hit us.'
    'You (P) hit us.'
    'You (P) hit me.'

Fourth, when the plural marker -*t* is used to pluralize a third person object, marked Ø-, the plural marker is not phonetically realized. Fifth, in reflexive forms, the reflexive morpheme occurs, but (S$_a$) subject agreement morphemes do not co-occur with

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[61] Jakobi & Crass (2004:71-2) note the same ambiguity of reference of the plural marker in verbs in Beria, though the plural morpheme in Beria is tone, rather than a segmental morpheme.

the reflexive morpheme (cf. §5.8.2 for more on reflexives, which pattern as S_p intransitives).

A full paradigm of a simple transitive verb (using the root *báb* 'hit') is given in Table 21, illustrating the possible combinations of affixes. Morphemes that are not phonetically realized are placed in parentheses, which do not here indicate optionality. Subject and object combinations which are not grammatical are indicated as such. It is difficult to determine with certainty if these forms are actually ungrammatical, or simply semantically implausible.

Table 21: (Perfective) simple transitive verbs

Root: báb 'hit'		1O	2O	3O	3S	Root	Refl	P	1S	2S	EP
dááppɔ̀	I hit myself	d-				báb	-t				ɔ̀
náàɾ	I hit you		n-			báb			-ɾ		
báàɾ	I hit him			Ø-		báb			-ɾ		
(not grm)	*I hit us										
nááppɪ̀ɾ	I hit you (p)		n-			báb		-t	-ɾ		
baaɾ	I hit them			Ø-		báb		(-t)	-ɾ		
táàm	you hit me	d-				báb				-m	
ǹtááppɔ̀	you hit yourself		n-			báb	-t				ɔ̀
báàm	you hit him			Ø-		báb				-m	
tááppɔ̀m	you hit us	d-				báb		-t		-m	
(not grm)	*you hit you										
báàm	you hit them			Ø-		báb		(-t)		-m	
d͡ʒááɔ̀	he hit me	d-			j-	báb					ɔ̀
ǹtʃááɔ̀	he hit you		n-		j-	báb					ɔ̀
wááɔ̀	he hit him			Ø-	j-	báb					ɔ̀
tááptɔ̀	he hit himself			Ø-	j-	báb	-t				ɔ̀
d͡ʒááppɔ̀	he hit us	d-			j-	báb		-t			ɔ̀
ǹtʃááppɔ̀	he hit you (p)		n-		j-	báb		-t			ɔ̀
wááɔ̀	he hit them			Ø-	j-	báb		(-t)			ɔ̀
(not grm)	*we hit me										
nááppɪ̀ɾ	we hit you		n-			báb		-t	-ɾ		
bàppíɾ	we hit him			Ø-		báb		-t	-ɾ		
dááptʊ́dɔ̀	we hit ourselves	d-				báb	-t	-t			ɔ̀
nááppɪ̀ɾ	we hit you (p)		n-			báb		-t	-ɾ		
bàppíɾ	we hit them			Ø-		báb		-t	-ɾ		
táápɔ̀m	you (p) hit me	d-				báb		-t		-m	
(not grm)	*you (p) hit you										
bàppɔ́m	you (p) hit him			Ø-		báb		-t		-m	
táápɔ̀m	you (p) hit us	d-				báb		-t		-m	
ǹtááptʊ́dɔ̀	you (p) hit yrslvs.		n-			báb	-t	-t			ɔ̀
bàppɔ́m	you (p) hit them			Ø-		báb		-t		-m	
d͡ʒááppɔ̀	they hit me	d-			j-	báb		-t			ɔ̀
ǹtʃááppɔ̀	they hit you		n-		j-	báb		-t			ɔ̀
wáppɔ̀	they hit him			Ø-	j-	báb		-t			ɔ̀
d͡ʒááppɔ̀	they hit us	d-			j-	báb		-t			ɔ̀
ǹtʃááppɔ̀	they hit you (p)		n-		j-	báb		-t			ɔ̀
wáppɔ̀	they hit them			Ø-	j-	báb		-t			ɔ̀
tááptʊdɔ̀	they hit thmslvs.			Ø-	j-	báb	-t	-t			ɔ̀

In the table above, several items should be noted. First, the phonetic shape of the root can change considerably depending on the phonological environment. Thus, the root occasionally occurs in a near-original form, as in *bàppɨ́r* 'we hit him/them', where the only change to the root is devoicing of the root-final /b/ before the voiceless plural marker /t/. At other times, the root is almost totaly obscured, remaining as only a long vowel [aa], as in *náàr* 'I hit you', where both the root-initial and root-final /b/ segments have dropped out, causing compensatory lengthening of the nucleus. Second, when the only plural argument is a third person object, represented by the Ø- morpheme, the plural marker /t/ associated with the plural Ø- morpheme does not surface in the phonetic form (indicated in the above table by parentheses). The result is that verbs whose only difference is the number of a third person object are identical to each other. Third, and similarly, when two verbs each contain one plural argument and the persons the subject and object of one verb match the persons of the subject and object of the second verb, the two verbs will be identical to each other, since the plural morpheme can be associated with either the subject or the object or both simultaneously (cf. (134)). Fourth, the reflexive forms are formed by using an object marker of the person of the sole participant and a reflexive morpheme in lieu of the subject morpheme. Fifth, forms that include subjects and objects of the same person (for first and second person only), but different number, are not grammatical (the same is true of transitive light verb constructions – cf. §5.3.2).

Examples of other simple transitive verbs are given in Table 22. For the sake of simplicity and space, only the forms with third person singular objects (Ø-) are given. Verb roots and their glosses are given in the top row. Person and number labels in the left-most column correspond to the person and number of the subject of each verb in the row.

Table 22: Examples of (perfective) simple transitive verbs

	kín	**'crush'**	**dák**	**'want'**	**té**	**'catch'**
1s	kìnîɾ	'I crushed it'	dàgîɾ	'I wanted it'	táàɾ	'I caught it'
2s	kìnûm	'you crushed it'	dàgôm	'you wanted it'	táàm	'you caught it'
3s	gínù	'he crushed it'	dágò	'he wanted it'	déî	'he caught it'
1p	kìntîɾ	'we crushed it'	dàkkîɾ	'we wanted it'	tédìɾ	'we caught it'
2p	kìntûm	'you (p) crushed it	dàkkôm	'you (p) wanted it	tédùm	'you (p) caught it
3p	gíntù	'they crushed it'	dákkò	'they wanted it'	dédù	'they caught it'

5.3.2   Transitive light verb constructions

A second group of transitive verbs differs from simple transitive verbs in two ways. First, and most importantly, this second group of transitive verbs are light verb constructions (cf. Jakobi 2011:88; Dimmendaal 2009a), formed by attaching a meaning carrying root, the "preverb" (or "coverb"), to the beginning of an inflected form of a (semantically light) simple root, usually identified as *n* 'to say' (cf. Cyffer 1981a:164; Bryan 1971:228; Lukas 1953:79). Such light verb constructions are a common feature of Nilo-Saharan languages generally (Dimmendaal 2009b:774). A second difference, minor and difficult to explain, is the placement in these light verb constructions of the reflexive marker. Rather than occurring immediately before the plural marker (as in simple transitive reflexives), the reflexive marker in transitive light verb reflexives occurs immediately after any object prefixes (cf. §5.8.2).[62]

A light verb construction (LVC) is a type of complex predicate in which a semantically 'light' verb, which corresponds in form and inflection to an existing semantically full 'main' verb, joins with another predicational element (the "preverb" or 'coverb') to form a single predication (Butt 2010). LVCs share many characteristics with serial verb constructions (SVCs; cf. Kroeger 2004:229-230), in their expression of eventhood, their morphology, and their syntax. However, LVCs may combine a light verb with predicational elements from several categories (e.g. a verb, noun, adjective),

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[62] Interestingly, in Tedaga, the reflexive marker consistently occurs immediately before the third person subject slot (Ortman 2003:138-139), as in Dazaga light verb constructions (traditionally Class 3), but unlike Dazaga simple verbs (traditionally Class 2).

whereas SVCs always involve two (or more) verbs. In Dazaga, another differentiating characteristic is that LVCs only have one set of argument agreement and plurality morphemes, whereas these features are redundantly marked on both verbs in an SVC (cf. §8.3).

LVCs (traditionally Class 3 verbs) comprise the vast majority of verbs in my database (78.9%), and all new verbs, such as the Arabic borrowing *fàhàmtí* 'to understand', that come into Dazaga are formed as LVCs (cf. LeCoeur & LeCoeur 1956:73), a characteristic function of LVCs (cf. Butt 2010:52).[63]

Because transitive LVCs are built on the simple verb root *n* 'to say', used as a light verb, they use the same subject and object agreement markers as do simple transitive verbs. To form a transitive LVC, the light verb *n* is conjugated for subject and object person agreement, number, aspect, and mood. Then the preverb root, which gives the semantic content to the LVC, is attached to the beginning of the fully conjugated light verb. The LVC is a single phonological (and grammatical) word, as indicated by tone patterns and [ATR] harmony across the LVC.[64] As such, the preverb root is always directly attached to the light verb, and no separation of these elements of the LVC is possible in any syntactic configuration of a clause.

The affixes of transitive LVCs and their order are presented in Table 23. I have identified the light verb as 'LV'. For the sake of comparison with simple transitive verbs, I have presented the affixes as prefixing or suffixing to the LV, and not to the preverb root. Note also that the position of the reflexive morpheme is different for transitive LVCs than for transitive simple verbs. As in Table 20, the subject morphemes and reflexive morpheme in Table 23 are in complementary distribution.

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[63] Not surprisingly, similar claims about how borrowed verbs are brought into the language have been made for Tedaga (Ortman 2003:111), Zaghawa/Beria (Wolfe 2001:41), and Kanuri (Cyffer 1998a:34).
[64] Interestingly, Wolfe (2001:67) claims that "Class 3" verbs in Zaghawa/Beria are not single phonological words, based on reasons that are not supported for Dazaga in my data.

Table 23: Position class chart for (perfective) transitive LVCs

Preverb	Object	Refl. and 3 Subject	LV	P	1 & 2 Subject
---	d- '1.OBJ' n- '2.OBJ' Ø- '3.OBJ'	t- 'REFL' j- '3'	n	-t 'P'	-ɾ '1' -m '2'

The comments on Table 20 are largely applicable to transitive LVCs as well, particularly in terms of the association of the plural morpheme with subjects and/or objects, the absence of the plural marker when it is associated with the third person object morpheme Ø-, and the complementary distribution of the reflexive morpheme with subject agreement morphemes (but in a different position than in reflexive simple verbs).

However, there are a few differences that should be noted. First, the phonetic realization of the third person subject marker /j/ is fairly predictable for LVCs, since it interacts primarily with first and second person object markers or with the final segment(s) of the preverb root (when the object is the third person marker Ø-). The patterns of its realization are summarized in Table 24.

Table 24: Phonetic realization of third person subject agreement marker

Phonemic input	Phonetic output
/d-j/	[d͡ʒɪ / d͡ʒi]
/n-j/	[nt͡ʃɪ / nt͡ʃi]
/C[+son]t-j/	[C[+son]t͡ʃɪ / C[+son]t͡ʃi]
/V-j/	[Vɪ / Vi]
/Vt-j/	[Vt͡ʃɪ / Vt͡ʃi]
/kt-j/	[kɪ / ki]
/pt-j/	[pt͡ʃɪ / pt͡ʃi]
/st-j/	[ʃɪ / ʃi]

Second, since the plural morpheme -t always follows the light verb root n, the plural morpheme always retains its underlying form and is phonetically realized as [t]. Third, when the subject is third person singular (and the form is not reflexive), the light verb n is not phonetically realized, since no suffixes are employed and the light verb therefore comes at the end of the word. If another morpheme (such as aspect or mood) is suffixed to a (perfective) third person singular form, the latent n reappears (e.g. [dɪlɛɪ] 'he

imitated him' + [gɪ] 'IPFV' → [dɪlɛɪŋɪ] 'he will imitate him', where the /n/ reappears to combine with the /g/ to produce [ŋ]).

A full paradigm of a transitive LVC (using the root *dìlɛ́* 'imitate') is given in Table 25, illustrating the possible combinations of affixes. Morphemes that are not phonetically realized are placed in parentheses, which do not here indicate optionality. Subject and object combinations which are not grammatical are indicated as such.

Table 25: (Perfective) transitive LVCs

Root: dìlɛ́ 'imitate'		Prvb	1O	2O	3O	Refl	3S	LV	P	1S	2S	EP
dìléddìn	I imitated myself	dìlɛ́	d-			t-		n				
dìlénìnìɾ	I imitated you	dìlɛ́		n-				n		-ɾ		
dìlénìɾ	I imitated him	dìlɛ́			Ø-			n		-ɾ		
(not grm)	*I imitated us											
dìlénìntìɾ	I imitated you	dìlɛ́		n-				n	-t	-ɾ		
dìlénìɾ	I imitated them	dìlɛ́			Ø-			n	(-t)	-ɾ		
dìlédìnòm	you imitated me	dìlɛ́	d-					n			-m	
dìléntìn	you imitated yr.	dìlɛ́		n-		t-		n				
dìlénòm	you imitated him	dìlɛ́			Ø-			n			-m	
dìlédìntòm	you imitated us	dìlɛ́	d-					n	-t		-m	
(not grm)	*you imitated you											
dìlénòm	you imitated them	dìlɛ́			Ø-			n	(-t)		-m	
dìléd͡ʒì	he imitated me	dìlɛ́	d-				j-	(n)				
dìléntʃì	he imitated you	dìlɛ́		n-			j-	(n)				
dìléì	he imitated him	dìlɛ́			Ø-		j-	(n)				
dìlédìn	he imitated hims.	dìlɛ́			Ø-	t-		n				
dìléd͡ʒìntò	he imitated us	dìlɛ́	d-				j-	n	-t			ò
dìléntʃìntò	he imitated you	dìlɛ́		n-			j-	n	-t			ò
dìléì	he imitated them	dìlɛ́			Ø-		j-	(n)	(-t)			ò
(not grm)	*we imitated me											
dìlénìntìɾ	we imitated you	dìlɛ́		n-				n	-t	-ɾ		
dìléntìɾ	we imitated him	dìlɛ́			Ø-			n	-t	-ɾ		
dìléddìntò	we imitated our.	dìlɛ́	d-			t-		n	-t			ò
dìlénìntìɾ	we imitated you	dìlɛ́		n-				n	-t	-ɾ		
dìléntìɾ	we imitated them	dìlɛ́			Ø-			n	-t	-ɾ		
dìlédìntòm	you imitated me	dìlɛ́	d-					n	-t		-m	
(not grm)	*you imitated you											
dìléntòm	you imitated him	dìlɛ́			Ø-			n	-t		-m	
dìlédìntòm	you imitated us	dìlɛ́	d-					n	-t		-m	
dìléntòntò	you imitated yr.	dìlɛ́		n-		t-		n	-t			ò
dìléntòm	you imitated them	dìlɛ́			Ø-			n	-t		-m	
dìléd͡ʒìntò	they imitated me	dìlɛ́	d-				j-	n	-t			ò
dìléntʃìntò	they imitated you	dìlɛ́		n-			j-	n	-t			ò
dìléìntò	they imitated him	dìlɛ́			Ø-		j-	n	-t			ò
dìléd͡ʒìntò	they imitated us	dìlɛ́	d-				j-	n	-t			ò
dìléntʃìntò	they imitated you	dìlɛ́		n-			j-	n	-t			ò
dìléìntò	they imitated thm.	dìlɛ́			Ø-		j-	n	-t			ò
dìlédìntò	they imitated thmselves	dìlɛ́			Ø-	t-		n	-t			ò

As the table above demonstrates, there are many similarities between transitive
LVCs and simple transitive verbs. However, whereas the form of the simple transitive

roots is sometimes obscured through morphophonemics, the preverb root of a transitive LVC is consistently retained.

Like simple transitive verbs, when the only plural argument of a transitive LVC is a third person object, represented by the Ø- morpheme, the plural marker -t associated with the plural Ø- morpheme does not surface in the phonetic form (indicated in the table above by parentheses). The result is that verbs whose only difference is the number of a third person object are phonetically identical to each other. Additionally, when two transitive LVCs each contain one plural argument and the persons of both arguments are the same, the two verbs will be identical to each other, as demonstrated in (135), since the plural morpheme can be associated with either the subject or the object or both simultaneously.

(135) dìlɛ́dìn**t**ʊ̀m
    dìlɛ́-d-n-**t**-m
    imitate-1.OBJ-LV-**P**-2
    'You (S) imitated us.'
    'You (P) imitated us.'
    'You (P) imitated me.'

As with simple transitive verbs, the reflexive forms of transitive LVCs are formed by using an "object" marker of the person of the sole participant and a reflexive morpheme in lieu of the usual subject morpheme (thus patterning as S_p verbs; cf. §5.5.2 and §5.8.2). Finally, forms that include subjects and objects of the same person (for first and second person only) but different numbers are not grammatical.

Examples of other simple transitive verbs are given in Table 26. For the sake of simplicity and space, only the forms with third person singular objects (Ø-) are given. Verb roots and their glosses are given in the top row. Person and number labels in the left-most column correspond to the person and number of the subject of each verb in the row.

Table 26: Examples of (perfective) transitive LVCs

	lóp	**'knead'**	**mól**	**'press'**
1s	lómòɾ	'I kneaded it'	míllìɾ	'I pressed it'
2s	lómòm	'you kneaded it'	míllòm	'you pressed it'
3s	lópt͡ʃì	'he kneaded it'	mílt͡ʃì	'he pressed it'
1p	lómpòɾ	'we kneaded it'	míltìɾ	'we pressed it'
2p	lómpòm	'you (p) kneaded it'	míltòm	'you (p) pressed it'
3p	lópt͡ʃìntò	'they kneaded it'	mílt͡ʃìntò	'they pressed it'

5.4 Agreement morphology of ditransitive verbs

Ditransitive verbs use the same morphology as transitives, and exhibit the same subgrouping of simple ditransitives and ditransitive LVCs. However, because ditransitives (like transitives) can only agree with one object, the object prefix variously agrees with one or the other of the ditransitive objects. This variation is based on a combination of the persons and semantic roles of the objects. Thus, if there is only one first or second person object, it is marked on the verb with the object agreement marker, regardless of semantic role. If both objects are first or second person or both third person, the recipient is marked on the verb with the object agreement marker. These patterns are described in greater detail in §6.3.3, on the syntax of ditransitive clauses.

At this point I merely present example (136) to illustrate that the object agreement prefix does not always agree with what English speakers would normally consider the "direct object" constituent.

(136) kútùb nínìɾ
    kútùb n-ín-ɾ
    book 2.OBJ-give-1
    'I gave a book to you.' / 'I gave you a book.'
    'Je t'ai donné un livre.'
    *'I gave you to a book.'[65]

---

[65] Note that this second reading is ungrammatical, and not simply semantically strange.

5.5 *Agreement morphology of intransitive verbs*

Intransitive verbs use the same set of agreement morphemes as transitive verbs, presented in Table 19, above, and reproduced here as Table 27. However, as mentioned in §5.1, intransitive verbs exhibit a pattern of split-intransitivity, variously marking their single arguments with morphemes used by transitive verbs as object and subject agreement markers. I label as "S_p" those intransitive verbs that mark their single arguments with the same morphemes used to mark transitive objects. "S_a" refers to those intransitive verbs that mark their single arguments with the same morphemes used to mark transitive subjects (cf. §5.2.2).

Table 27: Subject agreement morphemes of intransitive verbs

Pers.	S_p	S_a
1	t/d-	-ɾ
2	n-	-m
3	Ø-	j-

5.5.1 S_a (intransitive) verbs

S_a verbs, like transitive verbs (cf. §5.3), may be subdivided into simple S_a verbs (traditionally Class 2 intransitives) and LVC S_a verbs (traditionally Class 3 intransitives).

Simple S_a verbs are formed exactly as simple transitives, except that no object agreement prefixes are used, and reflexive forms are (unsurprisingly) impossible. The order of morphemes in a (perfective) simple S_a verb is presented in Table 28, and a fully conjugated (perfective) simple S_a verb is given in Table 29. The third person subject agreement marker is in complementary distribution with the first and second person subject markers.

Table 28: Position class chart for simple S_a (perfective) verbs

3 Subject	Root	P	1 & 2 Subject
j- '3'	---	-t 'P'	-ɾ '1'
			-m '2'

Table 29: (Perfective) simple S$_a$ verbs

	Root: káz 'laugh'		3S	Root	P	1S	2S	EP
1s	kàzîɾ	I laughed		káz		-ɾ		
2s	kàzûm	you laughed		káz			-m	
3s	gázù	he laughed	j-	káz				ù
1p	kàssîɾ	we laughed		káz	-t	-ɾ		
2p	kàssûm	you (p) laughed		káz	-t		-m	
3p	gássù	they laughed	j-	káz	-t			ù

The comments about simple transitive verbs (cf. §5.3.1) are largely applicable to simple S$_a$ verbs as well. The phonetic realization of the third person subject marker /j/ is again somewhat irregular. Additionally, the root-final consonant assimilates to the voicelessness of the plural morpheme *-t*, and the plural morpheme assimilates to the place of articulation of the root-final consonant. However, unlike with simple transitive verbs, the association of the plural morpheme *-t* is not ambiguous with intransitive verbs, since it cannot be interpreted as pluralizing the object.

Examples of the full paradigm of simple S$_a$ verbs are given in Table 30. Verb roots and their glosses are given in the top row. Person and number labels in the left-most column correspond to the person and number of the subject of each verb in the row.

Table 30: Examples of (perfective) simple S$_a$ verbs

	jíd	'cry'	kʊ́ɾ	'appear'
1s	jídìɾ	'I cried'	kʊ́ɾôɾ	'I appeared'
2s	jíɾòm	'you cried'	kʊ́ɾôm	'you appeared'
3s	t͡ʃìɾò	'he cried'	gʊ́ɾʊ́ò	'he appeared'
1p	jíttîɾ	'we cried'	kʊ́ɾʊ́kòɾ	'we appeared'
2p	jíttòm	'you (p) cried'	kʊ́ɾʊ́kòm	'you (p) appeared'
3p	t͡ʃìttò	'they cried'	gʊ́ɾʊ́kò	'they appeared'

The second subgroup of S$_a$ verbs are the LVC S$_a$ verbs (hereafter simply "intransitive LVCs" since there are no LVC S$_p$ verbs). Intransitive LVCs are formed like transitive LVCs, but without object agreement markers or reflexive markers. The order of morphemes in a (perfective) intransitive LVC is presented in Table 31, and a fully conjugated intransitive LVC is presented in Table 32. In Table 31, "preverb" indicates the meaning-carrying morpheme, and 'LV' indicates the position of the light verb root *n*.

The third person subject marker is in complementary distribution with the first and second person subject markers.

Table 31: Position class chart for (perfective) intransitive LVCs

Preverb	3 Subject	LV	P	1 & 2 Subject
----	j- '3'	n	-t 'P'	-ɾ '1'
				-m '2'

Table 32: (Perfective) intransitive LVCs

	Root: bìgìɾé 'age'		Root	3S	LV	P	1S	2S	EP
1s	bìgìɾénìɾ	'I aged'	bìgìɾé		n		-ɾ		
2s	bìgìɾénòm	'you aged'	bìgìɾé		n			-m	
3s	bìgìɾéì	'he aged'	bìgìɾé	j-	(n)				ʊ
1p	bìgìɾéntìɾ	'we aged'	bìgìɾé		n	-t	-ɾ		
2p	bìgìɾéntòm	'you (p) aged'	bìgìɾé		n	-t		-m	
3p	bìgìɾéìntò	'they aged'	bìgìɾé	j-	n	-t			ʊ

As with transitive LVCs (cf. §5.3.2), the various allomorphs of the third person subject agreement marker are fairly predictable (cf. Table 24). Additionally, when the LV root *n* is the last morpheme in the verb (in third person singular forms), it is not phonetically realized but does reappear if another suffix (such as an aspect marker) is attached. Like other intransitives, the plural marker can only be taken as pluralizing the subject.

Examples of the full paradigms of intransitive LVCs are given in Table 33. Verb roots and their glosses are given in the top row. Person and number labels in the left-most column correspond to the person and number of the subject of each verb in the row.

Table 33: Examples of (perfective) intransitive LVCs

	jɛ́ɾt	'get up'	bú	'fly, take flight'
1s	jèɾdîɾ	'I got up'	bùnûɾ	'I flew'
2s	jèɾôm	'you got up'	bùnûm	'you flew'
3s	jèɾt͡ʃî	'he got up'	bùî	'he flew'
1p	jèɾtîɾ	'we got up'	bùntûɾ	'we flew'
2p	jèɾtôm	'you (p) got up'	bùntûm	'you (p) flew'
3p	jèɾt͡ʃìntô	'they got up'	bùìntû	'they flew'

5.5.2 S_p (intransitive) verbs

S_p (intransitive) verbs (traditionally Class 1) form just 3.9% (twenty-one) of the verbs in my database, and are exhaustively listed in Table 36, at the end of this section. They are generally considered the "oldest" group of verbs in Dazaga (e.g. Lukas 1953:62),[66] and include many basic verbal ideas such as the positive and negative existential predicates and verbs like *tèrí* 'to go', *tìgìfì* 'to become, happen', and *tìrkàní* 'to walk'. Like simple transitives and simple S_a verbs, S_p are a closed class of verbs.

Unlike the S_a verbs, the agreement marker for the single argument of S_p verbs matches the object agreement markers of transitive verbs. This is demonstrated below, in Table 34.

Table 34: S_p subject and transitive object agreement markers

Pers.	Single argument of S_p verbs	Object of transitive
1	t/d-	t/d-
2	n-	n-
3	Ø-	Ø-

The split intransitive system that results from the difference in marking of the single arguments of S_a and S_p verbs is most likely a relic of a formerly fully ergative/absolutive system of argument agreement marking such as is still exhibited by Tedaga (cf. Ortman 2003).

The order of morphemes in a (perfective) S_p verb is given in Table 35.

Table 35: Position class chart for (perfective) S_p verbs

Subject	Root	P
d- '1' n- '2' Ø- '3'	----	-t 'P'

---

[66] This claim is difficult — perhaps impossible — to substantiate. It stems from the "basic" semantic nature of verbs included in this group (such as 'to be' and 'to not be'), its characterization as a closed class, as well as the group's disappearance from Kanuri (cf. Cyffer 2007:1108).

As with simple transitives and simple S$_a$ verbs, the root-final consonant assimilates to the voicelessness of the plural morpheme *-t*, and the plural morpheme assimilates to the place of articulation of the root-final consonant. Since S$_p$ verbs do not have objects, the plural morpheme *-t* is unambiguously associated with the subject.

A complete list of the S$_p$ verbs in my database is presented in Table 36. Each verb is listed in the "nominal" form (roughly functionally equivalent to an infinitive). The three (syntactically) transitive verbs whose morphology matches that of S$_p$ intransitive verbs are listed after the twenty-one S$_p$ intransitive verbs.

Table 36: S$_p$ verbs (exhaustive list)

Verb	Gloss	Verb	Gloss
t͡ʃìí	'be, exist'	tìrkàní	'walk'
méní	'not be, not exist'	tòfòrí	'enter'
mèí	'climb'	tùgùrí	'spend the day'
mìʃĭ	'sit, rest, stay'	tòkɔ̀ʃí	'appear'
nìrí	'arrive, come'	tòʃĭ	'cease, finish'
ŋòjí	'fight'	tòòʃĭ	'be born'
tààní	'fall'	tùùʃĭ	'enter'
tɛ̀rí	'leave, go'	tùwèí	'climb'
tìgìnèsí	'separate'	tòŋɔ̀ʃí	'try'
tìgìʃĭ	'become, happen'	t͡ʃìnhɛ̀tí	'forget' (trans.)
tìlìí	'fight'	màʃĭ	'hear' (trans.)
tìrdéí	'struggle'	tìʃĭ	'repay' (trans.)

5.6 Aspect

Dazaga verbs exhibit three aspects which are distinguished by the presence or absence of aspectual morphemes. These three aspects are perfective, imperfective, and progressive.[67] In this section, I describe only what I consider to be true aspects; other categories such as mood (§5.7) and voice (§5.8) are described separately. In the previous descriptive work of LeCoeur & LeCoeur (1956) and Lukas (1953), these categories have been lumped together as *les aspects* and *Aktionsarten und Zeiten*, respectively. Though

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[67] Jakobi & Crass (2004:53) posit two aspects for Beria, namely, "perfective" (*perfectif*) and "imperfective" (*imperfectif*).

the terminology in LeCoeur & LeCoeur (1956) and Lukas (1953) is not always transparent to the modern linguist, a comparison of the forms described yields the following equivalences:

Table 37: Correspondence of verbal categories in the literature

Present Study	LeCoeur & LeCoeur (1956)	Lukas (1953)
perfective	parfait (pp. 65-67)	Aorist (pp. 63-85)
imperfective	continu (pp. 67-68)	Progressiv (pp. 63-85)
progressive	-----	*i*-Form (? – p. 95)
-----	-----	Perfekt (pp. 94-95)
optative	optatif (pp. 68-69)	Optativ (pp. 85-89)
contingent	conditionnant (pp. 70-71)	Temporal (pp. 95-98)
imperative	impératif (p. 69)	Imperativ (pp. 98-102)
-----	-----	Futur (pp. 89-92)

5.6.1 Perfective

Perfective aspect is morphologically unmarked in contrast to other aspects, which are overtly marked. Perfective aspect does not have a specific time reference but views an event as a whole. It is the aspect typically used to relate past events in historical narrative, as in (137).

(137) bíní   dìgìsá   t͡ʃúú   tàní   àsàɾdíɾ
      bíní   dìgìsá   t͡ʃúú   tàní   asaɾd-ɾ
      today   days   two   1s   miscarry-1
      'Two days ago, I miscarried.' [lit. 'Today, two days (ago), I miscarried.']
      'J'ai avorté il y a deux jours de cela.'

However, perfective aspect can also be used to express events or states in the present, as illustrated in (138).[68]

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[68] I have not been able to determine any difference in meaning/interpretation between "present" perfectives, such as (138), and "present" imperfectives, such as (147).

(138) kɔ̀gʷɔ́jɛ̀   àŋkɨ́ɾ   dàgɨ̂ɾ
      kɔ̀gʷɔ́jɛ̀   àŋkɨ́ɾ   Ø-dák-ɾ
      chicken   male   3.OBJ-want-1
      'I want a rooster [lit. 'male chicken'].'
      'Je veux un coq.'

5.6.2   Imperfective

Imperfective aspect is marked by the suffix *-gì*, which is suffixed to the base form of the verb. The imperfective verb forms have a wide range of uses. In general terms, imperfective verbs express predicates which are presently true, enduringly true, customarily true, hypothetically true, true of the future, or express the purpose of another action.

The enduringly true, or "gnomic" predicates are illustrated in (139) and (140):

(139) dìskí=ɾù   báɾà   àddɨ̂ɾ   Ø-íɾì-gì
      noon=DAT   after   mid.afternoon   3-come-IPFV
      'After noon, mid afternoon comes.'
      'Après midi c'est "addur" qui vient.'

(140) bátà   còó   kɔ́ɾɛ́ɾò   sɛ́ltɛ́   gɔ́ìŋì
      bátà   còó   kɔ́ɾɛ́=ɾò   sɛ́ltɛ́   gɔ́-Ø-j-n-gì
      cloth   white   quick=DAT   filth   take-3.OBJ-3-LV-IPFV
      'White cloth quickly becomes dirty.'
      'Le tissu blanc se salit vite.'

The imperfective aspect is also used in clauses that express how things are done, or "procedural" clauses. This is illustrated in (141) and (142).

(141) jɛ́gɛ̀   kɛ̀wɛ́ò   èɾkɛ̀náɾù   dɔ́mpògì
      jɛ́gɛ̀   kɛ̀wɛ́=ò   èɾkɛ̀ní-a=ɾù   Ø-j-tɔ́m-t-gì
      house   mat=GEN.S   palm.slat-P=DAT   3.OBJ-3-make-P-IPFV
      'They build mat houses with palm slats.'
      'On fait la maison en nattes avec des lattes des dattiers.'

(142) dʊ̀ʊ̀sárʊ̀   kàwá dɔ́mpʊ̀gì
   dʊ̀ʊ̀sʊ́-a=rʊ̀ kɛ̀wɛ́-a Ø-j-tɔ́m-t-gì
   palm.leaf-P=DAT mat-P 3.OBJ-3-make-P-IPFV
   'They make mats with palm leaves.'
   'On fait des nattes avec les feuilles des palmiers.'

   The imperfective aspect is used to express events that are future. Imperfective aspect does not itself ecode future time reference. Rather, the future reference is derived from an adverbial word or phrase or from the context. The "future" use of the imperfective aspect is illustrated in examples (143) and (144).

(143) ʃìkí   ʃíí àwòrɛ́   kàsʊ́gʊ̀ dùrtúgì
   ʃìkí   ʃíí àwòrɛ́   kàsʊ́gʊ̀ d-tùr-tú-gì
   tomorrow not day.after.tomorrow market 1-go-P-IPFV
   'Not tomorrow, (but) the day after tomorrow, we (will) go (to) market.'
   'Pas demain, mais après demain, nous partirons au marché.'

(144) kɑ́ɑ́gʊ́ tìrŏn dɨrɔ́ dáʊ̀dà èrɨ̀ʃí gìsígì
   kɑ́ɑ́gʊ́ tìrŏn dɨrɔ́ dáʊ̀dà èrɨ̀ʃí Ø-j-kís-gì
   week one in (name) voyage 3.OBJ-3-do-IPFV
   'In one week, Daouda will go on a trip.'
   'Daouda va voyager dans une semaine.'

   In hypothetical conditional contructions, the verb in the apodosis is typically formed with imperfective aspect. This "hypothetical" use of the imperfective is illustrated in (145) and (146).

(145) gʷɔ̀ní nʊ́mmà áríí dànnɔ́
   gʷɔ̀ní nʊ́m=mà áríí Ø-j-téi-ní=ɔ̀
   camel 2S.POSS=DET mark 3.OBJ-3-have-NEG=CNTG

   wúràì   gɔ̀ìntígì
   wúrè-a=i   gɔ́-Ø-j-n-t-gì
   thief-P=ERG   take-3.OBJ-3-LV-P-IPFV
   'If your camel doesn't have a brand mark, thieves will take (it).'
   'Si ton chameau n'a pas de marque, les voleurs vont le prendre.'

(146) ʃìkí   bɛ́lkɛ́   ná   Ø-hàŋ-îɾ-ɔ̀   sáà   dìssí=ɾò   jèrd-îɾ-gì
tomorrow morning also 3.OBJ-find-1-CTNG   hour six=DAT   get.up-1-IPFV
'Tomorrow morning, if possible [lit. 'if I find (it)'], I will get up at six o'clock.'
'Demain matin aussi, si c'est possible, je vais me réveiller à 6h00.'

Current events or states are also usually expressed with the imperfective form of a verb. This use of the imperfective is illustrated below in (147) and (148) (but cf. footnote 68).

(147) àòsó=ɾò   áʊz-íɾ-gì
snake=DAT   fear-1-IPFV
'I fear snakes/I'm afraid of snakes/I have fear toward snakes.'
'J'ai peur du serpent.'

(148) kártà   wáppògì
kárt-à   Ø-j-báb-t-gì
card-P   3.OBJ-3-hit-P-IPFV
'They are playing cards.' [lit. 'They are hitting cards.']
'Ils jouent aux cartes.'

Actions which are customarily or habitually performed are expressed with verbs in the imperfective aspect. This "habitual" use of the imperfective is illustrated in (149) and (150).

(149) jôm nááná èrìʃí kúɾʃárò   kàrànîr   jénìrìgì
jôm nááná èrìʃí kúɾʃí-á=ɾò   Ø-karan-ɾ   Ø-jén-ɾ-gì
day every story child-P=DET   3.OBJ-read-1   3.OBJ-give-1-IPFV
'Every day, I read a story (to my) children.'
'Chaque jour je lit un conte aux enfants.'

(150) kálkál   sʊ́mmà   sáà   fòúrù   jèrdɨ́rgì
kálkál   sʊ́n=mà   sáà   fòú=ɾù   jɛ́ɾt-ɾ-gì
correct   3S.POSS=DET hour five=DAT   get.up-1-IPFV
'Usually, I get up at five o'clock.'
'Normalement je me lève à cinq heures.'

Finally, the imperfective aspect can be used to express the purpose of another action (which may or may not be in the imperfective aspect). This purposive use of the imperfective is illustrated in (151) and (152).

(151) mèɾέgà   gáɾdɨ̀ɾ   kíî   dùɾtúgì
      mèɾέ=gà   Ø-gáɾd-ɾ   kíî   d-túɾ-t-gì
      3s=ACC   3.OBJ-await-1   with   1-go-P-IPFV
      'I waited for him, to go with (him).' / 'I waited with him, for us to go together.'
      'Je veux l'attendre pour aller avec lui.'

(152) jégà   sómmà   dállɨ̀ɾ   kɨ̀llàhànîɾgì
      jégὲ=a   sóm=mà   Ø-dáll-ɾ   kɨ̀llàhà-Ø-n-ɾ-gì
      house=DET   3s.POSS=DET   3.OBJ-pass.by-1 greet-3.OBJ-LV-1-IPFV
      'I passed by his house (to) greet him.'
      'Je vais passer chez lui pour le saluer.'

5.6.3   Progressive

Progressive aspect is signaled by the presence of the suffix -*í*, which is suffixed to the base (unmarked) form of the verb. Progressive aspect indicates an event which is ongoing at the time of utterance. A verb with progressive aspect is always followed by an existential predicate in a periphrastic construction. The verb with progressive aspect and the existential predicate share the same subject person and number values (the copula does not have object agreement). This construction and usage are illustrated in (153) and (154).

(153) bàtàtá   bùɾt͡ʃìní   t͡ʃíí
      bàtàtá   búɾt-j-n-í   Ø-t͡ʃĭ(g)
      bat   take.off-3-LV-PROG 3-be
      'The bat (animal) is taking off/jumping into flight.'
      'Le chauve-souris s'envole.'

(154) ìí   bìllíò̀   t͡ʃédí   t͡ʃĭkkí
      ìí   bìllí=ò̀   Ø-j-jé-t-í   Ø-t͡ʃĭg-t
      water   pond=GEN.S   3.OBJ-3-drink-P-PROG   3-be-P
      'They are drinking water from the pond.'
      'Ils boivent l'eau de marigot.'

5.7 Mood

5.7.1 Indicative

The indicative is the unmarked mood. If a form is not specifically marked as contingent, optative, or imperative, and the clause is not marked as interrogative, then the verb and clause are in the indicative mood (cf. Chapter 6, and §7.1). The three aspects discussed in §5.6, above, all appear in the indicative mood (but not in the other moods).

5.7.2 Interrogative

Interrogative mood is signalled by the presence of *wh*-words for content questions and the yes/no question marker *-ra* for yes/no questions. A clause is not interpreted as interrogative apart from the presence of one of these markers (cf. §7.5.1 and §7.5.2). An interrogative clause formed by the use of a question word is illustrated in (155).

(155) bàɾán   sálèì=ŋà   **kɔ́ɔ́**
      teapot   (name)=GEN.S   where
      'Where (is) Saley's teapot?'
      'Où est la théière de Saley?'

The use of the yes/no marker *-ra* is illustrated in (156).

(156) bùltɨ́ɾùm   dɨɾɔ́   ɨ̀í   t͡ʃɨ́í**rà**
      bùltɨ́ɾùm   dɨɾɔ́   ɨ̀í   Ø-t͡ʃɨ́(g)=**rà**
      cup   in   water 3-be=YNQ
      'Is there water in the cup?'
      'Y a-t-il de l'eau dans le goblet?'

5.7.3 Contingent

The clitic =ɔ̀ marks "contingent" mood. This clitic attaches to the verb of a subordinate clause upon which the realization of the main clause is either logically or temporally contingent. Logical and temporal contingency are illustrated in (157) and (158), respectively.

(157) gʷɔ̀ní   nómmà   áríí   dànnɔ́
      gʷɔ̀ní   nóm=mà   áríí   Ø-j-téi-ní=ɔ̀
      camel   2S.POSS=DET   mark   3.OBJ-3-have-NEG=**CNTG**

      wúràì   gɔ̀ìntígì
      wúrè-a=i   gɔ-Ø-j-n-t-gì
      thief-P=ERG   take-3.OBJ-3-LV-P-IPFV
      '**If** your camel doesn't have a brand mark, thieves will take (it).'
      'Si ton chameau n'a pas de marque, les voleurs vont le prendre.'

(158) kéè   bí   ŋílɔ̀ɔ̀   gálì   ʃìí
      kéè   bí   ŋílí=ɔ̀   gálì   ʃìí
      circumcision   season   rainy.season=**CNTG**   good   not
      'Circumcision, **when** (it is) rainy season, (is) not good.'
      'La circoncision pendant la saison de pluies n'est pas bon.'

As seen in (158), when a claused marked with =ɔ̀ is verbless, the contingent clitic attaches to whatever word is clause-final (the noun *ŋílí* in this case).

5.7.4   Optative

Optative mood is formed by the affixation of the optative suffix *-é/ɛ́* (depending on the [ATR] value of the root vowels) to the base forms of a verb (cf. Lukas 1953:85), as illustrated by the comparison of indicative and optative forms in Table 38 (with only the optative morpheme break identified, for simplicity). The optative suffix replaces the word-final epenthetic vowel (or simply makes it unnecessary).

Table 38: Indicative vs. optative forms

Indicative	Gloss	Optative	Gloss
d͡ʒɛ̂n	'he gave me (s.t.)'	d͡ʒɛ́n-ɛ́	'may he give me (s.t.)'
n̩t͡ʃɛ́n	'he gave you (s.t.)'	n̩t͡ʃɛ́n-ɛ́	'may he give you (s.t.)'
t͡ʃɛ̂n	'he gave him (s.t.)'	t͡ʃɛ́n-ɛ́	'may he give him (s.t.)'
d͡ʒɛ́ntò	'he gave us (s.t.)'	d͡ʒɛ́nt-ɛ́	'may he give us (s.t.)'
n̩t͡ʃɛ́ntò	'he gave you (p) (s.t.)'	n̩t͡ʃɛ́nt-ɛ́	'may he give you (p) (s.t.)'
t͡ʃɛ̂n	'he gave them (s.t.)'	t͡ʃɛ́n-ɛ́	'may he give them (s.t.)'

Unlike the imperative forms (cf. §5.7.5), the subject of an optative can be any person (first, second, or third; contra Lukas (1953:85), who states that the optative cannot

be used with a second person subject), as demonstrated in examples (159), (160),
and (161).

(159) bíní   ánásàɾò   jèjéntɨ**ɾ**é
       bíní   ánásà=ɾò   jèjé-n-t-**ɾ**-e
       today   joy=DAT   converse-LV-P-**1**-OPT
       'Today, let's converse with joy/joyfully.'
       'Causons joieusement aujourd'hui.'

(160) dìlɛ́nòm**ɛ̀**
       dìlɛ́-Ø-n-**m**-ɛ
       imitate-3.OBJ-LV-**2**-OPT
       'May you imitate him.'
       'Que tu l'imites.'

(161) állà   gòfúɾà   n͡tʃɛ́nɛ́
       állà   gòfúɾò-a   n-**j**-jɛ́n-ɛ
       God   forgiveness-P   2.OBJ-**3**-give-OPT
       'May God give you forgiveness.'
       'Que Dieu te pardonne.'

As the examples above illustrate, the optative covers usages that might have
distinct forms in other languages, such as "(co)hortative" addresses and wishes/blessings.

5.7.5   Imperative

Imperatives are formed using the same person agreement and number markers as
indicative verbs and exhibit the same split between simple verbs and light verb
constructions. However, imperatives are distinguished from (most) other forms by two
criterial factors. First, imperatives do not include an overt subject agreement marker, as
illustrated in (162).[69]

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[69] Cf. the parallel claim of Jakobi & Crass (2004:95) regarding imperatives in Beria: "the imperative form
is characterized by the absence of the subject morpheme" (*la forme de l'impératif est caractérisée par
l'absence du morphème sujet*).

(162) dìlɛ́dìn
 dìlɛ́-d-n-**Ø**
 imitate.IMV-1.OBJ-LV-**2**
 'Imitate me!'
 'Imite moi!'

Though there is no overt subject agreement marker, there is evidence that there is still a "covert" or "understood" subject agreement marker present. Specifically, the plural morpheme *-t* appears when the (covert) subject is plural, but not when it is singular (unless triggered by a first or second person plural object). The identity of forms whose only difference is the number of a third person object (examples (163) and (164)) demonstrates it is not the third person object that triggers the presence of the plural marker *-t* in (165).

(163) dìlɛ́n
 dìlɛ́-Ø-n-Ø
 imitate.IMV-3.OBJ-LV-2
 '(You [sg.]) Imitate him.'

(164) dìlɛ́n
 dìlɛ́-Ø-n-Ø-Ø
 imitate.IMV-3.OBJ-LV-P-2
 '(You [sg.]) Imitate them.'

(165) dìlɛ́ntò
 dìlɛ́-Ø-n-t-Ø
 imitate.IMV-3.OBJ-LV-P-2
 '(You [pl.]) Imitate him/them.'

Second, imperatives use a distinct reflexive morpheme, *s-*, instead of the indicative reflexive morpheme *-t/t-* (often phonetically realized intervocalically as [d]). In the reflexive imperative forms with *s-*, the second person object agreement prefix *n-* does not co-occur. This difference is illustrated in the indicative reflexive and imperative reflexive, respectively, in (166).

(166) dìléntìn
dìlɛ́-n-t-n
imitate-2-**REFL**-LV
'You imitated yourself.'
'Tu t'es imité.'

dìlɛ́sìn
dìlɛ́-s-n-Ø
imitate.IMV-**REFL**-LV-2
'Imitate yourself!'
'Imite toi!'

However, because the indicative reflexive morpheme is underlyingly identical to the first person object morpheme, indicative third person reflexives (which lack subject markers and have the object marker Ø- for third person) share the same forms as certain imperative forms, as illustrated in (167), where the same phonetic realization could be either a non-reflexive imperative or an indicative reflexive, respectively, depending on context.

(167) dìlɛ́dìn
dɪlɛ-t-n-Ø
imitate.IMV-**1.OBJ**-LV-2
'Imitate me!'
'Imite moi!'

dìlɛ́dìn
dɪlɛ-Ø-t-n
imitate-3-**REFL**-LV
'He imitated himself.'
'Il s'est imité.'

The full conjugation of the imperative forms of *dìlɛ́* 'imitate' is given in Table 39.

Table 39: Imperative transitive LVCs

	Root: dìlɛ́ 'imitate'		Root	1O	2O	3O	Refl	LV	P	EP
Singular subj.	dìlɛ́dìn	imitate me!	dìlɛ́	d-				n		
	dìlɛ́sòn	imitate yourself!	dìlɛ́				s-	n		
	dìlɛ́n	imitate him!	dìlɛ́			Ø-		n		
	dìlɛ́dìntò	imitate us!	dìlɛ́	d-				n	-t	ʊ
	(not gram.)	imitate you (p)!								
	dìlɛ́n	imitate them!	dìlɛ́			Ø-		n	(-t)	
Plural subj.	dìlɛ́dìntò	imitate me!	dìlɛ́	d-				n	-t	ʊ
	(not gram.)	imitate you (s)!								
	dìlɛ́ntò	imitate him!	dìlɛ́			Ø-		n	-t	ʊ
	dìlɛ́dìntò	imitate us!	dìlɛ́	d-				n	-t	ʊ
	dìlɛ́sòntò	imitate yourselves!	dìlɛ́				s-	n	-t	ʊ
	dìlɛ́ntò	imitate them!	dìlɛ́			Ø-		n	-t	ʊ

"Negated imperatives," or prohibitions, are formed by negating the basic verb form (formally identical to the perfective form). This is illustrated in (168).

(168) bààm**mí**
Ø-báb-m-**ní**
3.OBJ-hit-2-**NEG**
'(You [sg.]) Don't hit him!'
'Ne le frappe pas!'

For more on the morphology of prohibitions, see §6.2.1.

5.7.6   Hortative

Besides second person (canonical) imperatives, there are also first person plural forms which are distinct from the optative forms, and share some distinguishing features with imperatives. I have analyzed these as hortatives.

