

## A sketch of Ganja (Balant)

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### 1 Introduction

#### 1.1 The language and its speakers

Balant (*f-jǎa*) is spoken by approximately half a million speakers in Senegal and Guinea Bissau. Ganja (*f-gǎñjǎ*), spoken by approximately 100,000 speakers, is a Balant variety located in Senegal, in the southern part of the administrative region of Sédhiou (Balantacounda and Boudhié).<sup>1</sup> The Ganja are also known as Balanta Mané.

The Balant call themselves *bì-jǎa* (singular (*h*)à-jǎa). The term ‘Balant’ (Mandinka *bàlàntá*, etc.) is the name given to them by their neighbours. Popular etymology explains this designation as derived from Mandinka *bàlàntà*, the completive form of the verb *bàlàŋ* ‘oppose, resist’, which fits well with the stereotyped image of the Balant. It seems more reasonable, however, to consider ‘Balant’ as a distorted form of Balant *bìlàantè* ‘men’.

The status of Balant varieties as dialects of a single language or as distinct (although closely related) languages is unclear, but as already argued by Wilson (1961), Ganja at least differs enough from the other varieties to be considered a separate language. The specific characteristics of Ganja do not manifest themselves in noun inflection and gender, which seem to be rather uniform across Balant varieties, but the verbal system of Ganja is very different from that of Kentohe, the other Balant variety for which some documentation is available.

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<sup>1</sup> The *Ethnologue* evaluates the number of Ganja speakers at 82,800 for 2006, and the number of speakers of other Balant varieties at 369,000 for 2014.

## 1.2 Genetic affiliation

Traditionally, Balant is classified as one of the three dialect clusters that constitute the Bak group of languages, alongside Joola and Mankanya-Manjaku-Pepel.

## 1.3 Language contact

According to oral traditions, the territory where the Ganja now live is a former Ñun territory that was conquered by the Balant through war, and Ganja was the name originally used by the Balant to designate the Ñun (N'Diaye-Corréard 1970). On the history of the region, see Bühnen (1994).

The fact that the Ganja, in contrast to the other Balant, have family names also found among Ñun and other ethnic groups of Casamance (*Biyáay, Jàatá, Mânsâl, Sàajó, Mâanî*), can be viewed as a result of the interaction between Balant settlers and the other ethnic groups of the region (among which the Ñun figure prominently in Ganja oral history). However, the Ñun language has completely disappeared from Balantacounda and Boudhié, and I am aware of no obvious trace of a Ñun substratum that might have contributed to the differentiation between Ganja and the other Balant varieties.

The main contact language for the Ganja is Mandinka, and according to Hawthorne (2003), the Balant-Mandinka contact is longstanding. A tendency for young speakers to abandon Ganja in favor of Mandinka, at least in some Ganja villages, was noted by N'Diaye-Corréard (1970), and this tendency is being reinforced by the spreading of Islam, since the Balant language tends to be associated with the traditional Balant culture. Mandinka borrowings are pervasive in the lexicon of Ganja. Like the other languages of Senegal, Ganja is also undergoing some influence from Wolof and French.

## 1.5 Bibliographic information

The only reliable sources on particular aspects of the phonology and morphosyntax of Ganja are N'diaye-Corréard (1970), N'diaye-Corréard (1973), and Biaye (2012). The only comprehensive description of Ganja is Creissels and Biaye (2016), to which the reader is referred for more details on the phonology and morphosyntax of Ganja. Mansaly (2017), devoted to the study of Ganja proverbs, includes a grammatical sketch of Ganja.

As regards the other Balant varieties, the main sources on Kentohe grammar and lexicon are Wilson (1961), Doneux (1984a), and Doneux (1984b).

## 1.6 Dialectal variation

This sketch of Ganja is entirely based on Creissels and Biaye (2016), which describes the Ganja variety spoken in Manécounda (near Simbandi Balant). In the absence of any dialectal inquiry, it is impossible to know to what extent this description is representative of other Ganja varieties, but my impression (based on discussions with speakers) is that variation within Ganja is not very significant.

## 2 Phonology

### 2.1 Consonants

#### 2.1.1 The inventory

The consonant phonemes of Balant Ganja are summarized in Table 1.