Like imperatives, hortatives lack the overt subject markers that are obligatory on all other verb forms (including optatives, some of the forms of which otherwise share some similarities with the first person plural imperatives). However, hortatives are dissimilar to the imperatives in at least two ways. First, they lack the distinctive *s*-reflexive marker of the imperatives; in fact, it appears that the hortatives lack a reflexive

morpheme entirely. Second, rather than the characteristic [n] or [u/ʊ] that ends imperatives, the hortatives end in [a], except when the object is first person, in which case the suffix [e/ɛ] is attached. The meaning/function of these suffixes is curently unknown. An example of a hortative paradigm is given below, in Table 40, for the root *dìlɛ́* 'imitate'. Interestingly, forms with first and second person singular (but not plural) objects were considered ungrammatical by my language consultant.

Table 40: Hortatives

	Root: dìlɛ́ 'imitate'		**Root**	**1O**	**2O**	**3O**	**LV**	**P**	**?**
1s	(not gram.)	*let's imitate me!							
2s	(not gram.)	let's imitate you (s)!							
3s	dìlɛ́ntà	let's imitate him!	dìlɛ́			Ø-	n	-t	a
1p	dìlɛ́dìntɛ̀	let's imitate ourslvs.!	dìlɛ́	d-			n	-t	ɛ
2p	dìlɛ́nìntà	let's imitate you (p)!	dìlɛ́		n		n	-t	a
3p	dìlɛ́ntà	let's imitate them!	dìlɛ́			Ø-	n	-t	a

5.8 Voice

Morphologically, verbs have only two voices, active and reflexive. There are no passive verb forms, but passive-like statements can be made using adjectives or "impersonal" actives (cf. §5.8.3).

5.8.1 Active

The active voice forms of verbs are the basic forms presented above in §5.3, §5.4, and §5.5. The reader is referred to those sections for further details.

5.8.2 Reflexive

I include reflexive verbs under the discussion of voice alternations because, like passives in other languages, reflexives in Dazaga are valency reducing derivations from active verb forms. There are no reflexive pronouns, and derived reflexive verbs are the only means of forming reflexive constructions. While morphologically intransitive (that is, having only one core argument agreement marker), verbs derived by means of the

reflexive morpheme *t* are always semantically transitive (as opposed to the patterns observed in Tedaga (Ortman 2003)).

Reflexive verbs are derived by the addition (to the basic, active forms) of the reflexive morpheme *t* (for reflexive imperatives, see §5.7.5). The reflexive morpheme will be either a suffix, as in (169), or a prefix of the light verb, as in (170), depending on whether the reflexive form of the verb comes from a simple transitive verb or from a transitive LVC, respectively.

(169) dááppὸ
    d-báb-**t**
    1-hit-**REFL**
    'I hit myself.'

(170) dìlɛ́ntὸntὸ
    dìlɛ́-n-**t**-n-t
    imitate-2-**REFL**-LV-P
    'You imitated yourselves.'

The person specified by the agreement morpheme of the reflexive form agrees with the person (first, second, or third) of the sole referential participant, the NP bearing the subject grammatical relation, if present in a clause. This is illustrated in (171), where the third person marker *Ø-* agrees with the third person subject *fírí* 'arrow'.

(171) **fírí**   kὸsὸnɪ́ɾὸ   ɛ̀kkáà   dáá kɔ́ktɪ̀n
     fírí   kʊsʊ-Ø-n-ɾ=ʊ   ɛ̀kkɛ́=a dáá kɔ́k-**Ø**-t-n
     arrow throw-3.OBJ-LV-1=DET tree=DET on   fix.to-**3**-REFL-LV
     'The arrow which I shot lodged itself in the tree.'
     'La flêche que j'ai lancé s'est fixée à l'arbre.'

In (172) and (173), there is no free noun phrase subject constituent, but the subject of the reflexive verb is understood to have the same person as the agreement marker on the verb (namely, first person in these examples).

(172) tàfʊ́   dìrɔ́   fʊ́fʊ́rdɩ̀n
       tàfʊ́   dìrɔ́   fʊ́fʊ́r-**d**-t-n
       sand   in   roll-**1**-REFL-LV
       '**I** rolled [lit. 'rolled myself'] in the sand.'
       'Je me suis roulé dans le sable.'

(173) fùrúmdɩ̀n   mòráŋà   lánɩ̀r
       fùrúm-**d**-t-n   mòrá=ŋà   lá-Ø-n-r
       turn-**1**-REFL-LV   3P=ACC   look.at-3.OBJ-LV-1
       '**I** turned [lit. 'turned myself'] (around) and looked at them.'
       'Je me suis retourné pour les regarder.'

While reflexive verbs are morphologically intransitive, they remain semantically transitive, and the presence of the detransitivizing reflexivity marker indicates that the person of the agreement marker is the person of both the agent and the patient. Since (what is normally) the object agreement morpheme is used to agree with the NP bearing the subject grammatical relation, reflexive verbs could be characterized as derived S_p verbs (as opposed to the underived S_p verbs described in §5.5.2). I have therefore labeled the agreement affixes as subject agreement markers in the following tables.

As in active verbs, plurality in reflexive verbs is indicated by a separate plural morpheme, distinct from the person agreement morphemes. The paradigm of a simple reflexive verb is presented in Table 41.

Table 41: (Perfective) simple reflexive verbs

	tàʊ́ 'hit'		**1S**	**2S**	**3S**	**Root**	**Refl**	**P**	**EP**
1s	dáápʊ̀	I hit myself	d			báb	t		ʊ
2s	ǹtáápʊ̀	you hit yourself		n		báb	t		ʊ
3s	tááptʊ̀	he hit himself			Ø	báb	t		ʊ
1p	dááptʊ́dʊ̀	we hit ourselves	d			báb	t	t	ʊ
2p	ǹtááptʊ́dʊ̀	you (p) hit yourselves		n		báb	t	t	ʊ
3p	tááptʊ́dʊ̀	they hit themselves			Ø	báb	t	t	ʊ

As the plural and reflexivity markers are underlyingly phonologically identical morphemes, it is not actually possible to determine their order relative to each other in the plural reflexive forms. In the table above, I have placed the reflexive morpheme before

the plural morpheme assuming that derivational morphemes will occur inside of inflectional morphemes.

The paradigm of a reflexive LVC is presented in Table 42.

Table 42: (Perfective) reflexive LVCs

dìlɛ́dí 'imiter'		**Root**	**1S**	**2S**	**3S**	**Refl**	**LV**	**P**	**EP**
1s	dìlɛ́ddìn	I imitated myself	dìlɛ́	d			t	n		
2s	dìlɛ́ntìn	you imitated yourself	dìlɛ́		n		t	n		
3s	dìlɛ́dìn	he imitated himself	dìlɛ́			Ø	t	n		
1p	dìlɛ́ddìntò	we imitated ourselves	dìlɛ́	d			t	n	t	ʊ
2p	dìlɛ́ntòntò	you (p) imitated yourselves	dìlɛ́		n		t	n	t	ʊ
3p	dìlɛ́dìntò	they imitated themselves	dìlɛ́			Ø	t	n	t	ʊ

As Table 42 shows, the reflexive morpheme in reflexive LVCs occurs in a different position within the verb than it does in simple reflexive verbs. Rather than appearing after the root and plural marker, as in simple reflexive verbs, the reflexive marker in reflexive LVCs occurs before the LV and plural marker. The reason for this difference is unknown.[70]

There are three transitive and ditransitive verbs (in my database) that have traditionally (e.g. Lukas 1953; cf. §5.1) been classified as Class 1 (that is, they use "object" markers as "subject" markers, like S_p verbs; cf. §5.2.3). These verbs can take free pronoun objects, as illustrated in (174) and (175), but cannot form reflexives, as demonstrated in (176) and (177).

(174) ńtàgà   dàássò
        ńtà=gà   d-báz-tʊ
        2s=ACC   1-hear-P
        'We heard you.'
        'Nous t'avons entendu.'

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[70] Cf. footnote 62.

(175) tìntágà   nàázʊ̀
     tìntá=gà   n-bázʊ
     1P=ACC   2-hear
     'You heard us.'
     'Tu nous as entendu.'

(176) *tìntágà   dàássʊ̀
     tìntá=gà   d-báz-tʊ
     1P=ACC   1-hear-P
     ('We heard ourselves.')
     ('Nous nous sommes entendu.')

(177) *ńtàgà   nàázʊ̀
     ńtà=gà   n-bázʊ
     2S=ACC   2-hear
     ('You heard yourself.')
     ('Tu t'es entendu.')

Examples (178) and (179) demonstrate that without accusative case marking on the free pronouns, these clauses must be interpreted as active clauses lacking an object constituent, and cannot be interpreted as reflexives.

(178) tìntá   dàássʊ̀
     tìntá   d-báz-tʊ
     1P   1-hear-P
     'We heard _____ .'
     'Nous avons entendu _____ .'
     (*'We heard ourselves.')
     (*'Nous nous sommes entendu.')

(179) ńtà   nàázʊ̀
     ńtà   n-bázʊ
     2S   2-hear
     'You (S) heard _____ .'
     'Tu a entendu _____ .'
     (*'You heard yourself.')
     (*'Tu t'es entendu.')

This inability to form reflexives is perhaps not surprising, since, historically, all S_p verbs (that is those which use object agreement morphemes to agree with their

subjects) were likely intransitive (cf. Ortman 2003), and there would not have been a way to form reflexives from S$_p$ verbs.

5.8.3   Passive

Dazaga does not have passive verb forms. That is, there is no passive verb morpheme which correlates with an obligatory demotion of the agent(-like) constituent to a non-core grammatical relation. To translate passive clauses from other languages, Dazaga speakers must either change the clause to active voice or use an adjective derived from a verb.

The use of an active clause to express a passive clause from another language is illustrated below, where the French passive clause *Le père a été imité par son fils* ('The father was imitated by his son') was the form presented to a native speaker of Dazaga, and the active Dazaga clause in (180) was the resultant elicited form.

(180) mí   ábbàgà   dìlɛ́ì
      mí   ábbà=gà   dìlɛ́-Ø-j
      son   father=ACC   imitate-3.OBJ-3
      '(The) son imitated (his) father.'
      'Le fils a imité son père.'

Another related way to express passives in Dazaga is by the use of "impersonal actives."[71] In this type of construction, the verb is active with an object but with a third person plural "impersonal" subject. This is illustrated in (181).

(181) ábbà   nírògà   ŋòrsɔ́   dìrɔ́   t͡ʃìttú
      ábbà   nír=ò=gà   ŋòrsɔ́   dìrɔ́   Ø-j-jíd-t
      father   1S.POSS=DET=ACC   war   in   3.obj-3-kill-p
      'My father was killed in war.' [lit. 'They killed my father in war.']
      'Mon père a été tué dans la guerre.'

The other method of expressing passive clauses from other languages is to use adjectives (what might be called "adjectival passives") derived from verb roots by means

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[71] Keenan & Dryer (2007:329) write, "Perhaps the most common means [for expressing functional equivalents of basic passives] is to use an active sentence with an 'impersonal' third person plural subject."

of the derivational suffix *-ɾɛ́* (cf. §4.1.2.2). This strategy is illustrated in (182), where the language consultant was presented with the passive French clause *La terre a été mouillée par la pluie* ('The ground was made wet by the rain').

(182) bʊ̀sʊ́=mà ìí=ɾʊ̀ lùfùd-ɾé
  ground=DET water=DAT moisten-ADJZ
  'The ground (is/was) wet by the rain.'
  'La terre (est/a été) mouillée par la pluie.'

  In this case, the patient is expressed as the subject of a non-verbal clause, and the agent is expressed with an instrumental oblique in the dative case. The expression of the agent is not obligatory, as illustrated in (183), where no agent is specified.

(183) tàɾgàzú wàɾtɾɛ́
  tàɾgàzí=u wáɾt-ɾɛ́
  branch=DET burn-ADJZ
  'The branch (is/was) burned.'
  'La branche (est/a été) brulé.'

5.9 Suppletive verb roots

  There are several verbs whose roots themselves specify the number of their objects (cf. Lukas 1953:61). Thus, some verbs select only singular objects and others select only plural objects, a phenomenon that König (2008:45) refers to as "verbal plurality." However, this term could be easily confused with pluractional verbs and event plurality. This phenomenon is probably better identified as "verb root suppletion," a term also used by Jakobi & Crass (2004) and Jakobi (2011:87, 93) in the description of Beria (Zaghawa).[72] There are nineteen such suppletive verb roots in my database, all of which are transitives (fifteen are simple transitives, and the remaining four are transitive LVCs). These suppletive verb roots are presented in Table 43.

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[72] Jakobi & Crass (2004:84-87) report suppletive verb roots differing in number of subject, number of object, and aspect. In Dazaga, I have only encountered suppletion related to number of object.

Table 43: Suppletive verb roots (exhaustive list)

Root meaning	Sg. object	Pl. object
'pour, dump, drop'	gáltí	béétí
'expel, drive away'	fɵ́dí	bɔ́ktí
'cause'	tʊnʊ	mugu
'bring'	kòrtí	tògòrtí
'remove'	tìrí	ʃɛ̀rí / tɛ̀hɛ̀rí
'place'	tìnàʊ̌	tùr̀ùrí
'put'	tìnní	tṵ̀ṵ́
'let go, set free'	tòsɔ̀ʊ́	tùf̃ùrí
'retrieve, collect'	tʊ̀ʊ́	wɔ́ɔ̀r

These verbs all have to do with causing or allowing an event, usually having to do with the object(s) going into motion. While some of the pairs of singular/plural stems could conceivably be phonologically related (e.g. [kòrtí] and [tògòrtí]), most are clearly not, and there is no pattern of derivation by which the stem of one number is derived from the stem of the other number.

König (2009:31) suggests that these suppletive verbs roots in Dazaga (as in Mandara and !Xun) follow an ergative pattern, where the number of either the object (when used transitively) or of the single argument (when used intransitively) will determine which root is used, but never the number of the transitive subject. I have not found this to be the case, as none of these verbs can be used intransitively, and so the suppletive root variation is solely determined by the number of the transitive object.

Chapter 6: Structure of the Simple Clause

6. Structure of the Simple Clause

In this chapter, I describe the structure of simple clauses. By "simple clauses" I mean clauses that are monoclausal and include only one verb. For this reason causatives and serial verb constructions are treated elsewhere, in Chapter 8. I also only include here clauses in the indicative mood that do not include special information structuring phenomena. I include here verbs of varying valency, but reserve the description of sentence types, clause combinations, and complex predicates for subsequent chapters (namely, Chapter 7 on sentence types and Chapter 8 on clause combinations and complex predicates).

I begin with a description and analysis of postpositions, adverbs, and case markers, then move to a description of verbal clauses (namely, intransitive, monotransitive, and ditransitive), followed by a description of non-verbal clauses (including clauses with an existential predicate).

6.1 Minor class constituents

6.1.1 Postpositions

As expected for a language with SOV basic word order, Dazaga has postpositions rather than prepositions (cf. e.g. the statistics presented by Hagège 2010:111). Contrary to the general pattern in African languages, and in Nilo-Saharan languages specifically (Creissels et al. 2008:124), Dazaga has a fair number of monomorphemic words that function (mostly or exclusively) as postpositions. Adpositions are rarely "distinguished from other morpheme types or from lexemes by specific structural features" (Hagège 2010:110), and this difficulty in distinction is increased because many adpositions in African languages are historically derived from nouns or verbs (Creissels et al.

2008:124). In this section, I classify morphemes as postpositions if 1) they require a preceding NP (as opposed to adverbs; cf. §6.1.2), 2) they are phonologically free from their preceding NPs (as opposed to the case marker enclitics; cf. §6.2), and 3) their semantic content is roughly in line with the type of meanings typically associated with adpositions (especially spatial and temporal senses; cf. Hagège 2010:257-329).

König (2008:38) states, "Whether the Saharan languages have a case system or not is not uncontroversial" (cf. Hutchison 1981; Cyffer 1983; Jakobi & Crass 2004; Jakobi 2006). She claims that "core and peripheral participants" (referring to terms and obliques) are marked by postpositions, and that such postpositional marking is obligatory for peripheral participants, but optional for core participants (König 2008:38). She concludes that these data allow two possible interpretations. First, perhaps Saharan languages are not case languages at all,[73] since their apparent "case" is expressed by postpositions and is sometimes optional. Or, perhaps they do have case, and this case is expressed by postpositions, an analysis which would be "a rather unusual accusative case system," according to König (2008:39).

The difficulty expressed by König in analyzing the case system of Dazaga (and the Saharan languages more generally) lies primarily in a failure to distinguish between the (phonologically and morphologically free) postpositions (cf. §6.1.1) and the enclitic case markers that mark ergative, accusative, genitive, and dative case in Dazaga (an error also made by Lukas (1953)).[74] Further complications in the analysis arise because patterns of case marking in Dazaga are affected by information structure and animacy as

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[73] König (2008:32) defines a "case language" as "a language with grammaticalized case that is present if case is obligatorily expressed to distinguish at least S, A, and O by the following means: affix, tone, root reduction, accent shift, and/or adpositions."

[74] Blake (2001:9-12) provides a helpful summary of some of the difficulties in distinguishing case markers from adpositions, and notes that phonological boundness is usually a corollary of case markers (as in Dazaga), but not of adpositions. Cf. Kittilä, Västi, & Ylikoski (2011:3): "[Case and adpositions both] express similar functions, e.g. coding semantic roles. However, the two concepts are not identical and there are certain formal differences between them. In principle, case markers are affixes and as such attach tightly to their hosts and may, for example, cause morphophonological changes in them. Adpositions, in turn, are seen rather as independent constituents ..." Interestingly, Dryer (2007b:82-83) claims that the Kanuri morpheme =ga, which marks the "object" NP, is best analyzed as a "postpositional clitic."

well as by grammatical relations and other syntactic matters, as König (2008) rightly recognizes.[75] These complicating matters are further discussed below in §6.2.

Several pieces of evidence support distinguishing case markers from postpositions. First, [ATR] vowel harmony is a crucial phonological distinction between postpositions and enclitic case markers. Since the domain of [ATR] vowel harmony is the phonological word, the vowels of postpositions (unlike the vowels of case enclitics) do not harmonize with the [ATR] value of the vowels of the preceding word as illustrated in (184), where the [−ATR] postposition *bárà* 'after' remains [−ATR] even after the [+ATR] word *ŋífírírù* 'celebration (dat.)'. On the other hand, the dative case enclitic *=rò* becomes [+ATR] *=rù* when it attaches to the [+ATR] root 'celebration'.

(184) ŋífírírù   bárà   dìgìsá   dìgírìm   tìgìsóɔ̀   tàní   dɛ́rìgì
      ŋífírí=rù   bárà   dìgìsá   dìgírìm   Ø-tìgìsó-ɔ́   tàní   d-tɛ́r-gì
      celebration=DAT   after   days   twenty   3-happen-CTNG   1S   1-go-IPFV
      'When twenty days after the celebration have passed, I will go.'
      'Je partirai 20 jours après la fête.'

A second important piece of evidence for the existence of a class of postpositions distinct from case markers is that some postpositions require the noun phrases which they follow to be marked with a particular case marker, such as the dative case, as in example (185), or the accusative case, as in example (186).

(185) jɔ̂m   tɛ́rò   bárà   gìnná   dùgùlí   àgír   kòlòkòlòjìnní
      jɔ̂m   tɛ́=**rò**   bárà   gìnná   dùgùlí   àgír   kòlòkòlò-Ø-j-n-ní
      day   that=**DAT** after   all   lion   donkey   provoke-3.OBJ-3-LV-NEG
      'After that day, the lion no longer provoked the donkey.'
      'Depuis ce jour-là le lion ne provoque pas l'âne.'

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[75] These complications also exist for Kanuri (Hutchison 1986:192, 199), in the description of which Cyffer (1983:201) is reluctant to use the term "case," because it does not strictly mark "inflection or, specifically, declension." To use the term in Kanuri, he says it would have to "include word order, postpositions, semantic criteria" etc. (1983:201). Cf. Kittilä, Västi, & Ylikoski (2011:17-22) for a useful summary of some of the relationships between case and animacy. See also the study by Yamamoto (1999:45-67) on the relationship between animacy and case marking, word order, subject selection, and topicality.

(186) mèɾɛ́=**gà**   òsú   Ø-jɛ́n-Ø
      3S=**ACC**   after   3.OBJ-give-2
      'Follow him.'
      'Suis-le.'

     As many postpositions do not specify the case of the noun phrase they govern, I do not consider this a necessary criterion for considering a word to be a postposition, but it does support the category of postposition, particularly as distinct from the case markers.

     Thirdly, case markers behave differently in relative clauses than postpositions do (cf. §8.3.2). When the object of a postposition is gapped, the postposition must be left stranded, rather than deleted. In the correct sentence, (187), *kúlɔ̀* 'field' is gapped, but *dáá* 'on' is left. When *dáá* 'on' is also deleted, the result is ungrammatical (188).

(187) kúlɔ̀   _____   dáá   jɛ́gɛ̀   níɾò   tɔ́mìɾò   jɔ́bìɾ
      kúlɔ̀   dáá   jɛ́gɛ̀   níɾ=ò   Ø-tɔ́m-ɾ=ò   Ø-jɔ́b-ɾ
      field   on   house 1S.POSS=DET 3.OBJ-build-1=DET 3.OBJ-buy-1
      'I bought the land on (which) I built my house.'
      'J'ai acheté le champ où j'ai construit ma maison.'

(188) *kúlɔ̀   _____   ____   jɛ́gɛ̀   níɾò   tɔ́mìɾò   jɔ́bìɾ
       kúlɔ̀   jɛ́gɛ̀   níɾ=ò   Ø-tɔ́m-ɾ=ò   Ø-jɔ́b-ɾ
       field   house 1S.POSS=DET 3.OBJ-build-1=DET 3.OBJ-buy-1
      ('I bought the land on (which) I built my house.')
      ('J'ai acheté le champ où j'ai construit ma maison.')

     On the other hand, when the noun phrase to which a case marker is cliticized is gapped, the case marker must also be deleted. Thus, in the grammatical sentence (189), the entire instrumental oblique *d͡ʒàná=ɾò* 'with knife' is gapped. When the dative case enclitic (here showing instrumentality) is left stranded, the sentence is ungrammatical (190).

(189) d͡ʒàná   _____   ɔ̀rkáà   jìdíɾù   kíɾ
      d͡ʒàná   ɔ̀rkɔ́=à   Ø-jíd-ɾ=ù   Ø-kí-ɾ
      knife   goat=DET   3.OBJ-kill-1=DET 3.OBJ-break-1
      'I broke the knife (with which) I killed the goat.'
      'Je me suis cassé le couteau avec lequel j'ai tué la chèvre.'

(190) *d͡ʒàná ɾʊ̀ ɔ̀ɾkáà jìdɪ́ɾù kɪ́ɾ
d͡ʒàná =ɾʊ̀ ɔ̀ɾkɔ́=à Ø-jíd-ɾ=ù Ø-kí-ɾ
knife =DAT goat=DET 3.OBJ-kill-1=DET 3.OBJ-break-1
('I broke the knife (with which) I killed the goat.')
('Je me suis cassé le couteau avec lequel j'ai tué la chèvre.')

Oblique postpositional phrases (which are sometimes hard to distinguish from adjunct) tend to precede the object (as do other obliques), as in (191) and (192), where the object and oblique constituents are bracketed and identified as such.

(191) [ɛ́bɛ̀ sʊ́mmà dɨ̀ɾɔ́]OBL [tíná]OBJ déì
ɛ́bɛ̀ sʊ́n=mà dɨ̀ɾɔ́ [tíní-a Ø-j-téi
handbag 3S.POSS=DET in object-P 3.OBJ-3-have
'She has (her) things in her handbag.'
'Elle a des effets dans son sac.'

(192) [kàɾágà dɨ̀ɾɔ́]OBL [ʃílà ɛ̀bɛ̀ɾá]OBJ hàŋɪ̂ɾ
kàɾágà dɨ̀ɾɔ́ ʃílì-a ɛ̀bɛ̀ɾí=a hák-Ø-n-ɾ
bush in egg-P turtledove=GEN.P find-3.OBJ-LV-1
'In the bush, I found eggs of a turtledove.'
'Dans la brousse j'ai eu les oeufs d'une tourterelle.'

While locative oblique postpositional phrases frequently follow the subject (if explicit), as in (193) and (194), temporal adjunct postpositional phrases more commonly precede the subject, as in (185) and (195).

(193) [àɾìí áì]SUBJ [dàʊ́ dáá]OBL dòbbú dànní
àɾìí áì dàʊ́ dáá dòbbú Ø-j-téi-ní
woman this head on thick.braid 3.OBJ-3-have-NEG
'This woman doesn't have a thick braid on (her) head.'
'Cette femme n'a pas de grosse tresse sur la tête.'

(194) [ŋáɾàm]SUBJ [ìí dɨ̀ɾɔ́]OBL t͡ʃʊɾʊʊní
ŋáɾàm ìí dɨ̀ɾɔ́ j-tʊɾʊʊ-ní
crocodile water in 3-leave-NEG
'Crocodiles don't leave the water.'
'Le crocodile ne sort pas dans l'eau.'

(195) [ką́ą̀gʊ́ tˈrɔ̌n dɨ̀rɔ́]_{AJCT} [dáúdà]_{SUBJ} èrɨ̀ʃí gìsɨ́gì
     ką́ą̀gʊ́ tˈrɔ̌n dɨ̀rɔ́ dáúdà èrɨ̀ʃí Ø-j-kís-gì
     week one in (name) voyage 3.OBJ-3-do-IPFV
     'In one week, Daouda will go on a trip.'
     'Daouda va voyager dans une semaine.'

However, when a locative postpositional phrase is used in existential clauses (as opposed to non-existential clauses), it usually occurs first in the clause, before the subject and existential predicate, as illustrated in (196).

(196) [d͡ʒérdɨ̀l áì dɨ̀rɔ́]_{OBL} ìí t͡ʃɪ́í
     d͡ʒérdɨ̀l áì dɨ̀rɔ́ ìí Ø-t͡ʃɪ̌(g)
     bucket this in water 3-be
     'There's water in this bucket.'
     'Il y a de l'eau dans ce seau.'

Examples (197) and (198) illustrate two more postpositions, while Table 44 presents a sample of Dazaga postpositions.

(197) màrá t͡ʃúú kʷî gódù
     màrá t͡ʃúú kʷî Ø-gó-t
     3P two between 3-fight-P
     'The two of them fought between themselves.' [lit. 'Between them two, they fought.']
     'Ils se sont bagarrés entre eux.'

(198) jɛ́gàà kàsʊ́gò kʊ̀lɔ́gɔ̀ t͡ʃɪ́í
     jɛ́gɛ̀=à kàsʊ́gò kʊ̀lɔ́gɔ̀ Ø-t͡ʃɪ̌(g)
     house=DET market next.to 3-be
     'The house is next to the market.'
     'La maison est à côté du marché.'

Table 44: Sample listing of postpositions

POSTPOSITION	GLOSS(ES)	POSTPOSITION	GLOSS(ES)
báɾà	'after'	kíì	'with'
círè	'alongside'	kìncí	'without'
dáá	'on'	kʷî	'between'
dìɾɔ́	'in'	kòlɔ́gɔ̀	'next to, beside'
fí	'under'	làɵ̌	'toward'
kɛ́gɛ́	'like'	ŋùllí	'above, over'

6.1.2 Adverbs

I use the term "adverb" here to refer to "modifiers of constituents other than nouns" (Schachter & Shopen 2007:20), including words that modify single words and words that modify whole sentences. I do not deal here in any depth with adverbial clauses (see §8.2.4), though I will comment briefly below on adverbs formed with the dative case enclitic =ɾò, and adverbial phrases formed using the homophonous subordinator =ɾò.[76]

Dazaga has fewer than fifty underived adverbs (in my database), all of which are monomorphemic. These include adverbs of manner (199), time (200), place (201), degree (202), and sentence modifiers (203). Of underived adverbs, those of time are the most numerous in my data, as illustrated below. Most other types of underived adverbs are few in number.

(199) [mòdíɾà]   'voluntarily, purposely'
      [bíɾè]   'by foot'
      [dèɾí]   'without cause'
      [dúɾúdúɾú]   'successively'
      [gúm]   'silently'
      [ɔ̀gɔ̀ní]   'again'

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[76] I think it is quite likely that the subordinator =ɾò is a grammaticalization of the dative case enclitic =ɾò, similar to that described for Kanuri and Ik by Heine (1990). In this case, the distinction between "dative" and "subordinator" is not really a distinction in morphemes (at least historically), but a distinction in usages of the same morpheme.

(200) [érè]   'currently'
      [ónnú]   'now'
      [kúllúm]   'all the time, all day'
      [ŋàɾdó]   'in past days'
      [óŋkɔ̀]   'previously'
      [ŋòskí]   'yesterday'
      [nòŋú]   'recently'
      [ànɔ̀ɔ́]   'for a while'
      [àwòɾɛ́]   'day after tomorrow'
      [bɛ̀ɾkɛ́]   'next year'
      [ʃéméʃĩ́]   'early'
      [dàjìɾɛ́]   'very early'
      [dɛ̀ɾègɛ́]   'later, lastly'
      [dímán]   'always, every day'
      [d͡ʒúkùɾ]   'never, not at all'
      [kóólì]   'never'

(201) [óttù]   'there'
      [kònnónà]   'everywhere'

(202) [àddí]   'a little'
      [búɾò]   'very'
      [bɛ́s]   'only'

(203) [bálìk]   'maybe'

     Some adverbs, for example *búɾò* 'very', can modify adjectives (204), verbs (205), and verb phrases (206).

(204) jíní   áì   búɾò   kàɾànnɛ́
      jíní   áì   búɾò   kàɾàn-ɾɛ́
      meat   this   very   fat-ADJZ
      'This meat (is) very fatty.'
      'Cette viande est très grasse.'

(205) ámmá   cúú   áɾá   búɾò   bèɾkéìntù
      ámmá   cúú   áɾá   búɾò   bèɾké-j-n-t
      people two   these much   dispute-3-LV-P
      'These two men disputed a lot.'
      'Ces deux hommes ont beaucoup disputé.'

(206) à̰ọ̰́   ái   bóɾò   hám   déî
      à̰ọ̰́   ái   bóɾò   hám   Ø-j-téî
      man   this   much   worry   3.OBJ-3-have
      'This man worries a lot.' [lit. 'This man has worry a lot.']
      'Cet homme a trop de soucis.'

    Beyond the small number of underived adverbs, adverbs (especially of manner) are productively formed by attaching the dative case enclitic =*ɾ*ʊ̀ to an adjective (Jourdan 1935:30; Lukas 1953:170; LeCoeur & LeCoeur 1956:50), as illustrated in (207), to a postpositional phrase (208), and, in a few cases, to a noun (209).

(207) /eskí=**ɾu**/   'new=DAT' / 'newly'
      /gálɪ=**ɾʊ**/   'good=DAT' / 'well'
      /kɔ́ɾɛ́=**ɾʊ**/   'short=DAT' / 'quickly'
      /kálkál=**lʊ**/   'equal=DAT' / 'equally'
      /wʊdʊ́=**ɾʊ**/   'bad=DAT' / 'badly'

(208) áʃǐ   kìnt͡ʃíɾò   góɾò   dùɾtùní
      áʃǐ   kìnt͡ʃǐ=**ɾò**   góɾò   d-túɾ-t-ní
      provision   without=**DAT**   able.to   1-leave-P-NEG
      'We can't leave without provisions.'
      'Nous ne pouvons pas partir sans provision.'

(209) /t͡ʃǐ=**ɾu**/   'mouth=DAT' / 'orally' (?)
      /kiʃí=**ɾu**/   'speed=DAT' / 'quickly'

    I do not consider =*ɾ*ʊ̀ in these cases to be a distinct derivational suffix, but rather to be a use of the dative case enclitic =*ɾ*ʊ̀. I have analyzed a homophonous enclitic =*ɾ*ʊ̀, as a subordinator, rather than as the dative case enclitic, since it attaches to whole clauses to make them subordinate adverbial clauses (cf. §8.2.4), as illustrated in (210) and (211).

(210) jégàà   dúɾtùrù   màrá   àgòzʊ́ʊ́   t͡ʃǐkkí
      jégà=à   d-túɾ-tù=**rù**   màrá   àgòzʊ́ʊ́   Ø-t͡ʃǐg-t
      house=DET   1-leave-P=**SUB**   3P   three   3-be-P
      '(When) we went (to their) houses, they were three [i.e. 'there were three of them'].'
      'Quand on est allé chez lui ils étaient trois.'

(211) gèìdám bàràntîɾɾò   àgʊ́ féɾúù t͡ʃíɾè   gìrdô
       gèìdám bàɾà-Ø-n-t-ɾ=**ɾ̀ò**   àgʊ́ féɾú=ù t͡ʃíɾè   t-gíɾ-t
       (name) search-3.OBJ-LV-P-1=**SUB**   then river=DET on.the.edge.of 1-arrive-P
       '(When) we found Geidam, then we arrived at the edge or the river.'
       'A Geidam nous sommes arrivés au bord du fleuve.'

6.2 Case markers

In Dazaga, the four case markers are =*ì* for ergative case, =*gà* for accusative case, =*ò̀*, =*à*, =*ŋà* for genitive case, and =*ɾò̀* for dative case. These case markers (especially the ergative, and, to a lesser degree, the accusative) in Dazaga, and parallel enclitics in other Saharan languages, have been variously analyzed. In the analysis which I propose, Dazaga exhibits a tripartite system of case marking for transitive subjects, intransitive subjects, and primary objects of transitive verbs. Each of the four case markers will be dealt with in more depth in the following sections.

6.2.1   Ergative case enclitic =*ì*

The ergative case enclitic =*ì* only occurs (unambiguously) on the subject NP constituent in a transitive clause, but is not obligatory for subjects of transitive clauses. The form [ì] occurs on [+ATR] stems and [ì] on [−ATR] stems. I analyze =*ì* as an optional ergative case marker (cf. McGregor 2009:493-497), in full accord with the analysis proposed by Wolfe & Adam (2015) for Beria =*gu*. It is optional in the sense that is does not obligatorily occur on all ergative constituents, but rather occurs only as conditioned by a number of factors, as described below. As mentioned above, this yields a tripartite system of case marking for transitive subjects, intransitive subjects, and primary objects of transitive verbs.[77] Thus, ergative constituents are (optionally) marked =*ì*, single arguments of intransitive verbs are invariably marked =*Ø*, and accusative constituents are (optionally, except in the case of free pronouns) marked =*gà*.

Previous literature on Dazaga (Jourdan 1935; LeCoeur & LeCoeur 1956) has largely ignored the ergative case enclitic, though Lukas (1953:164) does deal with it

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[77] This same tripartite system, with almost identical morphemes, is claimed for Kanuri by Bondarev et al. (2011).

briefly, calling it "a postposition for denotating the subject" (*eine Postposition zur Bezeichnung des Subjekts*).

My tripartite analysis of subject and primary object marking suggests that seemingly intransitive instances of the verb *tòɓàrí* 'to speak, say', when they take ergative-marked subjects, are actually transitive, with the third person object prefix Ø-. This interpretation is illustrated in (212), where the verb is marked as agreeing with a third person object (evidently the implicit speech content).

(212) árórò   té   kégé   tórkóì   faroŋarɛ
      áró=rò   té   kégé   tórkó=ì   Ø-j-fár=ŋa-ré
      goat=DAT   that   like   jackal=**ERG**   3.OBJ-3-say=?=ADJZ

      àgó   tórkórò   áróì   farıgırɛ   "..."
      àgó   tórkó=rò   áró=ì   Ø-j-fár-gì-ré   "..."
      then   jackal=DAT   goat=ERG   3.OBJ-3-say-IPFV-ADJZ
      'When the jackal had spoken like that to the goat, the goat said to the jackal: "..."'

Lukas (1953:165) gives the following example (word glosses and English translation added), in which =*yi* (that is, =*ì*) marks a NP constituent that functions as the subject of both an intransitive verb and a transitive verb, which would suggest that =*ì* might be a nominative marker, and not an ergative marker.

(213) anyíma   **yi**   ɛrcí   wudén   ga   góyi
      the.man   **NOM**   3.rise   gazelle   ACC   3.take
      'Der Mann erhob sich und nahm die Gazelle.'
      'The man rose and took the gazelle.'

However, this seemingly problematic occurrence of =*ì* can be accounted for in two ways. First, it is possible that this is a mistranscription, especially since the verb *jèrtí* 'rise, get up' in Lukas' transcription is missing the initial [j]. Thus, the sentence could be retranscribed as in (214), in which there is no occurrence of the ergative case enclitic.

(214) àɲìímà   jèrt͡ʃì   wídéngà   góì
      àɲìí=mà   jèrt-j   wídén=gà   gó-Ø-j
      man=DET   rise-3   gazelle=ACC   take-3.OBJ-3
      'The man rose and took the gazelle.'

Alternately, if the presence of the ergative case enclitic is assumed, as in (215), this may simply be a case of "ergative hopping" (cf. Haviland 1979:154-155; McGregor 1988:46; etc.). "Ergative hopping" refers to ergative case marking of a noun phrase which functions simultaneously as the subject of an intransitive verb and the subject of a transitive verb (e.g. when verb phrases are coordinated).

(215) àɲìímàì   jɛ̀r͡tʃí wídɛ́ngà gɔ́ì
   àɲìí=mà=ì   jɛ̀rt-j wídɛ́n=gà gɔ́-Ø-j
   man=DET=**ERG** rise-3 gazelle=ACC take-3.OBJ-3
   'The man rose and took the gazelle.'

Notably, such ergative hopping or "anticipatory" ergative marking (McGregor 2011:168) has already been identified in Beria (Wolfe & Adam 2015), and I take example (215) to be an occurrence of the same phenomenon in Dazaga.

Rather than simply marking the grammatical relation "transitive subject," the distribution of the ergative case enclitic is conditioned by a number of factors, not all of which can be fully explored in the present study. Below I list and illustrate the environments (sometimes overlapping) that most commonly correlate with, and probably trigger, the use of the ergative case enclitic. Many of these environments are mentioned in previous studies of the parallel enclitics in Kanuri (=jɛ) and Beria (=gu), and, in such cases, I give the references to the studies that mention the environments. Significantly, these factors are cross-linguistically common in conditioning the distribution of optional ergative markers (cf. McGregor 1992, 2009).

First, =ì marks highly agentive subjects of transitive verbs (Bondarev et al. 2011; Hutchison 1986; Wolfe & Adam 2015). This is illustrated in (216) and (217).

(216) gʷɔ̀ní   nʊ́mmà   áríí   dànnɔ́
      gʷɔ̀ní   nʊ́m=mà   áríí   Ø-j-téi-ní=ɔ̀
      camel   2S.POSS=DET mark   3.OBJ-3-have-NEG=CNTG

      wúɾàì   gɔ̀ìntígì
      wúɾè-a=ì   gɔ́-Ø-j-n-t-gì
      thief-P=ERG   take-3.OBJ-3-LV-P-IPFV
      'If your camel doesn't have a brand mark, thieves will take (it).'
      'Si ton chameau n'a pas de marque, les voleurs vont le prendre.'

(217) éskɨɾ   tⁱɾáì   éríɾù   ɔsɔ́n   dɨɾɔ́   t͡ʃúbù
      éskɨɾ   tⁱɾá=ì   érí=ɾù   ɔsɔ́n   dɨɾɔ́   Ø-j-júb
      soldier INDF=ERG spear=DAT side   in   3.OBJ-3-pierce
      '(The day they killed the prophet Jesus,) a soldier pierced his side with a spear.'
      '(Le jour où Isa est mort,) un soldat l'a piqué avec une lance sur la côte.'

     The ergative case marking on highly agentive subjects of transitive verbs contrasts with the absence of the ergative case marking on subjects with low agentivity. The absence of the ergative case marking on subjects of low agentivity is illustrated in (218) to (220), where neither *à̰ʊ́ áì* 'this man', nor *kὲwáà* 'the mat', nor *dàʊ́* '(my) head' receive ergative case marking.

(218) à̰ʊ́   áì   ìní   wʊ́ŋà   bùbúì
      à̰ʊ́   áì   ìní   Ø-j-bʊ́=ŋà   bùbú-Ø-j
      man   this thing 3.OBJ-3-bite=REL vomit-3.OBJ-3
      'This man vomited what he ate.'
      'Cet homme a vomit ce qu'il a mangé.'

(219) kὲwáà   bùɾgòú   déì
      kὲwɛ́=à   bùɾgòú   Ø-j-téì
      mat=DET   dust   3.OBJ-3-have
      'There is dust on the mat.' [lit. 'The mat has dust.']
      'Il y a de la poussière sur la natte.'

(220) dàʊ́   d͡ʒìzɛ̀ntʊ́gì
      dàʊ́   d-j-zɛ̀ntʊ́-gì
      head   1.OBJ-3-hurt-IPFV
      'My head is hurting me.' [free: 'I've a headache.']
      'J'ai mal à la tête.'

Second, the occurrence of *=ì* often correlates with an unlikely, or low-animacy, agent (Bondarev et al. 2011; Hutchison 1986; Cyffer 1983), as illustrated in (221) and (222). Often this includes agents that are lower in animacy than the object, as shown in (223) and (224).

(221) à̰ǵ̰ò   áì   dílìmì   káá   sínà   góɾò
      à̰ǵ̰ò   áì   dílìm=ì   kɛ́ɛ́-a   sín-a   Ø-j-kóɾ
      man   this   leprosy=ERG   hand-P   3S.POSS-P   3.OBJ-3-cut
      'This man, leprosy cut his hands.'
      'Cet homme, la lèpre lui a coupé ses mains.'

(222) dɔ́mɔ́ɾò   d͡ʒàŋú   òwɔ́nì   góìŋì
      dɔ́mɔ́ɾ=ò   Ø-d͡ʒàŋú-Ø   òwɔ́n=ì   gó-Ø-j-n-gì
      palm.stamen=DET   3.OBJ-close.IMV-2   wind=ERG   take-3.OBJ-3-LV-IPFV
      'Close the palm stamen; the wind will take (it).'
      'Ferme le pollen; le vent va le prendre.'

(223) kùɾùkùɾúì   dìgí   dáá   wóì
      kùɾùkùɾú=ì   dìgí   dáá   Ø-j-bó
      insect.type=ERG   foot   on   3.OBJ-3-bite
      'The insect stung him on the foot.'
      'Le tique l'a piqué au pied.'

(224) àgíɾì   èɾkéllìɾò   d͡ʒàú
      àgíɾ=ì   èɾkéllì=ɾò   d-j-báb
      donkey=ERG   kick=DAT   1.OBJ-3-hit
      'The donkey struck me with a kick.'
      'L'âne m'a donné un coup par derrière.'

In cases where the subject of a transitive verb is human, and thus a likely agent, but is not highly agentive, the ergative case marker is absent, barring other factors. This is illustrated in (218), above, and in (225).

(225) dòú   sɔ́mmà   àɲìí   dànní
      dòú   sɔ́n=mà   àɲìí   Ø-j-téi-ní
      girl   3S.POSS=DET   husband   3.OBJ-3-have-NEG
      'His girl doesn't have a husband.'
      'Sa fille n'a pas de mari.'

These first two uses of the ergative case enclitic could be lumped together as "marked agentivity," that is high agentivity or unexpected agentivity.

Third, =ì is very frequently used to mark the subject NP of a speech verb followed by a direct or indirect quote (Hutchison 1986; Wolfe & Adam 2015). Hutchison (1986:201) reports that this quotative use of the parallel Kanuri enclitic =jɛ is in fact now the only usage of that enclitic in most dialects of Kanuri (namely, Bilma, Dagera, Fashi, Kuburi, Manga, Sugurti, and Tumari). The quotative use of =ì is illustrated in (226), (227), and (228).

(226) haɪwanʊòì   mòráɾò   faɾɪgɪɾɛ   "..."
      haɪwanʊ=ò=ì   mòrá=ɾò   Ø-j-fáɾ-gɪ-ɾɛ   "..."
      monster=DET=**ERG** 3P=DAT   3.OBJ-3-say-IPFV-ADJZ
      'The monster said to them, "..."'

(227) àgʊ́ kʷòí téɾò   àsàíbàì   fattɪgɪɾɛ   "..."
      àgʊ́ kʷòí té=ɾò   àsàíbà=ì   Ø-j-fáɾ-t-gɪ-ɾɛ   "..."
      then place that=DAT prophet's.entourage=**ERG** 3.obj-3-say-P-IPFV-ADJZ
      'Then, at that place, the prophet's disciples said, "..."'

(228) állàì   kìzên   kìsìm-mí   jí
      állà=ì   kìzên   Ø-kís-m-ní   jí
      God=**ERG** adultery 3.OBJ-do-2-NEG 3.say
      'God told you not to commit adultery.' / 'God said you shouldn't commit adultery.'
      'Dieu a dit de ne pas faire l'adultère.'

When a verb of speech is used without a following (direct or indirect) quote, the ergative case marking is absent, as illustrated in (229).

(229) ábbà   níɾò   mʊ́   d͡ʒòfànní
      ábbà   níɾ=ò   mʊ́   d-j-fáɾ-ní
      father   1S.POSS=DET falsehood 1.OBJ-3-speak-NEG
      'My father doesn't speak falsehood to me.'
      'Mon père ne me ment pas.'

Fourth, =ì is used to mark subject noun phrases (Jakobi 2006; Wolfe & Adam 2015) when they are optionally moved to an immediately preverbal position. Section 7.7 deals with this usage in more detail. An example of this use of the ergative case enclitic is

illustrated in (230), where 'sparrowhawk' is italicized in the free translation to indicate focus.

(230) kɔ̀gʷɔ́jà   nɔ́mmà   èlíîɨ̀   gɔ́ì
      kɔ̀gʷɔ́jɛ̀-a   nɔ́m=mà   èlíí=ɨ̀   gɔ́-Ø-j
      chicken-P   2S.POSS=DET   sparrowhawk=**ERG**   take-3.OBJ-3
      'A *sparrowhawk* took your chickens.'
      'Un épervier a pris ta poule.'

A fifth possible factor is activation status, and possibly other discourse-related issues. Bondarev et al. (2011) and Wolfe & Adam (2015) investigate this factor in some depth for Kanuri (cf. also Hutchison 1986) and Beria, respectively. Discourse factors are outside the scope of the current study, and, due to limited space and data, I cannot demonstrate here whether and to what extent various discourse phenomena affect the distribution and function of the ergative case enclitic *=ì*.

The use of the term "ergative" to describe the enclitic *=ì* is not uncontroversial. Aside from Saharan verb systems, the distribution and function of the ergative case enclitic and its equivalents in other Saharan languages is perhaps the most widely discussed issue in Saharan linguistics, and there is considerable disagreement on how exactly to analyze these enclitics.

The parallel Kanuri enclitic *=jɛ* was described as a "nominative" case marker in the earlier accounts (Koelle 1854:161; Lukas 1937:17). Later analyses have tended to abandon a "case marking" analysis or to at least expand and qualify the idea of "case marking." Thus, Hutchison (1981:215) states that "Kanuri does not have a case marking system," and analyzes *=jɛ* as a postposition that indicates that the subject is the "agent" or "source" of the action of the verb. Cyffer (1983:201) also questions whether it is best to analyze Kanuri as having a case system, and clarifies that if "case" is used to describe particular enclitics, it would have to be qualified to include factors such as word order and semantic criteria. He concludes that the "degree of active participation in the action" (1983:194) is the determining criterion in predicting the occurrence of *=jɛ*.[78] In a later

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[78] Cyffer's sketch of Kanuri (1998a) does not deal with the "case marking" enclitics as such.

study (1986), Hutchison reverts to referring to =jɛ and certain other enclitics as "case markers," and claims (1986:201) that (in the Yerwa dialect), =jɛ functions (primarily) to "denote transitive NP subjects as semantic agents," but also occurs on subjects of intransitive verbs in certain narrative discourses.[79] In the most recent and complete study of the Kanuri "case" system, and of =jɛ in particular, Bondarev et al. (2011:32) find that multiple factors condition the distribution of =jɛ, including "inherent agential properties of the referent," "lexical semantics of the verb," and the "discourse-related cognitive status" of the subject NP. The distribution of the Dazaga enclitic =ì seems to be influenced by many of these same factors, but the enclitic is not used to mark subjects of intransitive clauses, as it is claimed to in Kanuri (Bondarev et al. 2011:49; Hutchison 1986:201; Cyffer 1983:194).[80]

Though the literature on the parallel Beria (Zaghawa) enclitic =gu is not as extensive as the literature on the Kanuri case system, the disparity of analysis is hardly less pronounced. The enclitic =gu attaches to subjects of transitive verbs in certain situations, and Jakobi & Crass (2004:151) analyze it as a "focalizer" (*focalisateur*) and claim that it focuses the agent of a transitive clause. They find that another enclitic, =di, focuses the single argument of an intransitive verb or the patient of a "weakly transitive" (*caractérisée par un faible degré de transitivité*) predicate (2004:152), thus completing a fully ergative-absolutive system of focus markers. Jakobi (2006) follows basically the same analysis, further claiming (and demonstrating) that =gu and =di can co-occur in a clause. Wolfe & Adam (2015) argue that =gu is actually an optional ergative case marker whose distribution and function is conditioned by multiple factors. They re-analyze =di as a specificational copula and not as a focal or case marker.

Thus the distribution and function(s) of the enclitic =ì in Dazaga share some of the features of the parallel enclitic in Kanuri, and are fully parallel to the distribution of Beria =gu as described and analyzed in Wolfe & Adam (2015).

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[79] It is possible that some of these occurrences may be explained as instances of ergative hopping.
[80] Though Hutchison (1981:215) notes that =ye is "almost totally restricted to transitive sentences."

6.2.2   Accusative case enclitic *=gà*

The accusative case enclitic *=gà* is used to mark the primary object of a transitive verb (and sometimes the secondary object of a ditransitive verb), but is not obligatory and often does not appear on primary objects when the primary object constituent is clearly identifiable from the order of constituents in the clause, as in (231).

(231) t͡ʃègèní   sómmà   èzá   t͡ʃúú   déî
       t͡ʃègèní   són=mà   èzí-a   t͡ʃúú   Ø-j-téi
       lute   3s.POSS=DET string-P   two   3.OBJ-3-have
       'His lute has two strings.'
       'Sa luth a deux cordes.'

However, when the primary object is an independent pronoun, the accusative case enclitic is obligatory (cf. Lukas 1953:160), as demonstrated in (232) and (233). Interestingly, this asymmetrical distribution of case, where accusative case is obligatory on object pronouns, but not on full NP objects, is analogous to the the majority pattern of morphological case-asymmetry, where "the locus of case-asymmetry is overwhelmingly the personal pronouns" (Iggesen 2011:247).

(232) mèɾé**gà**   dàázò̀
       mèɾé=**gà**   d-báz
       3s=**ACC**   1-hear
       'I heard him/her/it'

(233) *mèɾé   dàázò̀
       *mèɾé   d-báz
       3s   1-hear
       ('I heard him/her/it')

I have not been able to identify the factors that determine the distribution of the accusative case enclitic. Differential object marking is typically linked to variation in animacy, definiteness, or specificity (e.g. cf. Malchukov & Swart 2011:345). However, variation in these parameters does not predict the variable accusative case marking attested in Dazaga.

Thus, in (234), the object *wínúù* 'the book' is inanimate, whereas, in (235), the object *dèéŋì nírò* 'my brother' is animate. Yet in each example the object can optionally take accusative case marking, suggesting that animacy does not determine the distribution of the accusative marker.

(234) wínúù(gà)   kútùbùɾù   kòfùnnír
       wíní=u(=**ga**)   kútùb=u=ɾu   kofu-Ø-n-ɾ
       fire=DET(=**ACC**)   book=DET=DAT   fan-3.OBJ-LV-1
       'I fanned the fire with the book.'
       'J'ai eventé le feu avec le cahier.'

(235) dèéŋì   nírò(gà)   kútùbùɾù   kòfùnnír
       dèéŋì   nír=ʊ(=**ga**)   kútùb=u=ɾu   kofu-Ø-n-ɾ
       brother   1S.POSS=DET(=**ACC**)   book=DET=DAT   fan-3.OBJ-LV-1
       'I fanned my brother with the book.'
       'J'ai eventé mon frère avec le cahier.'

In (236), *kɔ̀gʷɔ́jɛ̀* 'chicken' is non-specific (indicated by the lack of an article), whereas, in (237), *kɔ̀gʷɔ́jɛ̀ tɨɾá* 'a chicken' is specific (indicated by the presence of the indefinite, but specific, article *tⁱɾá*). Yet, again, each can optionally take the accusative case enclitic.

(236) kíḭ̀ì   kɔ̀gʷɔ́jɛ̀(gà)   gɔ̀ì
       kíḭ̀=ì   kɔ̀gʷɔ́jɛ̀(=**ga**)   gɔ́-Ø-j
       bush.cat=ERG   chicken(=**ACC**)   take-3.OBJ-3
       'The bush cat took a [non-specific, indefinite] chicken.'
       'Le chat de brousse a pris une poule.'

(237) kíḭ̀ì   kɔ̀gʷɔ́jɛ̀   tⁱɾá(gà)   gɔ̀ì
       kíḭ̀=ì   kɔ̀gʷɔ́jɛ̀   tⁱɾá(=**ga**)   gɔ́-Ø-j
       bush.cat=ERG   chicken   INDF(=**ACC**)   take-3.OBJ-3
       'The bush cat took a [specific, indefinite] chicken.'
       'Le chat de brousse a pris une poule.'

Regarding definiteness, a comparison of (234) or (235) with (237) demonstrates that an object noun phrase can optionally take accusative case marking whether it is definite or indefinite. Thus, none of the three most common determiners of differential

object marking determine the distribution of the accusative case enclitic in Dazaga. Further research will be required to determine the motivating factors behind these differential object marking patterns.

The accusative case enclitic has two phonetic forms, [gà] and [ŋà], the latter of which is homophonous with one of the forms of the genitive case enclitic and with the relativizer =ŋà, but functionally distinct from each of these.

This variation between [gà] and [ŋà] is observed when the enclitic attaches to the same word, as illustrated in (238) and (239), where either [gà] or [ŋà] may attach to the pronoun *mèɾɛ́*. This suggests that the variation between [gà] and [ŋà] is not phonologically conditioned.

(238) mèɾɛ́=**gà**   òsú   Ø-jɛ́n-Ø
      3S=**ACC**   after   3.OBJ-give.IMV-2
      'Follow him.'
      'Suis-le.'

(239) mèɾɛ́**ŋà**   fíɾíɾò   t͡ʃʊ́bò   t͡ʃìɾû
      mèɾɛ́=**ŋà**   fíɾí=ɾò   Ø-j-jʊ́b   Ø-j-jíd
      3S=**ACC**   arrow=DAT   3.OBJ-3-pierce   3.OBJ-3-kill
      'He killed it with an arrow.'
      'Il l'a tué avec une flèche.'

This variation is found even with objects of the same verb, as illustrated in (240) and (241), where the verb *tàʊ́* takes an object marked by [gà] or [ŋà]. This suggests that the distribution of [gà] and [ŋà] is not lexically specified by the verb.

(240) tàní   mèɾɛ́**gà**   báàɾ
      tàní   mèɾɛ́=**gà**   Ø-báb-ɾ
      1S   3S=**ACC**   3.OBJ-hit-1
      'It was I who hit him.'
      'C'est moi qui l'ai frappé.'

(241) à̰ʊ́   ái**ŋà**   gìɾtí   dáá   wǎb
      à̰ʊ́   ái=**ŋà**   gìɾtí   dáá   Ø-báb-Ø
      man   this=**ACC**   neck   on   3.OBJ-hit.IMV-2
      'Hit this man on the neck.'
      'Frappe cet homme sur la nuque.'

In reviewing transcribed sentences in which the accusative case enclitic was variously transcribed as [gà] or [ŋà], my language consultant stated that it should always be written as =gà, which suggests that =gà is likely the underlying form of the enclitic, and that [ŋà] is either a variant in fast speech or an idiolectical or dialectical variation of =gà.

6.2.3   Genitive case enclitic =ò, =à, =ŋà

The genitive case enclitic has three forms: =ò, =à, and =ŋà. The forms =ò and =ŋà differ from =à in number, with =ò or =ŋà used when the possessum is singular, and =à used when the possessum is plural, as illustrated in (242) to (244).

(242) jɛ́gɛ̀   gòdú**ù**   déì
      jɛ́gɛ̀   gòdú=**ù**   Ø-j-téi
      house   clay=**GEN.S**   3.OBJ-3-have
      'He has a house of clay.'
      'Il a une maison en banco.'

(243) dínè   únnɔ́=**ŋà**   zòntɔ́
      world   now=**GEN.S**   bad
      'The present world (is) bad.'
      'Ce monde actuel est mauvais.'

(244) jálà   dùròú   nírò**à**   tàŋɔ́ŋà   dífí   sɔ́ntɔ́
      jálì-a   dùròú   nír=ò=**à**   tàŋɔ́=ŋà   dífí   sɔ́ntɔ́
      child-P older.sister 1S.POSS=DET=**GEN.P**   1S.POSS=GEN.S   mat.uncle 3P.POSS
      'The children of my older sister, (I'm) their uncle.'
      'Je suis l'oncle des enfants de ma grande soeur.'

As with other affixes and enclitics, the genitive case enclitics harmonize with the [ATR] value of the possessor (with [a] transparent to [ATR] harmony).

It is not easy to determine the semantic distinction between =ò and =ŋà. Of this distinction, Lukas (1953:37) states, "a difference in meaning between the two cannot be detected" (*ein Unterschied in der Bedeutung der beiden läßt sich nicht feststellen*). In an analysis of over sixty occurrences of these genitive case enclitics, I was able to determine

strong tendencies, but no exceptionless rules that would completely predict the distribution of the various genitive enclitics.

Thus, =ŋà occurs when the genitive NP is specific (examples (245) and (246)),[81] and =ʋ̀ when the genitive NP is nonspecific (example (247) and (248)). The plural =à occurs whenever the possessum is plural, regardless of specificity.

(245) gʷònûn   láɾdʋ̀=**ŋà**   Ø-gásʋ̀-Ø
      law   country=**GEN.S**   3.OBJ-obey.IMV-2
      'Obey the law of the country.'
      'Il faut obéir à la loi du pays.'

(246) dɨ̀ɾdɛ́   ŋɛ́gɨ̀=**ŋà**   máɨ̀   úmàɾà
      chief   (place)=**GEN.S**   (name) (name)
      'The chief of N'guigmi (is) Mayi Umara.'
      'Le chef de N'guigmi est Maï Oumara.'

(247) áɨ̀   búrú   kʋ́ɾʋ́=**ʋ̀**
      this   hole   rat=**GEN.S**
      'This (is) the hole of a rat.'
      'Ça, c'est un trou d'une souris.'

(248) kòlú   gʋ́bálkà**ʋ̀**   dàgɨ̀ɾdí
      kòlú   gʋ́bálkì-a=**ʋ̀**   Ø-dák-ɾ-dí
      sauce   okra-P=**GEN.S**   3.OBJ-want-1-NEG
      'I don't want okra sauce.'
      'Je ne veux pas la sauce du gombo.'

Despite these strong tendencies, some occurrences do not seem to fit these patterns, and may indicate that factors other than specificity partially determine the distribution of =ʋ̀ and =ŋà. First, in (249), =ʋ̀ is used with a genitive NP whose referent is clearly specific given the presence of the article =ma (cf. §4.1.5; notably, this is the only exception I found to the distributional pattern of =ʋ̀). Furthermore, =ŋà is frequently used in generic statements where the referent of the genitive NP seems to be nonspecific,

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[81] Kevin Walters (p.c.) suggests that the genitive =ŋà may be a combination (at least semantically, if not etymologically), of the genitive case =(g)ʋ and the determiner =ma. Lukas (1953:163) claims that =ŋà is "a genitive postposition of demonstrative origin" (*eine genitivische Postposition demonstrativen Ursprungs*).

as illustrated in (250). However, since natural kinds (which are generics; cf. Kearns (2000:138)) often function as specific, referential noun phrases, (250) is perhaps not an exception to the pattern (cf. Kroeger 2014b:3).

(249) tàní   ná   kòséè   nɨ́ɨ́màɔ̀   bàɾànîɾ
       tàní   ná   kòséè   nɨ́ɨ́=mà=**ɔ̀**   bàɾà-Ø-n-ɾ
       1s   also   councilor   town=DET=**GEN.S**   search.for-3.OBJ-LV-1
       'I also sought to become a councilor of the town.'
       'Moi aussi j'ai cherché à être conseiller de la ville.'

(250) fʊ́rcì   gʷɔ̀ní=**ŋà**   tùkùlí
       dung   camel=**GEN.S**   round
       'Camel's dung (is) round.'
       'La bouse du chameau est rond.'

Furthermore, evidence from various language consultants suggests that the distribution of =ɔ̀ and =ŋà may be at least partly determined by idiolectical (and possibly dialectical) factors. Specifically, I took several sentences from one language consultant, switched out =ɔ̀ for =ŋà, and presented these modified sentences, as well as the French gloss of the original sentence, to a second language consultant. The second language consultant sometimes found the modified sentences to be grammatical and sometimes stated that =ŋà should be used instead of =ɔ̀. I also performed the opposite change (=ɔ̀ to =ŋà) and found that the second language consultant again approved of some of the modified sentences but changed some of them back to the original form. Examples (251) and (252) exhibit the variation in choice of genitive enclitics by the two consultants.

(251) jíní   gʷɔ̀ní=**ɔ̀/ŋà**   t͡ʃʊ́ssɔ̀
       meat   camel=**GEN.S**   good
       'Camel meat (is) good.'
       'La viande du chameau est bonne.'

(252) kòlú   kàràsʊ́=**ɔ̀/ŋà**   ouʃai   dákkò
       kòlú   kàràsʊ́=**ɔ̀/ŋà**   ouʃ-a=i   Ø-j-dák-t
       sauce   sorrel=**GEN.S**   (name)-P=ERG   3.OBJ-3-like-P
       'Kanuri (people) like sorrel sauce.'
       'Les Kanuris aiment la sauce de l'oseille.'

Finally, I presented example (253) to the second language consultant, and asked if it were possible to switch between =ò and =ŋà for the same French translation, and he confirmed that it was possible, thus demonstrating that both forms may be simultaneously acceptable to the same speaker.[82]

(253) kòlú   góbálkà=**ò/ŋà**   dàgɨrdí
      kòlú   góbálkì-a=**ò/ŋà**   Ø-dák-ɾ-dí
      sauce   okra-P=**GEN.S**   3.OBJ-want-1-NEG
      'I don't want okra sauce.'
      'Je ne veux pas la sauce du gombo.'

It is possible that discourse status (e.g. whether or not textually evoked, whether or not topical, etc.) or other factors may also influence the distribution of the genitive enclitics, resulting in a distribution that is not predictable solely in terms of specificity. However, based on the strong distributional tendencies noted above, the usage of the genitive enclitics can be summarized in terms of specificity and number, as in Table 45.

Table 45: Genitive case enclitics

	Non-specific	**Specific**
Singular	=ò	=ŋà
Plural	=à	

Given the frequent identity or similarity of genitive and relative clause markers in many languages across the world (Aristar 1991), including some Nilo-Saharan languages, it is striking to note that the three enclitics used in Dazaga to mark genitive case (=ò, =à, and =ŋà) are identical to three of the enclitics used to form relative clauses (cf. §8.2.3.1). However, two facts suggest that this identity is (at least synchronically) coincidental. First, there is a fourth enclitic, =mà (one of the forms of the determiner), which is also used to mark relative clauses, which suggests that the relative clause markers =ò and =à should also be interpreted as instances of the determiner, which also has the forms =ò

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[82] Kevin Walters (p.c.) pointed out that this apparent neutralization of the distinction between =ò and =ŋà may simply reflect two different readings of the French *du gombo* 'of okra', one of which is non-specific, and the other of which is specific.

and =à (cf. §4.1.5) (and the relative clause marker =ŋà should be analyzed as a distinct relativizer). Second, while the distribution of genitive =ò and =à is determined by the number of the possessum, the distribution of the relative clause markers =ò and =à, like the distribution of the determiner forms =ò and =à, is phonologically conditioned.

In usage, besides showing possession, the genitive case can express other relationships such as "source" (example (254)), "composition/material" (example (255)), or "contents" (example (256)).

(254) ìí   bìllíò̀   t͡ʃèdí   t͡ʃìkkí
      ìí   bìllí=ò̀   Ø-j-jé-t-í   Ø-t͡ʃì(g)-t
      water   pond=**GEN.S**   3.OBJ-3-drink-P-PROG   3-be-P
      'They are drinking water from the pond.'
      'Ils boivent l'eau de marigot.'

(255) áì   dùɾú   bìɾgáò̀
      áì   dùɾú   bìɾgí-a=ò̀
      this   row   brick-P=**GEN.S**
      'This (is) a row of bricks.'
      'C'est un rang de briques.'

(256) áì   fétì   kàfɛ́=ò̀
      this   can   coffee=**GEN.S**
      'This (is) a can of coffee.'
      'Ça c'est une boite de café.'

The order of the possessor and possessum is noteworthy, given Dazaga's SOV word order. Greenberg's second universal (1966:78) states that "in languages with postpositions [the possessor] almost always precedes [the possessum]." Contrary to this typological tendency, the possessum precedes the possessor in Dazaga, as illustrated in (257) and (258).

(257) tàní   ná   [**kòséè**]PSM   [**níí̱màò̀**]PSR   bàɾànîɾ
      tàní   ná   kòséè   níí̱=mà=ò̀   bàɾà-Ø-n-ɾ
      1S   also councilor   town=DET=GEN.S   search.for-3.OBJ-LV-1
      'I also sought to become a councilor of the town.'
      'Moi aussi j'ai cherché à être conseiller de la ville.'

(258) [**jégà**]_{PSM}   [**t͡ʃòfìrúŋà**]_{PSR}   kòlókìŋì
     jégɛ̀=a   t͡ʃòfìrí=u=ŋà   kòlók-Ø-j-n-gì
     house=DET   bird=DET=GEN.S   remove-3.OBJ-3-LV-IPFV
     'He removed the bird's nest.'
     'Il défait le nid de l'oiseau.'

However, Greenberg's fifth universal (1966:79) predicts that "[i]f a language has dominant SOV order and the genitive follows the governing noun, then the adjective likewise follows the noun." This is the case in Dazaga (cf §4.2). Thus, noun phrases are head-initial in Dazaga, despite its SOV word order and use of postpositions.

6.2.4   Dative case enclitic *=rò*

The dative case enclitic *=rò* occurs very frequently, and has many uses, as might be expected given the diversity of use of the dative case cross-linguistically (cf. Abraham 2006:40). The difference in form between [rù] and [rò] is due to [ATR] harmony, as illustrated in (259) and (260).

(259) t͡ʃírù   ìí   fòzúɾ
     t͡ʃí=**rù**   ìí   Ø-fóz-ɾ
     mouth=**DAT**   water   3.OBJ-spew-1
     'I sprayed water with (my) mouth.'
     'J'ai jalli l'eau de la bouche.'

(260) áì   áì=**rò**   kóɾɛ́
     this   this=**DAT**   short
     'This (is) short(er) than this.'
     'Celui-ci est plus court que celui-là.'

The dative case enclitic can be used for locative adjuncts (example (261)), instrumental obliques (example (262)), temporal adverbials (example (263)), comparative constructions (example (260)), or simply as a case required by certain postpositions (example (264)).

(261) àɾìí   áì   t͡ʃáɾʊ̀   t͡ʃàŋáì   déì
     àɾìí   áì   t͡ʃá=ɾʊ̀   t͡ʃàŋáì   Ø-j-téi
     woman   this   nose=DAT   nose.ring   3.OBJ-3-have
     'This woman has a nose ring in her nose.'
     'Cette femme a un anneau au nez.'

(262) tàí   sʊ́mmà   àgàsʊ́=ɾʊ̀   gʊ́ɾʊ̀
     tàí   sʊ́n=mà   àgàsʊ́=ɾʊ̀   Ø-j-kʊ́ɾ
     neck   3S.POSS=DET   sword=DAT   3.OBJ-3-cut
     'He cut its neck with (a) sword.'
     'Il a coupé son cou avec la sabre.'

(263) ʃìkí   bɛ́lkɛ́   ná   hàŋíɾɔ̀   sáà   dìssíɾʊ̀   jɛ̀ɾdíɾgì
     ʃìkí   bɛ́lkɛ́   ná   hák-Ø-n-ɾ-ɔ̀   sáà   dìssí=ɾʊ̀   jɛ́ɾt-ɾ-gì
     tomorrow   morning   also   find-3.OBJ-LV-1-CTNG   hour   six=DAT   get.up-1-IPFV
     'Tomorrow morning, if possible [lit. 'if I find (it)'], I will get up at six o'clock.'
     'Demain matin aussi, si c'est possible, je vais me réveiller à 6h00.'

(264) jɔ̂m   tɛ́ɾʊ̀   báɾà   gìnná   dùgùlí   àgíɾ   kʊ̀lɔ̀kʊ̀lɔ̀jìnní
     jɔ̂m   tɛ́=ɾʊ̀   báɾà   gìnná   dùgùlí   àgíɾ   kʊ̀lɔ̀kʊ̀lɔ̀-Ø-j-n-ní
     day   that=DAT   after   all   lion   donkey   provoke-3.OBJ-3-LV-NEG
     'After that day, the lion no longer provoked the donkey.'
     'Depuis ce jour-là le lion ne provoque pas l'âne.'

Dative case also marks third person recipients of ditransitive verbs, and first or second person recipients if a redundant pronoun is used. These patterns are illustrated in (265) and (266). However, for reasons explained in detail in §6.3.3, these dative case recipients should be considered the primary objects of the ditransitive verbs.

(265) ńtàgà   dìɾdáɾʊ̀   ńt͡ʃɛ́n
     ńtà=gà   dìɾdɛ́=a=ɾʊ̀   n-j-jɛ́n
     2S=ACC   chief=DET=DAT   2.OBJ-3-give
     'He gave you to the chief.'
     'Il t'a donné aux chef du village.'

(266) àɾìímàì   (tàŋʊ́ɾʊ̀)   jálì   d͡ʒɛ́n
     àɾìí=mà=ì   (tàŋʊ́=ɾʊ̀)   jálì   d-j-jɛ́n
     woman=DET=ERG   (1S=DAT)   child   1.OBJ-3-give
     'The woman gave me the child.'
     'La femme m'a donné l'enfant.'

The dative case enclitic is often used with adjectives, and sometimes with other words or constituents to form adverbs (see §6.1.2). For more on the homophonous subordinator =rò, used to form certain adverbial clauses, see §8.2.4.

6.3 Basic verbal clauses

The basic word order is SOV (cf. Dimmendaal 2008:284), and this word order is maintained fairly rigidly (as is common in Africa; cf. Creissels et al. 2008:127), apart from a few changes for information structuring purposes (cf. §7.5.2 and §7.7).[83] Further details about the structure of verbal clauses are sketched in the following subsections.

6.3.1 Intransitive clauses

As described in §5.5, intransitive verbs exhibit split-intransitive encoding of their single arguments, with some single arguments encoded like subjects of transitive verbs and some like objects of transitive verbs. However, the argument agreement affixes are lexically specified, and any given intransitive verb only ever uses one set of argument agreement affixes. Despite the split in subject agreement affixes, all intransitive subject noun phrases receive null (Ø) case marking.

Dazaga has SOV basic word order, and intransitive clauses are always SV in order, as illustrated below in (267) through (269). However, as (267) and (268) illustrate, pro-drop is possible (and even frequent), as the person and number of the single argument are obligatorily marked on the verb.

(267) bíní   bɛ́lkɛ́   sáà   dìssírò   jɛ̀rdîr
      bíní   bɛ́lkɛ́   sáà   dìssí=rò   jɛ́rt-r
      today   morning   hour   six=DAT   get.up-1
      'This morning [lit. 'today morning'], I got up at six o'clock.'
      'Ce matin je me suis levé à 6h00.'

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[83] Lukas (1953:177), however, states "Tubu word order is not rigid ... This normal [SOV] word order is, however, frequently altered by putting an object of importance for the sentence at the beginning" (*Die Wortstellung der Tubusprache ist nicht starr ... Der genannte Normalfall der Wortstellung kommt aber häufig dadurch nicht zur Anwendung, daß man ein für den Satz wichtiges Objekt an die Spitze stellt.*).

(268) jõm té   àʊ́ʃì   ní   bàbàrt͡ʃì
      jõm té   àʊ́ʃ-j   ní   bàbàrt-j
      day that be.afraid-3 and   tremble-3
      'That day, he was afraid and trembled.'
      'Ce jour là il a eu peur et il a tremblé.'

(269) bàtàtá   bùrt͡ʃìní   t͡ʃìí
      bàtàtá   búrt-j-n-í   Ø-t͡ʃì(g)
      bat   take.off-3-LV-PROG 3-be
      'The bat (animal) is taking off/jumping into flight.'
      'Le chauve-souris s'envole.'

   Oblique or adjunct constituents occur either between the S and V constituents, as in (270), or before both the S and V constituents, as in (271) and (272), but never following the verb.

(270) tàní   ʊ́nnʊ́   bònîr
      tàní   ʊ́nnʊ́   bɔ́-n-ɾ
      1S   now   grow-LV-1
      'I'm grown now.' / 'I've grown up now.'
      'Moi j'ai grandi maintenant.'

(271) dìskírù   báɾà   àddîr   írìgì
      dìskí=rù   báɾà   àddîr   Ø-írì-gì
      noon=DAT   after addir   3-come-IPFV
      'After noon, "addir" [roughly 'early afternoon'] comes.'
      'Après midi c'est "addur" qui vient.'

(272) mèɾí   kʊ́lɔ̀   sʊ́mmà   dìɾɔ́   àlkám   bʊ́ɾò   lîì
      mèɾí   kʊ́lɔ̀   sʊ́n=mà   dìɾɔ́   àlkám   bʊ́ɾò   lí-j
      this.year field 3S.POSS=DET in   grain   much   grow-3
      'This year, in his field, a lot of grain is growing/has come up.'
      'Cette anneé beaucoup de blé a poussé dans son champ.'

   Changes in word order prompted by pragmatic and discourse considerations (e.g. focus, §7.7) only affect the ordering of S and O constituents and, therefore, do not affect the constituent order of intransitive clauses.

6.3.2   Transitive clauses

Transitive clauses have the constituent order SOV, though, like intransitive clauses, the subject is often not present as a free standing clausal constituent, due to pro-drop. Where an explicit subject, object, and verb are all present, the word order of a transitive clause is almost always SOV (for exceptions, see §7.7), as illustrated in (273) and (274).

(273) kɔ́ɾóì   básàl   t͡ʃít͡ʃìlt͡ʃì
       kɔ́ɾó=ì   básàl   t͡ʃít͡ʃìlt-Ø-j
       mouse=ERG   onion   chew.up-3.OBJ-3
       'The mouse chewed up the onion.'
       'La souris a rongé l'oignon.'

(274) à̰ɡ̰́   áì   ìní   wɔ́ŋà   búbúì
       à̰ɡ̰́   áì   ìní   Ø-j-bɔ́=ŋà   búbú-Ø-j
       man   this   thing   eat-3=REL   vomit-3.OBJ-3
       'This man threw up what he ate.'
       'Cet homme a vomit ce qu'il a mangé.'

When an object and an oblique argument both occur in a transitive clause, they will normally occur between the subject and verb. However, the order of the object and oblique relative to each other is difficult to predict (as opposed to the order of the two objects in ditransitive clauses; cf. §6.3.3), as illustrated by examples (275) and (276), where the order of the primary object and the oblique instrument is inverted. The difference may be determined by pragmatic factors.

(275) bɔ̀lɔ̀lɔ́ɾò   sàrágà   gìssígì
       bɔ̀lɔ̀lɔ́=ɾò   sàrágà   Ø-j-kís-t-gì
       flour.paste=DAT   charity   3.OBJ-3-do-P-IPFV
       'They do charity with flour paste.'
       'On fait de la charité avec la pâte.'

(276) tàí   sɔ́mmà   àgàsɔ́ɾò   gɔ́ɾò
       tàí   sɔ́n=mà   àgàsɔ́=ɾò   Ø-j-kɔ́ɾ
       neck   3S.POSS=DET   sword=DAT   3.OBJ-3-cut
       'He cut its neck with (a) sword.'
       'Il a coupé son cou avec la sabre.'

6.3.3 Ditransitive clauses

Ditransitives may be defined as verbs which "code events with three obligatory participants, one taking the role of syntactic subject, the other two of objects" (Givón 2001a:141). This definition is narrower than Dryer's definition of ditransitives as verbs with "at least two nonsubject arguments" (2007c:253). The narrower definition, which I follow here, includes verbs such as *bìàdí* 'to repay' and *tèní* 'to give', but excludes verbs such as *tìnàʊ̀* 'to place' and *tìnní* 'to put', which take an object and a locative oblique rather than two objects.

Ditransitive verbs in Dazaga, like transitive verbs, only have two argument agreement morphemes (cf. §5.4). Since one of these agrees with the subject, only one is left to agree with one of the two objects. With which of these objects the object agreement marker on the verb agrees is determined by a combination of the person and semantic role of the objects, resulting in patterns very similar to those described in the Ditransitive Person-Role Constraint (Haspelmath 2004; cf. also Dryer 1986), where semantic role and person jointly influence the order of bound object morphemes.[84]

First, if only one of the objects is first or second person, it will be marked on the verb with the object agreement marker, regardless of the semantic roles of the objects, as illustrated in (277) to (279). In (277) and (278), the first or second person theme is marked with the object agreement marker on the verb (as well as the redundant accusative case free pronoun), and the third person recipient is marked with the dative case enclitic.

(277) ńtàgà   dìɾdárʊ̀   ǹt͡ʃɛ́n
     ńtà=gà   dìɾdɛ́=a=ɾʊ̀   n-j-jɛ́n
     2S=ACC   chief=DET=DAT   **2.OBJ**-3-give
     'He gave you to the chief.'
     'Il t'a donné aux chef du village.'

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[84] Haspelmath (2004) formulates the Ditransitive Person-Role Constraint as follows: "Combinations of bound pronouns with the roles Recipient and Theme are disfavored if the Theme pronoun is first or second person and the Recipient pronoun is third person." Jakobi & Crass (2004:71) note that the object agreement morphemes in Beria (in a transitive sentence) can agree with a patient or recipient.

(278) tàŋá   dìɾdáɾò   d͡ʒɛ́n
      tàŋó=gà   dìɾdɛ́=a=ɾò   d-j-jén
      1S=ACC   chief=DET=DAT   **1.OBJ**-3-give
      'He gave me to the chief.'
      'Il m'a donné aux chef du village.'

In (279), the same two semantic roles (theme and recipient) and same verb appear, but the object agreement marker agrees with the recipient rather than the theme, because the recipient is first person and the theme is third person.

(279) ábbà   níɾòì   gálà   d͡ʒɛ́n
      ábbà   níɾ=ò=ì   gálà   d-j-jén
      father 1S.POSS=DET=ERG advice **1.OBJ**-3-give
      'My father gave me advice.'
      'Mon père m'a donné des conseils.'

This alternation of which constituent is encoded by the verb's object agreement marker is based on the alternation in *person* of the relevant constituents, and not on an alternation in *animacy* (cf. the animate theme in (277) versus the inanimate theme in (279)). This is demonstrated in (280) and (281), where both the third person themes and first person recipients are animate, yet the verbs take first person object markers, agreeing with the recipients rather than with the themes. In these two examples, the redundant first person dative free pronouns are optional, but, if they are used, they occur further from the verb than the theme.

(280) dìɾdɛ́ áìì   (tàŋóɾò)   ɛ́gíɾɛ́   d͡ʒɛ́n
      dìɾdɛ́ áì=ì   (tàŋó=ɾò) ɛ́gíɾɛ́   d-j-jén
      chief this=ERG (1S=DAT) male.slave **1.OBJ**-3-give
      'This chief gave me a man-servant.'
      'Ce chef m'a donné un esclave.'

(281) àɾìímàì   (tàŋóɾò)   jálì   d͡ʒɛ́n
      àɾìí=mà=ì   (tàŋó=ɾò) jálì   d-j-jén
      woman=DET=ERG (1S=DAT) child **1.OBJ**-3-give
      'The woman gave me the child.'
      'La femme m'a donné l'enfant.'

Example (282) further illustrates the pattern of marking the first or second person recipient on the verb (with the object marker) instead of the third person theme, which, in this example, is in the accusative case (though lacking the optional accusative marker *=gà*).

(282) állà   gòfúrà   ǹt͡ʃɛ́nɛ́
       állà   gòfúrò-a   n-j-jɛn-ɛ
       God   forgiveness-P   **2.OBJ**-3-give-OPT
       'May God give you forgiveness.'
       'Que Dieu te pardonne.'

Second, when both objects of a ditransitive verb are first or second person, the recipient is marked with the object agreement marker, and theme is encoded only with a free pronoun.[85] This is demonstrated in (283) and (284), where, in each case, the object agreement marker agrees with the person of the recipient rather than the theme, as reinforced by the (optional) dative case free pronouns.

(283) ńtàgà   (tàŋúrò)   d͡ʒɛ́n
       ńtà=gà   (tàŋú=rò)   d-j-jɛ́n
       2S=ACC   (1S=DAT)   **1.OBJ**-3-give
       'He gave you to me.'
       'Il t'a donné à moi.'

(284) táŋà   (ńtàrò)   ǹt͡ʃɛ́n
       tàŋú=gà   (ńtà=rò)   n-j-jɛn
       1S=ACC   (2S=DAT)   **2.OBJ**-3-give
       'He gave me to you.'
       'Il m'a donné à toi.'

Object agreement in Dazaga treats locatives and recipients differently. Locatives and recipients are defined based on semantic criteria: a locative is a "spatial reference

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[85] This is unsurprising given the generalization made by Siewierska & Bakker (2007:107), "Languages in which bound person forms on the verb are used for the R[ecipient] but not the T[heme] appear to be much more common than those in which the converse is the case." Though the dative case on the agreed-with noun phrase seems unusual, it has been reported in other, unrelated languages, such as Bilinarra (Meakins & Nordlinger 2014:376), Warlpiri (Legate (2002); data from Hale et al. (1995:1432)), and Amharic (Amberber 2011; Baker 2012:258).

point of the event" (Kroeger 2005:54), whereas a recipient is an animate entity which acquires possession (and/or ownership) of the theme as a result of the event described in the verb. However, there are syntactic features which distinguish recipients from locatives in most cases. Recipients always receive dative case marking, whereas locatives are usually the objects of postpositions, as in (285) and (286), with the postpositions *dìrɔ́* 'in' and *dáá* 'on'.[86]

(285) jɛ́gɛ̀   sɔ́mmà   **dìrɔ́**   súrú   dínù
      jɛ́gɛ̀   sɔ́n=mà   dìrɔ́   súrú   Ø-j-tín
      house   3S.POSS=DET in   perfume   3.OBJ-3-put
      'She put perfume in her house.'
      'Elle a mit du parfum dans sa maison.'

(286) kùrùkùrá   bái   dìgí   **dáá**   d͡ʒʊʊdʊ
      kùrùkùrú-a   bʊ́-a=ì   dìgí   dáá   d-j-bʊ́-t
      insect.type-P   big-P=ERG foot   on   1.OBJ-3-bite-P
      'Big insects bit me on the foot.'
      'Les tiques grandes m'ont piqué au pied.'

As mentioned above, another syntactic distinction between locatives and recipients is object agreement marking. When a locative goal constituent, instead of a recipient, appears in a clause where both non-subject constituents are first or second person, the object agreement marker cannot agree with the locative constituent. In examples (287) and (288), the object agreement marker agrees with the theme rather than the locative, and the redundant free theme pronoun is optional.

(287) (ńtàgà)   tàŋá   ǹt͡ʃùgùrú
      (ńtà=ga)   tàŋʊ́=ga   n-j-juguru
      (2S=ACC)   1S=ACC   **2.OBJ**-3-send
      'He sent you to me.'
      'Il t'a envoyé à moi.'

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[86] Certain non-goal locatives can also be expressed with dative case marking, but with the meaning 'at' (as in 'I will stay at the house') rather than 'to'. Dative case is not used with three place predicates (such as 'put' or 'send') taking an agent, a theme, and a locative goal.

(288) (tàŋá)   ńtàgà   d͡ʒùgùɾú
      (tàŋʊ́=ga) ńtà=ga   d-j-juguɾu
      (1S=ACC)   2S=ACC   **1.OBJ**-3-send
      'He sent me to you.'
      'Il m'a envoyé à toi.'

In (289), where the object agreement marker agrees with the locative (as it would with a recipient), the clause is ungrammatical (whether or not the accusative case marker is used). The same situation is illustrated in (290), where object agreement with the locative is ungrammatical.

(289) *ńtà(gà)   d͡ʒùgùɾú
       ńtà(=ga)   d-j-juguɾu
       2S(=ACC)   **1.OBJ**-3-send
      ('He sent you to me.')
      ('Il t'a envoyé à moi.')

(290) *tàŋ(á)   ǹt͡ʃùgùɾú
       tàŋʊ́(=ga)   n-j-juguɾu
       1S(=ACC)   **2.OBJ**-3-send
      ('He sent me to you.')
      ('Il m'a envoyé à toi.')

The fact that the object agreement marker cannot agree with the first or second person locatives suggests that locatives are considered obliques (or adjuncts, in some cases) rather than core constituents.

A few comments are in order here regarding the status of the non-agent, non-theme arguments as locatives rather than recipients. First, though animate goals of verbs like 'send' tend to be understood cross-linguistically (via implicature) as recipients (Aristar 1996), this is a much less natural reading when the theme is also animate, especially human (cf. Rappaport Hovav & Levin 2008:136, footnote 7). Thus, in the examples above, it is unlikely that the locative is actually a recipient.

Secondly, in all unambiguous instances of free recipient constituents, the recipient takes dative case. The lack of dative case in (287) and (288) is highly anomolous if the

constituents are recipients rather than locatives, but is fully expected if they are locatives rather than themes.

Third, the presence of accusative case on the locative constituent in (287) and (288) is somewhat unexpected. However, locative goal constituents are normally unmarked, as illustrated in (291), and do not take dative case marking (though they do sometimes take the postposition *dìɾɔ́* 'in, into'). Additionally, I have found at least one occurrence of a locative goal with accusative case marking, shown in (292), so this may be a possible function of accusative case.

(291) kàsʊ́gò(*ɾò)   dùɾtúgì
       kàsʊ́gò(*=ɾò)   d-tùɾ-tú-gì
       market(*=DAT)   1-go-P-IPFV
       'We will go to the market.'
       'Nous partirons au marché.'

(292) bònú   gɔ́n   ná   kʊ́làŋà   sòtɔ́
       bònú   Ø-gɔ́n-Ø   ná   kʊ́lò-a=**ŋà**   Ø-sòtɔ́-Ø
       hoe   3.OBJ-take.IMV-2 and   field-P=**ACC** 3.OBJ-go.to.IMV-2
       'Take your hoe and go to (the) fields.'
       'Prends ta houe et va au champs.'

In addition to the structures given in (287) and (288), the locative constituent can be made grammatically third person (such as with the noun *kʷòi* 'place'), in which case the object agreement marker automatically agrees with the first or second person theme, per the first constraint mentioned above. This is illustrated in (293) and (294).

(293) kʷòí   tàŋʊ́   ǹtʃùgùɾú
       kʷòí   tàŋʊ́   n-j-juguɾu
       place   1S.POSS   **2.OBJ**-3-send
       'He sent you to me/where I was.' [lit. 'He sent you (to) my place.']
       'Il t'a envoyé à moi.'

(294) kʷòí   nʊ́mmà   dʒùgùɾú
       kʷòí   nʊ́m=mà   d-j-juguɾu
       place   2S.POSS=DET **1.OBJ**-3-send
       'He sent me to you/where you were.' [lit. 'He sent me (to) your place.']
       'Il m'a envoyé à toi.'

In the third possible animacy alignment of the two objects of a ditransitive verb, when both objects of a ditransitive verb are third person, the recipient occurs closer to the (clause-final) verb than the theme does (see examples (295) and (296)), and the theme occurs closer to the verb than the locative oblique does (see examples (297) and (298)). In the following examples, the relevant constituents are placed in square brackets, and semantic roles are noted in bold subscript small caps.

(295) [dɔ̀fɔ́n   ɔ̀rkáŋà]**THM**   [bòtúrù]**REC**   jɛ́n
      dɔ̀fɔ́n   ɔ̀rkɔ́-a=ŋà   bòtú=rù   Ø-jɛ́n-Ø
      lung   goat-P=GEN   cat=DAT   3.OBJ-give.IMV-2
      'Give the lung of the goats to the cat.'
      'Donne le poumon des chêvres au chat.'

(296) jôm   nááná   [èrìʃǐ]**THM**   [kúrʃíárò]**REC**   kàrànîr   jénìrìgì
      jôm   nááná   èrìʃǐ   kúrʃí-á=rò   Ø-karan-r   Ø-jɛ́n-r-gì
      day   every   story   child-P=DAT   3.OBJ-read-1   3.OBJ-give-1-IPFV
      'Every day, I read a story (to my) children.'
      'Chaque jour je lit un conte aux enfants.'

(297) tɛ́rò   bárà   [fòŋámmà   dáá]**LOC**   [gànìʃǐá]**THM**   dùdûr
      tɛ́=rò   bárà   fòŋám=mà   dáá   gànìʃǐí-a   Ø-dúd-r
      that=DAT   after   wire.basket=DET   on   charcoal-P   3.OBJ-put-1

      ní   wíní   fùnîr
      ní   wíní   fú-Ø-n-r
      and   fire   light-3.OBJ-LV-1
      'After that, I put charcoal pieces in the wire basket and lit a fire.'
      'Ensuite j'ai posé le charbon sur le brasier et je l'ai allumé.'

(298) [gòrú   sómmà   dáá]**LOC**   [gì̀ʃǐ]**THM**   náwò
      gòrú   són=mà   dáá   gì̀ʃǐ   Ø-j-ná(g)
      house   3S.POSS=DET   on   straw.type   3.OBJ-3-put
      'He put straw on his house.'
      'Il a posé de la paille sur sa maison.'

These data suggest that there exist two (sometimes conflicting) constraints in Dazaga for object agreement, based on two different (but often correlated; cf. Haspelmath

2007a) hierarchies: a "person" hierarchy (299), and a "semantic role" hierarchy (300) (where the > indicates "is more highly ranked than").

(299) *Person Hierarchy*
$1^{st}/2^{nd} > 3^{rd}$

(300) *Semantic Role Hierarchy*
recipient > theme > locative

When these two hierarchies conflict (such as with a first person theme and third person recipient; cf. (277)), the person hierarchy is ranked more highly and determines the outcome (that is, the person hierarchy will select the first person theme for object agreement).

Furthermore, the fact that object agreement markers can agree with recipients and themes, but not with locatives, motivates a distinction in Dazaga between objects and obliques (or, more broadly, non-objects). This distinction treats recipients and themes as objects, but locatives as obliques (or adjuncts).

When no hierarchical level in the person hierarchy is crossed (namely, when both objects are first or second person, or when both are third person), recipients exhibit patterns characteristic of primary objects, suggesting a ranking of recipient over theme in the Semantic Role Hierarchy (300). Kroeger (2005:62) gives four criteria for distinguishing primary objects from secondary objects. Two of these point to the recipient as the primary object in Dazaga: the object agreement marker agrees with the recipient rather than with the theme (all else being equal), and the recipient normally occurs closer to the verb than the theme does.[87] A third criterion, which object can be promoted to subject through passivization, is not applicable in Dazaga.

However, the identification of the recipient as the primary object and the theme as the secondary object is not entirely clearcut, as Kroeger's fourth criterion suggests that the theme is the primary object. This criterion states that if one object is marked like the

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[87] Levin & Rappaport Hovav (2005:183) note, "In double object type structures, the recipient often usurps from the theme certain of the morphosyntactic properties normally associated with a theme realized as a direct object, such as adjacency to the verb and control of pronominal agreement markers."

single object of a monotransitive clause, and the other gets special marking (such as dative), the specially marked object is likely the secondary object. Based on examples such as (283) and (284), this criterion would select the theme as the primary object and the recipient as the secondary object.[88]

Nevertheless, because two of Kroeger's criteria suggest that the recipient is the primary object, I have adopted that analysis here. These patterns of marking recipient and theme make Dazaga what Dryer (1986:815) calls a "primary object language."

Haspelmath (2007a:82) distinguishes between "indirective" and "secundative" alignment of the two objects in a ditransitive construction. These two patterns of alignment are represented in Figure 3 (following Haspelmath 2007a:82), where P stands for "patient," T for "theme" and R for "recipient." The ovals indicate that the semantic roles they encircle are marked in the same way by some morphology (either case marking or agreement morphology, or both).

monotransitive	P	P
ditransitive	T R	T R
	indirective alignment	secundative alignment
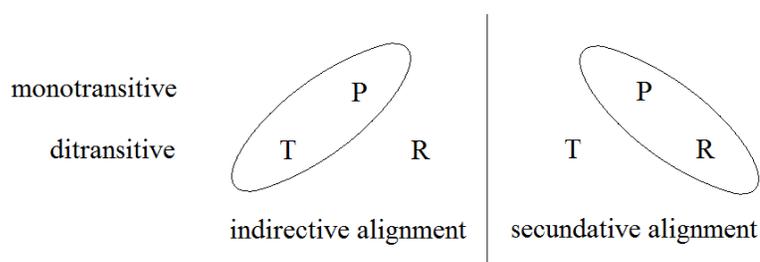
Figure 3: Indirective versus secundative alignment

Besides these two distinctions, ditransitive constructions can also exhibit a "neutral" pattern, where neither P, T, or R receive distinctive marking. Two less common patterns, which are not always considered "basic" alignment types (cf. Malchukov 2013:266; Haspelmath 2015:22) are the "tripartite" pattern, where P, T, and R are each marked in a different way from each other, and the "horizontal" pattern, where T and R are marked in the same way, but distinct from P (cf. Malchukov et al. 2010:5-7).

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[88] Creissels (2005:61-62) describes the similar pattern in Kanuri, noting, "this language shows a split between the case assigning properties of ditransitive verbs and their indexation properties." Like Dazaga, Kanuri uses the same "unique object [agreement] marker" (Creissels 2005:62) to agree with both the patient of a monotransitive verb and the recipient of a ditransitive verb.

Dazaga does not follow any of these five alignment types, but, rather, exhibits what has been called "mixed alignment" (Malchukov et al. 2010:10). In mixed alignment, "flagging" (i.e. case or adpositional marking) conflicts with "indexing" (i.e. person/number agreement on the verb). In ditransitive constructions with mixed alignment, cross-linguistically, indexing is usually secundative (treating P and R in the same way) and flagging is usually indirective (treating P and T in the same way) (Malchukove et al. 2010:10; Haspelmath 2015:24; cf. Siewierska 2004:133-137). This asymmetry between flagging and indexing probably arises because "case and adpositional marking is more sensitive to role properties, while cross-referencing and agreement is more sensitive to inherent prominence (animacy, definiteness)" (Malchukov et al. 2010:10).

The patterns of marking the two objects of ditransitive constructions in Dazaga match these cross-linguistic tendencies of mixed alignment. While mixed alignment itself is not uncommon, it usually involves neutral flagging; mixed alignment patterns in which case marking is dative, as in Dazaga, are "infrequent" (Malchukov et al. 2010:10).

6.4 Non-verbal predicates

In this section I describe "non-verbal predicates," including under this heading clauses with an existential predicate, but without another verb.[89] I do not here discuss clauses with an existential predicate and a progressive aspect main verb (cf. §5.6.3), which are verbal predicates. Rather than subdivide non-verbal predicates according to the syntactic category appearing in the predicate (adjectival, nominal, or locative constituent; cf. Dryer 2007c:224), I have grouped them based on the syntactic criterion of the presence or absence of an existential predicate. In the subsection on non-existential (non-verbal) clauses, I describe the semantically distinct, but syntactically similar, non-verbal

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[89] I choose the term "existential predicate" (cf. Pustet 2003:31) over "copula" to refer to the verb $\widehat{t\int}\acute{\imath}\acute{\imath}$ (so identified because it takes verbal morphology and can be fully conjugated like a verb), whose meaning is 'be' or 'exist'. This is because copulae are usually defined as lacking semantic content (cf. Roy 2013:22; Pustet 2003:5), and it is not clear that this is the case in Dazaga, where the negative existential predicate, at least, clearly includes the semantic content 'not' or 'negation'. See Dryer (2007c:225-226) for further discussion of the term "copula."

predicates such as "predicational," "specificational," "identificational," and "equative" (cf. Roy 2013:8; Mikkelsen 2011; Higgins1979:204-293). I describe existential clauses (including existential locatives) in a separate subsection.

6.4.1   Non-existential clauses

Non-existential (non-verbal) clauses lack any verb or existential predicate (cf. Lukas 1953:170). Rather, they are composed of a subject and a following predicate noun phrase or adjective phrase, as illustrated in (301).

(301) dínè   ʊ́nnʊ́=ŋà   wòdʊ́
      world   now=GEN.S   bad
      'The present world (is) bad.' [lit. 'The world of now (is) bad.']
      'Ce monde actuel est mauvais.'

As mentioned above, non-verbal predicates (or, more specifically, copular clauses in English) have often been divided into four groups based on semantic and syntactic criteria. I briefly summarize these criteria in Table 46 (adapted from Mikkelsen (2011:1810)).

Table 46: Semantic subcategories of non-existential (non-verbal) clauses

	Subject	Predicate
Equative	referential NP	referential NP
Predicational	referential NP	non-referential NP, AP
Specificational	non-referential NP	referential NP
Identificational	demonstrative	referential NP

These same four subcategories may be distinguished for non-existential clauses in Dazaga. In the following sections I briefly describe and illustrate each subcategory. For each category, negative clauses are formed by the addition of the negator *ʃìí* 'not' at the end of the positive clause, as in (302), rather than by the normal negative verbal suffix *-ní* 'NEG' (cf. §7.3.1).

(302) àmán   ìní   kíjáí   ʃíí
      confidence thing easy   NEG
      'Confidence (is) not an easy thing.'
      'La confiance n'est pas facile.'

6.4.1.1 *Equative*

In equative clauses, two referring noun phrases are equated, or claimed to be coreferential, as in (303) and (304).

(303) àɾìí   áì   ájá   níɾ
      woman   this   mother 1S.POSS
      'This woman (is) my mother.'
      'Cette femme est ma mère.'

(304) ájá   níɾ̀ò   éɾéí   sómmà   déɾé   níɾ
      ájá   níɾ=ò   éɾéí   són=mà   déɾé   níɾ
      mother 1S.POSS=DET little.sister 3S.POSS=DET maternal.aunt 1S.POSS
      'My mother's little sister (is) my aunt.'
      'La petite soeur de ma mère est ma tante.'

6.4.1.2 *Predicational*

Predicational clauses attribute a characteristic to or predicate a characteristic about the subject constituent. The predicate constituent may be either a non-referential noun phrase, as in (305), or an adjective phrase, as in (306) to (308).

(305) ájá   nóm=mà   àɾìí   gálì
      mother   2S.POSS=DET woman   good
      'Your mother (is) a good woman.'
      'Ta mère est une bonne femme.'

(306) àlâm   lárdò   sóntó=ŋà   màɾó=jè   t͡ʃòó=jè
      flag   country   3P.POSS=GEN.S red=and   white=and
      '(The) flag of their country (is) red and white.'
      'Le drapeau de leur pays est rouge et blanc.'

(307) áì   gálì   ʃíí
     this   good   not
     'This (is) not good.'
     'Ça, ce n'est pas bon.'[90]

(308) dínàà   mὲɾέ   égínírù   tùkùlí
     dínè=à   mὲɾέ   égíní=rù   tùkùlí
     world=DET 3S   shape=DAT round
     'The world, it (is) round in shape.'
     'Le monde a une forme ronde.'

      When adjectives occur in predicate position (as in other positions), they agree with the subject for number, as illustrated in (309) and (310), where *àgìlí* 'shirt' and *ŋɨ́là* 'pretty' are singular, and *jálà* 'fruits' and *t͡ʃʊ́ssà* 'good' are plural.

(309) àgìlí   sʊ́mmà   bʊ́ɾò   ŋɨ́là
     àgìlí   sʊ́n=mà   bʊ́ɾò   ŋɨ́là
     shirt   3S.POSS=DET very   pretty
     'Her shirt (is) very pretty.'
     'Sa chemise est très jolie.'

(310) àɾkɨ́n   jálà   sʊ́nà   t͡ʃʊ́ssà
     àɾkɨ́n   jálì-a   sʊ́n-a   t͡ʃʊ́ssò-a
     tree.type child-P 3S.POSS-P good-P
     'Arkin (tree), its fruits (are) good.'
     'Les fruits d'arkin sont bons.'

      Certain non-locative postpositional phrases can also occur in predicational clauses, as illustrated in (311), where the postpositional phrase *bíní kέgέ* 'like today' occurs in predicate position.

(311) d͡ʒúkùɾ   bíní   kέgέ   ʃíí
     never   today   like   NEG
     'It was never like today.'
     'Il n'etait jamais comme aujourd'hui.'

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[90] I originally categorized this example as identificational because of the deictic demonstrative subject (Mikkelsen 2011:1812); however, because the predicate is an adjective phrase, it should be categorized as identificational.

Predicational clauses are negated by the negator *ʃíí*, as illustrated in (312) and (313).

(312) mèɾí   sʊ́mmà   dílí   ʃíí
       mèɾí   sʊ́n=mà   dílí   ʃíí
       speech   3S.POSS=DET   just   not
       'His speech is not just/right/accurate.'
       'Sa parole n'est pas juste.'

(313) dòwál   jɛ́gààŋà   dábbà   ʃíí
       dòwál   jɛ́gɛ̀=à=ŋà   dábbà   ʃíí
       center.post   house=DET=GEN   strong   not
       'The center post of the house is not strong.'
       'Le piquet de la maison n'est pas dur.'

6.4.1.3 *Specificational*

Specificational clauses are used to "specify who (or what) someone (or something) is, rather than to say anything about that person (or entity)" (Mikkelsen 2011:1809). In this way, they are very similar to equative clauses, differing primarily by the motivation of the statement (though the subject constituent of a specificational clause is perhaps more likely to include a relative clause). Specificational clauses are illustrated in (314) and (315).

(314) ámmá   gʷɔ̀náà   t͡ʃɔ́ppɔ̀gà   dɛ̀ɛ́ŋà   níɾàà
       ámmá   gʷɔ̀ní-a=à   Ø-j-jɔ́b-t-gì-à   dɛ̀ɛ́ŋì-a   níɾ-a=à
       men   camel-P=DET   3.OBJ-3-buy-P-IMPF=DET   brother-P   1S.POSS-P=DET
       'The men who are buying the camels are my brothers.'
       'Les hommes qui achètent les chameaux sont mes frères.'

(315) àʊ́   gʷɔ̀nʊ́ʊ̀   t͡ʃɔ́bʊ̀gà   làʊ́   níɾ
       àʊ́   gʷɔ̀ní=ʊ̀   Ø-j-jɔ́b-gì-à   làʊ́   níɾ
       man   camel=DET   3.OBJ-3-buy-IMPF=DET   friend   1S.POSS
       'The man who will buy the camel is my friend.'
       'L'homme qui va acheter le chameau est mon ami.'

6.4.1.4   Identificational

Identificational clauses are non-existential (non-verbal) clauses whose subject is a demonstrative functioning deictically (Mikkelsen 2011:1812), and whose predicate constituent is a referring noun phrase, as in (316) to (318) (cf. Roy 2013:9).

(316) áɾá   gìnná   nɑ̰́ɑ̰́
       áɾá   gìnná   nǒm=mà
       these   all   2s.poss=DET
       'All these (things are) your (things).'
       'Tous ceux-ci t'appartiennent.'

(317) áì   dùɾú   bìɾgáʋ̀
       áì   dùɾú   bìɾgí-a=ʋ̀
       this   row   brick-P=GEN.S
       'This (is) a row of bricks.'
       'C'est un rang de briques.'

(318) áì   èlɛ́   òlòú=ù
       this   thorn   tree.type=GEN.S
       'This (is) a thorn of the "olowu" tree.'
       'C'est une épine de l'arbre acacia.'

6.4.2   Existential clauses

Existential clauses have been defined as a "specialized or non-canonical construction which expresses a proposition about the existence or the presence of someone or something" (McNally 2011:1830). Though not syntactically "non-canonical" as far as word order and subject agreement, existential clauses in Dazaga are syntactically distinguished from non-existential (non-verbal) clauses by the presence of the existential predicate *t͡ʃíí* 'to be', or its negative counterpart *bèí* 'to not be'. Non-verbal locative clauses are often considered a type of existential clause (cf. Dryer 2007c:238-47), and this categorization is supported in Dazaga by the presence of the existential predicate in locative clauses.

Structurally, existential clauses in Dazaga are similar to other clauses (verbal and non-verbal), with the subject occurring first, followed by the clause-final existential predicate, as illustrated in (319).

(319) ŋílí   tìgìsɔ́ɔ̀   gègé   bʊ́ɾʊ̀   t͡ʃìí
      ŋílí   Ø-tìgìsʊ́=ɔ́   gègé   bʊ́ɾʊ̀   Ø-t͡ʃǐ(g)
      rainy.season 3-happen=CNTG   malaria much   3-be
      'When it's rainy season, there's a lot of malaria.'
      'Pendant l'hivernage il y a beaucoup de paludisme.'

The existential predicate is conjugated like other verbs (an unusual situation in Africa, according to Creissels et al. (2008:131)), and so takes the plural marker when the subject of the existential clause is plural, as in (320), and also uses distinct subject agreement markers for the various persons, as illustrated in (321).

(320) jě̞gàà   dʊ́ɾtùɾù   màɾá   àgòzʊ́ʊ́   t͡ʃǐkkí
      jě̞gɛ̀=à   d-tʊ́ɾ-t=ɾù   màɾá   àgòzʊ́ʊ́   Ø-t͡ʃǐg-t
      house=DET   1-go-P=SUB   3P   three   3-be-P
      '(When) we went (to) the house, they were three [i.e. 'there were three of them'].'
      'Quand on est allé chez lui ils étaient trois.'

(321) tìntá   gìnná   t͡ʃʊ́ssòɾò   d͡ʒíkkí
      tìntá   gìnná   t͡ʃʊ́ssò=ɾò   d-t͡ʃǐg-t
      1P   all   good=DAT   1-be-P
      'We all were (doing) well.'
      'Nous étions tous bien ensemble.'

Negative existentials are formed exactly like positive existentials, except that the negative existential predicate is used instead of the positive. As with the positive existential predicate, the negative existential predicate matches the number and person of the subject, as illustrated in (322) and (323).

(322) ìní   állàrò   bʊ́   bèí
      ìní   állà=ɾò   bʊ́   Ø-bé(g)
      thing   God=DAT   big   3-be.not
      'There is nothing bigger/greater than God.'
      'Il n'y a rien de plus grand que Dieu.'

(323) fórá   dìró   dòɾɟá   bèkkí
       fóɾó-a   dìró   dòɾ-mí-a   **Ø-bég-t**
       cattle-P   among   bull-DIM-P **3-be.not-P**
       'Among the cattle, there are no young bulls.'
       'Il n'y a pas de veaux parmis les vaches.'

Locative existentials, like other existential clauses, have the existential predicate rather than another verb (or nothing), as shown in (324).

(324) kólà   dìró   àɾìí   bóɾò   t͡ʃìí
       kóló-a   dìró   àɾìí   bóɾò   Ø-t͡ʃǐ(g)
       field-P   in   grasshopper   much   3-be
       'There are lots of grasshoppers in (the) fields.'
       'Il y a beaucoup de sauterelles dans les champs.'

As with other existentials, the existential predicate in locative existentials is conjugated as singular or plural in agreement with the number of the subject (see examples (325) and (326)), and negative existential locative clauses use the negative existential predicate, in singular or plural form, as the subject requires (see examples (327) and (328)).

(325) kòlú   sómmà   dìró   dèŋkélí   t͡ʃìí
       kòlú   són=mà   dìró   dèŋkélí   Ø-t͡ʃǐ(g)
       sauce   3S.POSS=DET in   potato   3-be
       'There is potato in his sauce.'
       'Il y a de la patate dans sa sauce.'

(326) ámmá   gìnná   àgáɾò   t͡ʃǐk-kí
       ámmá   gìnná   àgá=ɾò   Ø-t͡ʃǐg-t
       people   all   outside=DAT   3-be-P
       'All (the) people are outside.'
       'Tous les gens sont dehors.'

(327) kíʃìgì   sómmà   dìró   ínníná   bèì
       kíʃìgì   són=mà   dìró   ínníná   Ø-bé(g)
       intestines 3S.POSS=DET in   nothing   3-be.not
       'There's nothing in its intestines.'
       'Il n'y a rien dans son intestin.'

(328) dὲέŋà   nírà   gìnná bèkkí
       dὲέŋì-a   nír-à   gìnná Ø-bég-t
       brother-P   1S.POSS-P all   3-be.not-P
       'All my brothers are not (here).' / 'None of my brothers are here.'
       'Tous mes frères ne sont pas là.'

Interestingly, locative existential clauses can be used even when the subject is specific and definite, as in (329).

(329) gʷɔ̀ní   sómmà   ɛ́ʃɛ́   dɨ̀ɾɔ́ t͡ʃǐí
       gʷɔ̀ní   són=mà   ɛ́ʃɛ́   dɨ̀ɾɔ́ Ø-t͡ʃǐí(g)
       camel   3S.POSS=**DET** valley in   3-be
       'His camel is in the valley.'
       'Son chameau est dans la vallèe.'

Locative existential predicates are not used to express possession in Dazaga (cf. Stassen 2009:327). Rather, like many Nilo-Saharan languages (Stassen 2009:663-665), possession is expressed by a transitive verb meaning 'have' (cf. Stassen 2009:33-34), as in (330).

(330) dàʊ́   dáá   dìfìní   **déì**
       dàʊ́   dáá   dìfìní   Ø-j-**téi**
       head   on   hair   3.OBJ-3-**have**
       'He has hair on (his) head.'
       'Il a de cheveux sur la tête.'

Chapter 7: Sentence Types

7. Sentence Types

In this chapter, I describe the structure and characteristics of different sentence types. There are various ways in which the terms "sentence type" and "clause type" are used (cf. Dryer 2007c:224). In this chapter, I use the term "sentence type" to refer to the distinction between declarative/indicative (§7.1), imperative (§7.4), and interrogative (§7.5) sentence types (cf. König & Siemund 2007). Though not strictly issues of "sentence type" as used in this chapter, I also include here a description of pro-sentences (§7.2) and negation (§7.3), as well as a description of a marked topic construction (§7.6) and focus (§7.7).

7.1 Indicative (Declarative)

Indicative clauses are strongly SOV, with only a few exceptions (cf. §7.7). Free pronouns may function as clausal constituents, as in (331), though they are often omitted (especially free subject pronouns) through pro-drop when they redundantly encode information already signalled by the obligatory subject and object agreement markers on the verb. This is illustrated in (331) and (332), where the person of the subject is signalled only by the first person subject agreement suffix on the verb and not additionally by a free pronoun subject constituent *tàní* 'I'.

(331) **mὲrέŋà**   kákkàɾdὸ   kòfùniɾ
      mὲrέ=ŋà   kákkàɾ=ɾὸ   kofu-Ø-n-**ɾ**
      3s=ACC   book=DAT   fan-3.OBJ-LV-**1**
      'I fanned it with a book.'
      'Je l'ai eventé avec un cahier.'

(332) bíà   sómmà   àddí   zínɨ̀**r**
      bíà   són=mà   àddí   zí-Ø-n-**r**
      salary   3S.POSS=DET a.little increase-3.OBJ-LV-**1**
      'I increased his salary a little bit.'
      'J'ai augmenté son salaire un peu.'

For more on the structure of indicative clauses, see Chapter 6.

7.2 Pro-sentences

Pro-sentences, as defined by Schachter & Shopen (2007:31), are words which "are used in answering questions, and which are understood as equivalent to affirmative and negative sentences ..." In Dazaga, the affirmative pro-sentence, 'yes', is *ɔ́ɔ́*, as illustrated in the brief conversation in (333).

(333) tíí   bàfʊ́=ɾà
      meal   ready=YNQ
      '(Is) the meal ready?'

      ɔ́ɔ́   bàfʊ̀-ɾɛ́
      yes   ready-ADJZ
      'Yes, (it is) ready.'

The negative pro-sentences in Dazaga are *áʔà* 'no' and *kɨnná* 'no'. The negative particle *kɨnná* 'no' is specifically used to negate an incorrect suggestion/presupposition, or a misunderstanding, before offering a correction (i.e. a contra-expectation statement). These uses are illustrated in (334) and (335), respectively.

(334) dífà   ntɛɾʊgɪɾa
      dífà   n-tɛɾ-gɪ=ɾa
      (place) 2-go-IPFV=YNQ
      'Are you going to Diffa?'

      kɨnná (pause) dɛ̀nní
      kɨnná   d-tɛ́ɾ-ní
      NEG   1-go-NEG
      'No, I'm not going.'

(335) músà   òrkó   sómmà   t͡ʃɔ́bʊ̀
      músà   òrkó   són=mà   Ø-j-jób
      (name) goat   3S.POSS=DET   3.OBJ-3-buy
      'Musa bought her goat.'

      kɨ̀nná   (pause) wú̀ì
      kɨ̀nná   wú-Ø-j
      NEG   steal-3.OBJ-3
      'No, he stole it.'

7.3 Negation

Studies of negation (e.g. Dahl 2011, 1979; Dryer 1988; Payne 1985) commonly distinguish between negation in indicative verbal clauses ("standard negation") and all other negation ("non-standard negation").[91] Since this parameter mostly correlates with the distinction in Dazaga between morphological (affixal) negation (cf. Dahl 2011:14) and (non-affixal) negation by particles, I have framed my description below using the terminology of "standard negation" versus "non-standard negation." Dazaga does not exhibit what has been variously termed "lexical negation" (cf. Dahl 2011:11, 14) or "affixal negation" (cf. Zimmer 1964), namely, derivational negative affixes similar to English *in-*, *un-*, or *non-*.

7.3.1   Standard negation

Standard negation is expressed by the suffixation of *-ní* 'NEG' to the verb of the clause, as in (336). As illustrated in the following examples, the negative suffix always has a high tone and requires preceding low tones.

(336) bígì   állàì   dàgòní
      bígì   állà=ì   Ø-j-dák-ní
      sin   God=ERG   3.OBJ-3-want-NEG
      'God doesn't want/like sin.'
      'Dieu ne veut pas le peché.'

---

[91] Auwera (2011:73) states that in standard negation, "the scope of the negation is the entire clause, the clause is a declarative, its main predicate is a verb, and the negative strategy is a general (productive) one." Negation which lacks "any of these properties" is non-standard (Auwera 2011:73).

The negative suffix *-ní* has two other allomorphs. The allomorph *-mí* occurs following [m], which happens with most verbs with a second person subject, as in (337).

(337) ìní   zòntʊ́   d͡ʒúkùɾ   kìsìm**mí**
      ìní   zòntʊ́   d͡ʒúkùɾ   Ø-kís-m-**ní**
      thing   bad   not.at.all   3.OBJ-do-2-**NEG**
      'You didn't do anything bad at all.'
      'Tu ne feras jamais quelque chose de mauvais.'

The allomorph *-dí* occurs (through denasalization) following [r] or [ɾ], which happens with most verbs with a first person subject, as in (338).

(338) kòlú   gʊ́bálkàʊ̀   dàgɪ̀r**dí**
      kòlú   gʊ́bálkì-a=ʊ̀   Ø-dák-ɾ-**ní**
      sauce   okra-P=GEN.S   3.OBJ-want-1-**NEG**
      'I don't want okra sauce.'
      'Je ne veux pas la sauce du gombo.'

Thus, while the three allomorphs are phonologically conditioned, they end up correlating very highly with the person of the subject, with *-ní* negating third person verbs, *-mí* negating second person verbs, and *-dí* negating first person verbs.

That this correlation is not due to the person of the subject, but to phonological conditioning, is demonstrated by the small number of S_p verbs (cf. §5.5.2) that do not use the usual subject agreement affixes and therefore have verb-final phonological environments different from those of other verbs. Thus, with a first person S_p verb, the verb does not end with *-ɾ* '1' and so, unlike (338), does not occur with the negative suffix allomorph *-dí*, as demonstrated in (339), where the allomorph *-ní* is acceptable, but *-dí* is ungrammatical.

(339) áʃɪ̌   kìncíɾò   gʊ́rò   dùɾtù**ní** / *dùɾtù**dí**
      áʃɪ̌   kìncí=ɾò   gʊ́rò   d-túɾ-t-ní
      provision   without=DAT   able.to   1-leave-P-NEG
      'We can't leave without provisions.'
      'Nous ne pouvons pas partir sans provision.'

In addition to negating indicative clauses, the suffix *-ní* 'NEG' is use to form "negative imperatives."[92] These are identical in form to negated second person perfective indicative verb forms.[93] Thus, the form *tìnnùmmí* in (340) could only be disambiguated by the broader context, etc. For this reason, it is perhaps preferrable to refer to "prohibitions" than to "negated imperatives," since the verb forms in prohibitions do not display the distinctive signs of the imperative mood (cf. §5.7.5), though they are functionally prohibitions.

(340) t͡ʃírí   tìnnùm**mí**
      t͡ʃírí   Ø-tínn-m-**ní**
      shout   3.OBJ-put-2-**NEG**
      'You (sg.) didn't shout.' (indicative reading)
      '(You [sg.]) Don't shout.' (imperative reading)

Additional examples of prohibitions (identified as such, without providing context, because they were elicited as prohibitions) are provided in (341) through (343). See §7.3.2 for a description of mitigated prohibitions (using non-standard negation).

(341) bààm**mí**
      Ø-báb-m-**ní**
      3.OBJ-hit-2-**NEG**
      '(You [sg.]) Don't hit him!'
      'Ne le frappe pas!'

(342) tòkàsòdòm**mí**
      t-kás-t-m-**ní**
      1.OBJ-follow-P-2-**NEG**
      '(You [pl.]) Don't follow me!'
      'Ne me suivez pas!'

---

[92] Though Auwera (2011:88) classifies "prohibitive negation" as a kind of non-standard negation, I have included it under "standard negation" because it employs the same negative suffix as standard negation.
[93] Jakobi & Crass (2004) report the same identity of forms for negated second person perfective and prohibitive verbs in Beria. Kanuri has a similar pattern, but prohibitions also include a preceding negative particle, in addition to the negative suffix (cf. Ziegelmeyer 2009:18; Cyffer 2009:79; Cyffer 1998a:41; Hutchison 1981:131).

(343) táblʊ̀   dáá   nààm**mí**
táblʊ̀   dáá   Ø-ná(g)-m-**ní**
table   on   3.OBJ-put-2-**NEG**
'(You [sg.]) Don't put it on the table.'
'Ne le mets pas sur le table!'

7.3.2   Non-standard negation

Non-standard negation is used for non-verbal clauses (cf. §0), for contrastive (indicative) negation, and for mitigated prohibitions. The negator *ʃíí* 'not' is used with non-existential non-verbal clauses, and the negative existential predicate *bèí* 'to not be' is used with existential clauses, as illustrated in (344) through (347).

(344) àmán   ìní   kíjáí   ʃíí
confidence   thing   easy   NEG
'Confidence (is) not an easy thing.'
'La confiance n'est pas facile.'

(345) áì   gálì   ʃíí
this   good   not
'This (is) not good.'
'Ça, ce n'est pas bien.'

(346) ìní   állàɾʊ̀   bʊ́   bèí
ìní   állà=ɾʊ̀   bʊ́   Ø-bé(g)
thing   God=DAT   big   3-be.not
'There is nothing bigger/greater than God.'
'Il n'y a rien de plus grand que Dieu.'

(347) kíʃɨ́gì   sʊ́mmà   dɨ̀ɾɔ́   ínníná   bèí
kíʃɨ́gì   sʊ́n=mà   dɨ̀ɾɔ́   ínníná   Ø-bé(g)
intestines   3S.POSS=DET   in   nothing   3-be.not
'There's nothing in its intestines.'
'Il n'y a rien dans son intestin.'

When an expected event or state is negated in an indicative clause, a special construction is used. Instead of the standard negative verbal suffix *-ní* 'NEG', the verb takes the suffix *-ɾɛ́* 'ADJZ' (forming something analogous to a participle), and is followed

by the clause-final negative existential predicate *bèí* 'to not be'. This "contrastive" (cf. Horn 2001[1989]) negation is illustrated in (348) and (349).

(348) gìgɨ̀rt͡ʃ íŋààɾù   ìí   ìrìrɛ́   bèí
      gigɨrt-j-n-gì=à=ɾù   ìí   Ø-ìrí-rɛ́   Ø-bé(g)
      thunder-3-LV-IPFV=DET=SUB   rain   3-come-**ADJZ**   3-be.not
      'After it thundered, rain didn't come.'
      'Après avoir tonné, la pluie n'est pas venu.'

(349) músà   ɔ̀rkɔ́   sómmà   t͡ʃɔ́bʊ̀
      músà   ɔ̀rkɔ́   són=mà   Ø-j-jɔ́b
      (name)   goat   3S.POSS=DET   3.OBJ-3-buy
      'Musa bought her goat.'
      'Musa a acheté sa chèvre.'

      kɨ̀nná   (pause)   t͡ʃɔ̀bʊ̀rɛ́   bèí   (pause)   wúì
      kɨ̀nná   Ø-j-jɔ́b-rɛ́   Ø-bé(g)   wú-Ø-j
      NEG   3.OBJ-3-buy-**ADJZ**   3-be.not   steal-3.OBJ-3
      'No, he didn't buy it; he stole it.'
      'Non, il ne l'a pas acheté; il l'a volé.'

Prohibitions may be mitigated, or softened, by the use of the clause-initial negator *sɔ́* 'not' along with the "negative imperative" form (which includes *-ní* 'NEG'). This is illustrated in (350) as compared to (351), where the sense of the mitigated prohibition in (350) is conveyed using 'should' in lieu of a straight command.

(350) **sɔ́**   ìní   áì   kìsɨm**mí**
      sɔ́   ìní   áì   Ø-kís-m-ní
      not   thing   this   3.OBJ-do-2-NEG
      'You should not do this thing.' [lit. 'You shouldn't not do this thing.']
      'Il ne faut pas faire cela.'

(351) ìní   áì   kìsɨm**mí**
      ìní   áì   Ø-kís-m-ní
      thing   this   3.OBJ-do-2-NEG
      'Don't do this thing.'
      'Ne fais pas cette chose.'

Dazaga also has a few other negative particles, namely, d͡ʒúkùɾ 'not at all' (example (352)), and ínníná 'nothing' (example (353)).

(352) ìní   zòntó   **d͡ʒúkùɾ**   kìsìmmí
       ìní   zòntó   d͡ʒúkùɾ   Ø-kís-m-ní
       thing   bad   not.at.all   3.OBJ-do-2-NEG
       'You didn't do anything bad at all.' [lit. 'You didn't not at all do a bad thing.']
       'Tu ne feras jamais quelque chose de mauvais.'

(353) **ínníná**   bèí
       ínníná   Ø-bé(g)
       nothing   3-be.not
       'There's nothing.' [lit. 'There's not nothing.']
       'Il n'y a rien.'

As (350), (352), and (353) demonstrate, double negation is possible without yielding a positive interpretation. The particles d͡ʒúkùɾ 'not at all', ínníná 'nothing', and sɔ́ 'not' are negative polarity items (Giannakidou 2011; Hoeksema 2011), and cannot occur in clauses that lack some other negator. This is illustrated in (354) (cf. (353)).

(354) *ínníná   t͡ʃìí
       ínníná   Ø-t͡ʃì(g)
       nothing   3-be
     ('There's nothing.')
     ('Il n'y a rien.')

7.4   *Imperatives, hortatives, and optatives*

In this section, I deal with the clause structure of imperative, hortative, and optative verbs (for the morphology of imperatives, hortatives, and optatives, see §5.7.5, §5.7.6, and §5.7.4, respectively). Like indicative clauses, imperative, hortative, and optative clauses are (S)OV, as illustrated in (355) to (357), respectively.

(355) ìní   áì   ɛwɛ́=ɾò   lán-Ø-Ø
       thing   this   finger=DAT   touch.IMV-3.OBJ-2
       'Touch this thing with your finger.'
       'Touche ça avec la doigt.'

(356) dàzàgá   kàɾàntá
       dàzàgá   kaɾa-Ø-n-t-Ø-a
       (lang.)   read-3.OBJ-LV-P-1-HORT
       'Let's read Dazaga.'
       'Lisons Dazaga.'

(357) állàì   tùwèí   dɨ̀ɾɔ́ kʊsʊnt͡ʃinɛ
       állà=ì   tùwèí   dɨ̀ɾɔ́ kʊsʊ-n-j-n-ɛ
       God=ERG   tree.type in   throw-2.OBJ-3-LV-OPT
       'May God cast you into the thorn trees.'
       'Que Dieu te jette dans le gommier.'

Whereas second person pronouns may appear as subjects in indicative clauses (as illustrated in (358)), imperative clauses do not have overt second person pronominal subjects. Significantly, not only do second person free pronoun subjects not occur in imperative clauses, but the second person subject agreement markers do not occur overtly for imperative forms, as illustrated in (359) and (360).

(358) **ńtà**   àʃĭ   tààmmí
       ńtà   àʃĭ   Ø-téi-m-ní
       2S   luck   3.OBJ-have-2-NEG
       'You don't have (any) luck.'
       'Toi, tu n'a pas de chance.'

(359) dìskí   tìgìsɔ́ɔ̀   jíɾ
       dìskí   Ø-tìgìsɔ́-ɔ̀   **Ø**-jíɾ
       noon   3-happen-CTNG **2**-come.IMV
       'When it's noon, come.'
       'Viens à midi.'

(360) kɔ̀ɾɛ́   tásʊ́=ŋà   fùɾúmù-Ø-**Ø**
       lid   bowl=GEN.S   turn.over.IMV-3.OBJ-**2**
       'Turn over the lid of the bowl.'
       'Renverse la couvercle de la tasse.'

Singular and plural subjects are distinguished only by the absence or presence, respectively, of the plural marker -*t*, as illustrated in the contrast between (361) and (362) (cf. §5.7.5).

(361) dìlɛ́n
dɪlɛ-Ø-n-Ø
imitate.IMV-3.OBJ-LV-2
'(You [sg.]) Imitate him.'

(362) dìlɛ́ntò
dɪlɛ-Ø-n-t-Ø
imitate.IMV-3.OBJ-LV-P-2
'(You [pl.]) Imitate him.'

Similar to imperatives, hortatives lack overt subject marking, either as free pronouns or as subject agreement markers. The number of the plural number of the subject is indicated by the plural marker -t. These patterns are illustrated in (363).

(363) kʷòí   ɲákíŋárò   kíjáírò   jéntà
kʷòí   ɲák-j-n-gɪ=a=rò   kíjáí=rò   jé-n-t-Ø-a
place   sleep-3-LV-IPFV=DET=SUB   easy=DAT   converse-LV-P-1-HORT
'While he's sleeping, let's talk softly.'
'Lorsque il est en train de dormir, parlons doucement.'

Optative clauses, like indicative clauses, but unlike imperative and hortative clauses, have full subject agreement marking, whether or not the subject constituent also occurs as an overt clausal constituent, as illustrated in (364) and (365).

(364) bíní   ánásàrò   jèjéntɨ́ré
bíní   ánásà=rò   jèjé-n-t-r-é
today   joy=DAT   converse-LV-P-1-OPT
'Today, may we converse with joy/joyfully.'
'Causons joieusement aujourd'hui.'

(365) állà   gòfúrà   ǹt͡ʃɛ́nɛ́
állà   gòfúrò-a   n-j-jɛ́n-ɛ́
God   forgiveness-P 2.OBJ-3-give-OPT
'May God grant you forgiveness.'
'Que Dieu te pardonne.'

7.5 Interrogatives

7.5.1   Yes/no questions

Yes/no questions are marked by the clause-final enclitic =ɾà and its allomorphs. The enclitic =ɾà 'YNQ' always occurs clause-finally, cliticizing to the final word whether it is a verb or a word from another grammatical category, as illustrated in (366), (367), (368) and (369), where it attaches to the existential predicate, a possessive pronoun (with a determiner), a derived adjective, and a verb, respectively.

(366) bùltɨ́ɾùm   dɨ̀ɾɔ́   ìí   t͡ʃìí=ɾà
      bùltɨ́ɾùm   dɨ̀ɾɔ́   ìí   Ø-t͡ʃí(g)=ɾà
      cup   in   water   3-be=YNQ
      'Is there water in the cup?'
      'Y a-t-il de l'eau dans le goblet?'

(367) kúɾʃɨ́   núm=má=ɾà
      child   2S.POSS=DET=YNQ
      'Is this your child?'

(368) t͡ʃɨ́nnè   d͡ʒàktɨ̀-ɾɛ́=ɾà
      door   close-ADJZ=YNQ
      'Is the door closed?'
      'Est-ce que la porte est fermée?'

The yes/no question enclitic has an allomorph [mà] which occurs following a clause final [m], as illustrated in (369).

(369) ʃáì   kìsɨ́mmà
      ʃáì   Ø-kís-m=ɾà
      tea   3.OBJ-make-2=YNQ
      'Did you make tea?

7.5.2   Content questions

Interrogative pro-forms, or "*wh*-words," are words that stand in for the questioned constituents in an interrogative sentence (König & Siemund 2007:302). The most common interrogative pro-forms are presented in Table 47.

Table 47: Interrogative pro-forms

Who	ɲàá	**Where**	kɔ̀ɔ́ / kʊ̀nɔ́
What	ínní	**Why**	íɲà
When	kìnná / lɔ́kɔ̀	**How**	---
Whose	ɲàʊ́	**Which**	náà

     Wh-words can occur *in situ*, or in preverbal position (what may be a focus slot; cf. §7.7), though adverbial phrases are often preposed. These alternate possibilities are illustrated in (370) and (371). In (370), the question word *ínní* 'what' occurs where the seconary object theme constituent normally would (i.e. *in situ*), preceding the primary object recipient constituent (cf. §6.3.3). In (371), on the other hand, *ínní* 'what' is moved to the preverbal position, following the primary object recipient constituent.

(370) ábbà   nʊ́mmà   **ínní**   dɛ̀ɛ́ɲì   nʊ́mmàɾʊ̀   t͡ʃɛ́n
       ábbà   nʊ́m=mà   ínní   dɛ̀ɛ́ɲì   nʊ́m=mà=ɾʊ̀   Ø-j-jɛ́n
       father   2S.POSS=DET   what   brother   2S.POSS=DET=DAT   3.OBJ-3-give
       'What did your father give to your brother?'
       'Qu'est-ce que ton père a donné à ton frère?'

(371) ábbà   nʊ́mmà   dɛ̀ɛ́ɲì   nʊ́mmàɾʊ̀   **ínní**   t͡ʃɛ́n
       ábbà   nʊ́m=mà   dɛ̀ɛ́ɲì   nʊ́m=mà=ɾʊ̀   ínní   Ø-j-jɛ́n
       father   2S.POSS=DET   brother   2S.POSS=DET=DAT   what   3.OBJ-3-give
       'What did your father give to your brother?'
       'Qu'est-ce que ton père a donné à ton frère?'

     The same pattern is exhibited for subject constituents. When a subject constituent is questioned, the question word can appear *in situ* or in the preverbal slot, following the object(s), in an inversion of the normal SO order. This is illustrated in (372) to (375).

(372) **jɛ́gɛ̀**   **áì**   **ɲàáì**   t͡ʃɔ́bʊ̀
       jɛ́gɛ̀   áì   ɲàá=ì   Ø-j-jɔ́b
       house   this   who=ERG   3.OBJ-3-buy
       'Who bought this house?'
       'Qui a acheté cette maison?'

(373) **ɲàáì**   **jɛ́gɛ̀**   **áì**   t͡ʃɔ́bʊ̀
     ɲàá=ì   jɛ́gɛ̀   áì   Ø-j-jɔ́b
     who=ERG   house   this   3.OBJ-3-buy
     'Who bought this house?'
     'Qui a acheté cette maison?'

(374) **èzʊ́ʊ̀**   **ɲàáì**   gɔ́ɾʊ̀
     èzí=ʊ̀   ɲàá=ì   Ø-j-kɔ́ɾ
     rope=DET   who=ERG   3.OBJ-3-cut
     'Who cut the rope?'
     'Qui a coupé la corde?'

(375) **ɲàáì**   **èzʊ́ʊ̀**   gɔ́ɾʊ̀
     ɲàá=ì   èzí=ʊ̀   Ø-j-kɔ́ɾ
     who=ERG   rope=DET   3.OBJ-3-cut
     'Who cut the rope?'
     'Qui a coupé la corde?'

     The presence of the ergative case marker is not always required for subjects of unmarked agentivity (i.e. not high or unexpected; cf. §6.2.1), as illustrated in (376) with *tɔ̀bí* 'buy', where the subject *músà* 'Musa', lacks the ergative case enclitic.

(376) músà   ɔ̀ɾkɔ́   sʊ́mmà   t͡ʃɔ́bʊ̀
     músà   ɔ̀ɾkɔ́   sʊ́n=mà   Ø-j-jɔ́b
     (name)   goat   3S.POSS=DET   3.OBJ-3-buy
     'Musa bought her (another person's) goat.'

     However, when even subjects of unmarked agentivity are questioned, the question word must bear ergative case marking. Its absence is ungrammatical, whether the question work occurs *in situ* or in the preverbal position, as illustrated in (377) to (378).

(377) ɲàá**ì**/*Ø   jɛ́gɛ̀   áì   t͡ʃɔ́bʊ̀
     ɲàá=**ì**/*Ø   jɛ́gɛ̀   áì   Ø-j-jɔ́b
     who=**ERG**/*Ø   house   this   3.OBJ-3-buy
     'Who bought this house?'
     'Qui a acheté cette maison?'

(378) jɛ́gɛ̀   áì   ɲààí/*Ø   t͡ʃɔ́bʊ̀
jɛ́gɛ̀   áì   ɲàá=ì/*Ø   Ø-j-jɔ́b
house   this   who=**ERG/*Ø**   3.OBJ-3-buy
'Who bought this house?'
'Qui a acheté cette maison?'

     For primary objects and possessors of primary objects, the preverbal position is the same as *in situ*, as illustrated in the following three pairs of examples ((379) to (384)), where question and answer pairs are given, showing that the *wh*-words often occur in the same place as the words they question.

(379) à̰ɡ̰́mà   **ínní**   t͡ʃɔ́bʊ̀
à̰ɡ̰́=mà   ínní   Ø-j-jɔ́b
man=DET   what   3.OBJ-3-buy
'What did the man buy?'
'Qu'est ce que l'homme a acheté?'

(380) à̰ɡ̰́mà   **jɛ́gɛ̀**   t͡ʃɔ́bʊ̀
à̰ɡ̰́=mà   jɛ́gɛ̀   Ø-j-jɔ́b
man=DET   house   3.OBJ-3-buy
'The man bought a house.'
'L'homme a acheté une maison.'

(381) à̰ɡ̰́mà   kútúbù   **ɲààɾʊ̀**   t͡ʃɛ́n
à̰ɡ̰́=mà   kútúb=ù   ɲàá=ɾʊ̀   Ø-j-jɛ́n
man=DET   book=DET   who=DAT   3.OBJ-3-give
'To whom did the man give the book?'
'L'homme a donné le livre à qui?'

(382) à̰ɡ̰́mà   kútúbù   **dɛ̀ɛ́ŋì   sɔ́mmàɾʊ̀**   t͡ʃɛ́n
à̰ɡ̰́=mà   kútúb=ù   dɛ̀ɛ́ŋì   sɔ́n=mà=ɾʊ̀   Ø-j-jɛ́n
man=DET   book=DET   brother   3S.POSS=DET=DAT 3.OBJ-3-give
'The man gave the book to his brother.'
'L'homme a donné le livre à son frère.'

(383) à̰ɡ̰́mà   gʷɔ̀ní   **ɲààʊ̀**   wúì
à̰ɡ̰́=mà   gʷɔ̀ní   ɲàá=ʊ̀   wú-Ø-j
man=DET   camel   who=GEN   steal-3.OBJ-3
'Whose camel did the man steal?'
'L'homme a volé le chameau de qui?'

(384) à̰ɡ́mà gʷɔ̀ní **dὲέŋì** **nírɔ̀ɔ̀** wúì
   à̰ɡ́=mà gʷɔ̀ní dὲέŋì nír=ɔ̀=ɔ̀ wú-Ø-j
   man=DET camel brother 1S.POSS=DET=GEN steal-3.OBJ-3
   'The man stole my brother's camel.'
   'L'homme a volé le chameau de mon frère.'

   In non-existential non-verbal interrogative clauses, the question word occurs before the predicate adjective, noun, or postpositional phrase. Thus, in (385), the postpositional phrase *tàníjὲ ńtàjὲ dìrɔ́* 'between me and you' is preposed, and the *wh-*word *ɲàá* 'who' occurs in the subject slot relative to the predicate adjective *bʊ́* 'big'.

(385) tàní=jὲ ńtà=jὲ dìrɔ́ ɲàá bʊ́
   1S=and 2S=and in who big
   'Between me and you, who (is) bigger?'
   'Entre toi et moi qui est grand?'

   In "where" questions, the *wh-*word *kɔ̀ɔ́* 'where' usually follows the subject constituent.[94] Thus, in (386), *kɔ̀ɔ́* 'where' follows *ábbà nʊ́mmà* 'your father', as the locative clause in an (indicative) existential locative clause often does. In (386), the existential predicate and the locative postpositional phrase are replaced by the question word. The answer to such a question would include the existential predicate, as well as a locative constituent, as in (387).

(386) ábbà nʊ́mmà   kɔ̀ɔ́
   ábbà nʊ́m=mà kɔ̀ɔ́
   father 2S.POSS=DET where
   'Where's your father?'
   'Où est ton père?'

(387) (ábbà nírɔ̀)   jέgàà dìrɔ́ t͡ʃíí
   (ábbà nír=ɔ̀)   jέgὲ=à dìrɔ́ Ø-t͡ʃĭ(g)
   (father 1S.POSS=DET) house=DET in 3-be
   'My father is in the house.'
   'Mon père est dans la maison.'

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[94] However, Kevin Walters (p.c.) has informed me that *kɔ̀ɔ́* 'where' can often occur clause-initially, with not apparent change in meaning.

Questions using *kɔ́ɔ́* 'where' can also be formed using the adverbial phrase *kònɔ́rò* 'where', as in (388). As indicated by the asterisk preceding the material in parentheses, in this construction the existential predicate obligatorily co-occurs with the question word (that is, it is not optional).

(388) ábbà   nʊ́mmà   kònɔ́rò   * (t͡ʃíí)
      ábbà   nʊ́m=mà   kònɔ́=rò   Ø-t͡ʃǐ(g)
      father   2S.POSS=DET   where=DAT   3-be
      'Where's your father?'
      'Où est ton père?'

If the object of a postpositional phrase is questioned, the *wh*-word occurs in the place where the object of a postposition would have occurred in an indicative clause (that is, preceding the postposition). This is illustrated in (389) and (390), where the question word *ínní* 'what' precedes the postpositions *kɛ́gɛ́* 'like' and *gɔ́r* 'about'.

(389) gíní   sʊ́mmà   ínní   kɛ́gɛ́
      gíní   sʊ́n=mà   ínní   kɛ́gɛ́
      color   3S.POSS=DET   what   like
      'What color is it?' [lit. 'Its color (is) like what?']
      'Quelle est sa couleur?'

(390) jàʊ́   sʊ́mmà   ínní   gɔ́r
      jàʊ́   sʊ́n=mà   ínní   gɔ́r
      price   3S.POSS=DET   what   about
      'How much does it cost?' [lit. 'Its price (is) about what?']
      'Ça coûte combien?'

Questions that in English are typically expressed by the question word 'how' are expressed by postpositional phrases, by dative adverbial phrases, or by means of other question words, as illustrated in (391), (392), and (393), respectively.

(391) d͡ʒóú   nʊ́m=mà   ínní   kɛ́gɛ́
      spirit   2S.POSS=DET   what   like
      'How do you feel?' [lit. 'What is your spirit like?']
      'Comment sens-tu?'

(392) à̗ǵ   áì=ŋà   kònɔ́=ɾò̀   bâ   nɔ́m
      man   this=GEN.S   where=DAT   relation 2S.POSS
      'How are you related to this man?'
      'De quel côté cet homme est-il ta parenté?'

(393) dàzágàɾò̀   *arbre*   ńtò̀   ínní
      dàzágà=ɾò̀   *arbre*   Ø-j-n-t   ínní
      (language)=DAT   tree   3.OBJ-3-say-P what
      'How do you say "tree" in Dazaga?'
      'Comment dit-on "arbre" en Dazaga?'

7.6 *Marked topic (left-dislocation)*

In this section I describe a marked topic construction accomplished via left-dislocation of nominal constituents (cf. Kroeger 2004:137-8). Left-dislocation constructions are distinguished from topicalization by the resumptive pronoun in left-dislocation constructions (as opposed to the gap left in topicalization; cf. Kroeger 2004:138; Gregory & Michaelis 2001:1667). In these marked topic constructions, the marked topic is fronted (left-dislocated), and a resumptive pronoun takes the place of the left-dislocated constituent in the clause structure, as illustrated in example (394), where the left-dislocated constituent and resumptive pronoun are co-indexed and occur in square brackets.

(394) [àwá   áì]ᵢ   t͡ʃǔssò̀   [sɔ́mmà]ᵢ   àddí
      àwá   áì   t͡ʃǔssò̀   sɔ́n=mà   àddí
      game   this   good   3S.POSS=DET   little
      'This game, its fun is small.' [free: 'This game's not very fun.']
      'Ce jeu-là, sa joie est petite.'

This left-dislocation is possible across the hierarchy of constituents, including subject, primary object, oblique, possessor, and adjunct. Left-dislocation of these constituents is illustrated in examples (395) to (399), respectively. In each example, the left-dislocated constituent and the resumptive pronoun are in bold type.

(395) *Left-dislocation of subject*

à̰ó̰	**áì**	**mèrɛ́**	dɔ́ktírɛ́	d͡ʒúkùr	jèjèìnní
à̰ó̰	áì	mèrɛ́	dɔ́kt-rɛ́	d͡ʒúkùr	jeje-j-n-ní
man	this	3s	be.silent-ADJZ	never	converse-3-LV-NEG

'**This man**, **he** (is) silent; he never converses.'
'Cet homme, il est silencieux; il ne cause jamais.'

(396) *Left-dislocation of primary object*

ábbà	**nírò**	gúrsà	nírò	gìnná	**mèrɛ́rò**	jénìr
ábbà	nír=ò	gúrsò-a	nír=ò	gìnná	mèrɛ́=rò	Ø-jén-r
father	1S.POSS=DET	money-P	1S.POSS=DET	all	3S=DAT	3.OBJ-give-1

'**My father**, I gave **him** all my money.'
'Mon père, j'ai lui donné tout mon argent.'

(397) *Left-dislocation of oblique (instrument)*

d͡ʒàná	**áì**	wóní	**mèrɛ́rò**	àrànîr
d͡ʒàná	áì	wóní	mèrɛ́=rò	àrà-Ø-n-r
knife	this	sheep	3S=DAT	slaughter-3.OBJ-LV-1

'**This knife**, I slaughtered a sheep with **it**.'
'Ce couteau, j'ai tué un mouton avec le.'

(398) *Left-dislocation of possessor*

à̰ó̰	**áì**	mí	**sómmà**	dùrúsù
à̰ó̰	áì	mí	són=mà	dùrúsù
man	this	son	3S.POSS=DET	tall

'**This man**, **his** son is tall.'
'Cet homme, son fils est long.'

(399) *Left-dislocation of adjunct (locative)*

kólɔ̀	**áì**	ŋàhílà	**mèrɛ́**	dìrɔ́	bórò	lîi
kólɔ̀	áì	ŋàhílà	mèrɛ́	dìrɔ́	bórò	lí-j
field	this	millet	3s	in	much	grow-3

'**This field**, the millet is growing a lot in **it**.'
'Ce champ, le mil devient grand en elle.'

The left-dislocation of possessors is particularly common and is further illustrated in examples (400) and (401).

(400) **àɾkín**   jálà   **sónàà**   t͡ʃʊ́ssà
      àɾkín   jálì-a   són-à=à   t͡ʃʊ́ssò-a
      tree.type child-P   3S.POSS-P=DET   good-P
      '**Arkin (tree)**, **its** fruits (are) good.'
      'Les fruits d'arkin sont bons.'

(401) **àɾìí**   ** à̰í**   **sɔ́mmà**   násʊ̀
      àɾìí   à̰í   sɔ́n=mà   Ø-nás
      woman   husband   3S.POSS=DET   3-die
      '**(The) woman**, **her** husband died.'
      'Le mari de cette femme est mort.'

     It is also possible to left-dislocate "heavy" constituents, that is, those with an embedded clause. This is illustrated in (402), where the left-dislocated possessor contains an embedded relative clause (shown in square brackets).

(402) **à̰ɲìí**   **[mɛ̀ɾɛ́ŋà   bàɾáíŋàà]**   sʊ́ɾʊ́   **sɔ́mmà**   júsùf
      à̰ɲìí   mɛ̀ɾɛ́=ŋà   baɾa-Ø-j-n-gɪ=a   sʊ́ɾʊ́   sɔ́n=mà   júsùf
      man   3S=ACC   search-3.OBJ-3-LV-IPFV=DET   name   3S.POSS=DET   (name)
      'The man whom he is searching for, his name is Yusuf.'
      'L'homme qui la cherchait s'appelle Yusuf.'

7.7 Focus

     Dazaga's word order is fairly strictly SOV, but the order OSV is also occasionally attested (cf. the similar claims for Kanuri (e.g. Hutchison 1986:192) and Beria/Zaghawa (e.g. Jakobi 2006)). As noted in §6.2.1, the ergative case enclitic is not obligatory (in the sense that it does not occur on every transitive subject), and several factors affect its distribution (see the more detailed description in §6.2.1). One use of the ergative case enclitic is to mark transitive subjects when there is an inversion of the subject and object constituents of a clause (OSV order). In this usage, the ergative case enclitic is required, as illustrated in (403) (cf. (377) and (378)).

(403) kɔ̀gʷɔ́jà   nɔ́mmà   èlíîì/*Ø   gɔ̀ì
      kɔ̀gʷɔ́jɛ̀-a   nɔ́m=mà   èlíí=ì/*Ø   gɔ́-Ø-j
      chicken-P   2S.POSS=DET   sparrowhawk=**ERG/*Ø**   take-3.OBJ-3
      'A *sparrowhawk* took your chickens.'
      'Un épervier a pris ta poule.'

Lukas (1953:165) explains the occurence of the ergative case enclitic on subjects in clauses with OSV order as motivated by a need to disambiguate grammatical relations (cf. Lukas (1937:17) for a similar explanation of the same phenemenon in Kanuri). However, this does not seem to be the (only) motivation, since the grammatical relations of the nominal constituents is not always ambiguous in OSV clauses, and yet, the ergative case enclitic occurs on immediately preverbal subjects when there is no need to disambiguate grammatical relations of subject and object. This is illustrated in (404), where the object is already distinguished from the subject by the presence of the accusative case enclitic *=gà*, and yet the absence of the ergative case enclitic is ungrammatical.

(404) kògᵂɔ́jɛ̀   sʊ́mmàgà   kɪ́ɪ̠̀/*∅   gɔ́ì
     kògᵂɔ́jɛ̀   sʊ́n=mà=gà   kɪ́ɪ̠=ì/*∅   gɔ́-∅-j
     chicken   3S.POSS=DET=ACC   bush.cat**=ERG/*∅**   take-3.OBJ-3
     'It was the bush cat who took his chicken.'
     'C'est le chat de brousse qui a pris sa poule.'

Below, I propose a (tentative) focus analysis of subject constituents moved to the immediately preverbal position and marked with the ergative case enclitic.[95] I also note difficulties with this analysis. Focus is not encoded by tone; I have not studied intonation patterns in relation to focus.

The term "focus" has been variously defined as the "new information" in a clause (Foley 2007:403), "the portion of a proposition which cannot be taken for granted at the time of speech" (Lambrecht 1994:207), or "that part of the utterance that is at issue" (Kroeger 2014c:4; cf. Clopper & Tonhauser 2011). In English and French, one of the ways that focus can be signaled is through a clefted sentence (as reflected in some of the free translations below).

When the subject constituent of a transitive clause is focused, the focused element is optionally moved to the immediately preverbal position, a focus position common in

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[95] Significantly, Wolfe & Adam (2015) demonstrate that the (optional) ergative case enclitic in Beria is used with focused subject constituents.

SOV languages (Kim 1988).[96] When the subject is moved to this focus position, it is obligatorily marked by the ergative case enclitic *=ì* (cf. example (403)). This is illustrated in the question and response pairs in (405) and (406), in (407), which has contrastive focus on the subject constituent, and in (408) and (409).

(405) èzóò   ɲààí   góɾò
            èzí=ò   ɲàá=**ì**   Ø-j-kóɾ
            rope=DET   who=**ERG**   3.OBJ-3-cut
            'Who cut the rope?'
            'Qui a coupé la corde?'

            èzóò   mí   níɾòì   góɾò
            èzí=ò   mí   níɾ=ò=**ì**   Ø-j-kóɾ
            rope=DET   son   1S.POSS=DET=**ERG** 3.OBJ-3-cut
            'My son cut the rope.'
            'Mon fils a coupé la corde.'

(406) gʷòní   sómmà   ɲààí   wúì
            gʷòní   són=mà   ɲàá=**ì**   wú-Ø-j
            camel   3S.POSS=DET   who=**ERG** steal-3.OBJ-3
            'Who stole his camel?'
             'Qui a volé son chameau?'

            gʷòní   sómmà   dèéɲì   níɾòì   wúì
            gʷòní   són=mà   dèéɲì   níɾ=ò=**ì**   wú-Ø-j
            camel   3S.POSS=DET   brother   1S.POSS=DET=**ERG** steal-3.OBJ-3
            'My brother stole his camel.'
            'Mon frère a volé son chameau.'

(407) (It wasn't a dog that bit my brother.)
            (Ce n'est pas un chien qui a mordu mon frère.)

            dèéɲì   níɾò   gʷòníì   wóì
            dèéɲì   níɾ=ò   gʷòní=**ì**   wú-Ø-j
            brother   1S.POSS=DET   camel=**ERG** bite-3.OBJ-3
            'It was a camel that bit my brother.'
            'C'est un chameau qui a mordu mon frère.'

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[96] Other focus constructions, which do not involve case markers or the preverbal position, are reported in Kanuri (Wolff & Löhr 2006; Ziegelmeyer 2011). These focus constructions do not appear to have parallels in Dazaga.

(408) ìní   gìnná   állàì   hèllíkì
      ìní   gìnná   állà=ì   hèllík-Ø-j
      thing   all   God=**ERG**   create-3.OBJ-3
      'It's God who created everything.'
      'C'est Dieu qui a tout créé.'

(409) ὲkkέ   t͡ʃʊ̀rɔ̀gʊ́   àrìáì   dàkkʊ́m
      ὲkkέ   t͡ʃʊ̀rɔ̀gʊ́   àrìí-a=ì   Ø-dág-t-m
      tree   tree.type   woman-P=**ERG**   3.OBJ-like-P-2
      '*Women* like the jujubier tree.'
      'Les femmes aiment le jujubier.'

Focused primary object constituents normally occur in the immediately preverbal position, but, for primary objects, this is the same as *in situ*, given Dazaga's SOV word order. This is illustrated in (410) and (411) (cf. (379) to (382)).

(410) (What did the man buy?)
      (Qu'est-ce que l'homme a acheté?)

      à̰ʊ́mà   **jέgὲ**   t͡ʃɔ́bʊ̀
      à̰ʊ́=mà   jέgὲ   Ø-j-jɔ́b
      man=DET   house   3.OBJ-3-buy
      'The man bought a house.'
      'L'homme a acheté une maison.'

(411) (To whom did the man give the book?)
      (L'homme a donné le livre à qui?)

      à̰ʊ́mà   kútúbù   **dὲέŋì**   **sʊ́mmàrʊ̀**   t͡ʃέn
      à̰ʊ́=mà   kútúb=ù   dὲέŋì   sʊ́n=mà=rʊ̀   Ø-j-jέn
      man=DET   book=DET   brother   3S.POSS=DET=DAT   3.OBJ-3-give
      'The man give the book to his brother.'
      'L'homme a donné le livre à son frère.'

Focused secondary objects, like focused subjects, may optionally move to the immediately preverbal position (from their normal position preceding the primary object), reversing the normal order of the primary and secondary objects. This is illustrated in (412).

(412) (What did your father give to your brother?)
(Qu'est-ce que ton père a donné à ton frère?)

ábbà	nír̀ò	dὲέŋì	nír̀ò̀rò	**kútúbgà**	t͡ʃέn
ábbà	nír̀=ò	dὲέŋì	nír̀=ò=rò	kútúb=gà	Ø-j-jέn
father	1S.POSS=DET	brother	1S.POSS=DET=DAT	book=ACC	3.OBJ-3-give

'My father gave a book to my brother.'
'Mon père a donne un livre à mon frère.'

In un-elicited sentences in my data (from texts and example sentences), subjects moved to the immediately preverbal position (and marked with =ì) only occur in such focus constructions. However, some elicited sentences present complications for the analysis of preverbal subjects as focused constituents.

Specifically, in addition to their movement in focus constructions, transitive subjects can optionally be moved to the preverbal position when the subject is topical, and, therefore, not focused (assuming that "a single element cannot function as both topic and focus at the same time" (Kroeger 2004:161-162)). This is illustrated in (413) to (416). In each of these examples, the subject is topical because of its mention in a preceding statement or question; nevertheless, the subject appears in the preverbal position (with ergative case marking). These forms do not seem to be the most preferred forms for replies/responses. My language consultant confirmed that these were grammatically correct, but did not himself produce these forms in elicited sentences.

(413) (The dog didn't bite my brother.)
(Le chien n'a pas mordu mon frère.)

mí	nírò(gà)	kír̀î	wóì
mí	nír̀=ò(=gà)	kír̀í=ì	wó-Ø-j
son	1S.POSS=DET(=ACC)	dog=**ERG**	bite-3.OBJ-3

'The dog bit my son.'
'Le chien a mordu mon fils.'

(414) (What did Ibrahim do to the goat?)
       (Qu'est-ce que Ibrahim a fait au chèvre?)

       ɔ̀ɾkáà(gà)   ìbràhímì   t͡ʃĩɾù
       ɔ̀ɾkɔ́=à(=gà)   ìbràhím=ì   Ø-j-jíd
       goat=DET(=ACC) (name)=**ERG**   3.OBJ-3-kill
       'Ibrahim killed the goat.'
       'Ibrahim a tué la chèvre.'

(415) (What did the camel do to the boy?)
       (Qu'est-ce que le chameau a fait au garçon?)

       kàllʊ́ʊ̀(gà)   gʷɔ̀níì   wʊ́ì
       kàllí=ʊ̀(=gà)   gʷɔ̀ní=ì   wʊ́-Ø-j
       boy=DET(=ACC)   camel=**ERG**   bite-3.OBJ-3
       'The camel bit the boy.'
       'Le chameau a mordu le garçon.'

(416) (What did your son do?)
       (Qu'est-ce que ton fils a fait?)

       èzúù   mí   nɪ́ɾòì   gɔ́ɾò
       èzí=ù   mí   nɪ́ɾ=ò=ì   Ø-j-kɔ́ɾ
       rope=DET   son 1S.POSS=DET=**ERG**   3.OBJ-3-cut
       'My son cut the rope.'
       'Mon fils a coupé la corde.'

The appearance of topical constituents in what otherwise seems to be a focus position, suggests that either the immediately preverbal position is not really a focus position (but, rather, is compatible with both focus and topic constituents) or that the topical and focused subjects are filling two distinct preverbal slots when moved from their normal clause-initial position. Further research is needed to confirm or refute the analysis of examples such as (403) through (409) as subject focus constructions.

Chapter 8: Clause Combinations

8. Clause combinations

In this chapter, I describe Dazaga's patterns of clause combinations, categorizing these broadly under the terms coordination and subordination. I include causative constructions in the section on subordination because I analyze periphrastic causative constructions as biclausal. I also include in this chapter a third phenomenon, serial verb constructions, which are not strictly the combination of clauses, but which exhibit some similarities to clause combinations (such as the multiplicity of verbs) which warrant a separate treatment here. In the sections on clause coordination, I also include brief descriptions of other lower-level patterns of coordination.

Clause combinations have been studied from a variety of different perspectives, including syntax, pragmatics, and discourse (cf. e.g. Haiman & Thompson 1988; Fabricus-Hansen & Ramm 2008; Bril 2010). The focus in this chapter is syntactic description. I further subdivide clause subordination into complementation, relative clauses, and adverbial clauses.

8.1 Coordination

In this section on coordination, I examine conjunctive coordination ("conjunction"), disjunctive coordination ("disjunction"), and adversative coordination. While the primary focus of this section is on clausal coordination, I also briefly (and first) describe the basic patterns of phrasal coordination. In example sentences, coordinators are given in bold type. The categories and terminology employed in this section basically follow those of Haspelmath (2007b).

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8.1.1 Phrasal coordination

The bisyndetic enclitic coordinator =*jɛ̀* 'and' is used for phrasal conjunction (except for verb and postpositional phrases). This is illustrated for both simple and more complex noun phrases in (417) and (418).

(417) fíɾá**jɛ̀**　　　 képtí**jɛ̀**　　　 t͡ʃɔ́bʊ̀
　　　 fíɾí-a=jɛ̀　　　 képtí=jɛ̀　　　 Ø-j-jɔ́b
　　　 arrow-P=and　　 bow=and　　　 3.OBJ-3-buy
　　　 'He bought arrows **and** a bow.'
　　　 'Il a acheté un arc et des flèches.'

(418) nɛ̀bá　　　 ʊ́ŋkɔ̀à**jɛ̀**　　　　　 ámmá　 állà　 gásʊ̀tʊ̀gàà
　　　 nɛ̀bí-a　　 ʊ́ŋkɔ̀=à=jɛ̀　　　　　 ámmá　 állà　 Ø-j-kás-t-gì=à
　　　 prophet-P　 before=GEN.P=and　 people　 God　 3.OBJ-3-follow-P-IPFV=DET

　　　 gìnná**jɛ̀**　　 bígà　　 sʊ́ntáà　　　　 d͡ʒíkànʊ̀　 òrózà
　　　 gìnná=jɛ̀　　 bígì-a　 sʊ́ntʊ́-a=à　　 d͡ʒíkànʊ̀　 òrózì-a
　　　 all=and　　　 sin-P　 3P.POSS-P=DET　 because　 domestic.animal-P

　　　 hàlálà　　 sàɾákìntʊ̀
　　　 hàlâl-a　 sàɾák-Ø-j-n-t
　　　 clean-P　 sacrifice-3.OBJ-3-LV-P
　　　 'Because of their sins, the prophets of old **and** all people who followed God
　　　 sacrificed (ceremonially) clean animals.'
　　　 'À cause de leur péchés, les prophètes d'avant et tout ceux qui craignaient Dieu ont
　　　 offert en sacrifice des animaux dits 'halal'.'

The coordinator =*jɛ̀* can also be used to coordinate the objects of postpositions (419), adverbs (420), and adjectives (421).

(419) tàní=**jɛ̀**　 ńtà=**jɛ̀**　 dìɾɔ́　 ɲàá　 bʊ́
　　　 1s=and　　 2s=and　　 in　　 who　 big
　　　 'Between me **and** you, who (is) bigger?'
　　　 'Entre toi et moi qui est grand?'

(420) níí̱　　 ŋégí=ŋà　　　　　 ʊ́nnʊ́=**jɛ̀**　 ʊ́ŋkɔ̀=**jɛ̀**　 bʊ́ɾò　 ʃìʃá
　　　 town　 (place)=GEN.S　 now=and　　 before=and　 very　 different
　　　 'Nowadays the town of N'guigmi is very different from before.'
　　　 [lit. 'The town of N'guigmi, now **and** before, (is) very different.']
　　　 'Maintenant la ville de N'guigmi est beaucoup different qu'avant.'

(421) àlâm   lárdò   sóntó=ŋà   màró=**jɛ̀**   t͡ʃòó=**jɛ̀**
       flag   country   3P.POSS=GEN.S   red=and   white=and
       '(The) flag of their country (is) red **and** white.'
       'Le drapeau de leur pays est rouge et blanc.'

The conjunction of postpositional phrases with *=jɛ̀* 'and' (used for other phrasal conjunction) is ungrammatical, as demonstrated in (422). Rather, such conjunction must be at the verb phrase level, using *ní* 'and', as in (423). Verb phrase conjunction normally involves the monosyndetic use of *ní* 'and', occurring between the coordinated verb phrases (e.g. cf. examples (430) and (431)). In (423), where the verb is repeated, *ní* 'and' occurs bisyndetically, in second position within the verb phrase (i.e. following the postpositional phrases).

(422) *è̩ì̩áà   jégàà   dáá**jɛ̀**   jìgáà   dìró**jɛ̀**   tòìléntó
       è̩ì̩í-a=à   jégè-a=à   dáá=jɛ̀   jìgé-a=à   dìró=jɛ̀   Ø-tʊɪlɛn-t
       rock-P   house=DET   on=and   well=DET   in=and   3-fall-P
       ('The rocks fell on the house **and** into the well.')
       ('Les pierres sont tombées sur la maison et dans le puits.')

(423) è̩ì̩áà   jégàà   dáá **ní**   tòìléntó   jìgáà   dìró **ní**   tòìléntó
       è̩ì̩í-a=à   jégè-a=à   dáá ní   Ø-tʊɪlɛn-t   jìgé-a=à   dìró ní   Ø-tʊɪlɛn-t
       rock-P   house=DET   on   and   3-fall-P   well=DET   in   and   3-fall-P
       'The rocks fell on the house **and** into the well.'
       'Les pierres sont tombées sur la maison et dans le puits.'

Lukas (1953:166) reports a monosyndetic use of *=jɛ̀*, illustrated in (424).[97] I have also encountered a single example of this same phenemenon in my own data, presented in (425). Besides the monosyndetic usage of *=jɛ̀*, it is worth noting that these examples exhibit different patterns as far as where the conjunction occurs relative to the two noun phrases, namely following the second noun phrase (424) or following the first noun phrase (425).

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[97] Stassen (2000:15; also Whaley (2011:474)) notes this same example in his discussion of postposed monosydetic and polysyndetic conjunctions (using his terminology). Lukas (1953:166) gives several other examples of the same phenomenon.

(424) wídɛ́n   ɔ̀ɾkɔ́=**jɛ̀**
      gazelle   goat=and
      'a gazelle **and** a goat'
      'Gazelle und Ziege'

(425) ábbà   nírɔ̀**jɛ̀**   dɛ̀ɛ́ŋì   nírɔ̀   gʷɔ̀ná   t͡ʃɔ́ppɔ̀
      ábbà   níɾ=ɔ̀=jɛ̀   dɛ̀ɛ́ŋì   níɾ=ɔ̀   gʷɔ̀ní-a   Ø-j-jɔ́b-t
      father   1S.POSS=DET=and   brother   1S.POSS=DET   camel-P   3.OBJ-3-buy-P
      'My father **and** my uncle bought camels.'
      'Mon pere et mon frere ont achete des chameaux.'

Stassen (2000:14) claims that monosyndetic patterns of postposed conjunctions are often reduced variants of dominantly bisyndetic patterns. This appears to be the case in Dazaga, where the monosyndetic use of =jɛ̀ is very rare and can occur in either of the positions filled by the bisyndetic usage, but doesn't seem to differ in meaning from the bisyndetic pattern.

When multiple conjunction occurs, the coordinator =jɛ̀ 'and' must be repeated with each coordinand. The omission of the coordinator is ungrammatical. These patterns are illustrated in (426) and (427) (cf. Lukas 1953:166).

(426) làʊ́   nírɔ̀   ɔ̀ɾkɔ́**jɛ̀**   gʷɔ̀ní**jɛ̀**   áskí**jɛ̀**   t͡ʃɔ́bʊ̀
      làʊ́   níɾ=ʊ̀   ɔ̀ɾkɔ́=jɛ̀   gʷɔ̀ní=jɛ̀   áskí=jɛ̀   Ø-j-jɔ́b
      friend   1S.POSS=DET   goat=and   camel=and   horse=and   3.OBJ-3-buy
      'My friend bought a goat, a camel, **and** a horse.'
      'Mon ami a acheté une chèvre, un chameau, et un cheval.'

(427) *làʊ́   nírɔ̀   ɔ̀ɾkɔ́   gʷɔ̀ní   áskí**jɛ̀**   t͡ʃɔ́bʊ̀
      làʊ́   níɾ=ʊ̀   ɔ̀ɾkɔ́   gʷɔ̀ní   áskí=jɛ̀   Ø-j-jɔ́b
      friend   1S.POSS=DET   goat   camel   horse=and   3.OBJ-3-buy
      ('My friend bought a goat, a camel, **and** a horse.')
      ('Mon ami a acheté une chèvre, un chameau, et un cheval.')

Dazaga does not distinguish emphatic phrasal conjunction (i.e. *both ... and* conjunction; cf. Haspelmath (2007b:15)) from regular phrasal conjunction. To translate emphatic phrasal conjunction from other languages, Dazaga uses a construction that is structurally identical to regular phrasal conjunction. The bisyndetic conjunctive coordinator =jɛ̀ 'and' is used to coordinate the noun phrases, and the verb appears only

once, as in (428). The coordinator *ní* 'and', used for clausal conjunction (cf. §8.1.2), and the particle *ná* 'even, also' are ungrammatical for emphatic phrasal conjunction, as demonstrated in (429).

(428) ʃáì**jɛ̀**　ìí**jɛ̀**　dàgíɾ
　　　ʃáì=jɛ̀　ìí=jɛ̀　Ø-dák-ɾ
　　　tea=and　water=and　3.OBJ-want-1
　　　'I want **both** tea **and** water.'
　　　'J'aime et thé et l'eau.'

(429) *ʃáì　**ní**　ìí　**ní**　dàgíɾ
　　　ʃáì　ní　ìí　ní　Ø-dák-ɾ
　　　tea　and　water　and　3.OBJ-want-1

　　　*ʃáì　**ná**　ìí　**ná**　dàgíɾ
　　　ʃáì　ná　ìí　ná　Ø-dák-ɾ
　　　tea　also　water　also　3.OBJ-want-1
　　　('I want **both** tea **and** water.')
　　　('J'aime et thé et l'eau.')

The monosyndetic coordinator *ní* 'and' is used for verb phrase conjunction, as in examples (430) and (431).

(430) làʊ́　níɾʊ̀　gʷɔ̀ní　d͡ʒásʊ̀　**ní**　ɔ̀ɾkɔ́　t͡ʃɔ́bʊ̀
　　　làʊ́　níɾ=ʊ̀　gʷɔ̀ní　Ø-j-t͡ʃás　ní　ɔ̀ɾkɔ́　Ø-j-jɔ́b
　　　friend　1S.POSS=DET　camel　3.OBJ-3-sell　and　goat　3.OBJ-3-buy
　　　'My friend sold a camel **and** bought a goat.'
　　　'Mon ami a vendu un chameau et acheté une chèvre.'

(431) jɔ̂m　tɛ́　awʊʃɪ　**ní**　bàbàɾt͡ʃɪ̌
　　　jɔ̂m　tɛ́　awʊʃ-j　ní　babaɾt-j
　　　day　that　fear-3　and　tremble-3
　　　'That day, he was afraid **and** trembled.'
　　　'Ce jour là il a eu peur et il a tremblé.'

The phrasal conjunction *=jɛ̀* 'and' cannot be used for verb phrase conjunction, as demonstrated by comparing (430) with (432).

(432) *làʊ́   nírʊ̀   gʷɔ̀ní   d͡ʒàsʊ́**jɛ̀**   ɔ̀rkɔ́ t͡ʃɔ́bʊ̀**jɛ̀**
      làʊ́   nír=ʊ̀   gʷɔ̀ní   Ø-j-t͡ʃás=jɛ̀   ɔ̀rkɔ́ Ø-j-jɔ́b=jɛ̀
      friend 1S.POSS=DET camel   3.OBJ-3-sell=and   goat   3.OBJ-3-buy=and
      ('My friend sold a camel **and** bought a goat.')
      ('Mon ami a vendu un chameau et acheté une chèvre.')

As with English *and*, the coordinator *ní* 'and' can be understood to mean 'and then' by way of (generalized conversational) implicature. This implicature is illustrated in (433), where the speaker is not resting and walking simultaneously, but in sequence.

(433) àddí   t͡ʃonír   **ní**   dígánʊ̀
      àddí   t͡ʃo-n-r ní   d-tígán
      a.little rest-LV-1 and   1-walk
      'I rested for a little while, **and (then)** walked (on).'
      'Je me suis reposé un peu et (puis) continué.'

The coordinator *ná* 'also, and', rather than *ní* 'and', is used for the conjunction of imperatives. This is demonstrated in (434).

(434) bònú   gɔ́n   **ná/*ní**   kʊ́làŋà   sòtɔ́
      bònú   Ø-gɔ́n-Ø   ná/*ní   kʊ́lɔ̀-a=ŋà   Ø-sòtɔ́-Ø
      hoe   3.OBJ-take.IMV-2   and/*and   field-P=ACC   3.OBJ-go.to.IMV-2
      'Take your hoe **and** go to (the) fields.'
      'Prends ta houe et va au champ.'

Phrasal disjunction is expressed by means of the monosyndetic disjunctive coordinator *wàllá* 'or', as illustrated in (435) with noun phrases, and in (436) with verb phrases.

(435) ŋɛ́gí   **wàllá** dífà   dɛ́rìgì
      ŋɛ́gí   wàllá   dífà   d-tɛ́r-gì
      (place) or   (place) 1-go-IPFV
      'I will visit N'guigmi **or** Difa.'
      'Je visiterai N'guigmi ou Difa.'

(436) jégè   níɾò   dέɾìgì   **wàllá**   kàsógòrò   dòwózìgì
          jégè   níɾ=ò   d-tέɾ-gì   wàllá   kàsógò=rò   d-bóz-gì
          house   1S.POSS=DET 1-go-IPFV   or   market=DAT   1-stay-IPFV
          'I'll go to my house **or** I'll stay at the market.'
          'Je vais aller chez moi ou je vais rester au marché.'

Whereas English and French have explicitly exclusive disjunctive constructions (*either ... or* and *ou ... ou* or *soit ... soit*), this kind of disjunction is syntactically the same as regular disjunction in Dazaga, as demonstrated in (437), where the same monosyndetic disjunctive coordinator *wàllá* 'or' is used.

(437) ʃáì   **wàllá**   ìí   dàgíɾ   (t͡ʃííɾò   íí   dàgìɾdí)
          ʃáì   wàllá   ìí   Ø-dák-ɾ   (t͡ʃííɾò   íí   Ø-dák-ɾ-ní)
          tea   or   water 3.OBJ-want-1 (but   milk 3.OBJ-want-1-NEG)
          'I want either tea **or** water (but I don't want milk).'
          'Je veux ou/soit du thé ou/soit de l'eau (mais je ne veux pas du lait).'

Many languages distinguish between disjunction in alternative questions and standard disjunction (Haspelmath 2007b:26). Dazaga does not exhibit this distinction. Rather, disjunction in alternative questions, like standard disjunction, is expressed with the disjunctive coordinator *wàllá* 'or', as demonstrated in (438).

(438) áskí   **wàllá** gʷòní kìʃì-ɾé
          horse   or   camel   speed-ADJZ
          'Are horses **or** camels faster?'
          'Est-ce que le cheval ou le chameau est plus rapide?'

Phrasal adversative coordination is ungrammatical, as illustrated in (439) and (440).[98]

(439) làó   níɾò   òɾká t͡ʃúú t͡ʃóbò   **t͡ʃííɾò** gʷòní tɨɾ̆n t͡ʃóbò
          làó   níɾ=ò   òɾkó-a t͡ʃúú Ø-j-jób   t͡ʃííɾò gʷòní tɨɾ̆n Ø-j-jób
          friend 1S.POSS=DET goat-P two 3.OBJ-3-buy but   camel one 3.OBJ-3-buy
          'My friend bought two goats, **but** (only) one camel.'
          'Mon ami a acheté deux chèvres, mais il a acheté (seulement) un chameau.'

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[98] See Vicente (2010) for a study of the syntax of adversative coordination.

(440) *làʊ́   nírʊ̀   ɔ̀rká   t͡ʃúú **t͡ʃíírʊ̀** gʷɔ̀ní t̪ʼrɔ̌n t͡ʃɔ́bʊ̀
     làʊ́   nír=ʊ̀   ɔ̀rkɔ́-a t͡ʃúú t͡ʃíírʊ̀ gʷɔ̀ní t̪ʼrɔ̌n Ø-j-jɔ́b
     friend 1S.POSS=DET goat-P   two   but   camel   one   3.OBJ-3-buy
('My friend bought two goats, **but** bought (only) one camel.')
('Mon ami a acheté deux chèvres, mais (seulement) un chameau.')

8.1.2   Clausal coordination

Clauses are conjunctively coordinated by the bisyndedic use of the coordinator *ní* 'and'. This is illustrated in (441) and (442). In clausal conjunction, *ní* 'and' occurs as a second position particle, following the first argument of the verb in each clause (note that the temporal adjunct *ʊ́ŋkɔ̀* 'before' is not counted in determining the second position in (442)).

(441) làʊ́   nírʊ̀   **ní** gʷɔ̀ní d͡ʒàsʊ́   tàní **ní** ɔ̀rkɔ́ jóbɨ̀r
     làʊ́   nír=ʊ̀   ní   gʷɔ̀ní Ø-j-t͡ʃás   tàní ní   ɔ̀rkɔ́ Ø-jɔ́b-ɾ
     friend 1S.POSS=DET and camel   3.OBJ-3-sell 1S   and goat   3.OBJ-buy-1
     'My friend sold a camel, **and** I bought a goat.'
     'Mon ami a vendu un chameau et j'ai acheté une chèvre.'

(442) ʊ́ŋkɔ̀   jálà   **ní** t͡ʃĭkkí   dʊ́wá   **ní** t͡ʃĭkkí
     ʊ́ŋkɔ̀   jálì-a ní   Ø-t͡ʃĭg-t dòú-a ní   Ø-t͡ʃĭg-t
     before boy-P   and 3-be-P   girl-P and 3-be-P
     'Before, there were boys **and** there were girls.'
     'Avant il y avait les jeunes gens et des filles.'

Whereas *ní* 'and' is used monosyndetically for verb phrase coordination (see examples (430) and (431)), this usage is ungrammatical for clausal coordination, as demonstrated in (443).

(443) *làʊ́   nírʊ̀   gʷɔ̀ní d͡ʒàsʊ́   **ní** tàní ɔ̀rkɔ́ jóbɨ̀r
     làʊ́   nír=ʊ̀   gʷɔ̀ní Ø-j-t͡ʃás   ní   tàní ɔ̀rkɔ́ Ø-jɔ́b-ɾ
     friend 1S.POSS=DET camel   3.OBJ-3-sell and 1S   goat   3.OBJ-buy-1
('My friend sold a camel, **and** I bought a goat.')
('Mon ami a vendu un chameau et j'ai acheté une chèvre.')

What might be called "additive conjuction" or "also-conjunction," is formed in the same way as clausal conjunction. This is demonstrated in (444), where the

coordinator *ní* 'and' must be used bisyndetically, again in the second position within a clause, following the first term of the clause's verb. With the monosyndetic usage of *ní* 'and', the sentence is ungrammatical for the intended meaning, as illustrated in (445) (but would be grammatical for 'I like meat and I like millet').

(444) jíní **ní** dàgɨɾ ŋàhílà **ní** dàgɨɾ
     jíní ní Ø-dák-ɾ ŋàhílà ní Ø-dák-ɾ
     meat and 3.OBJ-want-1 millet and 3.OBJ-want-1
     'I like meat **and also** millet.'
     'J'aime du viande et aussi du mil.'

(445) *jíní dàgɨɾ **ní** ŋàhílà dàgɨɾ
     jíní Ø-dák-ɾ ní ŋàhílà Ø-dák-ɾ
     meat 3.OBJ-want-1 and millet 3.OBJ-want-1
     ('I like meat **and also** millet.')
     ('J'aime du viande et aussi du mil.')

Emphatic negative clausal coordination is structurally identically to emphatic conjunction, except that the repeated verb is negated, as illustrated in (446) and (447).

(446) máɾádí **ní** dàgɨɾdí táwá **ní** dàgɨɾdí
     máɾádí ní Ø-dák-ɾ-ní táwá ní Ø-dák-ɾ-ní
     (place) and 3.OBJ-like-1-NEG (place) and 3.OBJ-like-1-NEG
     'I don't like **either** Maradi **or** Tahoua.' / 'I like **neither** Maradi **nor** Tahoua.'
     'Je n'aime pas Maradi, ni Tahoua.'

(447) ʃáì **ní** dàgɨɾdí ìí **ní** dàgɨɾdí
     ʃáì ní Ø-dák-ɾ-ní ìí ní Ø-dák-ɾ-ní
     tea and 3.OBJ-like-1-NEG water and 3.OBJ-like-1-NEG
     'I don't like **either** tea **or** water.' / 'I like **neither** tea **nor** water.'
     'Je n'aime ni du thé, ni de l'eau.'

In adversatively coordinated clauses, the adversative monosyndetic coordinator *t͡ʃííɾò* 'but' occurs between the two clauses. This is illustrated in examples (448) to (451).

(448) làʊ́ nírʊ̀ ɔ̀rkɔ́ tʃɔ́bʊ̀ **tʃ͡íírʊ̀** gʷɔ̀ní tʃɔ́bʊ̀rɛ́ bèí
làʊ́ nír=ʊ̀ ɔ̀rkɔ́ Ø-j-jɔ́b tʃ͡íírʊ̀ gʷɔ̀ní Ø-j-jɔ́b-rɛ́ Ø-bé(g)
friend 1S.POSS=DET goat 3.OBJ-3-buy but camel 3.OBJ-3-buy-ADJV 3-be.not
'My friend bought a goat, **but** didn't buy a camel.'
'Mon ami a acheté une chèvre, mais pas un chameau.'

(449) làʊ́ nírʊ̀ ɔ̀rkɔ́ tʃɔ́bʊ̀ **tʃ͡íírʊ̀** gʷɔ̀ní d͡ʒàsʊ́
làʊ́ nír=ʊ̀ ɔ̀rkɔ́ Ø-j-jɔ́b tʃ͡íírʊ̀ gʷɔ̀ní Ø-j-tʃ͡ás
friend 1S.POSS=DET goat 3.OBJ-3-buy but camel 3.OBJ-3-sell
'My friend bought a goat, **but** sold a camel.'
'Mon ami a acheté une chèvre, mais vendu un chameau.'

(450) jégàà búrʊ̀ tàmànnɛ́ **tʃ͡íírʊ̀** tɔ́mʊ̀r
jégɛ̀=a búrʊ̀ tàmàn-rɛ́ tʃ͡íírʊ̀ Ø-tɔ́m-r
house=DET very expense-ADJZ but 3.OBJ-build-1
'The house was very expensive, **but** I built it (anyway).'
[or 'I built a house even though it was expensive.']
'J'ai construit la maison, bien que elle était chère.'

(451) gʷɔ̀nʊ́ʊ̀ wáʃì **tʃ͡íírʊ̀** jɔ́bìrɔ̀ dàgír
gʷɔ̀ní=ʊ̀ wáʃì tʃ͡íírʊ̀ Ø-jɔ́b-r=ɔ Ø-dák-r
camel=DET ill but 3.OBJ-buy-1=CNTG 3.OBJ-want-1
'The camel is ill, **but** I (still) want to buy it.'
[or 'Even though the camel is ill, I'd like to buy it.']
'Bien que le chameau est malad, je veux l'acheter.'

Clausal disjunction is accomplished with the same coordinator, *wàllá* 'or', as is used for phrasal disjunction, as demonstrated in (452).

(452) dèɛ́ŋì nírʊ̀ jégɛ̀ ábbà nírʊ̀ŋà tɛ́rìgì
dèɛ́ŋì nír=ʊ̀ jégɛ̀ ábbà nír=ʊ̀=ŋà Ø-tɛ́r-gì
brother 1S.POSS=DET house father 1S.POSS=DET=GEN.S 3-go-IPFV

wàllá ábbà nírʊ̀ jégɛ̀ dèɛ́ŋì nírʊ̀ŋà írìgì
wàllá ábbà nír=ʊ̀ jégɛ̀ dèɛ́ŋì nír=ʊ̀=ŋà Ø-írì-gì
or father 1S.POSS=DET house brother 1S.POSS=DET=GEN.S 3-come-IPFV
'My brother will go to my father's house, **or** my father will come to my brother's house.
'Mon frère va aller chez mon père, ou mon père va venir chez mon frère.'

8.2 Subordination

Subordinate clauses may be broadly categorized by whether they are selected by a lexical head (complementation), modify a head noun (relative clauses), or modify a verb phrase or clause (adverbial clauses) (cf. Thompson et al. 2007:238; Kroeger 2005:219). I describe each of these types of subordination in more detail in the following sections.

Thompson et al. (2007) identify three primary strategies by which languages mark subordination, namely, by subordinating morphemes, special verb forms, and word order. Of these three strategies, only subordinating morphemes and special verb forms are attested as means of subordination in Dazaga.

8.2.1   Complement clauses

Noonan (2007:52) defines complementation as the "syntactic situation that arises when a notional sentence or predication is an argument of a predicate."[99] As is common in SOV languages, complement clauses in Dazaga precede the matrix verb. This is illustrated throughout the following examples.

Complement clauses can be formed by the addition of the determiner to the complement clause, as in (453), where the determiner *=à* is cliticized to the complement clause which functions as the object of the verb *mòní* 'to know'.

(453) àgʊ́   dʊ́nà   tɛ́   kɛ́gɛ́   dèdìná**á**   mʊnɨm
      àgʊ́   dʊ́nà   tɛ́   kɛ́gɛ́   Ø-j-téi-t-ní=**à**   Ø-mʊn-m
      then   power   that   like   3.OBJ-3-have-P-NEG=**DET**   3.OBJ-know-2
      'You know **that** they don't have much power.'
      'Tu sais qu'ils n'ont pas beaucoup de force.'

With verbs of speech, the reported speech of the complement clause occurs preceding the verb of speech. This construction is illustrated in (454) and (455). The aspect (perfective) marking and subject agreement on the verbs in the complement clauses are the same as those of independent clauses.

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[99] Dixon (2006:1) defines complement clauses as clauses that take the place of a noun phrase as a core argument of a verb. Horie & Comrie (2000:1) simply define complementation as "predication manifested in argument slots."

(454) mèɾɛ́ɾò   ʃáì   dàgíɾ   níɾ
      mèɾɛ́=ɾò   ʃáì   Ø-dák-ɾ   Ø-n-ɾ
      3S=DAT   tea   3.OBJ-want-1   3.OBJ-say-1
      'I told him that I wanted tea.'
      'Je lui ai dit que je veux du thé.'

(455) làwá   sónàà   íɾdò   dèɛ́ŋì   níɾòɾò   fádìɾ
      làó-a   són-a=à   Ø-íɾ-t   dèɛ́ŋì   níɾ=ò=ɾò   Ø-fáɾ-ɾ
      friend-P   3S.POSS-P=DET   3-come-P   brother   1S.POSS=DET=DAT   3.OBJ-say-1
      'I told my brother that his [my brother's] friends had come.'
      'J'ai dit à mon frère que ses amis sont venus.'

Direct speech, though not a kind of complementation, is structurally identical to indirect speech, as demonstrated in (455) versus (456). It is distinguishable only by the context, or when direct speech distinctives are present, such as the imperative mood, illustrated in (457), or a shift in deictic reference (e.g. 'his' versus 'your' in (455) and (456)).

(456) làwá   náá́   íɾdò   dèɛ́ŋì   níɾòɾò   fádìɾ
      làó-a   nŏm-a=a   Ø-íɾ-t   dèɛ́ŋì   níɾ=ò=ɾò   Ø-fáɾ-ɾ
      friend-P   2S.POSS-P=DET   3-come-P   brother   1S.POSS=DET=DAT   3.OBJ-say-1
      'I said to my brother, "Your friends have arrived."'
      'J'ai dit à mon frère, "Tes amis sont venus."'

(457) mèɾɛ́ɾò   t͡ʃínnàà   lánò   níɾ
      mèɾɛ́=ɾò   t͡ʃínnè=à   Ø-lánò-Ø   Ø-n-ɾ
      3S=DAT   door=DET   3.OBJ-open.IMV-2   3.OBJ-say-1
      'I told him, "Open the door!"'
      'Je lui ai dit de ouvrir la porte.' [lit. 'Je lui ai dit, "Ouvre la porte."']

With the verb *támáí* 'think, hope', the complement clause is constructed like an independent clause would be. This is illustrated in (458) and (459), where the verbs in the complement clauses take the same aspect markers as independent indicative clauses.

(458) làwá   níɾà   íɾdò   tàmànír
      làó-a   níɾ=a   Ø-íɾ-t   támá-Ø-n-ɾ
      friend-P   1S.POSS=P   3-come-P   think-3.OBJ-LV-1
      'I thought my friends had come.'
      'J'ai pensé que mes amis sont arrivés.'

(459) dɛ́ɛ́ŋì   níɾò   kɔ́ɾɛ́ɾò   írìgì   tàmànír
      dɛ̀ɛ́ŋì   níɾ=ò   kɔ́ɾɛ́=ɾò   Ø-íɾ-gì   támá-Ø-n-ɾ
      brother 1S.POSS=DET   short=DAT 3-come-IPFV hope-3.OBJ-LV-1
      'I hope that my brother comes quickly.'
      'Je espère que mon frère vient vite.'

The verb *nàgí* 'want' takes a complement clause in the contingent mood, as illustrated in (460) to (463). Example (463) demonstrates that the verb *nàgí* 'want' allows its complement clause to have a subject distinct from the matrix clause subject.

(460) gʷɔ̀nʊ́ʊ̀   wáʃì   t͡ʃííɾò   jɔ́bɨ̀ɾɔ̀   dàgíɾ
      gʷɔ̀ní=ò   wáʃì   t͡ʃííɾò   Ø-jɔ́b-ɾ=ɔ   Ø-dák-ɾ
      camel=DET   ill   but   3.OBJ-buy-1=CNTG   3.OBJ-want-1
      'The camel is ill, but I (still) want to buy it.'
      [or 'Even though the camel is ill, I'd like to buy it.']
      'Bien que le chameau est malad, je veux l'acheter.'

(461) màɾá=ɾò   ìní   tòwó   jɛ́nɨ̀ɾɔ̀   dàgíɾò   d͡ʒíŋkàlò
      màɾá=ɾò   ìní   tòʊ́=ò   Ø-jɛ́n-ɾ=ɔ   Ø-dák-ɾ=ò   d͡ʒíŋkàlò
      3P=DAT   thing   eat.INF=GEN 3.OBJ-give-1=CNTG 3.OBJ-want-1=DET because

      t͡ʃĩ̀ŋàfá   jɔ́bɨ̀ɾ
      t͡ʃĩ̀ŋàfʊ́-a Ø-jɔ́b-ɾ
      rice-P   3.OBJ-buy-1
      'I bought rice for them so that they would have something to eat.'
      [lit. 'Because I wanted to give them something to eat, I bought (them) rice.']
      'J'ai acheté du riz pour eux, pour qu'ils aient quelques choses à manger.'

(462) násáɾgá   fínɨ̀ɾ**o**   dàgíɾ
      násáɾgá   Ø-fín-ɾ=**o**   Ø-dák-ɾ
      (language)   3.OBJ-learn-1=CNTG   3.OBJ-want-1
      'I want to learn French.'
      'Je veux apprendre le français.'

(463) mí   níɾò   dàzàgá   fĩŋòò   dàgíɾ
      mí   níɾ=ò   dàzàgá   Ø-j-fín-gì=**o**   Ø-dák-ɾ
      son   1S.POSS=DET (language)   3.OBJ-3-learn-IPFV=CNTG 3.OBJ-want-1
      'I want my son to learn Dazaga.'
      'Je veux que mon fils apprendre le Dazaga.'

The verbs *tìèɾí* 'to refuse' and *tàlòptí* 'order, command' take infinitive complements with the subordinator *=ɾò* (homophonous with the dative case enclitic *=ɾò*) as illustrated in examples (464) to (466). Theses examples demonstrate that the lack of the subordinator *=ɾò* is ungrammatical for complement clauses of these verbs. The asterisk outside of the parentheses indicates that the material in parentheses is obligatory (i.e. not optional).

(464) mìnèʃĭ***(ɾò)**   t͡ʃɛ̀ɾò
  mìnèʃĭ***(=ɾò)**   Ø-j-jɛ́ɾ
  beg.INF***(=SUB)**   3.OBJ-3-refuse
  'He refused to beg.'
  'Il a refusé de mendier.'

(465) dèéŋì   sṹmmàgà   tòŏ***(ɾò)**   t͡ʃɛ̀ɾò
  dèéŋì   sṹn=mà=gà   tòŏ***(=ɾò)**   Ø-j-jɛ́ɾ
  brother   3S.POSS=DET=ACC   bite.INF***(=SUB)**   3.OBJ-3-refuse
  'He refused to bite his brother.'
  'Il a refusé de mordre son frère.'

(466) èzúù   (mɛ̀ɾɛ́ì)   kɔ̀ɾí***(ɾò)**   tààlìmmóɾ
  èzí=ù   (mɛ̀ɾɛ́=ì)   kɔ̀ɾí***(=ɾò)**   taalɪm-Ø-n-ɾ
  rope=DET   3S=ERG   cut.INF***(=SUB)**   order-3.OBJ-LV-1
  'I ordered him to cut the rope.'
  'J'ai lui ordonné de couper la corde.'[100]

Example (467) shows that the complement of *tàlòptí* 'order, command' cannot be a normal perfective indicative verb. Example (468) shows that the infinitive form of the negative existential predicate, *méní* 'to not be', must be used to negate the verb in the complement clause. Use of standard affixal negation in this context is ungrammatical, as demonstrated in (469).

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[100] This example appears to include backward control. Fukuda (2008:168) defines backward control as a relationship "where the matrix argument is silent and its identity depends on the overt embedded argument for its referent." Polinsky & Potsdam (2002:257) similarly define backward control as a control relationship "in which the controllee is structurally superior to the controller" (cf. Monahan 2003; Potsdam 2006).

(467) *èzúù   góɾò   tààlìmmúɾ
      èzí=ù   Ø-j-kóɾ   taalɪm-Ø-n-ɾ
      rope=DET   3.OBJ-3-cut   order-3.OBJ-LV-1
      ('I ordered him to cut the rope.')
      ('J'ai lui ordonné de couper la corde.')

(468) mí   níɾò   dèéŋì   sómmàgà
      mí   níɾ=ò   dèéŋì   són=mà=gà
      son   1S.POSS=DET   brother   3S.POSS=DET=ACC

      tòó   ménírù   tààlìmmúɾ
      tòó   **méní**=rù   taalɪm-Ø-n-ɾ
      bite.INF   not.be.INF=SUB   order-3.OBJ-LV-1
      'I commanded my son not to bite his brother.'
      'J'ai commandé mon fils de ne pas mordre son frère.'

(469) *mí   níɾò   dèéŋì   sómmàgà
      mí   níɾ=ò   dèéŋì   són=mà=gà
      son   1S.POSS=DET   brother   3S.POSS=DET=ACC

      wòní   tààlìmmúɾ
      Ø-j-bó-**ní**   taalɪm-Ø-n-ɾ
      3.OBJ-3-bite-NEG   order-3.OBJ-LV-1
      ('I commanded my son not to bite his brother.')
      ('J'ai commandé mon fils de ne pas mordre son frère.')

The verb *tòŋòʃí* 'try' can take a complement clause with a bare infinitive complement clause verb, as in (470). The presence of the subordinator *=ɾò* is ungrammatical in this case. Example (471) demonstrates that the complement clause verb cannot be a regular indicative verb. The verb *tòŋòʃí* 'try' can also take a complement clause verb with *-ɾέ* 'ADJZ' (something like a participle), as in (472).

(470) jíní   kòɾí(**rò**)   dòŋòsó
      jíní   kòɾí(**=rò**)   d-tòŋòsó
      meat   cut.INF(**=SUB**)   1-try
      'I tried to cut (some) meat.'
      'J'ai essayé de couper la viande.'

(471) *jíní   kɔ́ɔ́r   dòŋɔ̀sú
      jíní   Ø-kɔ́ɾ-ɾ   d-tòŋɔ̀sú
      meat   3.OBJ-cut-1   1-try
      ('I tried to cut (some) meat.')
      ('J'ai essayé de couper la viande.')

(472) mèrí   áì   éí   dèrìgìrɛ́   dòŋɔ̀sú
      mèrí   áì   éí   d-téɾ-gì-rɛ́   d-tòŋɔ̀sú
      current.year this pilgrimage   1-go-IPFV-**ADJZ** 1-try
      'This year, I (will) try to go on the pilgrimage.'
      'Cette année je vais essayer d'aller en pèlerinage.'

The various strategies for forming complement clauses are summarized in Table 48.

Table 48: Summary of strategies for forming complement clauses

Complementation strategy	Example verbs
determiner	*mòní* 'to know'
zero marking (indicative verb)	*n* 'to say', *tòfàrí* 'to say', *támáí* 'think, hope'
contingent mood (=ɔ̀)	*nàgí* 'want'
infinitive & subordinator =rò	*tìèrí* 'to refuse', *tàlòptí* 'order, command'
bare infinitive	*tòŋɔ̀fí* 'try'
indicative verb with -ɾɛ́	

8.2.2   Causative constructions

Causatives in Dazaga are either lexical (such as *jìdîr* 'I kill', i.e. 'I cause to die'), light verb constructions, serial verb constructions, or periphrastic.[101] I have found no synchronic evidence for morphological causatives.

In contrast to the current state of the language, Lukas (1953:137-138) reported the existence of a morphological causative, followed by Bryan (1971:229-230). Nevertheless, even in his time, Lukas (1953:137) admitted an "extreme paucity of information" on causatives, and stated that there was only the "the beginnings of a special causative formation," and not an "established system."

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[101] Kroeger (2004:193) defines a periphrastic causative, also known as an "analytical" causative, as a construction in which "the causative expression 'cause to X' is expressed by two separate verbs."

Of the causative forms that Lukas mentions, only one can be considered a truly morphological causative. Specifically, he lists the prefix *t-* as the causative morpheme for deriving causative forms from simple transitive verbs and simple S_a verbs (which, combined, comprise Class 2 in the traditional analysis of the verb system). However, I have not found this causative prefix used to derive causative forms in causative clauses with simple verbs, but, rather, have always found periphrastic constructions used to form causative clauses with simple verbs.

The other causative forms that Lukas (1953:138) lists — for transitive LVCs (traditionally part of Class 3) — are constructed by combining the preverb morpheme of an LVC with another verb of "causation" to create a causative LVC. The reported use of these causative forms basically matches my observations for causative LVCs, which are described in more detail in §8.2.2.2.

Morphological causatives are attested in the Saharan languages Beria/Zaghawa (Wolfe 2001:65; Jakobi & Crass 2004) and Kanuri (Lukas 1937:101-102; Hutchison 1981:148-152; Cyffer 1998a:42-43; Cyffer 2007:1114-1115), but their productivity seems to be limited.[102]

The currently productive strategy for forming causative clauses (excluding clauses with lexical causatives, which are formed like basic intransitive or transitive clauses) is by the use of periphrastic constructions or serial verb constructions (SVCs). The periphrastic constructions use a system of various verbs of causation, whose distribution depends on whether the verb is simple or requires a light verb construction (LVC), and on whether the causee is singular or plural. Causative SVCs (only with simple verbs) are formed with *tὲní* 'give'. This system of causative formation is summarized in Table 49, and is further illustrated by the examples in the following sections.

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[102] For example, of the Kanuri causative, Hutchison (1981:148) states, "Its status as a productive derived form might [...] be referred to as tenuous at best."

Table 49: Summary of causative constructions

Simple verbs		Light Verb Constructions	
Sg. Causee	Pl. Causee	Sg. Causee	Pl. Causee
infinitive + =rə̀ + inflected form of tə́n	infinitive + =rə̀ + infl. form of múg	preverb + inflected form of tìrí	preverb + inflected form of tèhèrí
Serial verb construction with tèní 'give'			

8.2.2.1 Causative constructions with simple verbs

Periphrastic causative clauses may be formed by combining the causative verb *tʊnʊ* 'cause (sg. obj.)' or *mugu* 'cause (pl. obj)' with a simple verb in an embedded clause. Like the verbs in complements of the verbs *tìèrí* 'to refuse' and *tàlʊ̀ptí* 'order, command', the verbs in the embedded clause of a periphrastic causative construction are in the infinitive form and take the subordinator *=rə̀*. The causative verbs function periphrastically with verbs that express the caused event of the causative construction. The verb *tʊnʊ* is used if the causee is singular, and *mugu* is used if the causee is plural (as demonstrated in (475) and (476)). Causatives constructions may also be formed by combining the verb *tèní* 'give' in an SVC with a simple verb (cf. §8.3).

8.2.2.1.1 Causatives constructions with intransitive simple verbs

Periphrastic causative constructions with simple verbs are illustrated in examples (473) to (476). In these constructions, the embedded verb is intransitive. In each case, the verb of causation appears in an inflected form, with its subject agreement marker indicating the person of the causer, and its object agreement marker indicating the person of the causee. The embedded verb is given in the infinitive form (sometimes called the "nominal" form in Saharan studies; cf. Ortman (2003)) with the subordinator *=rə̀* (cf. §8.2.4). A single construction (infinitive simple verb with the subordinator *=rə̀*) is used to express the embedded verbs from both S_p (example (473) and (476)) and S_a (examples (474) and (475)) verbs (cf. §5.5), perhaps because the subject agreement markers are irrelevant in the infinitival forms.

(473) tɪ̀ɾkànírò̀   d͡ʒʊdʊnʊ
     tɪ̀ɾkàní=ɾʊ   d-j-tʊn
     walk.INF=SUB 1.OBJ-3-cause
     'He made me walk.'
     'Il m'a fait marcher.'

(474) kínnírù   nʊdʊnʊɾ
     kínní=ɾu   n-tʊn-ɾ
     laugh.INF=SUB   2.OBJ-cause-1
     'I made you laugh.'
     'Je t'ai fait rire.'

(475) kàllʊ́ʊ̀ɪ   dìɾí   sʊ́mmà(gà)
     kàllí=ʊ=ɪ   dìɾí   sʊ́n=ma(=gà)
     boy=DET=ERG   sister   3S.POSS=DET(=ACC)

     ègíɾù   dʊ́nò̀/**múgù**
     ègí=ɾu   Ø-j-tʊn/*Ø-j-múg
     cry.INF=SUB   3.OBJ-3-cause/**3.OBJ-3-cause
     'The boy made his sister cry.'
     'Le garçon fait pleurer sa sœur.'

(476) ɔ̀ɾkáà   tɪ̀ɾkànírò̀   múkkùɾ/**tʊ́ntò̀r**
     ɔ̀ɾkɔ́-a=a   tɪ̀ɾkàní=ɾʊ Ø-múg-t-ɾ/*Ø-tʊ́n-t-ɾ
     goat-P=DET   walk.INF=SUB 3.OBJ-cause-P-1/**3.OBJ-cause-P-1
     'We made the goats walk.'
     'Nous avons fait marcher les chèvres.'

8.2.2.1.2   Causatives constructions with transitive simple verbs

    Periphrastic causative constructions with transitive simple verbs are illustrated in (477) to (480). As with periphrastic causatives with intransitive simple verbs, a verb of causation is used along with the caused event, in a periphrastic construction. As each of the following examples demonstrates, the number of the causee determines which causative verb must be used. The embedded simple verb is expressed in the infinitive form with the subordinator =ɾò̀, and the causee is expressed with the accusative case enclitic. The object of the embedded verb immediately precedes the embedded verb (as expected from Dazaga's SOV word order). The causee precedes both the embedded verb

and its object. Example (480) demonstrates that the causer, if overtly present, occurs before the causee and the embedded verb (again, as expected).

(477) àɾìígà   ŋàhílà   kìnnírù   dʊnʊɾ/**mugur**
      àɾíí=gà   ŋàhílà   kìnní=rù   Ø-tʊn-ɾ/*Ø-muk-ɾ
      woman=ACC   millet   crush.INF=SUB   3.OBJ-cause-1/*3.OBJ-cause-1
      'I caused the woman to crush the millet.'
      'J'ai fait écraser le mil à la femme.'

(478) ámmágà   t͡ʃĩnnà   kìrírò   mukkuɾ/**dʊntʊr**
      ámmá=gà   t͡ʃĩnnè=a   kìrí=rò   Ø-mug-t-ɾ/*Ø-tʊn-t-ɾ
      people=ACC   door=DET   break.INF=SUB   3.OBJ-cause-P-1/*3.OBJ-cause-P-1
      'We caused the men to break the door.'
      'Nous avons fait casser la porte aux hommes.'

(479) kàllíàgà   èzúù   kòrírò   mumum/**dʊnʊm**
      kàllí-a=gà   èzí=ù   kòrí=rò   Ø-mug-m/*Ø-tʊn-m
      boy-P=ACC   rope=DET   cut.INF=SUB   3.OBJ-cause-2/*3.OBJ-cause-2
      'You caused the boys to cut the rope.'
      'Tu as fait couper la corde aux garçons.'

(480) à̰ɔ̰́ì   mí   sómmàgà   jégè   tìjàsírò
      à̰ɔ̰́=ì   mí   són=mà=gà   jégè   tìjàsí=rò
      man=ERG   son   3S.POSS=DET=ACC   house   sell.INF=SUB

      dʊnʊ/**mugu**
      Ø-j-tʊn/*Ø-j-muk
      3.OBJ-3-cause/*3.OBJ-3-cause
      'The man caused his son to sell the house.'
      'L'homme a fait vendre la maison à son fils.'

When the object of the embedded verb is not a pronoun, it cannot receive accusative case marking, as illustrated in (481). This is the case even if the object of the embedded verb is animate and human, as demonstrated in (482). This is different from the pattern in other types of embedded infinitive clauses (cf. examples (465) and (468)).

(481) àɾíígà   ŋàhílà(**gà**)   kìnníɾù   dʊnʊɾ
àɾìí=gà   ŋàhílà(*=gà)   kìnní=ɾù   Ø-tʊn-ɾ
woman=ACC   millet(*=ACC)   crush.INF=SUB   3.OBJ-cause-1
'I caused the woman to crush the millet.'
'J'ai fait ecrasser le mil par la femme.'

(482) ńtàgà   kàllímà(**gà**)   tàʊ́ɾʊ̀   nʊdʊnʊɾ
ńtà=gà   kàllímà(*=gà)   tàʊ́=ɾʊ̀   n-tʊn-ɾ
2S=ACC   boy=DET(*=ACC)   hit.INF=SUB   2.OBJ-cause-1
'I caused you to hit the boy.'
'J'ai fait frapper le garcon par toi.'

When the object of the embedded verb is pronominal, accusative case marking is optional, as demonstrated in (483). This is somewhat unexpected since accusative pronouns are normally obligatorily marked with the accusative case enclitic (cf. §6.2.2).

(483) ámmágà   ńtà(**gà**)   tàʊ́ɾʊ̀   mukkuɾ
ámmá=gà   ńtà(=gà)   tàʊ́=ɾʊ̀   Ø-mug-t-ɾ
people=ACC   2s(=ACC)   hit.INF=SUB   3.OBJ-cause-P-1
'We caused the men to hit you.'
'Nous t'avons fait frapper par les hommes.'

Example (484) (cf. (483)) further demonstrates that double accusative marking is possible in certain periphrastic causative constructions, suggesting that periphrastic causatives are biclausal (as opposed to causative serial verb constructions and causative light verb constructions, neither of which can take double accusative marking). This biclausal analysis is further supported by the use of the morpheme =ɾʊ̀ to subordinate the embedded verb and its object (cf. §8.2.4).

(484) ńtà**gà**   tàŋʊ́**gà**   tìgàsíɾʊ̀   nt͡ʃʊdʊnʊ
ńtà=gà   tàŋʊ́=gà   tìgàsí=ɾʊ̀   n-j-tʊn
2S=ACC   1S=ACC   follow.INF=SUB   2.OBJ-3-cause
'He caused you to follow me.'
'Il m'a fait suivre par toi.'

The biclausal analysis of periphrastic causatives, such as (484), could be represented informally (and without preserving word order) using a relational structure

diagram such as that in Figure 1, which graphically shows the embedding of one clause within another, where the object of the matrix clause controls the subject of the embedded clause.
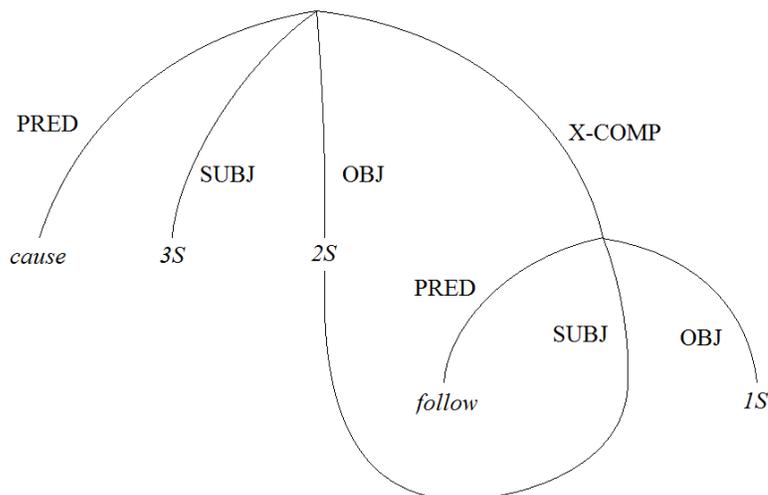
Figure 4: Functional structure of example (484)

8.2.2.1.3 Causative SVCs

Causative constructions with simple verbs can also be formed as SVCs (cf. §8.3) by combining the verb *tèní* 'give' with a simple verb. This use of SVCs is illustrated in (485). A comparison of (485) with (477) shows that the type of causative (periphrastic versus SVC) formed with a given simple verb is not lexically specified by that verb.

(485) ŋàhílà(gà)   àrììrò   jɛ́nɨ̀r   gínù
      ŋàhílà(=gà)   àrìí=rò   Ø-jɛ́n-r   Ø-j-kín
      millet=ACC   woman=DAT   3.OBJ-give-1   3.OBJ-3-crush
      'I caused the woman to crush the millet.'
      'J'ai fait ecrasser le mil par la femme.'

Because SVCs are, by definition (cf. §8.3), monoclausal, causative SVCs should be considered monoclausal, unlike periphrastic causatives formed with simple verbs. Case marking also supports this analysis, since accusative case markers never co-occur in causative SVCs (unlike in periphrastic causatives; cf. (484)). Rather, in a causative SVC, the causee receives dative case (as the recipient of the verb *tèní* 'give'), and the object of

the other verb in the SVC receives accusative case (optionally, if not a pronoun). Causative SVCs using *tèní* 'give' should not be confused with similar SVCs used to specify a beneficiary (cf. §8.3). In causative SVCs, the verb *tèní* 'give' is the first of the two verbs in the SVC (cf. (485)), whereas, in benefactive SVCs, the verb *tèní* 'give' is the second verb, as illustrated in (486).

(486) ábbà   nɨ́ɾʊ̀ì   kútùb   t͡ʃɔ́bʊ̀   **d͡ʒɛ́n**
      ábbà   nɨ́ɾ=ʊ̀=ì   kútùb   Ø-j-jɔ́b   d-j-jɛ́n
      father   1S.POSS=DET=ERG   book   3.OBJ-3-buy   1.OBJ-3-give
      'My father bought a book for me.'
      'Mon père a acheté un livre pour moi.'

8.2.2.1.4   Ingestive causatives

      The ingestive verbs *tʊ̀ʊ́* 'eat' and *tèí* 'drink' are both simple transitive verbs in Dazaga. However, ingestive verbs differ from other simple verbs in that causatives formed with these verbs must be SVCs and cannot be periphrastic constructions. Causative SVCs for ingestive verbs are illustrated in (487) to (490).

(487) ìí   jɛ́nɨ̀ɾ   t͡ʃédù
      ìí   Ø-jɛ́n-ɾ   Ø-j-jé-t
      water   3.OBJ-give-1   3.OBJ-3-drink-P
      'I made them drink water.'
      'Je les ai fait boire l'eau.'

(488) dɛ̀ɛ́ŋà   nɨ́ɾàɾʊ̀   ìí   jɛ́nɨ̀ɾ   t͡ʃédù
      dɛ̀ɛ́ŋì-a   nɨ́ɾ-à=ɾʊ̀   ìí   Ø-jɛ́n-ɾ   Ø-j-jé-t
      brother-P   1S.POSS-P=DAT   water   3.OBJ-give-1   3.OBJ-3-drink-P
      'I made my brother drink water.'
      'J'ai fait boire l'eau à mes frères.'

(489) ámíáì   àmìárʊ̀   bródì   t͡ʃɛ̃ntʊ̀   wʊ́dʊ̀
      ámí-á=ì   àmì-á=rʊ̀   bródì   Ø-j-jɛ́n-t   Ø-j-bʊ́-t
      boy-P=ERG   boy-P=DAT   bread   3.OBJ-3-give-P   3.OBJ-3-eat-P
      'The men made the boys eat bread.'
      'Les hommes ont fait manger le pain aux garçons.'[103]

(490) bródì   nínɨ̀r   bʊ́m
      bródì   n-jɛ́n-r   Ø-bʊ́-m
      bread   2.OBJ-give-1   3.OBJ-eat-2
      'I made you eat bread.'
      'Je t'ai fait mange le pain.'

     With these ingestive verbs, unlike with other simple verbs, it is ungrammatical to form a periphrastic causative construction. This is demonstrated in (491).

(491) *ńtàgà   bródì   tʊ̀ʊ́rʊ̀   nʊdʊnʊr
      ńtà=gà   bródì   tʊ̀ʊ́=rʊ̀   n-tʊn-r
      2S=ACC   bread   eat.INF=SUB   2.OBJ-cause-1
      ('I made you eat bread.')
      ('Je t'ai fait mange le pain.')

8.2.2.2   *Causative light verb constructions*

     Non-causative forms of LVCs are formed by joining a preverb to an inflected form of the simple verb *n* 'to say' (according to the usual identification). When used in an LVC construction, the verb *n* is semantically "light," and serves a merely grammatical role (that is, it does not contribute to the lexical content of the LVC, which is provided solely by the preverb). In the same way, causative LVCs are formed with one of two verbs that are semantically "light" when used in LVCs. These verbs are *tìrí* 'pull out (sg. obj.)' and *ʃêrí* or *tèhèrí* 'pull out (pl. obj)'.

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[103] The occurrence of the ergative case enclitic on *ámí-á* 'boys' is unique in these examples, but so is the occurrence of an overt subject, namely, *ámí-á* 'boys'. The ergative case marking may also serve to identify *ámí-á* 'boys' as subject of the matrix clause, since it is separated from its verb by another clause.

8.2.2.2.1 Causative LVCs with singular causees

When a causative LVC has a singular causee (corresponding to the subject of the parallel non-causative form), the preverb attaches to a following (inflected) form of the causative light verb *tìrí* 'pull out (sg. obj.)'.

This construction is illustrated in (492) for a transitive LVC with a singular causee (the object). In this construction, the causer is encoded as the subject of the causative LVC, the causee as the object, and the object of the caused event is not indexed on the causative LVC at all (because the LVC only has two argument agreement affixes), but appears solely as a NP constituent preceding the causative LVC.

(492) kútùbù   fahamnɪdɪr
      kútùb=ù   faham-n-t-r
      book=DET   comprehension-2.OBJ-CAUS.LV-1
      'I caused you (sg.) to understand the book.'
      'Je t'ai fait comprendre le livre.'

Examples of causative LVCs based on syntactically intransitive verbs are given in (493) and (494). In these constructions, similar to the transitive causative LVC in (492), the causer is encoded as the subject of the causative LVC and the causee as the object of the causative LVC. Since the caused event is intransitive, there is no object of the caused event. The subject of the caused event can appear as a free NP constituent as well as being indexed on the verb.

(493) éré   nírò   kàràtír
      éré   nír=ò   kara-Ø-t-r
      younger.brother   1S.POSS=DET   study-3.OBJ-CAUS.LV-1
      'I caused my younger brother to learn' / 'I taught my younger brother.'
      'J'ai enseigné mon petit frere.'

(494) fóró   férúù   dìró   fagɪtɪr
      fóró   férí=ù   dìró   fagɪ-Ø-t-r
      cow   river=DET into   descend-3.OBJ-CAUS.LV-1
      'I made the cow go down into the river.'
      'J'ai fait descendre la vache aux fleuve.'

Unlike the periphrastic causatives formed from simple verbs, causative LVCs are best analyzed as monoclausal, similar to prototypical morphological causatives. Case marking patterns support this analysis. The causee (as the primary object) can receive accusative case whether it precedes or follows the object of the preverb (i.e. the caused event). This is illustrated in (495) and (496).

(495) kàllóògà   kútùbù   fàhámtìɾ
     kàllí=ò=gà   kútùb=ù   fàhám-Ø-t-ɾ
     boy=DET=ACC   book=DET   comprehension-3.OBJ-CAUS.LV-1
     'I caused the boy to understand the book.'
     'J'ai fait comprendre le livre aux garçon.'

(496) kútùbù   kàllóògà   fàhámtìɾ
     kútùb=ù   kàllí=ò=gà   fàhám-Ø-t-ɾ
     book=DET   boy=DET=ACC   comprehension-3.OBJ-CAUS.LV-1
     'I caused the boy to understand the book.'
     'J'ai fait comprendre le livre aux garçon.'

Examples (497) and (498) demonstrate that accusative case cannot occur on both the causee and the object of the preverb.

(497) *kàllóògà   kútùbùgà   fàhámtìɾ
     kàllí=ò=gà   kútùb=ù=gà   fàhám-Ø-t-ɾ
     boy=DET=ACC   book=DET=ACC   comprehension-3.OBJ-CAUS.LV-1
     ('I caused the boy to understand the book.')
     ('J'ai fait comprendre le livre aux garçon.')

(498) *kútùbùgà   kàllóògà   fàhámtìɾ
     kútùb=ù=gà   kàllí=ò=gà   fàhám-Ø-t-ɾ
     book=DET=ACC   boy=DET=ACC   comprehension-3.OBJ-CAUS.LV-1
     ('I caused the boy to understand the book.')
     ('J'ai fait comprendre le livre aux garçon.')

If only the object of the preverb (caused event) receives accusative case, it is still ungrammatical, as demonstrated in (499).

(499) *kàllóò   kútùbù**gà**   fàhámtɨɾ
  kàllí=ò   kútùb=ù=gà   fàhám-Ø-t-ɾ
  boy=DET   book=DET=ACC   comprehension-3.OBJ-CAUS.LV-1
 ('I caused the boy to understand the book.')
 ('J'ai fait comprendre le livre aux garçon.')

8.2.2.2.2 Causative LVCs with plural causees

  When a causative LVC has a plural causee (corresponding to the subject of the parallel non-causative form), the preverb attaches to a following (inflected) form of the causative light verb *tèhèɾí* 'pull out (pl. obj)'.

  This construction is illustrated in examples (500) and (501). As in causative transitive LVCs with singular causees, the causer is encoded as the subject of the causative transitive LVC, the causee as the object, and the object of the caused event is not indexed on the causative LVC (because it is the secondary object), but appears solely as a NP constituent preceding the causative LVC (in these cases, *kútùbù* 'the book' and *èɡíʃá sóntá* 'their loans').

(500) kútùbù   fahamnɪhɛttɨɾ
  kútùb=ù   faham-n-hɛd-t-ɾ
  book=DET   comprehension-2.OBJ-CAUS.LV-P-1
  'I caused you (pl.) to understand the book.'
  'Je vous ai fait comprendre le livre.'

(501) èɡíʃá   sóntá   bɪahɛdɨɾ
  èɡíʃǐ-a   sóntó-a   bɪa-Ø-hɛd-ɾ
  loan-P   3P.POSS-P   pay-3.OBJ-CAUS.LV-1
  'I made them pay their loans.'
  'Je les ai fait payer leur prêts.'

8.2.2.2.3 Transitive LVCs and grammatical relations

  Cross-linguistically, there is a strong correlation between the grammatical relation of the arguments in a ditransitive clause and the grammatical relation of the causee in a (morphological) transitive causative (Baker 1988). Thus, in a given language, "if the recipient [of a ditransitive verb] is expressed as a primary object, [...] then there is a strong tendency for a transitive causee also to be marked as a primary object" (Kroeger

2004:194-201). Conversely, if the recipient of a ditransitive verb is marked as a secondary object or an oblique argument, then the transitive causee will tend to be marked as a secondary object or an oblique argument.

This generalization holds true in Dazaga for transitive causative LVCs. Excluding overriding constraints when a theme is first or second person, the recipient in a ditransitive clause is marked (by object agreement) as the primary object (cf. §6.3.3). It is not surprising, then, that the causee of a transitive causative LVC is expressed as the primary object, as demonstrated in (502), where the object agreement marker *n-* '2.OBJ' agrees with the second person causee and not with the third person object of the caused event (expressed here as an unmarked secondary object).

(502) kútùb=ù   faham-**nɪ**-dɨ-ɾ
      book=DET   comprehension-**2.OBJ**-CAUS.LV-1
      'I caused you to understand the book.'
      'Je t'ai fait comprendre le livre.'

Case marking further confirms that the causee is the primary object of the causative transitive LVC. In (503), both the causee and the object of the caused event are third person, and the third person object agreement marker (Ø-) does not disambiguate which is the primary object of the causative transitive LVC. However, the accusative case enclitic =*gà* indicates that the causee, *kàllíàgà* 'boys', is the primary object.

(503) kàllíà**gà**   kútùbàà   fahamhɛdɨɾ
      kàllí-à=**gà**   kútùb-à=à   faham-Ø-hɛd-ɾ
      boy-P-**ACC**   book-P=DET   comprehension-3.OBJ-CAUS.LV-1
      'I caused the boys to understand the books.'
      'J'ai fait comprendre les livres aux garcons.'

Although the accusative case marks the causee, which is the primary object, this case marking pattern is different from the case marking of the primary objects of ditransitive verbs. The primary objects of ditransitives, as recipients, receive dative case (cf. §6.3.3), whereas the primary objects of transitive causative LVCs, as non-recipients, receive accusative case.

8.2.3   Relative clauses[104]

In examining relative clauses in any language, there are particular features or aspects that need to be considered. Payne (1997:326) helpfully lists three major parameters along which relative clauses differ, namely, 1) the position of the head noun to the relative clause, 2) the strategy (or strategies, where more than one are observed) of relativization, and 3) which grammatical relations can be relativized. I briefly comment on each of these in more detail below.

I use the term "relative clause" in this section to refer to the modifying clause itself, excluding the "head" noun. Unless otherwise stated, I use "relative clause" to refer only to restrictive relative clauses (excluding non-restrictive relative clauses and corelatives). I use NP_{mat} to refer to the noun phrase in the matrix clause which is modified by the relative clause. The coreferential noun phrase in the relative clause (whether manifested as a resumptive pronoun or a gap) is referred to as NP_{rel}. For the sake of space, I assume the reader is somewhat familiar with the typology of relative clauses (Andrews 2007b; Keenan 1985) and with the Accessibility Hierarchy (Keenan & Comrie 1977; cf. Dik 1997:399-404).[105]

In the published works on Dazaga, relative clauses have received very little attention. Lukas (1953) gives slightly less than one page to relative clauses; LeCoeur & LeCoeur (1956) give barely half a page to the matter. Much of this section is reworked from Walters (2014) which also includes a comparative study of Kanuri relative clauses.

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[104] See Peranteau et al. (1972) for a valuable collection of studies on relative clauses in over 20 languages.
[105] In the literature, the term "headless relative clause" is often used interchangeably with "free relative clause" (cf. Payne 1997:326). Thus, for example, Riemsdijk & Williams (1986:108) use the terms interchangeably and simply define a free/headless relative clause as one that lacks a head (1986:160). Similarly, Givón (2001b:205) uses "headless" to refer to relative clauses that Kroeger (2005:239) calls "free" relative constructions. For a useful discussion of the differences between "free" relatives and "headless" relatives, see Kroeger (2005:238-240).

8.2.3.1   The structure of relative clauses

In this section I describe the ordering of head noun and relative clause, the ordering of other noun modifiers and relative clause, and the structural markers of a relative clause in Dazaga.

Dazaga does not use free relative clauses or headless relative clauses. To express an English free relative such as *what she said*, Dazaga requires that a generic head noun such as *ìní* 'thing' be employed, as in example (504). If the interrogative word *ínní* 'what?' is used to try to construct a free relative clause, the result is ungrammatical, as demonstrated in example (505). Thus, relative clauses are externally headed.

(504) ìní   fárɔ̀   dàgìní
      ìní   Ø-j-fáɾ=ɔ̀   Ø-j-dák-ní
      thing   3.OBJ-3-say=DET   3.OBJ-3-like-NEG
      'He didn't like what she said.' [lit. 'He didn't like the thing she said.']

(505) *ínní   fárɔ̀   dààzìní
       ínní   Ø-j-fáɾ=ɔ̀   d-báz-ní
       what   3S.said=DET   1S.heard-NEG
      ('I didn't hear what she said.')

Though many languages with SOV word order typology (and only SOV languages) allow prenominal relative clauses (Comrie 1981:87; Andrews 2007b:209; Keenan 1985:144), example (504) demonstrates that Dazaga does not exhibit this pattern; rather, relative clauses are strictly postnominal. This is further illustrated in examples (506) and (507). In these examples, the head noun is in bold type, and the following relative clause is enclosed with square brackets.

(506) **à̰ǘ**   [gʷɔ̀nṵ̈́ǒ̰   t͡ʃɔ́b]ʋ̀   dɛ̀éŋì   níɾʋ̀ɾʋ̀
      à̰ǘ   gʷɔ̀ní=ʋ̀   Ø-j-jɔ́b=ʋ̀   dɛ̀éŋì   níɾ=ʋ̀=ɾʋ̀
      man   camel=DET   3.OBJ-3-buy=DET   brother   1S.POSS=DET=DAT

      núkì   t͡ʃɛ́n
      núk-j   Ø-j-jɛ́n
      speak-3   3.OBJ-3-give
      'The **man** [who bought the camel] spoke to my brother.'
      'L'homme qui a acheté le chameau a parlé à mon frère.'

(507) **à̰ʊ̰́** [ìí ànábò̰ kʊ́bbʊ́ t͡ʃéì]ŋà èskí dàgɨ̀ní
à̰ʊ̰́ ìí ànáb=ò̰ kʊ́bbʊ́ Ø-j-jé=ŋà èskí Ø-j-dák-ní
man water grape=GEN old 3.OBJ-3-drink=REL new 3.OBJ-3-want-NEG
'The **man** [who has drunk old wine] doesn't want new.'

Other modifying elements, such as determiners, possessives, other "genitives," or adjectives follow their head nouns (cf. §4.2). When such other modifying elements co-occur with relative clauses as modifiers of the same head noun, the relative clause follows the other modifiers (except for determiners), whether demonstratives, possessives/genitives, or adjectives. These are illustrated, respectively, in examples (508) to (510).

(508) mèɾí **áì** [nìntáɾò̰ nʊ́fáttìɾ]ŋà
mèɾí áì nìntá=ɾò̰ n-fáɾ-t-ɾ=ŋà
message this 2P=DAT 2.OBJ-speak-P-1=REL
'this message [that he spoke to you]'

(509) mí **sʊ́n** [dág]ò̰
mí sʊ́n Ø-j-dág=ò̰
son 3S.POSS 3.OBJ-3-love=DET
'his son [whom he loved]'
'son fils qu'il aimait'

(510) áskí **jɛ́skò̰** [táán]ò̰
áskí jɛ́skò̰ Ø-táán=ò̰
horse black 3-fall=DET
'the black horse [which fell down]'
'le cheval noir qui est tombé'

Lukas (1953:179) mentions three ways in which a relative clause in Dazaga can be marked: 1) when the head noun is a singular indefinite noun, the relative clause is simply joined to its head noun (what Lukas calls the *Beziehungswort* 'antecedent') without being specially marked in any way; 2) for plural head nouns, a "relative" form of the verb is used; and 3) if the head noun is singular and definite, then the relativizer =ŋa is used.[106]

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[106] Lukas (1953:179) refers to this as a *Relativ-pronomen*, or "relative pronoun." However, since the form =ŋa does not change, regardless of the person, number, or gender of the head noun, this is better analyzed

In reality, it seems that his "relative" forms of the verb (1953:92-4) are nothing more than a verb with the determiner cliticized, resulting in a vowel cliticized to the verb, as in examples (511) to (513), below.

(511) ámmá   [kʷòí   áìɾò   bíní   bèkkìnná]**á**   mòráɾò
       ámmá   kʷòí   áì=ɾò   bíní   Ø-bég-t-ní-ɾé]=**à**   mòrá=ɾò
       people   place   this=DAT today   3-be.not-P-NEG-ADJZ=**DET**   3P=DAT

       ná   fáttò   jí
       ná   Ø-fáɾ-t-Ø   jí
       also   3.OBJ-tell.IMV-P-2   3.say
       '… he said "Tell it to the people [who are not here today]."'

(512) ɔ̀rká   [t͡ʃĩ̀ŋàfʊ́   níɾò   wʊ́d]**à**   t͡ʃáttò
       ɔ̀rkɔ́-a   t͡ʃĩ̀ŋàfʊ́   níɾ=ò   Ø-j-bʊ́-t=**à**   j-jád-t
       goat-P   rice   1S.POSS=DET   3.OBJ-3-eat-P=**DET**   3-die-P
       'The goats [who ate my rice] died.'
       'Les chèvres qui ont mangé mon riz sont morts.'

(513) ámmá   [gʷɔ̀ná   t͡ʃɔ́ppʊ̀g]**à**   dèɛ́ŋà   níɾà
       ámmá   gʷɔ̀ní-a   Ø-j-jɔ́b-t-gì=**à**   dèɛ́ŋì-a   níɾ-à
       people   camel-P   3.OBJ-3-buy-P-IPFV=**DET**   brother-P   1S.POSS-P
       'The men [who are buying the camels] are my brothers.'
       'Les hommes qui achètent les chameaux sont mes frères.'

I have not encountered any evidence for relative clauses that are unmarked, Lukas' (1953:179) first option.

Despite Lukas' claims, it is not easy to categorize the distribution of the morphemes that can occur at the end of relative clauses. However, there are two ways of constructing relative clauses in Dazaga that are distinct, though structurally similar.

First, and most commonly, relative clauses are ended by the determiner =*ma* or one of its allomorphs (cf. §4.1.5).[107] Many simple noun phrases in Dazaga end with =*ma*, but the placement of =*ma* is distinctive in a relative clause, where the NP-final

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as a relativizer. Cf. Kroeger (2004:177-178) for a helpful discussion of the differences between relativizers and relative pronouns.

[107] Keenan (1985:146) notes that, of the possible orders of head noun, modifying clause, and determiner, the order in which the determiner is separated from the head noun by the modifying clause, as in Dazaga, is less common than the other orders.

determiner immediately follows, and is cliticized to, a verb. Because the determiner follows the verb, the form *=ma* only occurs after second person forms ending in /m/, which are much more rare than the other verb forms. The occurrence of the determiner *=ma* (or one of its allomorphs) at the end of a relative clause is illustrated in examples (514) to (516). In these examples, the relative clause is enclosed in square brackets, and the determiner is in bold type.

(514) ậ̰ɡ́   [àgàsʊ́ jɔ́bɨ̀r   jɛ́nɨ̀r]**ʊ̀**   kíì   núŋkɨ̀r
       ậ̰ɡ́   àgàsʊ́ Ø-jɔ́b-r   Ø-jɛ́n-r=**ʊ̀**   kíì   núk-n-t-r
       man   sword   3.OBJ-buy-1   3.OBJ-give-1=**DET**   with   speak-LV-P-1
       'We spoke with the man [whose sword I bought].'
       'Nous avons parlé avec l'homme à qui j'ai acheté une épée.'

(515) ậ̰ɡ́   [gʷɔ̀nʊ́ʊ̀   t͡ʃɔ́bʊ̀gà]**à**   làʊ́   nɨ́r
       ậ̰ɡ́   gʷɔ̀ní=ʊ̀   Ø-j-jɔ́b-gì=**à**   làʊ́   nɨ́r
       man   camel=DET   3.OBJ-3-buy-IPFV=**DET**   friend   1S.POSS
       'The man [who will buy the camel] is my friend.'
       'L'homme qui va acheter le chameau est mon ami.'

(516) ìní   [fárʊ̀m]**mà**   gìnná àìrɛ́   kɛ́gɛ́rʊ̀   tàŋʊ́rʊ̀   tìgìsɛ́ɛ́
       ìní   Ø-fár-m=**mà**   gìnná àì-rɛ́   kɛ́gɛ́=rʊ̀   tàŋʊ́=rʊ̀   Ø-tìgìsʊ́-ɛ́
       thing   3.OBJ-say-2=**DET**   all   this-ADJZ   like=DAT   1S=DAT   3-happen-OPT
       'May it happen to me like every thing [you said].'

   Because relative clauses are postnominal, the extent of the relative clause is fairly clearly demarcated, with the head noun (immediately, except for other elements within the same noun phrase) preceding the relative clause, and the determiner appearing at the very end of the relative clause, following the clause-final verb. In some cases, as in (515), above, another definite noun phrase is embedded within the noun phrase that contains the relative clause, with the result that there are multiple determiners. However, even in (515), the second determiner clearly marks the end of the relative clause because it follows the relative clause verb, rather than some other non-verbal element.

   The other way that a relative clause can be ended is by the relativizer *=ŋà* cliticized to the end of the relative clause, in much the same way that the determiner can

appear at the end of a relative clause.[108] This is illustrated in examples (517) to (519), below.

(517) ầǫ̀   [ìí   ànábừ   kúbbú   t͡ʃéì]**ŋà**   èskí   dàgìní
      ầǫ̀   ìí   ànáb=ừ   kúbbú   Ø-j-jé=**ŋà**   èskí   Ø-j-dák-ní
      man   water grape=GEN old   3.OBJ-3-drink=**REL** new   3.OBJ-3-want-NEG
      'The man [who has drunk old wine] doesn't want new.'

(518) mèɾí   áì   [nìntáɾừ   nǘfáttɨɾ]**ŋà**
      mèɾí   áì   nìntá=ɾừ   n-fáɾ-t-ɾ=**ŋà**
      message this 2P=DAT   2.OBJ-speak-P-1=**REL**
      'this message [that he spoke to you]'

   With some verbs, whose stem ends in a velar stop, a morphophonemic process takes place whereby the final velar stop of the underlying verb root fully assimilates to the initial nasal of the relativizer, then degeminates (or simply deletes), so that the result is simply *=ŋà*. For example, the form *t͡ʃĭ=ŋà* 'which was' in (519) below, is a combination of the root *t͡ʃĭg* 'to be' plus the relativizer *=ŋà* (i.e. *t͡ʃĭg-* plus *=ŋà → t͡ʃĭ=ŋà*).

(519) kʷòí   [kʷî   t͡ʃĭ]**ŋà**   sáímàɾừ   kùlíì
      kʷòí   kʷî   Ø-t͡ʃĭ(g)=**ŋà** sáì=mà=ɾừ   kùlí-Ø-j
      place   between 3-be=**REL**   sky=DET=DAT   call-3.OBJ-3
      'The place [which was between], he called sky.'

   Based on data from Kevin Walters (p.c.), it appears that the distribution of the determiner versus the relativizer at the end of relative clauses may be a dialectical difference between clans, rather than anything to do with the definiteness of the head noun. Thus, the same relative clause can be expressed with either morpheme, depending on the speaker, as illustrated in (520) and (521).

(520) àìɾɛ́   ʃáì   támɨɾ**ŋà**   / támɨɾ=**ừ**
      àì-ɾɛ́   ʃáì   Ø-tám-ɾ=**ŋà**   Ø-tám-ɾ=**ừ**
      this-ADJZ tea   3.OBJ-drink-1=**REL**   3.OBJ-drink-1=**DET**
      'This here is the tea that I drank.'
      'C'est le thé que j'ai goûté.'

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[108] Cf. Tucker & Bryan (1966:183): "The Relative in TUBU is expressed by *ŋa*, *ŋaa* at the end of the Noun Group."

(521) àìɾɛ́   ʃái   dámòŋà   / dámò
      àì-ɾɛ́   ʃái   Ø-j-tám=ŋà   Ø-j-tám=ò
      this-ADJZ   tea   3.OBJ-3-drink=**REL**   3.OBJ-3-drink=**DET**
      'This here is the tea that he drank.'
      'C'est le thé qu'il a goûté.'

8.2.3.2   *Relativization strategies and the Accessibility Hierarchy in Dazaga*

NP~rel~ can serve any function in the relative clause from subject to possessor. This is illustrated throughout the following examples as I discuss the relativization strategies used for the various functions of NP~rel~. Even though Lukas (1953:179) refers to *=ŋa* as a *Relativ-pronomen*, LeCoeur & LeCoeur (1956:71) are correct in pointing out that "there is no relative pronoun in Dazaga." As demonstrated below, the gap strategy and resumptive pronouns are utilized for relativization of all grammatical relations.

Given the ability to relativize at all, we expect, based on Keenan & Comrie (1977), the ability to relativize the subject grammatical relation. Relativization of the subject grammatical relation is demonstrated in (522) and (523). The gap strategy may be used for relativized subjects, though there is subject agreement marked on the relative clause verb to agree with the relativized subject (however, agreement marking is not generally considered to constitute "pronoun retention"; cf. Keenan & Comrie (1977:92)).

(522) ɛ̀kkɛ́ [_____ jɛ́gàà   kòìi̞   t͡ʃǐ]ŋà   t͡ʃáltʃ̀i
      ɛ̀kkɛ́   jɛ́gɛ̀=à   kòìi̞   Ø-t͡ʃǐ(g)=ŋà t͡ʃált-Ø-j
      tree   house=DET in.front.of 3-be=REL   cut.down-3.OBJ-3
      'He cut down the tree [that was in front of the house].'
      'Il a abattu l'arbre qui était devant la maison.'

(523) mèɾí [_____ dèlîl   dé]ŋà   gálì
      mèɾí   dèlîl   Ø-j-téi=ŋà   gálì
      speech   evidence 3.OBJ-3-have=REL good
      'Speech [that has evidence] (is) good.'
      'Avant de dire quelque chose, c'est bon d'avoir des preuves.'

Typologically, the use of resumptive pronouns as a strategy for relativizing the subject relation is rare in Africa. It is reported in only four languages (out of fifty-four) in Kuteva & Comrie's (2005) typological study of subject relativization in African

languages.[109] Dazaga should be added to this number, as resumptive pronouns may be used for relativized subjects, as illustrated in (524), where *mèɾɛ́* '3S' refers anaphorically to *kíɾí* 'dog'.

(524) kíɾí   [**mèɾɛ́**   mí   níɾʊ̀   wʊ́]ʊ̀   jìdíɾ
      kíɾí   mèɾɛ́   mí   níɾ=ʊ̀   Ø-j-bʊ́=ʊ̀   Ø-jíd-ɾ
      dog   3S   son 1S.POSS=DET 3.OBJ-3-bite=DET 3.OBJ-kill-1
      'I killed the dog [which bit my son].'
      'J'ai tué le chien [qui a mordu mon fils].'

The primary object may also be relativized. As with relativized subjects, relativized primary objects may be gapped in their relative clauses, as shown in examples (525) and (526).

(525) fíɾí   [_____   kʊ̀sʊ̀níɾ]ʊ̀   ɛ̀kkáà   dáá   kɔ́ktɨn
      fíɾí   kʊsʊ-Ø-n-ɾ=ʊ   ɛ̀kkɛ́=a   dáá   kɔ́k-Ø-t-n
      arrow   throw-3.OBJ-LV-1=DET   tree=DET   on   fix.to-3-REFL-LV
      'The arrow [which I shot] lodged itself in the tree.'
      'La flèche que j'ai lancé s'est fixée à l'arbre.'

(526) àʊ́   [____   àgàsʊ́   jɛ́nɨ̀ɾ]ʊ̀ì   dɛ̀ɛ́ŋì   níɾʊ̀gà   wáwʊ̀
      àʊ́   àgàsʊ́   Ø-jén-ɾ=ʊ̀=ì   dɛ̀ɛ́ŋì   níɾ=ʊ̀=gà   Ø-j-báb
      man   sword   3.OBJ-give-1=DET=ERG   brother   1S.POSS=DET=ACC   3.OBJ-3-hit
      'The man [to whom I gave the sword] hit my brother.'
      'L'homme à qui j'ai donné l'épée a frappé mon frère.'

Resumptive pronouns may also be used for a relativized primary object, as demonstrated in (527), where the recipient, *mèɾɛ́=ɾʊ̀* 'to him', is the primary object (cf. §6.3.3).

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[109] The four languages are Babungo [Babango], Kɔɔzime [Koonzime], Ngemba, and Yoruba. Interestingly, these four languages are all Niger-Congo, Atlantic-Congo, Volta-Congo, Benue-Congo, Bantoid languages, except for Yoruba, which is Niger-Congo, Atlantic-Congo, Volta-Congo, Benue-Congo, Defoid. It is significant, then, that the possibility of pronoun retention as a subject relativization strategy should also be attested in an unrelated Nilo-Saharan langauge.

(527) à̤ʊ́   [**mɛ̀rɛ́rò**   àgàsʊ́   jɛ́nɨ̀r]ʊ̀ì
à̤ʊ́   mɛ̀rɛ́=rò   àgàsʊ́   Ø-jɛ́n-ɾ=ʊ̀=ì
man   3S=DAT   sword   3.OBJ-give-1=DET=ERG

dɛ̀éŋì   nírʊ̀gà   wáwò
dɛ̀éŋì   nír=ʊ̀=gà   Ø-j-báb
brother   1S.POSS=DET=ACC   3.OBJ-3-hit
'The man [to whom I gave the sword] hit my brother.'
'L'homme à qui j'ai donné l'épée a frappé mon frère.'

However, (528) shows that the resumptive pronoun of the relativized primary object must be fronted to the beginning of the relative clause and cannot occur in the normal preverbal position of the primary object (following the secondary object; cf. §6.3.3).

(528) *à̤ʊ́   [àgàsʊ́   **mɛ̀rɛ́rò**   jɛ́nɨ̀r]ʊ̀ì
à̤ʊ́   àgàsʊ́   mɛ̀rɛ́=rò   Ø-jɛ́n-ɾ=ʊ̀=ì
man   sword   3S=DAT   3.OBJ-give-1=DET=ERG

dɛ̀éŋì   nírʊ̀gà   wáwò
dɛ̀éŋì   nír=ʊ̀=gà   Ø-j-báb
brother   1S.POSS=DET=ACC   3.OBJ-3-hit
('The man [to whom I gave the sword] hit my brother.')
('L'homme à qui j'ai donné l'épée a frappé mon frère.')

Secondary objects may be relativized using the gap strategy to represent NP$_{rel}$, as illustrated in example (529) and (530).

(529) mèrí   áì   [_____   nìntárò   nʊ́fáttɨ̀r]ŋà   mòrárò   ná
mèrí   áì   nìntá=rò   n-fáɾ-t-ɾ=ŋà   mòrá=rò   ná
message   this   2P=DAT   2.OBJ-speak-P-1=REL 3P=DAT   also

fáttò   jí
Ø-fáɾ-t-Ø   jí
3.OBJ-tell.IMV-2   3.say
'This message [that he spoke to you], he said "Tell it to them also."'

(530) wúrèì   kútùbù   [ábbà   nírʊ̀ì   _____   d͡ʒɛ́m]mà   wúì
wúrè=ì   kútùb=ù   ábbà   nír=ʊ̀=ì   d-j-jɛ́n=mà   wú-Ø-j
thief=ERG book=DET father 1S.POSS=ERG   1.OBJ-3-give=DET steal-3.OBJ-3
'A thief stole the book [which my father gave to me].'
'Un voleur a volé le livre que mon père m'a donné.'

In addition to the gap strategy, resumptive pronouns are possible as a relativization strategy for secondary objects, as illustrate in (531). As with primary object resumptive pronouns, secondary object resumptive pronouns must be fronted to the beginning of the relative clause. Left *in situ*, they are ungrammatical, as demonstrated in (532).

(531) wúrèì   kútùbù   [**mèrɛ́** ábbà   níròì   d͡ʒɛ́m]mà   wúì
      wúrè=ì   kútùb=ù   mèrɛ́ ábbà   nír=ò=ì   d-j-jén=mà   wú-Ø-j
      thief=ERG book=DET 3S   father 1S.POSS=ERG 1.OBJ-3-give=DET steal-3.OBJ-3
      'A thief stole the book [which my father gave to me].'
      'Un voleur a volé le livre que mon père m'a donné.'

(532) *wúrèì   kútùbù   [ábbà níròì   **mèrɛ́** d͡ʒɛ́m]mà   wúì
       wúrè=ì   kútùb=ù   ábbà nír=ò=ì   mèrɛ́ d-j-jén=mà   wú-Ø-j
       thief=ERG book=DET father 1S.POSS=ERG 3S   1.OBJ-3-give=DET steal-3.OBJ-3
      ('A thief stole the book [which my father gave to me].')
      ('Un voleur a volé le livre que mon père m'a donné.')

Oblique arguments can also be relativized. The gap strategy may still be used at this relatively low level on the Accessibility Hierarchy. This is illustrated in (533) for locative obliques, in (534) for instrumental obliques, and in (535) for comitative obliques.

(533) níḭ́   [_____   dìrɔ́ bìzzí   bènn]á   dɛ́rò
      níḭ́   dìrɔ́ bìzzí   Ø-bé(g)-ní-rɛ́=à   d-tɛ́r
      village   in   poverty 3-be.not-NEG-ADJZ=DET 1-go
      'I went to a village [in which there was no poverty].'
      'Je suis allé au village dans laquel il n'y avait pas de pauvreté.'

(534) d͡ʒàná [_____   òrkáà   jìdír]ò   kír
      d͡ʒàná   òrkɔ́=à   Ø-jíd-r=ò   Ø-k-r
      knife   goat=DET 3.OBJ-kill-1=DET 3.OBJ-break-1
      'I broke the knife [with which I killed the goat].'
      'Je me suis cassé le couteau avec lequel j'ai tué la chèvre.'

(535) àǫ̰ [_____   kíì kàsógò dɛ́r]ò   dɛ̀ɛ́ŋì   nírò
      àǫ̰   kíì kàsógò d-tɛ́r=ò   dɛ̀ɛ́ŋì   nír=ò
      man   with market 1-go=DET   brother 1S.POSS=DET
      'The man [with whom I went to the market] (is) my brother.'
      'L'homme avec qui je suis allé au marché est mon frère.'

Interestingly, in example (533) and (535), where the NP_{rel} is gapped, the postpositions are retained (i.e. stranded) even though no resumptive pronoun is supplied to complete the postpositional phrases. This differs with the pattern in example (534), where, as we would expect of an enclitic case marker, the dative marker *=rù* is deleted along with the gapped oblique NP. In Walters (2014), I attributed this difference to a possible difference in grammatical relations between the two relativized constituents (e.g. oblique instrumental versus adjunct locative). However, it is analytically more plausible to attribute this disparity to the difference between a postposition, like *dáá* 'on', and an enclitic case marker (cf. §6.1.1). Thus, it is the syntactic category (postposition versus case marker), not the grammatical relation (oblique versus adjunct), that is the relevant distinction underlying the asymmetrical patterns of gapping noted in (533) to (535).

The resumptive pronoun strategy is also allowed for relativized obliques, as illustrated in examples (536) to (538).

(536) níí **[mèrɛ́** dɨ̀rɔ́ bìzzí bènn]á   dɛ́rʊ̀
   níí mɛ̀rɛ́ dɨ̀rɔ́ bìzzí Ø-bé(g)-ní-rɛ́=à d-tɛ́r
   village 3s in poverty 3-be.not-NEG-ADJZ=DET 1-go
   'I went to a village [in which there was no poverty].'
   'Je suis allé au village dans laquel il n'y avait pas de pauvreté.'

(537) d͡ʒàná **[mɛ̀rɛ́=rʊ̀** ɔ̀rkáà jìdɨ́r]ʊ̀   kɨ́r
   d͡ʒàná mɛ̀rɛ́=rʊ̀ ɔ̀rkɔ́=à Ø-jíd-r=ʊ̀   Ø-k-r
   knife 3S=DAT goat=DET 3.OBJ-kill-1=DET 3.OBJ-break-1
   'I broke the knife [with which I killed the goat].'
   'Je me suis cassé le couteau avec lequel j'ai tué la chèvre.'

(538) à̰ʊ̰́ **[mɛ̀rɛ́** kíì kàsʊ́gʊ̀ dér]ʊ̀ dɛ̀ɛ́ŋì nírʊ̀
   à̰ʊ̰́ mɛ̀rɛ́ kíì kàsʊ́gʊ̀ d-tɛ́r=ʊ̀ dɛ̀ɛ́ŋì nír=ʊ̀
   man 3s with market 1-go=DET brother 1S.POSS=DET
   'The man [with whom I went to the market] (is) my brother.'
   'L'homme avec qui je suis allé au marché est mon frère.'

Possessors may be relativized, as illustrated in examples (539) and (540). Even at this low end of the Accessibility Hierarchy, there is evidence of alternate strategies for marking NP_{rel}. Thus, in example (539), the NP_{rel} is gapped, but, in example (540), the resumptive possessive pronoun *sʊ́mmà* 'his' is used.

(539) à̧ǫ́   [àgàsú   _____   jɔ́bɨ̀r   jénɨ̀r]ʊ̀   kíì   núŋkɨ̀r
à̧ǫ́   àgàsú   Ø-jɔ́b-r   Ø-jén-r=ʊ̀   kíì   núk-n-t-r
man   sword   3.OBJ-buy-1   3.OBJ-give-1=DET   with   speak-LV-P-1
'We spoke with the man [whose sword I bought].'
'Nous avons parlé avec l'homme à qui j'ai acheté une épée.'

(540) à̧ǫ́   [àgàsú   **sǿmmà**   jɔ́bɨ̀r   jénɨ̀r]ʊ̀   kíì   núŋkɨ̀r
à̧ǫ́   àgàsú   sǿn=mà   Ø-jɔ́b-r   Ø-jén-r=ʊ̀   kíì   núk-n-t-r
man   sword   3S.POSS=DET   3.OBJ-buy-1   3.OBJ-give-1=DET   with   speak-LV-P-1
'We spoke with the man [whose sword I bought].'
'Nous avons parlé avec l'homme à qui j'ai acheté une épée.'

Adjuncts may also be relativized, like other constituents, with both the gap strategy and with resumptive pronouns. This is demonstrated, in (541) to (544).

(541) kʊ́lɔ̀   [_____   dáá   jégè   nírʊ̀   tɔ́mɨ̀r]ʊ̀   jɔ́bɨ̀r
kʊ́lɔ̀   dáá   jégè   nír=ʊ̀   Ø-tɔ́m-r=ʊ̀   Ø-jɔ́b-r
field   on   house   1S.POSS=DET   3.OBJ-build-1=DET   3.OBJ-buy-1
'I bought the land [on which I built my house].'
'J'ai acheté le champ où j'ai construit ma maison.'

(542) ká̧á̧gʊ́   té   [_____   dɨ̀rɔ́   dáʊ́dà   èrɨ̀ʃí   gís]ʊ̀   dɨ̀rɔ́
ká̧á̧gʊ́   té   dɨ̀rɔ́   dáʊ́dà   èrɨ̀ʃí   Ø-j-kís]ʊ̀   dɨ̀rɔ́
week   that   in   (name)   trip   3.OBJ-3-do=DET   in

ábbà   nírʊ̀   násʊ̀
ábbà   nír=ʊ̀   Ø-nás
father   1S.POSS=DET   3-die
'My father died the week in which David left for a trip.'
'Mon père est mort la semaine [où David est parti pour un voyage].'

(543) kʊ́lɔ̀   [**mèrɛ́**   dáá   jégè   nírʊ̀   tɔ́mɨ̀r]ʊ̀   jɔ́bɨ̀r
kʊ́lɔ̀   mèrɛ́   dáá   jégè   nír=ʊ̀   Ø-tɔ́m-r=ʊ̀   Ø-jɔ́b-r
field   3s   on   house   1S.POSS=DET   3.OBJ-build-1=DET   3.OBJ-buy-1
'I bought the land [on which I built my house].'
'J'ai acheté le champ où j'ai construit ma maison.'

(544)

ką́ą́gú	té	[**mɛ̀rɛ́**	dɨ̀rɔ́	dáʊ́dà	èrɨ̀ʃɨ̌	gís]ʊ̀	dɨ̀rɔ́
ką́ą́gú	té	mɛ̀rɛ́	dɨ̀rɔ́	dáʊ́dà	èrɨ̀ʃɨ̌	Ø-j-kís]ʊ̀	dɨ̀rɔ́
week	that	3s	in	(name)	trip	3.OBJ-3-do=DET	in

ábbà	nír̀ò	násò̀
ábbà	nír=ò̀	Ø-nás
father	1S.POSS=DET	3-die

'My father died the week in which David left for a trip.'
'Mon père est mort la semaine [où David est parti pour un voyage].'

We can summarize the data and analyses of §8.2.3.2 as follows, in Table 41, below.

Table 50: Summary of relativization strategies

	Subj	**Obj**	**Obj₂**	**Obl**	**Poss**	**Adjunct**
Gap	√	√	√	√	√	√
Resumptive	√	√	√	√	√	√

Given the equal distribution of the gap and resumptive pronoun relativization strategies along the Accessibility Hierarchy, a few comments are warranted.

First, this "equal" distribution of relativization strategies, in terms of which grammatical relations they can relativize (I have not quantified each strategy's frequency), does not contradict Keenan & Comrie's (1977:68) claim that, "A language must have a primary [relative clause]-forming strategy." Whether a strategy is "primary" or not is not based on its frequency of usage or markedness for relativizing a grammatical relation. Rather, by "primary" Keenan & Comrie only mean that the strategy can be used to relativize the subject grammatical relation (1977:68). In this sense, Dazaga has two "primary" relativization strategies.

Second, Keenan & Comrie (1977:92) suggest that "pronoun retention will be used in proportion to the difficulty of the position being relativized," with a tendency to use the gap strategy toward the high ("subject") end of the Accessibility Hierarchy, and pronoun retention (resumptive pronouns) toward the low ("genitive") end of the Accessability Hierarchy. Given their predictions, the equal use in Dazaga of both the gap

strategy and resumptive pronouns accross the whole Accessability Hierarchy is somewhat typologically unexpected.

8.2.3.3 *Non-restrictive relative clauses*

Non-restrictive relative clauses are also possible, and they are formed in the same way that restrictive relative clauses are formed. This is exemplified in (545).

(545) **à�í**   [mɛ̀ɾɛ́ kíì   t͡ʃĩ]ŋ̀àɾò   t͡ʃɛ́n   ní   mɛ̀ɾɛ́ ná   wóì
      à̰ɪ̰   mɛ̀ɾɛ́ kíì   Ø-t͡ʃĩ(g)]=ŋà=ɾò Ø-j-jɛ́n   ní   mɛ̀ɾɛ́ ná   Ø-j-bʊ́
      husband 3s   with   3-be=REL=DAT   3.OBJ-3-give and 3s   also 3.OBJ-3-eat
      'She gave it to (her) **husband** [who was with her], and he also ate.'

As with restrictive relative clauses, this non-restrictive relative clause is externally headed, postnominal, and (like some restrictive relative clauses) is signaled by the presence of the relativizer *=ŋa*. These similarities between restrictive and non-restrictive relative clauses are not surprising, as this is a common pattern in the languages of the world (Keenan 1985:169; Comrie 1981:132; cf. Andrews 2007b:207; Kroeger 2004:175).

8.2.3.4 *Aspect of relative clause verbs*

As the many examples above illustrate, SOV word order is maintained in relative clauses. Unlike in Kanuri (cf. Hutchison 1981:217-218), there are no aspectual restrictions on the verbs in relative clauses; all three aspects (cf. §5.6) are attested, as illustrated in examples (546) to (548). Thus, in (546), the perfective form *t͡ʃɔ́bò* is used for 'bought', in (547), the progressive form *t͡ʃɔ́bìì* is used for 'is buying', and in (548), the imperfective form *t͡ʃɔ́bògì* is used for 'will buy'.

(546) à̰ʊ̰   [gʷɔ̀nʊ́ò   **t͡ʃɔ́b]ò**   dɛ̀ɛ́ŋì   níɾòɾò
      à̰ʊ̰   gʷɔ̀ní=ò   Ø-j-jɔ́b=ò   dɛ̀ɛ́ŋì   níɾ=ò=ɾò
      man   camel=DET 3.OBJ-3-buy=DET brother 1S.POSS=DET=DAT

      núkì   t͡ʃɛ́n
      núk-j   Ø-j-jɛ́n
      speak-3 3.OBJ-3-give
      'The man [who bought the camel] spoke to my brother.'
      'L'homme qui a acheté le chameau a parlé à mon frère.'

(547) à̰ʊ́   [gʷɔ̀nʊ́ʊ̀   **t͡ʃɔ́bɪ̀ɪ̀**   t͡ʃǐ]=ŋà   dɛ̀ɛ́ŋì   nírò
      à̰ʊ́   gʷɔ̀ní=ò   Ø-j-jɔ́b-ì   Ø-t͡ʃí(g)=ŋa   dɛ̀ɛ́ŋì   nír=ò
      man   camel=DET   3.OBJ-3-buy -**PROG**   3S.is=REL   brother   1S.POSS=DET
      'The man [who is buying the camel] is my brother.'
      'L'homme qui achète le chameau est mon frère.'

(548) à̰ʊ́   [gʷɔ̀nʊ́ʊ̀   **t͡ʃɔ́bʊ̀gà]à**   làʊ́   nír
      à̰ʊ́   gʷɔ̀ní=ò   Ø-j-jɔ́b-gì=à   làʊ́   nír
      man   camel=DET   3.OBJ-3-buy-**IPFV**=DET friend   1S.POSS
      'The man [who will buy the camel] is my friend.'
      'L'homme qui va acheter le chameau est mon ami.'

8.2.4   Adverbial clauses

    Adverbial clauses frequently (but not always) precede the main clause. They are signalled by subordinating morphemes. As is typical for SOV languages (Thompson et al. 2007:238), subordinating morphemes in Dazaga are postpositional.

    Reason clauses are formed by the postpositive subordinator *d͡ʒíŋkàlò* 'because'.[110] Since the adverbial clause usually precedes the main clause, the postpositive subordinator usually occurs between the subordinate and main clauses (but cf. (551), where the adverbial clause occurs in the middle of the main clause). The adverbial clause is also marked with the determiner *=ma* (or one of its allomorphs), preceding *d͡ʒíŋkàlò*. The use of this subordinator is illustrated in (549) to (551).

(549) wókí   kàntɨ̀rá   **d͡ʒíŋkàlò**   lɔ́bd͡ʒìntò
      wókí   ká-Ø-n-t-r=a   **d͡ʒíŋkàlò**   lɔ́b-d-j-n-t
      time   pass-3.OBJ-LV-P-1=DET **because**   tired-1.OBJ-3-LV-P
      'We are tired, **because** it is late.'
      'Nous somme fatigués, car/parce que il est tard.'

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[110] This subordinator is also variously pronounced [d͡ʒírkànò], [d͡ʒílànò], [d͡ʒíkànò], [d͡ʒílkàl], or [d͡ʒíkàn]. This subordinator is evidently further shortened to [d͡ʒíkà] in the Duuza dialect of Dazaga, as evidenced in Allanga (2013:25). Kevin Walters (p.c.) has suggested that *d͡ʒíŋkàlò* may be composed of two morphemes, [d͡ʒíŋkàl] and [rò] 'DAT', yielding [d͡ʒíŋkàllò] by assimilation of /r/ to the preceding /l/.

(550) jégè   sɔ́ntɔ́ò   zòntɔ́ɾò   dɔ́mpòò   **d͡ʒíŋkàlò**   táá/nò
       jégè   sɔ́ntɔ́=ò   zòntɔ́=ɾò Ø-j-tɔ́m-t=ò   **d͡ʒíŋkàlò**   Ø-táán
       house   3P.POSS=DET bad=DAT   3.OBJ-3-build-P=DET **because** 3-fall
       '**Because** they built their house badly, it fell down.
       (or 'They didn't build their house well, so it fell down.')
       'Ils ont mal construit leur maison, par conséquent elle est tombée.'

(551) à̰ɔ́màì   kíɾúùgà   mí   sɔ́mmà
       à̰ɔ́=mà=ì   kíɾí=ù=gà   mí   sɔ́n=mà
       man=DET=ERG   dog=DET=ACC son   3S.POSS=DET

       wɔ́ò   **d͡ʒíŋkàlò** t͡ʃíɾù
       Ø-j-bɔ́=ò   **d͡ʒíŋkàlò** Ø-j-jíd
       3.OBJ-3-bite=DET **because**   3.OBJ-3-kill
       'The man killed the dog, **because** it bit his son.'
       'L'homme a tué le chien, parce que il a mordu son fils.'

    The placement of the adverbial clause after the main clause verb is ungrammatical, as demonstrated in (552), where the adverbial clause is enclosed in brackets.

(552) *à̰ɔ́màì   kíɾúùgà   t͡ʃíɾù
       à̰ɔ́=mà=ì   kíɾí=ù=gà   Ø-j-jíd
       man=DET=ERG   dog=DET=ACC 3.OBJ-3-kill

       [mí   sɔ́mmà   wɔ́ò   **d͡ʒíŋkàlò**]
       mí   sɔ́n=mà   Ø-j-bɔ́=ò   **d͡ʒíŋkàlò**
       son   3S.POSS=DET 3.OBJ-3-bite=DET **because**
       'The man killed the dog, **because** it bit his son.'
       'L'homme a tué le chien, parce que il a mordu son fils.'

    There is no separate purposive subordinator, and the causal/reason subordinator *d͡ʒíŋkàlò* 'because' can be used to express sentences that, in English and French, have a purpose clause. This is illustrated in (553), where the French elicitation sentence (like the free English translation) includes a purpose clause, but the literal English translation of the Dazaga reflects the change to a reason clause.

(553) màɾá=ɾò ìní tòwó   jénìɾò   dágìɾò   d͡ʒíŋkàlò
màɾá=ɾò ìní tòó=ò   Ø-jén-ɾ=ɔ   Ø-dák-ɾ=ò   d͡ʒíŋkàlò
3P=DAT   thing eat.INF=GEN 3.OBJ-give-1=CNTG 3.OBJ-want-1=DET **because**

t͡ʃìŋàfá   jóbìɾ
t͡ʃìŋàfó-a Ø-jób-ɾ
rice-P   3.OBJ-buy-1
'I bought rice for them so that they would have something to eat.'
[lit. '**Because** I wanted to give them something to eat, I bought them rice.']
'J'ai acheté du riz pour eux, pour qu'ils aient quelques choses à manger.'

The use of the subordinator =ɾò (which is homophonous with the dative case enclitic =ɾò) to subordinate an adverbial clause is very common, especially for temporal clauses. As with reason clauses formed with d͡ʒíŋkàlò 'because', adverbial clauses formed with the subordinator =ɾò usually precede the main clause, and the boundary between the subordinate and main clause is identifiable by the location of the subordinator =ɾò. When the subordinator =ɾò is used to subordinate adverbial clauses, the determiner also appears on the adverbial clause, preceding the subordinator =ɾò. This use of the subordinator =ɾò is illustrated in (554) to (555).

(554) màɾá làó níɾò   ìrìgàɾò
màɾá làó níɾ=ò   Ø-írì-gì=à=rò
?   friend 1S.POSS=DET 3-come-IPFV=DET=**SUB**

dèéŋì   níɾò   ʃáì gèéì
dèéŋì   níɾ=ò   ʃáì gèé-Ø-j
brother 1S.POSS=DET tea prepare-3.OBJ-3
'Before my friend arrived, my brother prepared tea.'
'Avant que mon ami est arrivé, mon frère a preparé du thé.'[111]

(555) kʷòí   ɲákíŋáɾò   kíjáíɾò   jéntà
kʷòí   ɲák-j-n-gɪ=a=rò   kíjáí=ɾò   jé-n-t-Ø-à
place   sleep-3-LV-IPFV=DET=**SUB** easy=DAT   converse-LV-P-1-HORT
'While he's sleeping, let's talk softly.'
'Lorsque il est en train de dormir, parlons doucement.'

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[111] I am unsure of the meaning and function of the word *màɾá* here. Though homophonous with the third person plural free pronoun *màɾá* '3P', it does not appear to function as a pronoun in this sentence. One native speaker claimed "it's a preposition to get the attention of one's interlocutor" (*c'est une preposition pour attirer l'attention de son interlocuteur*). It may be a discourse particle.

Adverbial clauses can also be formed in a few other (less common) ways, such as the use of the preposition *bárà* 'after' to signal an event that precedes the main clause, as in (556) and (557).

(556) írìɾɛ̀ɾò   **bárà**   ʃáì   tòkkíɾ
       írì-ɾɛ̀=ɾò   bárà   ʃáì   tŭg-t-ɾ
       3.come-ADJZ=DAT   after   tea   3.OBJ-prepare-P-1
       'After he arrived, we made tea.'
       'Après qu'il a arrivé, nous avons fait du thé.'

(557) wòtíɾù   tènnáàɾò   **bárà**   dìgíɾò   dùɾú
       wòtíɾ-ù   Ø-téɾ-ní=à=ɾò   bárà   dìgí=ɾò   d-túɾ-Ø
       vehicle=DET   3-go-NEG=DET=DAT   after   foot=DAT   1-go-P
       'Because the vehicle doesn't work, we'll have to go by foot.'
       'Parce que la voiture ne marche pas, on doit aller à pieds.'

Contingent mood is used to form a temporal adverbial clause when the main clause expresses a timeless or gnomic statement (it is also used to form logically contingent "if" clauses; cf. §5.7.3), as in (558) to (560) — but also sometimes when the main clause has a particular temporal reference, as demonstrated in (561).

(558) lóbd͡ʒíŋɔ́   d͡ʒààgdíŋì
       lób-d-j-n-gɪ=ɔ   d͡ʒàák-d-t-n-gɪ
       tired-1.OBJ-3-LV-IPFV=**CNTG**   extend-1-REFL-LV-IPFV
       'I lie down **when** I am tired.'
       'Je me longe quand je suis fatigué.'

(559) kéè   bí   ŋílɔ̀   gálì   ʃìí
       kéè   bí   ŋílí=ɔ   gálì   ʃìí
       circumcision   season   rainy.season=**CNTG**   good   not
       'Circumcision, **when** (it is) rainy season, (is) not good.'
       'La circoncision pendant la saison de pluies n'est pas bon.'

(560) ŋílí   tìgìsɔ̀   gègé   bóɾò   t͡ʃìí
       ŋílí   Ø-tìgìsŭ=ɔ̀   gègé   bóɾò   Ø-t͡ʃì(g)
       rainy.season   3-happen=**CNTG**   malaria   much   3-be
       '**When** it's rainy season, there's a lot of malaria.'
       'Pendant l'hivernage il y a beaucoup de paludisme.'

(561) ʃìkí kógɛ tìgìsóǫ jégè tàŋú jíɹ
   ʃìkí kógɛ Ø-tìgìsú=ǫ jégè tàŋú jíɹ-Ø
   tomorrow morning.section 3-happen=**CNTG** house 1S.POSS come.IMV-2
   'Tomorrow, **when** it's between 7:00 and 9:30 in the morning, come to my house.'
   'Viens chez moi demain entre 7h00 et 9h30.'

8.3 Serial verb constructions

A serial verb construction (SVC) may be defined as a "monoclausal construction consisting of multiple independent verbs with no element linking them and with no predicate-argument relation between the verbs" (Haspelmath forthcoming:6). However, the exact nature of SVCs is not completely agreed upon,[112] and issues such as a single versus multiple event reading are disputed (e.g. cf. Kroeger (2004) and Aikhenvald (2006) against Baker & Harvey (2010) and Foley (2010)).[113] For my purposes, I assume the characteristics of prototypical SVCs as sketched in Kroeger (2004:229-230) and Aikhenvald (2006).

SVCs are common in West Africa (Aikhenvald 2006:1). They are sometimes confused with complex predicates,[114] such as light verb constructions (LVCs), and with clause chaining and coordination. Because Dazaga does not exhibit clause chaining (though it is reported in Old Kanembu (Bondarev 2010), Kanuri (Rothmaler 2011), and Beria (Jakobi & Crass 2004:167-175)), my main concern here is to determine if SVCs occur in Dazaga as constructions distinct from LVCs and coordination.

As noted in §5.3.2, a crucial distinction between LVCs and SVCs (including in Dazaga) is that LVCs may select their preverbs from a range of syntactic categories, especially nouns and adjectives. Consequently, the two predicational elements of an LVC

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[112] Cf. Staden & Reesink (2008:21): "Despite the by now impressive literature on serial verb constructions, there is still surprisingly little agreement on what exactly defines serial verb constructions."

[113] Haspelmath (forthcoming:15) considers the "single event" criterion redundant if SVCs are defined as necessarily monoclausal.

[114] Indeed, some linguists consider SVCs to be a type of complex predicate (e.g. Baker & Harvey 2010:13). However, Amberber et al. (2010:10) note that there is "currently no widely accepted answer" to the question of what exactly a complex predicate is. Baker (1997:247) remarks: "The term 'complex predicate' in syntactic theory is still semantically transparent; it can refer to any predicate that a particular researcher finds difficult ..."

are often not both verbs. In contrast, an SVC "contains two or more *verbs*" (Kroeger 2004:229; emphasis added).

Clausal coordination (cf. §8.1) in Dazaga is also clearly distinct from SVCs: the two verbs in an SVC (as identified by various syntactic tests) are never separated by a coordinator, whereas clausal coordination is never asyndetic; the two verbs in an SVC always share at least one argument (as is typical in SVCs; cf. Kroeger 2004:229; Haspelmath forthcoming:19), whereas verbs in coordinate clauses need not share any arguments.

While cross-linguistically it is very common for both verbs of an SVC to share a grammatical subject (cf. Kroeger 2004:230; Baker 1989:513), this is often not the case in causative SVCs in Dazaga, as illustrated in examples (485), (488), and (490), above. These same examples contradict Haspelmath's (forthcoming:19) ninth generalization about SVCs, namely that, "In different-subject SVCs, the second verb is always intransitive (cf. Aikhenvald 2006: 16)."

Another important, though disputed (as mentioned above), reason for distinguishing SVCs in Dazaga is that the two verbs are understood as a single (though sometimes complex) event; this is demonstrated particularly in translations by native speakers of Dazaga into languages such as French and English, which lack SVCs. In these cases, the original SVC is translated as a single event (as seen in the examples below).

Cross-linguistically, both verbs of an SVC must be of the same tense, aspect, mood, and polarity (Kroeger 2004:235; cf. Aikhenvald 2006:8),[115] though, in many languages, these values are only marked on one of the verbs in an SVC.[116] Dazaga exhibits this pattern, marking aspect and mood on the second verb in an SVC, as illustrated in (562) for optative mood and in (563) for imperfective aspect.

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[115] Haspelmath (forthcoming:17) states that is is unclear how universal this restriction is with regard to aspectual values.
[116] When tense, aspect, mood, and polarity are only marked on one of the verbs in an SVC, "it occurs in a peripheral position, i.e. preceding the first verb or following the last verb" (Haspelmath forthcoming:18).

(562) állàì   bígì   tàŋʊ́   sèmɛ̀í   d͡ʒɛ́nɛ́
      állà=ì   bígì   tàŋʊ́   Ø-sɛmɛ-j   d-jɛ́n-ɛ́
      God=ERG   sin   1S.POSS   3.OBJ-pardon-3   1.OBJ-3-give-**OPT**
      'May God forgive me my sin.'
      'Que Dieu pardonne mon péché.'

(563) jôm   nááná   èɾìʃí   kúɾʃíáɾò   kàɾàníɾ   jénìɾì**gì**
      jôm   nááná   èɾìʃí   kúɾʃí-á=ɾò   kaɾa-Ø-n-ɾ   Ø-jɛ́n-ɾ-**gì**
      day   every   story   child-P=DAT   read-3.OBJ-LV-1   3.OBJ-give-1-**IPFV**
      'Every day, I read a story (to my) children.'
      'Chaque jour je lit un conte aux enfants.'

Aspect and mood marked by affixation cannot be marked on only the first verb of an SVC, as demonstrated in (564) and (565), or on both the first and second verbs of an SVC, as demonstrated in (566) and (567).

(564) *állàì   bígì   tàŋʊ́   sèmèíɛ   d͡ʒén
      állà=ì   bígì   tàŋʊ́   Ø-sɛmɛ-j-**ɛ**   d-j-jén
      God=ERG   sin   1S.POSS   3.OBJ-pardon-3-**OPT**   1.OBJ-3-give
      ('May God forgive me my sin.')
      ('Que Dieu pardonne mon péché.')

(565) *jôm   nááná   èɾìʃí   kúɾʃíáɾò   kàɾàníɾ**gì**   jénìɾ
      jôm   nááná   èɾìʃí   kúɾʃí-á=ɾò   kaɾa-Ø-n-ɾ-**gì**   Ø-jén-ɾ
      day   every   story   child-P=DAT   read-3.OBJ-LV-1-**IPFV**   3.OBJ-give-1
      ('Every day, I read a story (to my) children.')
      ('Chaque jour je lit un conte aux enfants.')

(566) *állàì   bígì   tàŋʊ́   sèmèíɛ   d͡ʒénɛ́
      állà=ì   bígì   tàŋʊ́   Ø-sɛmɛ-j-**ɛ**   d-j-jén-**ɛ**
      God=ERG   sin   1S.POSS   3.OBJ-pardon-3-**OPT**   1.OBJ-3-give-**OPT**
      ('May God forgive me my sin.')
      ('Que Dieu pardonne mon péché.')

(567) *jôm   nááná   èɾìʃí   kúɾʃíáɾò   kàɾàníɾ**gì**   jénìɾì**gì**
      jôm   nááná   èɾìʃí   kúɾʃí-á=ɾò   kaɾa-Ø-n-ɾ-**gì**   Ø-jén-ɾ-**gì**
      day   every   story   child-P=DAT   read-3.OBJ-LV-1-**IPFV**   3.OBJ-give-1-**IPFV**
      ('Every day, I read a story (to my) children.')
      ('Chaque jour je lit un conte aux enfants.')

However, imperative mood, which is indicated by the occurrence of the imperative stem, rather than by affixation, occurs in both the first and second verbs of an imperative SVC, as illustrated in (568) and (569).

(568) dèbéɾì   gìsʊ́   tɛ́n
      dèbéɾì   Ø-gìsʊ́-Ø   t-jɛ́n-Ø
      effort   3.OBJ-do.**IMV**-2   1.OBJ-give.**IMV**-2
      'Make an effort for me!'
      'Il faut faire un effort pour moi!'

(569) búrú   lôn   ànìʃĭ   dɪ́ɾ
      búrú   Ø-lôn-Ø   ànìʃĭ   Ø-dɪ́ɾ-Ø
      hole   3.OBJ-dig.**IMV**-2 pure.sand 3.OBJ-take.out.**IMV**-2
      'Dig a hole to take out pure sand.'
      'Creuse un trou pour enlever du sable pur.'[117]

Kroeger (2004:229-233) offers several diagnostic tests for distinguishing SVCs from other constructions. These tests include possible patterns of tense, aspect, mood, and negation marking, whether a constituent can be questioned, whether a coordinator can be used, and whether the verbs can be interpreted as referring to a single event (these latter two issues are addressed above).

In the following paragraphs, I apply tests related to patterns of tense, aspect, mood, and negation marking and whether a constituent can be questioned. Cross-linguistically, SVCs often have restrictions on tense, aspect, mood, and negation marking that do not hold for coordinate constructions. Additionally, it is often possible to question one argument in an SVC, whereas most languages do not allow questioning of only one coordinand of a coordinate construction (cf. Baker 1989:514).

First, aspect marking patterns distinguish coordinate constructions from SVCs. Two of the possible patterns for coordinate constructions are illustrated in (570) and (571). In (570), the first verb has perfective (unmarked) aspect and the second has

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[117] Baker's analysis (1989:527-529) requires that SVCs share an internal argument. If the SVC in (569) is analyzed as having two monotransitive verbs, each with a different object, then it could not be a SVC according to this criterion. However, if the second verb, 'take out', were analyzed as ditransitive, subcategorizing for an agent, theme, and source, and if the source were the same ("shared") as the object of the first verb, then this could be considered a true SVC, even by Baker's criteria.

imperfective aspect; in (571), the first verb has progressive aspect and the second has imperfective aspect.

(570)   bíní   ní   t͡ʃòfìrí   déî   ʃìkí   ní   t͡ʃìrí**gì**
    bíní   ní   t͡ʃòfìrí   Ø-j-téi   ʃìkí   ní   Ø-j-jíd-**gì**
    today   and   bird   3.OBJ-3-catch   tomorrow   and   3.OBJ-3-kill-**IPFV**
    'He caught a bird today, and tomorrow he will kill it.'
    'Il a attrapé un oiseau aujourd'hui, et demain il va le tuer.'

(571)   ónnʊ́   ní   jínùù   gʊ́rí   t͡ʃìí
    ónnʊ́   ní   jíní-ù   Ø-j-kʊ́r-**í**   Ø-t͡ʃì(g)
    now   and   meat=DET   3.OBJ-3-cut-**PROG**   3-be

    tòwà̰í   ní   dɛ̀ɛ́ŋì   sʊ́mmài   wʊ́rtì**gì**
    tòwà̰í   ní   dɛ̀ɛ́ŋì   sʊ́n=mà=ì   Ø-j-bʊ́rt-**gì**
    afternoon   and   brother   3S.POSS=DET=ERG   3.OBJ-3-cook-**IPFV**
    'Right now, he's cutting up the meat, and this afternoon his brother will cook it.'
    'Maintenant, il est en train de couper la viande, et cet après-midi son frère va le fait cuire.'

With SVCs, this differential aspect marking is not possible. I have already demonstrated in (562) to (567) that aspect and mood must be marked only on the second verb of the SVC. Consequently, it is not possible for the two verbs in an SVC to take different aspectual marking on each verb, as demonstrated in (572).

(572)   *músà   d͡ʒànáà   gʊ́ìnì   t͡ʃìí   jínùù   gʊ́rì**gì**
    músà   d͡ʒàná=à   gʊ́-Ø-j-n-**ì**   Ø-t͡ʃì(g)   jíní-ù   Ø-j-kʊ́r-**gì**
    (name)   knife=DET   take-3.OBJ-3-LV-**PROG**   3-be   meat=DET   3.OBJ-3-cut-**IPFV**
    ('Musa will cut the meat with the knife.')
    ('Musa va couper la viande avec le couteau.')

Patterns of negation marking also distinguish between coordinate constructions and SVCs. In a coordinate construction, it is possible to assert the truth of one verb and negate the other, as demonstrated in (573). This is not possible with an SVC; negation can only be marked on the second verb in the SVC, as demonstrated in (574) to (576). When an SVC is negated, the negation marked on the second verb is understood to have scope over the first verb as well, as demonstrated in (574).

(573) búrú   lóì   t͡ʃíírò   à*nìʃĭ   dìrò**ní**
      búrú   ló-Ø-j   t͡ʃíírò   à*nìʃĭ   Ø-j-tír-**ní**
      hole   dig-3.OBJ-3   but   pure.sand   3.OBJ-3-pull.out-**NEG**
      'He dug a hole, but didn't take out pure sand.'
      'Il a creusé un trou, mais il n'a pas enlevé du sable pur.'

(574) búrú   lóì   à*nìʃĭ   dìrò**ní**
      búrú   ló-Ø-j   à*nìʃĭ   Ø-j-tír-**ní**
      hole   dig-3.OBJ-3   pure.sand   3.OBJ-3-pull.out-**NEG**
      'He didn't dig a hole to take out pure sand.'
      'Il n'a pas creusé un trou pour enlever de sable pur.'

(575) *búrú   lóìn**ní**   à*nìʃĭ   dírò
       búrú   ló-Ø-j-n-**ní**   à*nìʃĭ   Ø-j-tír
       hole   dig-3.OBJ-3-LV-**NEG**   pure.sand   3.OBJ-3-pull.out
      ('He didn't dig a hole to take out pure sand.')
      ('Il n'a pas creusé un trou pour enlever de sable pur.')

(576) *búrú   lóìn**ní**   à*nìʃĭ   dìrò**ní**
       búrú   ló-Ø-j-n-**ní**   à*nìʃĭ   Ø-j-tír-**ní**
       hole   dig-3.OBJ-3-LV-**NEG**   pure.sand   3.OBJ-3-pull.out-**NEG**
      ('He didn't dig a hole to take out pure sand.')
      ('Il n'a pas creusé un trou pour enlever de sable pur.')

      The test of whether only one half or part of a construction can be questioned does not distinguish SVCs from coordinate constructions in Dazaga. A single constituent can be questioned from both coordinate constructions, as in (577) and (578), and SVCs, as in (579) and (580).[118]

(577) làó   nírò   **ínní**   d͡ʒásò   ní   ɔ̀rkɔ́ t͡ʃɔ́bò
      làó   nír=ò   ínní   Ø-j-t͡ʃás   ní   ɔ̀rkɔ́ Ø-j-jób
      friend 1S.POSS=DET what 3.OBJ-3-sell and goat 3.OBJ-3-buy
      'What did my friend sell and bought a camel?'
      'Qu'est-ce que mon ami a vendu et acheté un chameau?'

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[118] This grammatical acceptability is perhaps not surprising, since this constraint properly applies to filler-gap constructions (extraction), and not to *in situ* questioning (Paul Kroeger, p.c.).

(578) **ínní**   lóì   ní   ànìʃĭ   díɾ̀ò
       ínní   ló-Ø-j   ní   ànìʃĭ   Ø-j-tíɾ
       what   dig-3.OBJ-3   and   pure.sand   3.OBJ-3-pull.out
       'What did he dig and took out pure sand?'
       'Qu'est-ce que il a creusé et il a enlevé du sable pur?'

(579) **ínní**   lóì   ànìʃĭ   díɾ̀ò
       ínní   ló-Ø-j   ànìʃĭ   Ø-j-tíɾ
       what   dig-3.OBJ-3   pure.sand   3.OBJ-3-pull.out
        'What did he dig to take out pure sand?'
       'Qu'est-ce que il a creusé pour enlevé de sable pur?'

(580) búrú   lóì   **ínní**   díɾ̀ò
       búrú   ló-Ø-j   ínní   Ø-j-tíɾ
       hole   dig-3.OBJ-3   what   3.OBJ-3-pull.out
        'What did he dig a hole to take out?'
       'Qu'est-ce que il a creusé un trou pour enlevé?'

SVCs frequently function in "valency-increasing" ways (Aikhenvald 2006:5), such as by introducing a beneficiary (cf. Kroeger 2004:227). SVCs with this beneficiary function use the verb *tèní* 'give' (as is often the case cross-linguistically; cf. Aikhenvald (2006:2)). This "beneficiary" function using the verb *tèní* 'give', where the verb *tèní* 'give' occurs as the second verb in the SVC, is illustrated in examples (581) to (583) (as well as example (91)). In these constructions, the second verb of the SVC is ditransitive, but its theme is understood to be the object of the first verb in the SVC (cf. Baker 1989:516).

(581) ábbà   nɪ́ɾʊ̀ì   kútùb   t͡ʃɔ́bʊ̀   **d͡ʒɛ́n**
       ábbà   nɪ́ɾ=ʊ̀=ì   kútùb   Ø-j-jɔ́b   d-j-jɛ́n
       father   1S.POSS=DET=ERG   book   3.OBJ-3-buy   1.OBJ-3-give
       'My father bought a book for me.'
       'Mon père a acheté un livre pour moi.'

(582) fátìmɛ̀   àfɾàí   dɔ̀ɔ́m   **tɛ́n**
       fátìmɛ̀   àfɾàí   Ø-dɔ̀ɔ́m-Ø   t-jɛ́n-Ø
       (name)   basket   3.OBJ-make.IMV-2   1.OBJ-give.IMV-2
       'Fatime, make me a winnowing basket.'
       'Fatime, construit-moi un van.'

(583) dèbéɾì   gìsʊ́   **tɛ́n**
      dèbéɾì   Ø-gìsʊ́-Ø   t-jɛ́n-Ø
      effort   3.OBJ-do.IMV-2   1.OBJ-give.IMV-2
      'Make an effort for me!'
      'Il faut faire un effort pour moi!'

Causatives from simple verbs (cf. §8.2.2.1.4) can also be formed as SVCs using the verb *tèní* 'give', but, unlike the beneficiary use, the verb *tèní* 'give' in causative SVCs occurs as the first verb in the SVC, as illustrated in (584).

(584) bɾódì   **nínìr**   bʊ́m
      bɾódì   n-jɛ́n-ɾ   Ø-bʊ́-m
      bread   2.OBJ-give-1   3.OBJ-eat-2
      'I made you eat the bread.'
      'Je t'ai fait mange le pain.'

Another common function of SVCs is to express an action and its purpose (Kroeger 2004:228). This purposive use is illustrated in examples (585) to (588). In these examples, the order of the two verbs is iconic,[119] with the first verb expressing the main action and the second verb expressing the purpose. Each object immediately precedes its verb (cf. the different order with dative marked primary object in (563)).

(585) búrú   lôn   ànìʃĭ   díɾ
      búrú   Ø-lôn-Ø   ànìʃĭ   Ø-díɾ-Ø
      hole   3.OBJ-dig.IMV-2   pure.sand   3.OBJ-take.out.IMV-2
      'Dig a hole to take out pure sand.'
      'Creuse un trou pour enlever du sable pur.'

(586) bùláà   kòɾtʊ́   sɛ́ltɛ̀   áì   gʊ́n
      bùló=à   Ø-kòɾtʊ́-Ø   sɛ́ltɛ̀   áì   Ø-gʊ́n-Ø
      potty=DET   3.OBJ-bring-2   filth   this   3.OBJ-take-2
      'Bring the potty to remove this refuse.'
      'Amène le pot pour prendre la saleté.'[120]

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[119] Haspelmath (forthcoming:18) considers this to be true of nearly all cause-effect or sequential SVCs. He notes the interesting fact that this generalization holds true even when the temporally iconic order is opposite to a language's normal order for the main and subordinate clauses (cf. Baker 1989:525-527).
[120] Interestingly, Haspelmath (forthcoming:4) notes that SVCs in which each verb has a different patient, as in examples (585) to (586), are "not very common."

(587) bùɾdíɾ ɛ̀kkáà táàɾ
bùɾt-n-ɾ ɛ̀kkɛ́-a-à Ø-táà-ɾ
jump-LV-1 tree-P=DET 3.OBJ-catch-1
'I jumped to catch onto the tree.'
'J'ai sauté pour attraper l'arbre.'

(588) mèɾé kíì ànɔ̀ɔ̯́ dòóssò gálìɾò jèjéntíɾ
mèɾé kíì ànɔ̀ɔ̯́ d-bóz-t gálì=ɾò jèjé-n-t-ɾ
3S with long.time 1-stay-P good=DAT converse-LV-P-1
'We stayed with him for a while to converse well.'
'On est resté longtemps avec lui pour bien causer.'

  Aikhenvald (2006:25) mentions several other "valency increasing" SVC types, including what she calls "instrumental" and what she calls "comitative" (or "sociative"). In these usages, one of the verbs in the SVC functions to introduce an instrument or comitative constituent. An instrumental SVC is illustrated in (589), in contrast to the coordinate structure in (590). A comitative SVC is illustrated in (591).

(589) músà d͡ʒànáà góì   jínúù góɾò
músà d͡ʒàná=à gó-Ø-j jíní=ù Ø-j-kóɾ
(name) knife=DET take-3.OBJ-3 meat=DET 3.OBJ-3-cut
'Musa cut the meat with the knife.'
'Musa a coupé la viande avec le couteau.'

(590) músà d͡ʒànáà góì **ní** jínúù góɾò
músà d͡ʒàná=à gó-Ø-j ní jíní=ù Ø-j-kóɾ
(name) knife=DET take-3.OBJ-3 and meat=DET 3.OBJ-3-cut
 'Musa took the knife and (then) cut the meat.'
'Musa a pris le couteau et (puis) il a coupé la viande.'

(591) bònú gón   kólàŋà sòtó
bònú Ø-gón-Ø   kólò-a=ŋà Ø-sòtó-Ø
hoe 3.OBJ-take.IMV-2 field-P=ACC 3.OBJ-go.to.IMV-2
'Go to (the) fields with your hoe.'
'Va au champ avec ta houe.'

  Other examples of SVCs do not fit easily into the categories described above. At least some of these are probably what have been called "idiomatic" SVCs (Kroeger

2004:228; Aikhenvald 2006:2), where the meaning of the SVC is not compositional.[121] This kind of SVC is illustrated in examples (592) to (593), where the combination of the verbs *gʷɔ́dí* 'take' and *tìrèí* 'have' consistently means 'carry'. It is perhaps noteworthy in this regard that Dazaga does not have a distinct simple verb for 'carry'.

(592) mí   sʊ́mmà   èfírí   dáá   gɔ̀ì   dèì
       mí   sʊ́n=mà   èfírí   dáá   gɔ́-Ø-j   Ø-j-téi
       son   3S.POSS=DET   shoulder   on   take-3.OBJ-3 3.OBJ-3-have
       'He carried his son on (his) shoulders.'
       'Il a pris son fils par l'épaule.'

(593) dàʊ́   dáá   ìí   gɔ̀ì   dèì
       dàʊ́   dáá   ìí   gɔ́-Ø-j   Ø-j-téi
       head   on   water   take-3.OBJ-3 3.OBJ-3-have
       'She carried water on her head.' / 'On her head, she carried water.'
       'Elle porte de l'eau sur la tête.'

   Additional examples of SVCs are presented in (594) to (596).

(594) mèréŋà   fírírò   t͡ʃʊ́bbò   t͡ʃìrû
       mèré=ŋà   fírí=rò   Ø-j-jʊ́bbò   Ø-j-jír
       3S=ACC   arrow=DAT   3.OBJ-3-pierce   3.OBJ-3-kill
       'He killed it with an arrow.'
       'Il l'a tué avec une flèche.'

(595) ʃái   gààníɾ   kìsíɾ
       ʃái   gán-Ø-n-ɾ   Ø-kís-ɾ
       tea   precede-3.OBJ-LV-1   3.OBJ-make-1
       'I made tea earlier.'
       'J'ai fait le thé premièrement.'[122]

(596) jégè̀   sʊ́mmà   dìrɔ́   kìlím   fùrt͡ʃì   dèì
       jégè̀   sʊ́n=mà   dìrɔ́   kìlím   fʊ́rt-Ø-j   Ø-j-téi
       house   3S.POSS=DET   in   rug   spread-3.OBJ-3   3.OBJ-3-have
       'In his house, he spread a rug.'
       'Il a étalé un tapis dans sa maison.'

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[121] Haspelmath (forthcoming:6) does not accept non-compositional or idiomatic SVCs as true SVCs.
[122] It is possible that this is an example of the "completive aspect" use of SVCs mentioned by Kroeger (2004:228).

Chapter 9: Conclusion

9. Conclusion

In the present study, I have provided an overview of the phonology, morphology, and syntax of Dazaga, as represented by the Keshirda dialect. It is my hope that this work will serve as the starting point for further research of Dazaga — in more detail, in a more comprehensive treatment (including phonology), and with a broader dialectical scope.

In this concluding chapter, I summarize some of the features of Dazaga that are cross-linguistically unusual, and then suggest phenomena of the language that I think would be particularly fruitful areas for further study.

9.1 Typologically unusual features of Dazaga

The basic features of Dazaga grammar are summarized in §1.3. In this section, I briefly point out some typologically interesting features of Dazaga, which have been discovered as a result of this study. Each of these is described in more detail in previous chapters.

Africa has traditionally been considered to have very few languages with ergative features (cf. Creissels 2000:234; Creissels et al. 2008:90), though several have been reported in recent decades (e.g. Shilluk (Miller & Gilley 2001); Päri (Andersen 1988); Loma (Rude 1983); see also König (2008: 95-96) for a few additional languages). In his typological survey of ergativity, McGregor (2009:494) reports Shilluk as the sole known example of an African language with optional ergative case marking (cf. McGregor 2010:1631). However, optional ergative case marking has recently been identified in the Saharan language Beria (Wolfe & Adam 2015), and Dazaga can now be added to the list of at least three African languages to exhibit this feature.

Another unusual feature of Dazaga is the marking of the primary object of ditransitive verbs with dative case. While the marking of the recipient of a ditransitive

verb as the primary object is common (Siewierska & Bakker 2007:1007), the marking of the primary object with dative case appears to be quite rare (though this is attested in at least a few other languages; cf. §6.3.3, footnote 81).

Dazaga does not have morphological causatives, but does exhibit causative light verb constructions, which share features with both periphrastic causatives (non-derived) and with morphological causatives (a single phonological word). I have been able to identify only a few other languages that uses causative light verbs as a primary strategy for forming causative constructions (namely, Urdu (Butt 1995:35-87; 2010) and Persian (e.g. Megerdoomian 2001)).

Finally, Dazaga has two relativization strategies (gap and pronoun retention) that can be used across the levels of the Accessibility Hierarchy (Keenan & Comrie 1977). This is unexpected given the tendency for languages to use the gap strategy to relativize grammatical relations higher on the Accessibility Hierarchy and pronoun retention for grammatical relations lower on the Accessibility Hierarchy. Additionally, the use of pronoun retention to relativize the subject grammatical relation is rare in African languages (Kuteva & Comrie 2005).

9.2   Areas for further research

Given the brevity of the present study, our knowledge of the grammar of Dazaga would benefit greatly from a more thorough investigation of almost every topic. Nevertheless, in the course of my research and writing, certain issues in Dazaga grammar have struck me as particularly deserving of further research. In the following paragraphs I mention just a few of these issues.

I have provided a brief analysis of tone, but most of my conclusions are based on tonal patterns at the level of the phonological word. A fuller understanding of tone will require a much broader study, certainly including tonal patterns over higher level constituents such as the clause and sentence, including intonation.

Three other topics for further research are likely, in my estimation, to be interrelated. I have given considerable space to the case system, but much work remains to explain the patterns of occurrence of optional ergative and accusative case enclitics.

Related work in Kanuri (Cyffer 1983; Hutchison 1986; Bondarev et al. 2011) and Beria (Jakobi 2006; Wolfe & Adam 2015) suggests some of the lines of inquiry along which we may expect to find answers. The dative case marking on primary objects in ditransitive clauses, though not unheard of, merits further attention.

I have briefly covered the issues of topic and focus constructions, but more work in this area would greatly benefit our understanding of the information structuring patterns of Dazaga (and perhaps of the patterns of optional case marking).

Discourse features are outside the scope of the present study. However, aside from being an important area of study in their own right, they would certainly be informative to our understanding of (especially optional) case marking as well as topic and focus patterns.

REFERENCES

Abdoulaye, Mahamane Laoualy. 1985. *Morphophonologie des formes aspectuelles, temporelles et modales affirmatives et non-dérivés du verbe en tubu*. Niamey, Niger: Université de Niamey, MA thesis.

Abraham, Werner. 2006. Introduction. Datives: structural vs. inherent − abstract vs. morphological − autonomous vs. combinatory − universally vs. language-specifically configured? In Daniel Hole, André Meinunger & Werner Abraham (eds.), *Datives and other cases: Between argument structure and event structure*, 3–46. Amsterdam: John Benjamins.

Aikhenvald, Alexandra Y. 2006. Serial verb constructions in typological perspective. In Alexandra Aikhenvald & R. M. W. Dixon (eds.), *Serial verb constructions: A cross-linguistic typology* (Explorations in Linguistic Typology 2), 1–68. Oxford: Oxford University Press.

Aikhenvald, Alexandra Y. 2007. Typological distinctions in word-formation. In Timothy Shopen (ed.), *Language typology and syntactic description,* vol. 2, 1–65. Cambridge: Cambridge University Press.

Alidou, Hassana. 1988. *Sur la morphophonologie du syntagme nominal en Tubu (dazaga de Tasker, Niger)*. Niamey, Niger: Université de Niamey, MA thesis.

Allanga, Djimi. 2013. *Daga Dazagaa*. N'Djaména, Chad: Yagabi.

Amani, Laouali. 1986. *Description phonologique du Tubu: Le parler dazaga de N'Gourti (Niger)*. Niamey, Niger: Université de Niamey, MA thesis.

Amberber, Mengistu. 2011. Differential case marking of arguments in Amharic. In Andrej Malchukov & Andrew Spencer (eds.), *The Oxford handbook of case*, 742–755. Oxford: Oxford University Press.

Andersen, Torben. 1988. Ergativity in Päri, a Nilotic OVS language. *Lingua* 75. 289–324.

Andrews, Avery D. 2007a. The major functions of the noun phrase. In Timothy Shopen (ed.), *Language typology and syntactic description*, vol. 1, 132–223. Cambridge: Cambridge University Press.

Andrews, Avery D. 2007b. Relative clauses. In Timothy Shopen (ed.), *Language typology and syntactic description*, vol. 2, 206–236. Cambridge: Cambridge University Press.

Anonby, Erik. 2007. Review of 'Grammaire du beria', by Angelika Jakobi and Joachim Crass. *Journal of African languages and linguistics* 28. 217–220.

Aristar, Anthony Rodrigues. 1991. On diachronic sources and synchronic pattern: An investigation into the origin of linguistic universals. *Language* 67. 1–33.

Aristar, Anthony Rodrigues. 1996. The relationship between dative and locative: Kuryłowicz's argument from a typological perspective. *Diachronica* 13. 207–224.

Auwera, Johan von der. 2011. On the diachrony of negation. In Laurence R. Horn (ed.), *The expression of negation*, 73–109. Berlin: De Gruyter.

Awagana, Ari. 2011. Racines lexicales sahariennes: Préludes à la reconstruction du vocabulaire de base. In Doris Löhr, Eva Rothmaler, & Georg Ziegelmeyer (eds.), *Kanuri, Borno and beyond: Current studies on the Lake Chad region*, 7–25. Köln: Rüdiger Köppe.

Baker, Brett & Mark Harvey. 2010. Complex predicate formation. In Mengistu Amberber, Brett Baker, & Mark Harvey (eds.), *Complex predicates: Cross-linguistic perspectives on event structure,* 13–47. Cambridge: Cambridge University Press.

Baker, Mark C. 1988. *Incorporation: A theory of grammatical function changing.* Chicago: University of Chicago Press.

Baker, Mark C. 1989. Object sharing and projection in serial verb constructions. *Linguistic Inquiry* 20. 513–553.

Baker, Mark C. 1997. Complex predicates and agreement in polysynthetic languages. In Alex Alsina, Joan Bresnan & Peter Sells (eds.), *Complex predicates* (CSLI Lecture Notes 64), 247-288. Standford, CA: Center for the Study of Language and Information.

Baker, Mark C. 2003. *Lexical categories: Verbs, nouns, and adjectives* (Cambridge Studies in Linguistics 102). Cambridge: Cambridge University Press.

Baker, Mark C. 2012. On the relationship of object agreement and accusative case: Evidence from Amharic. *Linguistic Inquiry* 43. 255–274.

Baroin, Catherine. 1997. *Tubu: The Teda and the Daza*. New York: The Rosen Publishing Group.

Barth, Heinrich. 1862. *Sammlung und Bearbeitung Central-Afrikanischer Vokabularien.* Gotha, Germany: Justas Perthes.

Beck, David. 2002. *The typology of parts of speech systems: The markedness of adjectives*. London: Routledge.

Bender, Marvin Lionel. 1991. Sub-classification of Nilo-Saharan. In M. Lionel Bender (ed.), *Proceedings of the 4th Nilo-Saharan Linguistics Colloquium, (Nilo-Saharan: Linguistic Analyses and Documentation Vol. 7)*, 1–35. Hamburg: Helmut Buske Verlag.

Bhat, D. N. S. 1994. *The adjectival category: Criteria for differentiation and identification* (Studies in Language Companion Series 24). Amsterdam: John Benjamins.

Blake, Barry J. 2001. *Case*. 2nd edn. Cambridge: Cambridge University Press.

Bondarev, Dmitry. 2010. Complex clauses in Old Kanembu/LG. In Georg Ziegelmeyer & Norbert Cyffer (eds.), *Aspects of co- and subordination: Case studies from African, Slavonic, and Turkic languages*, 213–250. Köln: Rüdiger Köppe.

Bondarev, Dmitry, Philip J. Jaggar, Doris Löhr & Abba I. Tijani. 2011. Differential subject marking in Kanuri: Agentivity, pragmatics, and split-intransitive. In Doris Löhr, Eva Rothmaler, & Georg Ziegelmeyer (eds.), *Kanuri, Borno and beyond: Current studies on the Lake Chad region*, 27–57. Köln: Rüdiger Köppe.

Bougnol, Jean-Pierre. 1975. Equisse préliminaire d'une phonologie de la langue daza. *Afrika und Übersee* 2. 257–259.

Boyer, One & Elizabeth Zsiga. 2013. Phonological devoicing and phonetic voicing in Setswana. In Ọlanikẹ Ọla Orie and Karen W. Sanders (eds.), *Selected proceedings of the 43rd annual conference on African linguistics*, 82–89. Somerville, MA: Cascadilla Proceedings Project.

Bril, Isabelle (ed.). 2010. *Clause linking and clause hierarchy: Syntax and pragmatics*. Amsterdam: John Benjamins.

Bryan, Margaret Arminel. 1971. The verb classes in East Saharan languages. In Veronika Six, Norbert Cyffer, Ludwig Gerhardt, Hilke Meyer-Bahlburg, and Ekkehard Wolff (eds.), *Afrikanische Sprachen und Kulturen – ein Querschnitt* (Hamburger Beiträge zur Afrikakunde, 14), 224–234. Hamburg: Deutsches Institut zur Afrikaforschung.

Bulakarima, Shettima Umara. 1997. Survey of Kanuri dialects. In Norbert Cyffer & Thomas Geider (eds.), *Advances in Kanuri scholarship*, 67–75. Köln: Rüdiger Köppe.

Butt, Miriam. 1995. The structure of complex predicates in Urdu (Dissertations in Linguistics). Stanford: CSLI [Center for the Study of Language and Information] Publications.

Butt, Miriam. 2010. The light verb jungle: Still hacking away. In Mengistu Amberber, Brett Baker & Mark Harvey (eds.), *Complex predicates: Cross-linguistic perspectives on event structure,* 48–78. Cambridge: Cambridge University Press.

Bye, Patrick. 2011. Dissimilation. In Marc van Oostendorp, Colin J. Ewen, Elizabeth Hume & Keren Rice (eds.), *The Blackwell companion to phonology,* vol. 3, 1408–1433. Chichester, West Sussex, United Kingdom: Blackwell Publishing.

Carbou, Henri. 1912. *La région du Tchad et du Oudaï: Études ethnographiques, dialecte Toubou*. Paris: E. Leroux.

Casali, Roderic F. 2003. [ATR] value asymmetries and underlying vowel inventory structure. *Linguistic Typology* 7. 307–382.

Casali, Roderic F. 2008. ATR harmony in African languages. *Language and Linguistics Compass* 2. 496–549.

Clopper, Cynthia G. & Judith Tonhauser. 2011. On the prosodic coding of focus in Paraguayan Guaraní. In Mary Byram Washburn et al. (eds.), *Proceedings of the 28th West Coast Conference on Formal Linguistics*, 249–257. Somerville, MA: Cascadilla Proceedings Project.

Coetzee, Andries W., S. Lin & Rigardt Pretorius. 2007. Post-nasal devoicing in Tswana. In J. Trouvain & W. J. Barry (eds.), *Proceedings of the XVIth International Congress of Phonetic Sciences (ICPhS XVI)*, 861–864. Saarbrücken, Germany.

Coetzee, Andries W. & Rigardt Pretorius. 2010. Phonetically grounded phonology and sound change: The case of Tswana labial plosives. *Journal of Phonetics* 38. 404–421.

Comrie, Bernard. 1981. *Language universals and linguistic typology*. Chicago: University of Chicago Press.

Comrie, Bernard. 1989. *Language universals & linguistic typology*. 2nd edn. Chicago: University of Chicago Press.

Connell, Bruce. 2011. Downstep. In Marc van Oostendorp, Colin J. Ewen, Elizabeth Hume, and Keren Rice (eds.), *The Blackwell companion to phonology,* vol. 2, 824–847. Chichester, West Sussex, United Kingdom: Blackwell Publishing.

Creissels, Denis. 2000. Typology. In Bernd Heine & Derek Nurse (eds.), *African languages: An introduction*, 231–258. Cambridge: Cambridge University Press.

Creissels, Denis. 2005. A typology of subject and object markers in African languages. In F. K. Erhard Voeltz (ed.), *Studies in African linguistic typology* (Typological Studies in Language 64), 43–70. Amsterdam: John Benjamins.

Creissels, Denis. 2006/07. Buchbesprechung of Jakobi & Crass' 'Grammaire du beria (langue saharienne)' (2004). *Afrika und Übersee* 89. 276–280.

Creissels, Denis. 2007. Remarks on split intransitivity. Paper presented at the *7th Syntax and Semantics Conference in Paris (7ème Colloque de Syntaxe et Sémantique à Paris),* Paris, 4–6 October, 2007. http://www.ddl.ish-lyon.cnrs.fr/fulltext/Creissels/Creissels_2007c.pdf. Accessed 17 January 2015.

Creissels, Denis, Gerrit J. Dimmendaal, Zygmunt Frajzyngier & Christa König. 2008. Africa as a morphosyntactic area. In Bernd Heine & Derek Nurse (eds.), *A linguistic geography of Africa,* 86–150. Cambridge: Cambridge University Press.

Croft, William. 1991. *Syntactic categories and grammatical relations: The cognitive organization of information*. Chicago: University of Chicago Press.

Croft, William. 2000. Parts of speech as language universals and as language-particular categories. In Petra M. Vogel & Bernard Comrie (eds.), *Approaches to the typology of word classes* (Empirical Approaches to Language Typology 23), 65–102. Berlin: De Gruyter.

Crystal, David. 2003. *A dictionary of linguistics & phonetics*. 5th edn. Oxford: Blackwell.

Cyffer, Norbert. 1981a. Pluralization in Saharan languages. *Afrika und Übersee* 64. 161–186.

Cyffer, Norbert. 1981b. The person elements in Saharan languages: A step towards the creation of Proto-Saharan. In Thilo C. Schadebert and M. Lionel Bender (eds.), *Nilo-Saharan: Proceedings of the first Nilo-Saharan linguistics colloquium (Leiden, September 8-10, 1980)*, 185–200. Dordrecht: Foris Publications.

Cyffer, Norbert. 1983. Case marking in Kanuri? *Afrika und Übersee* 66. 191–202.

Cyffer, Norbert. 1991. The Zaghawa verb structure and its relation to other Saharan languages. *Proceedings of the fourth Nilo-Saharan linguistics colloquium*, 79–90. Hamburg: Helmut Buske Verlag.

Cyffer, Norbert. 1996. Who are the ancestors of the Saharan family? In M. Lionel Bender and Thomas Hinnebusch (eds.), *6th Nilo-Saharan Linguistics Conference 1995*. *Afrikanistische Arbeitspapiere* 45. 53–63.

Cyffer, Norbert. 1997. A survey of the Kanuri language. In Norbert Cyffer and Thomas Geider (eds.), *Advances in Kanuri scholarship* (Westafrikanische Studien 17), 17–66. Köln: Rüdiger Köppe.

Cyffer, Norbert. 1998a. *A sketch of Kanuri*. Köln: Rüdiger Köppe.

Cyffer, Norbert. 1998b. Basic time relations in the Saharan verbal system. In Petr Zima and Vladimir Tax (eds.), *Language and location in space and time*, 45–53. München: Lincom Europa.

Cyffer, Norbert. 2000. Linguistic properties of the Saharan languages. In Petr Zima (ed.), *Areal and genetic factors in language classification and description: Africa south of the Sahara* (Lincom Studies in African Linguistics 47), 30–59. München: Lincom Europa.

Cyffer, Norbert. 2007. Kanuri morphology. In Alan S. Kaye (ed.), *Morphologies of Asia and Africa*, vol. 2, 1089–1126. Winona Lake, Indiana: Eisenbrauns.

Cyffer, Norbert. 2009. Negation patterns in Kanuri. In Norber Cyffer, Erwin Ebermann & Georg Ziegelmeyer (eds.), *Negation patterns in West African languages and beyond*, 71–91. Amsterdam: John Benjamins.

Dahl, Östen. 1979. Typology of sentence negation. *Linguistics* 17. 79–106.

Dahl, Östen. 2011. Typology of negation. In Laurence R. Horn (ed.), *The expression of negation*, 9–38. Berlin: De Gruyter.

Diessel, Holger. 1999. *Demonstratives: Form, function, and grammaticalization* (Typological Studies in Language 42). Amsterdam: John Benjamins.

Dik, Simon C. (Kees Hengeveld, ed.). 1997. *The theory of functional grammar, Part 2: Complex and derived constructions*. Berlin: De Gruyter.

Dimmendaal, Gerrit J. 2005. Head marking, dependent marking and constituent order in the Nilotic area. In F. K. Erhard Voeltz (ed.), *Studies in African linguistic typology* (Typological Studies in Language 64), 71–92. Amsterdam: John Benjamins.

Dimmendaal, Gerrit J. 2008. Africa's verb-final languages. In Bernd Heine & Derek Nurse (eds.), *A linguistic geography of Africa*, 272–308. Cambridge: Cambridge University Press.

Dimmendaal, Gerrit J. 2009a. Kanuri. In Keith Brown & Sarah Ogilvie (eds.), *Concise encyclopedia of languages of the world*, 578. Oxford: Elsevier.

Dimmendaal, Gerrit J. 2009b. Nilo-Saharan languages. In Keith Brown & Sarah Ogilvie (eds.), *Concise encyclopedia of languages of the world*, 772–776. Oxford: Elsevier.

Dixon, R. M. W. 1994. *Ergativity* (Cambridge Studies in Linguistics 69*)*. Cambridge: Cambridge University Press.

Dixon, R. M. W. 2006. Complement clauses and complementation strategies in typological perspective. In R. M. W. Dixon & Alexandra Aikhenvald (eds.), *Complementation* (Explorations in Linguistic Typology 3), 1–48. Oxford: Oxford University Press.

Dixon, R. M. W. & Alexandra Y. Aikhenvald (eds.). 2004. *Adjective classes: A cross-linguistic typology*. New York: Oxford University Press.

Dryer, Matthew. 1986. Primary objects, secondary objects, and antidative. *Language* 62. 808–845.

Dryer, Matthew. 1988. Universal of negative position. In Michael Hammond, Edith A. Moravcsik & Jessica R. Wirth (eds.), *Studies in syntactic typology*, 93–124. Amsterdam: John Benjamins.

Dryer, Matthew. 2007a. Noun phrase structure. In Timothy Shopen (ed.), *Language typology and syntactic description,* vol. 2, 151–205. Cambridge: Cambridge University Press.

Dryer, Matthew. 2007b. Word order. In Timothy Shopen (ed.), *Language typology and syntactic description,* vol. 1, 61–131. Cambridge: Cambridge University Press.

Dryer, Matthew. 2007c. Clause types. In Timothy Shopen (ed.), *Language typology and syntactic description,* vol. 1, 224–275. Cambridge: Cambridge University Press.

Fabricius-Hansen, Cathrine & Wiebke Ramm (eds.). 2008. *'Subordination' versus 'Coordination' in sentence and text: A cross-linguistic perspective.* Amsterdam: John Benjamins.

Fadoul, Zakaria. No date. *Structure de la langue Beria*. Paris: University of Paris, doctoral dissertation.

Fannami, Muhammad & Mohammed Aminu Mu'azu. 2011. *An introduction to morphology and syntax of the Kanuri language* (Linguistics Edition 87). Munich: LINCOM Europa.

Foley, William A. 2007. A typology of information packaging in the clause. In Timothy Shopen (ed.), *Language typology and syntactic description,* vol. 1, 362–446. Cambridge: Cambridge University Press.

Foley, William A. 2010. Events and serial verb constructions. In Mengistu Amberber, Brett Baker & Mark Harvey (eds.), *Complex predicates: Cross-linguistic perspectives on event structure,* 79–109. Cambridge: Cambridge University Press.

Frajzyngier, Zygmunt. 2012. *A grammar of Wandala.* Berlin: De Gruyter.

Fukuda, Shin. 2008. Backward control. *Language and linguistics compass* 2. 168–195. Available online: http://www2.hawaii.edu/~fukudash/backwardcontrol.pdf. Accessed 19 May 2015.

Gafos, Adamantios I. & Amanda Dye. 2011. Vowel harmony: Opaque and transparent vowels. In Marc van Oostendorp, Colin J. Ewen, Elizabeth Hume & Keren Rice (eds.), *The Blackwell companion to phonology,* vol. 4, 2164–2189. Chichester, West Sussex, United Kingdom: Blackwell Publishing.

Giannakidou, Anastasia. 2011. Negative and positive polarity items. In Klaus von Heusinger, Claudia Maienborn & Paul Portner (eds.), *Semantics: An international handbook of natural language meaning*, vol. 2, 1660–1712. Berlin: De Gruyter.

Gick, Bryan, Douglas Pulleyblank, Fiona Campbell & Ngessimo Mutaka. 2006. Low vowels and transparency in Kinande vowel harmony. *Phonology* 23. 1–20.

Givón, Talmy. 2001a. *Syntax: An introduction*, vol. 1. Amsterdam: John Benjamins.

Givón, Talmy. 2001b. *Syntax: An introduction*, vol. 2. Amsterdam: John Benjamins.

Goad, Heather. 2011. The representation of sC clusters. In Marc van Oostendorp, Colin J. Ewen, Elizabeth Hume & Keren Rice (eds.), *The Blackwell companion to phonology*, vol. 2, 898–923. Chichester, West Sussex, United Kingdom: Blackwell Publishing.

Goldsmith, John A. 1976. Autosegmental phonology. Cambridge, MA: Massachusetts Institute of Technology, PhD dissertation.

Goldsmith, John A. 1990. *Autosegmental & metrical phonology*. Oxford: Basil Blackwell.

Gouskova, Maria, Elizabeth Zsiga & One Tlale Boyer. 2011. Grounded constraints and the consonants of Setswana. *Lingua* 121. 2120–2152.

Greenberg, Joseph H. 1966. Some universals of grammar with particular reference to the order of meaningful elements. In Joseph H. Greenberg (ed.), *Universals of language*, 2nd edn., 73–113. Cambridge, MA: The M.I.T. Press.

Greenberg, Joseph H. 1970. *The languages of Africa.* Bloomington: Indiana University.

Gregory, Michelle L. & Laura A. Michaelis. 2001. Topicalization and left-dislocation: A functional opposition revisited. *Journal of Pragmatics* 33. 1665–1706.

Gussenhoven, Carlos. 2004. *The phonology of tone and intonation.* Cambridge: Cambridge University Press.

Hagège, Claude. 2010. *Adpositions*. Oxford: Oxford University Press.

Haiman, John & Sandra A. Thompson (eds.). 1988. *Clause combining in grammar and discourse*. Amsterdam: John Benjamins.

Hale, Kenneth L, Mary Laughren & Jane Simpson. 1995. Warlpiri syntax. In Joachim Jacobs, Arnim von Stechow, Wolfgang Sternefeld & Theo Vennemann (eds.), *Syntax: Ein internationales Handbuch zeitgenssischer Forschung* (An International Handbook of Contemporary Research), 1430–1451. Berlin: De Gruyter.

Hall, Nancy. 2011. Vowel epenthesis. In Marc van Oostendorp, Colin J. Ewen, Elizabeth Hume, and Keren Rice (eds.), *The Blackwell companion to phonology*, vol. 3, 1576–1596. Chichester, West Sussex, United Kingdom: Blackwell Publishing.

Haspelmath, Martin. 2001. Word classes and parts of speech. In P. B. Baltes & N. J. Smelser (eds.), *International encyclopedia of the social and behavioural sciences,* 16538–16545. Amsterdam: Pergamon.

Haspelmath, Martin. 2002. *Understanding morphology*. London & New York: Arnold & Oxford University Press.

Haspelmath, Martin. 2004. Explaining the Ditransitive Person-Role Constraint: A usage-based approach. *Constructions* 2.

Haspelmath, Martin. 2007a. Ditransitive alignment splits and inverse alignment. *Functions of Language* 14. 79–102.

Haspelmath, Martin. 2007b. Coordination. In Timothy Shopen (ed.), *Language typology and syntactic description,* vol. 2, 1–51. Cambridge: Cambridge University Press.

Haspelmath, Martin. 2013. Argument indexing: A conceptual framework for the syntactic status of bound person forms. In Dik Bakker & Martin Haspelmath (eds.), *Languages across boundaries: Studies in memory of Anna Siewierska*, 197–226. Berlin: De Gruyter.

Haspelmath, Martin. 2015. Ditransitive constructions. *Annual Review of Linguistics* 1. 19–41. Available online: http://www.annualreviews.org/doi/pdf/10.1146/annurev-linguist-030514-125204. Accessed 19 May 2015.

Haspelmath, Martin. Forthcoming. The serial verb construction: Comparative concept and cross-linguistic generalizations. January 2015 draft. Available online: http://www.academia.edu/10652772/The_serial_verb_construction_Comparative_concept_and_cross-linguistic_generalizations. Accessed 2 April 2015.

Haviland, John B. 1979. Guugu Yimidhirr. In R. M. W. Dixon and Barry J. Blake (eds.), *Handbook of Australian languages*, vol. 1, 27–180. Amsterdam: John Benjamins.

Heine, Bernd. 1976. *A typology of African languages based on the order of meaningful elements* (Kölner Beiträge zur Afrikanistik 4). Berlin: Dietrich Reimer Verlag.

Heine, Bernd. 1990. The dative in Ik and Kanuri. In William Croft, Keith Denning & Suzanne Kemmer (eds.), *Studies in typology and diachrony: Papers presented to Joseph H. Greenberg on his 75th birthday* (Typological Studies in Language 20), 129–149. Amsterdam: John Benjamins.

Heine, Bernd. 1997. *Possession: Cognitive sources, forces, and grammaticalization* (Cambridge Studies in Linguistics 83). Cambridge: Cambridge University Press.

Higgins, Roger Francis. 1979. *The pseudo-cleft construction in English*. New York: Garland.

Hoeksema, Jack. 2011. Negative and positive polarity items: An investigation of the interplay of lexical meaning and global conditions on expression. In Laurence R. Horn (ed.), *The expression of negation*, 187–224. Berlin: De Gruyter.

Hombert, Jean-Marie. 1974. Universals of downdrift: Their phonetic basis and significance for a theory of tone. In *Papers from the fifth conference on African linguistics, Stanford University, March 29-31, 1974*, 169–183.

Hopper, Paul J. & Sandra A. Thompson. 1980. Transitivity in grammar and discourse. *Language* 56. 251–299.

Horie, Kaoru & Bernard Comrie. 2000. Introduction. In Kaoru Horie (ed.), *Complementation* (Converging Evidence in Language and Communicational Research 1), 1–10. Amsterdam: John Benjamins.

Horn, Laurence R. 2001[1989]. *A natural history of negation*. Stanford: CSLI [Center for the Study of Language and Information] Publications.

Hulst, Harry van der. 2011. Pitch accent systems. In Marc van Oostendorp, Colin J. Ewen, Elizabeth Hume & Keren Rice (eds.), *The Blackwell companion to phonology*, vol. 2, 1003–1026. Chichester, West Sussex, United Kingdom: Blackwell Publishing.

Hulst, Harry van der and Jeroen van de Weijer. 1995. Vowel harmony. In John H. Goldsmith (ed.), *The handbook of phonological theory*, 495–534. Oxford: Blackwell.

Hutchison, John P. 1981. *The Kanuri language: A reference grammar*. Madison: University of Wisconsin.

Hutchison, John P. 1986. Major constituent case marking in Kanuri. In Gerrit J. Dimmendaal (ed.), *Current approaches to African linguistics* (Publications in African Languages and Linguistics 6), vol. 3, 191–208. Dordrecht, Holland: Foris Publications.

Hyman, Larry M. 2001. The limits of phonetic determinism in phonology: *NC revisited. In Elizabeth Hume & Keith Johnson (eds.), *The role of speech perception in phonology*, 141–185. New York: Academic Press.

Hyman, Larry M. 2006. Word-prosodic typology. *Phonology* 23. 225–257.

Hyman, Larry M. 2009. How (not) to do phonological typology: The case of pitch-accent. *Language Sciences* 31. 213–238.

Hyman, Larry M. 2011. *The representation of tone*. In Marc van Oostendorp, Colin J. Ewen, Elizabeth Hume & Keren Rice (eds.), *The Blackwell companion to phonology*, vol. 2, 1078–1102. Chichester, West Sussex, United Kingdom: Blackwell Publishing.

Iggesen, Oliver A. 2011. Asymmetry in case marking: Nominal vs. pronominal systems. In Andrej Malchukov & Andrew Spencer (eds.), *The Oxford handbook of case*, 246–257. Oxford: Oxford University Press.

Jakobi, Angelika. 2006. Focus in an active/agentive alignment system – the case of Beria (Saharan). *Zentrum für Allgemeine Sprachwissenschaft: Papers in Linguistics* 46. 129–142.

Jakobi, Angelika. 2011. Split-S in Beria. In Doris Löhr, Eva Rothmaler & Georg Ziegelmeyer (eds.), *Kanuri, Borno and beyond: Current studies on the Lake Chad region*, 91–116. Köln: Rüdiger Köppe.

Jakobi, Angelika & Joachim Crass. 2004. *Grammaire du beria (langue saharienne)*. Köln: Rüdiger Köppe.

Jarrett, Kevin A. 1981. The development of the Kanuri aspect system within Western Saharan. In Thilo C. Schadebert & M. Lionel Bender (eds.), *Nilo-Saharan: Proceedings of the first Nilo-Saharan linguistics colloquium (Leiden, September 8-10, 1980)*, 201–215. Dordrecht: Foris Publications.

Jarrett, Kevin A. 1988. Dialectes et alpabétisation dans les écoles (Kanuri du Niger). *Journal of West African Languages* 18. 105–124.

Jourdan, Paul Édouard Antoine Alfred. 1935. *Notes grammaticales et vocabulaire de la langue daza*. London: Kegan Paul, Trench, Trubner & Co., Ltd.

Kearns, Kate. 2000. *Semantics*. New York: St. Martin's Press.

Keenan, Edward L. 1985. Relative clauses. In Timothy Shopen (ed.), *Language typology and syntactic description*, vol. 2, 141–170. Cambridge: Cambridge University Press.

Keenan, Edward L. & Bernard Comrie. 1977. NP accessibility and universal grammar. *Linguistic Inquiry* 8. 63–100.

Kellenberger, Joshua. 2008. On classifying Beria verbs. *10th Nilo-Saharan Linguistic Colloquium*, Paris 2007.

Kim, Alan Hyun-Oak. 1988. Preverbal focusing and and type XXIII languages. In Michael Hammond, Edith A. Moravcsik & Jessica R. Wirth (eds.), *Studies in syntactic typology*, 147–169. Amsterdam: John Benjamins.

Kinkade, M. Dale. 1983. Salish evidence against the universality of "noun" and "verb". *Lingua* 60. 25–40.

Kittilä, Seppo, Katja Västi, & Jussi Ylikoski. 2011. Introduction to case, animacy and semantic roles. In Seppo Kittilä, Katja Västi & Jussi Ylikoski (eds.), *Case, animacy and semantic roles*, 1–26. Amsterdam: John Benjamins.

Koelle, Sigismund Wilhelm. 1854. *Grammar of the Bornu or Kanuri language*. London: Church Missionary Society.

König, Christa. 2008. *Case in Africa*. New York: Oxford University Press.

König, Christa. 2009. !Xun. In Gerrit J. Dimmendaal (ed.), *Coding participant marking: Construction types in twelve African languages* (Studies in Language Companion Series 110), 23–53. Amsterdam: John Benjamins.

König, Ekkehard & Peter Siemund. 2007. Speech act distinctions in grammar. In Timothy Shopen (ed.), *Language typology and syntactic description,* vol. 1, 276–324. Cambridge: Cambridge University Press.

Kroeger, Paul. 2004. *Analyzing syntax*. Cambridge: Cambridge University Press.

Kroeger, Paul. 2005. *Analyzing grammar*. Cambridge: Cambridge University Press.

Kroeger, Paul. 2014a. Information status and the meaning of *the*. Unpublished class notes.

Kroeger, Paul. 2014b. Sense and reference. Unpublished class notes.

Kroeger, Paul. 2014c. Information structure: Topic and focus. Unpublished class notes.

Kuteva, Tania & Bernard Comrie. 2005. The typology of relative clause formation in African languages. In F. K. Erhard Voeltz (ed.), *Studies in African linguistic typology* (Typological Studies in Language 64), 209–228. Amsterdam: John Benjamins.

Lambrecht, Knud. 1994. *Information structure and sentence form: Topic, focus, and the mental representations of discourse referents* (Cambridge Studies in Linguistics 71). Cambridge: Cambridge University Press.

Leben, William. 1973. Suprasegmental phonology. Cambridge, MA: Massachusetts Institute of Technology, PhD dissertation.

LeCoeur, Charles & Marguerite LeCoeur 1956. *Grammaire et textes téda-daza*. Memoires de l'IFAN 46. Dakar: Institut Français d'Afrique Noire.

Legate, Julie Anne. 2002. *Warlpiri: Theoretical implications*. Cambridge, MA: Massachusetts Institute of Technology, PhD dissertation.

Levin, Beth & Malka Rappaport Hovav. 2005. *Argument realization*. Cambridge: Cambridge University Press.

Lewis, M. Paul, Gary F. Simons & Charles D. Fennig (eds.). 2015a. Dazaga. *Ethnologue: Languages of the world*. 17th edn. Dallas: SIL International. https://www.ethnologue.com/language/dzg. Accessed 20 April 2015.

Lewis, M. Paul, Gary F. Simons & Charles D. Fennig (eds.). 2015b. Saharan. *Ethnologue: Languages of the world*. 17th edn. Dallas: SIL International. https://www.ethnologue.com/subgroups/saharan-0. Accessed 20 April 2015.

Lewis, M. Paul, Gary F. Simons & Charles D. Fennig (eds.). 2015c. Kanuri. *Ethnologue: Languages of the world*. 17th edn. Dallas: SIL International. https://www.ethnologue.com/subgroups/kanuri-0. Accessed 20 April 2015

Löhr, Doris. 1997. Kanuri orthographies from 1854 until present. In Norbert Cyffer & Thomas Geider (eds.), *Advances in Kanuri scholarship*, 77–113. Köln: Rüdiger Köppe.

Lukas, Johannes. 1937. *A study of the Kanuri language: Grammar and vocabulary*. London: Oxford University Press.

Lukas, Johannes. 1953. *Die Sprache der Tubu in der zentralen Sahara*. Berlin: Akademie Verlag.

Maddieson, Ian. 2013. Voicing and gaps in plosive systems. In Matthew S. Dryer & Martin Haspelmath (eds.), *The world atlas of language structures online*. Leipzig: Max Planck Institute for Evolutionary Anthropology. (Available online at http://wals.info/chapter/5. Accessed on 8 April 2015.)

Maha Abdu El-Dawi. 2010. *The morphosyntactic structure of the Zaghawa language in Sudan. Focus: The Wegi dialect*. Khartoum University, PhD dissertation.

Malchukov, Andrej L. 2013. Alignment preferences in basic and derived ditransitives. In Dik Bakker & Martin Haspelmath (eds.), *Languages across boundaries: Studies in memory of Anna Siewierska*, 263–289. Berlin: De Gruyter.

Malchukov, Andrej L., Martin Haspelmath & Bernard Comrie. Ditransitive constructions: a typological overview. 2010. In Andrej L. Malchukov, Martin Haspelmath & Bernard Comrie (eds.), *Studies in ditransitive constructions: A comparative handbook*, 1–64. Berlin: De Gruyter.

Malchukov, Andrej L. & Peter de Swart. 2011. Differential case marking and actancy variations. In Andrej L. Malchukov & Andrew Spencer (eds.), *The Oxford handbook of case*, 339–355. Oxford: Oxford University Press.

Matthews, P. H. 1974. *Morphology: An introduction to the theory of word-structure.* Cambridge: Cambridge University Press.

McCarthy, John J. 1986. OCP effects: Gemination and antigemination. *Linguistic Inquiry* 17. 207–263.

McGregor, William B. 1988. Mood and subordination in Kuniyanti. In Peter Austin (ed.), *Complex sentence constructions in Australian languages*, 37–68. Amsterdam: John Benjamins.

McGregor, William B. 1992. The semantics of ergative marking in Gooniyandi. *Linguistics* 30. 275–318.

McGregor, William B. 2009. Typology of ergativity. *Language and Linguistics Compass* 3. 480–508.

McGregor, William B. 2010. Optional ergative case marking systems in a typological-semiotic perspective. *Lingua* 120. 1610–1636.

McGregor, William B. 2011. *The Nyulnyul language of Dampier land, Western Australia: Volume 1: Grammar* (Pacific Linguistics 632)*.* Canberra: Pacific Linguistics.

McNally, Louise. 2011. Existential sentences. In Klaus von Heusinger, Claudia Maienborn & Paul Portner (eds.), *Semantics: An international handbook of natural language meaning*, vol. 2, 1829–1848. Berlin: De Gruyter.

Meakins, Felicity & Rachel Nordlinger. 2014. *A grammar of Bilinarra: An Australian aboriginal language of the northern territory* (Pacific Linguistics 640). Berlin: De Gruyter.

Megerdoomian, Karine. 2001. Event structure and complex predicates in Persian. *Canadian Journal of Linguistics/Revue canadienne de linguistique* 46. 97–125.

Merlan, Francesca. 1985. Split intransitivity: Functional oppositions in intransitive inflection. In Johanna Nichols & Anthony C. Woodbury (eds.), *Grammar inside and outside the clause*, 324–362. Cambridge: Cambridge University Press.

Mikkelsen, Line. 2011. Copular clauses. In Klaus von Heusinger, Claudia Maienborn & Paul Portner (eds.), *Semantics: An international handbook of natural language meaning*, vol. 2, 1805–1829. Berlin: De Gruyter.

Miller, Cynthia L. & Leoma G. Gilley. 2001. Evidence for ergativity in Shilluk. *Journal of African Languages and Linguistics* 22. 33–68.

Monahan, Philip J. 2003. In G. Garding & M. Tsujimura (eds.), *WCCFL [West Coast Conference on Formal Linguistics] 22 Proceedings*, 356–369. Somerville, MA: Cascadilla Press. Available online: http://individual.utoronto.ca/pmonahan/papers/Monahan_2003_WCCFL.pdf. Accessed 19 May 2015.

Murray, Robert W. & Theo Vennemann. 1983. Sound change and syllable structure in Germanic phonology. *Language* 59. 514–528.

Nachtigal, Gustav. 1879–1889. *Sahara und Sudan: Ergebnisse sechsjähriger Reisen in Afrika*. 3 vols. Berlin: Reimer, Hempel & Parey.

Nachtigal, Gustav. 1881. *Sahârâ und Sûdân*. Berlin: Weidmann.

Noonan, Michael. 2007. Complementation. In Timothy Shopen (ed.), *Language typology and syntactic description,* vol. 2, 52–150. Cambridge: Cambridge University Press.

Ohala, John. 1983. The origin of sound patterns in vocal tract constraints. In Peter F. MacNeilage (ed.), *The production of speech*, 189–216. New York: Springer-Verlag.

Ortman, Mark. 2000. *L'ortographe et la grammaire du tedaga*. Revised edn. Unpublished orthography statement.

Ortman, Mark. 2003. Teda verb classes and their morphology in light of verbal paradigms. Unpublished manuscript. N'Djaména, Chad: Association SIL.

Parker, Steve. 2011. Sonority. In Marc van Oostendorp, Colin J. Ewen, Elizabeth Hume & Keren Rice (eds.), *The Blackwell companion to phonology*, vol. 2, 1160–1184. Chichester, West Sussex, United Kingdom: Blackwell Publishing.

Parker, Steve. 2012. Sonority distance vs. sonority dispersion – a typological survey. In Steve Parker (ed.), *The sonority controversy*, 101–165. Berlin: De Gruyter.

Payne, John R. 1985. Negation. In Timothy Shopen (ed.), *Language typology and syntactic description,* vol. 1, 197–242. Cambridge: Cambridge University Press.

Payne, Thomas. 1997. *Describing morphosyntax: A guide for field linguists.* Cambridge: Cambridge University Press.

Peranteau, P. M., J. N. Levi & G. C. Phares (eds.). 1972. *The Chicago which hunt*. Chicago: Chicago Linguistic Society.

Petráček, Karel 1965. Die Phonetik, Phonologie und Morphologie der Berti (-Siga) Sprache in Dar Fur. *Archiv Orientalni* 33. 341–366.

Petráček, Karel 1966. Die Morphologie der Berti (-Siga) Sprache in Dar Fur. *Archiv Orientalni* 34. 295–319.

Petráček, Karel. 1987. Berti or Sagato-a (Saharan) vocabulary. *Afrika und Übersee* 70. 163–193.

Petráček, Karel. 1988. The BER-Group of Saharan languages. *Archiv Orientalni* 56. 129–136.

Polinsky, Maria & Eric Potsdam. 2002. Backward control: Evidence from Malagasy. *MIT Working Papers in Linguistics* 44. 257–272.

Potsdam, Eric. 2006. Backward object control in Malagasy: Against an empty category analysis. In Donald Baumer, David Montero & Michael Scanlon (eds.), *Proceedings of the 25th West Coast Conference on Formal Linguistics*, 328–336. Somerville, MA: Cascadilla Proceedings Project. Available online: http://www.lingref.com/cpp/wccfl/25/paper1465.pdf. Accessed 19 May 2015.

Portner, Paul & Barbara H. Partee (eds.). 2002. *Formal semantics: The essential readings*. Oxford: Blackwell Publishing.

Pustet, Regina. *Copulas: Universals in the categorization of the lexicon.* Oxford: Oxford University Press.

Rauh, Gisa. 2010. *Syntactic categories: Their identification and description in linguistic theories.* Oxford: Oxford University Press.

Rappaport Hovav, Malka & Beth Levin. 2008. The English dative alternation: The case for verb sensitivity. *Journal of Linguistics* 44. 129–167.

Reinisch, Leo. 1873. *Der einheitliche Ursprung der Sprachen der alten Welt*. Wien: Wilhelm Braumüller.

Riemsdijk, Henk van & Edwin Williams. 1986. *Introduction to the theory of grammar*. Cambridge, MA: The MIT Press.

Rose, Sharon & Rachel Walker. 2011. Harmony systems. In John Goldsmith, Jason Riggle & Alan Yu (eds.), *Handbook of phonological theory*, 2nd edn., 240–290. Oxford: Wiley-Blackwell.

Rothmaler, Eva. 2011. Can we speak of converbs in Kanuri? In Doris Löhr, Eva Rothmaler & Georg Ziegelmeyer (eds.), *Kanuri, Borno and beyond: Current studies on the Lake Chad region*, 117–136. Köln: Rüdiger Köppe.

Roy, Isabelle. 2013. *Nonverbal predication: Copular sentences at the syntax-semantics interface* (Oxford Studies in Theoretical Linguistics 45). Oxford: Oxford University Press.

Rude, Noel. 1983. Ergativity and the active-stative typology of Loma. *Studies in African Linguistics* 14. 265–283.

Saeed, John I. 2009. *Semantics*. 3rd edn. Chichester, West Sussex, UK: Wiley-Blackwell.

Sapir, Edward. 1917. Review of 'Het passieve karakter van het verbum transitivum of van het verbum actionis in talen van Noord-America' by C.C. Uhlenbeck. *International Journal of American Linguistics* 1. 82–86.

Schachter, Paul & Timothy Shopen. 2007. Parts-of-speech systems. In Timothy Shopen (ed.), *Language typology and syntactic description,* vol. 1, 1–60. Cambridge: Cambridge University Press.

Siewierska, Anna. 2004. *Person* (Cambridge Textbooks in Linguistics). Cambridge: Cambridge University Press.

Siewierska, Anna & Dik Bakker. 2007. Bound person forms in ditransitive clauses revisited. *Functions of Language* 14. 103–125.

Sole, Maria-Josep, Larry M. Hyman & Kemmonye C. Monaka. 2010. More on post-nasal devoicing: The case of Shekgalagari. *Journal of Phonetics* 38. 604–615.

Staden, Miriam van & Ger P. Reesink. 2008. Serial verb constructions in a linguistic area. In Gunter Senft (ed.), *Serial verb constructions in Austronesian and Papuan languages* (Pacific Linguistics 594), 17–54. Canberra: Pacific Linguistics.

Starwalt, Coleen Grace Anderson. 2008. The acoustic correlates of ATR harmony in seven- and nine-vowel African languages: A phonetic inquiry into phonological structure. Arlington, TX: University of Texas at Arlington, PhD dissertation. Available online: http://www.sil.org/system/files/reapdata/61/97/69/61976982571057249474967120179627518810/C_Starwalt_Dissertation.pdf

Stassen, Leon. 2000. AND-languages and WITH-languages. *Linguistic Typology* 4. 1–54.

Stassen, Leon. 2009. *Predicative possession*. Oxford: Oxford University Press.

Stewart, John M. 1965. The typology of the Twi tone system. *Bulletin of the Institute of African Studies* 1. 1–27.

Thompson, Sandra A., Robert E. Longacre & Shin Ja J. Hwang. 2007. Adverbial clauses. In Timothy Shopen (ed.), *Language typology and syntactic description,* vol. 2, 237–300. Cambridge: Cambridge University Press.

Trask, R. L. 1993. *A dictionary of grammatical terms in linguistics*. London: Routledge.

Tubiana, Joseph. 1963. Note sur la langue des zaghawa. *Travaux de XXVe congrès internationale des orientalistes*, 614–619. Moscow.

Tubiana, Marie-José. 2008. *Hommes sans voix*. Paris: Editions l'Harmattan.

Tucker, A. N. & M. A. Bryan. 1966. The Eastern Saharan languages. In A. N. Tucker & M. A. Bryan, *Linguistic analyses: The non-Bantu languages of North-Eastern Africa*, 168–192. Oxford: Oxford University Press.

Vicente, Luis. 2010. On the syntax of adversative coordination. *Natural Language & Linguistic Theory* 28. 381–415.

Walters, Josiah K. 2014. Relative clauses in Dazaga. *GIALens* 8.2 (http://www.gial.edu/documents/gialens/vol8-2/walters_dazaga.pdf).

Walters, Josiah K. Forthcoming. *Issues in the phonology of Dazaga.*

Walters, Kevin L. 2013. *Phonological sketch of Dazaga (Keshirda of Niger).* Unpublished manuscript.

Walters, Kevin & Inouss Hagar (eds.). 2005. *Lexique tubu (dazaga) - français avec glossaire français - tubu*. Niamey, Niger: SIL International.

Whaley, Lindsay. 2011. Syntactic typology. In Jae Jung Song (ed.), *The Oxford handbook of linguistic typology*, 465–486. Oxford: Oxford University Press.

Wolfe, Andrew Miller. 2001. Towards a generative phonology and morphology of the dialects of Beria. Cambridge, MA: Harvard University, BA thesis.

Wolfe, Andrew Miller & Tajeldin Abdalla Adam. 2015. *Optional ergativity and information structure in Beria*. Unpublished manuscript.

Wolff, H. Ekkehard. 1990. Tone and the historical development of the Proto-Saharan aorist and progressive in Tubu and Kanuri. *19th West African Languages Congress, Legon, Ghana.*

Wolff, H. Ekkehard. 1991. On Tubu tones. In M. Lionel Bender (ed.), *Proceedings of the 4th Nilo-Saharan linguistics colloquium, Bayreuth, August 2-4, 1989 (Nilo-Saharan: Linguistic Analyses and Documentation Vol. 7)*, 67–77. Hamburg: Helmut Buske Verlag.

Wolff, H. Ekkehard. 1992. Historical properties and dynamics of the verbal system in western Saharan (Kanuri, Tubu). *Afrika und Übersee* 75. 75–109.

Wolff, H. Ekkehard. 2011. On the origin and status of nasal vowels in 'Tubu'. In Doris Löhr, Eva Rothmaler & Georg Ziegelmeyer (eds.), *Kanuri, Borno and beyond: Current studies on the Lake Chad region*, 173–190. Köln: Rüdiger Köppe.

Wolff, H. Ekkehard & Soumana Hassana Alidou. 1989. Desegmentalisation and tone in Tubu: 'Definite' marking in the Daza dialect of Tasker. *Journal of West African Languages* 79. 67–73.

Wolff, H. Ekkehard & Doris Löhr. 2006. Encoding focus in Kanuri verbal morphology: Predication focus and the "Kanuri focus shift". In Ines Fiedler & Anne Schwarz (eds.), *Papers on information structure in African languages*, 185–209. Berlin: Zentrum für Allgemeine Sprachwissenschaft.

Yamamoto, Mutsumi. 1999. *Animacy and reference*. Amsterdam: John Benjamins.

Ziegelmeyer, Georg. 2009. Negation of non-indicative mood in Hausa, Fulfulde and Kanuri. In Norber Cyffer, Erwin Ebermann & Georg Ziegelmeyer (eds.), *Negation patterns in West African languages and beyond*, 7–20. Amsterdam: John Benjamins.

Ziegelmeyer, Georg. 2011. On argument focus in Kanuri. In Doris Löhr, Eva Rothmaler, & Georg Ziegelmeyer (eds.), *Kanuri, Borno and beyond: Current studies on the Lake Chad region*, 191–205. Köln: Rüdiger Köppe.

Zimmer, Karl. 1964. *Affixal negation in English and other languages: An investigation of restricted productivity* (Word Monograph 5). New York: Linguistic Circle of New York.

Zsiga, Elizabeth, Maria Gouskova & One Tlale. 2006. On the status of voiced stops in Tswana: Against *ND. In C. Davis, A. R. Deal & Y. Zabbal (eds.), *Proceedings of the 36th annual meeting of the North East Linguistic Society (NELS)*, 721–734. Amherst, MA: Graduate Linguistics Student Association.

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