Table 1. Consonant phonemes of Balant Ganja

	lab.	interd.	alveol.		palat.	vel.	lab. vel.	glott.
			voiced	voiceless				
plosives	b		d	t	j	g	gb	
prenasalized plosives	mb		nd	nt	ɲj	ŋg	ŋgb	
fricatives	f	θ	s					h
prenasalized fricatives	mf	nθ	ns					
nasals	m		n		ɲ	ŋ		
lateral			l					
vibrant			r					
approximants					y		w	

The following consonants are characterized by a particular behavior:

- *b* and *g* immediately followed by a nasal or by a prenasalized obstruent are converted into *m* and *ŋ* respectively;

- *h* has a marked tendency to be elided before unrounded vowels, and to be converted into *w* before rounded vowels;
- when immediately followed by another consonant, *s* in coda position is converted into *h*, but this *h* tends to be replaced by a copy of the following consonant.

### 2.1.2 The voiced vs. voiceless distinction

The voiced vs. voiceless distinction is relevant for alveolar plosives only. Phonetically, each of the other obstruents has a (more or less) voiced and a (more or less) voiceless allophone, but the transcription used in this chapter ignores this variation: the plosives are represented by the letters indicating realizations that are in principle voiced, and the fricatives by the letters indicating realizations that are in principle voiceless. The justification for this convention is that the voiced allophone has a wider distribution for plosives than for fricatives; in particular, in word-initial position immediately followed by a vowel, plosives are represented by the voiced allophone, and fricatives by the voiceless one.

### 2.1.3. Prenasalization and the underspecified nasal N

The fact that many nouns have prenasalized initials without any possibility of isolating the nasal element morphologically is consistent with the recognition of prenasalized consonants as phonemes, since in general, initial consonant clusters not interrupted by a morphological boundary are not possible in Ganja. However, there are also many nouns for which prenasalization can be analyzed as the outcome of a morphological process, and in the verbal system, prenasalization is never lexical and regularly marks the incompletive aspect. Such facts can be accounted for by positing an abstract phoneme (or morphophoneme) *N*, defined as a nasal not specified for its place of articulation, whose manifestations can be described as follows:

- immediately followed by an obstruent other than *h*, *N* is realized as a prenasalization;
- ‘*N* + nasal’ is realized as a strong/long nasal;
- *N* followed by *l* or *r* loses its nasal feature, resulting in the strong/long realizations *ll* and *rr* respectively;
- *N* followed by *y*, *w*, or *h* surfaces as *ŋ*.

## 2.2 Vowels

### 2.2.1 The inventory

Ganja has the following inventory of vowels:

Table 2. Ganja vowel inventory

	short		long	
	front	back	front	back
close +ATR	i	u	i:	u:
close –ATR	ɪ	ʊ	ɪ:	ʊ:
mid +ATR	e	o	e:	o:
mid –ATR	ɛ	ɔ	ɛ:	ɔ:
open	a		a:	

No data is available regarding the precise phonetic nature of the  $\pm$ ATR contrast. This term must consequently be understood just as a phonological label conventionally used for a contrast involved in a particular type of vowel harmony.

Long vowels are transcribed by double letters. Nasality is not a relevant feature of vowels, but the nasalization of vowels immediately following a nasal consonant is perceivable.

### 2.2.2 Vowel harmony

Vowel harmony in Ganja can be described by dividing the vowels other than *a* (whose particular behavior will be described later) into two subsets. +ATR is the marked value of the  $\pm$ ATR feature, i.e. the only one specified in underlying representations, and –ATR is the default value taken by the vowels that are not specified as +ATR, after the rules that spread the +ATR value have operated. In words that include a +ATR vowel and do not include any *a*, +ATR spreads to the whole word and may spread further to clitics.

The vowels of most affixes are underlyingly –ATR, which may suggest another analysis, according to which affixes would copy the  $\pm$ ATR feature from stems, but some affixes include a +ATR vowel that imposes the +ATR value to the vowels of the stem to which they attach:

*rɛf* ‘fan (V)’ + *-ti* (instrument nominalization) → *rɛf-tí* ‘fan (N)’

As regards the particular behavior of *a*, words like *sùmàaré* ‘crane’ and *gì-làdí* ‘neck’ (where an underlyingly –ATR prefix surfaces as +ATR *gì-*) suggest that *a* blocks the rightward spreading of the +ATR value but is transparent to its leftward spreading. However, the rule is a bit more complex, since the transparency of *a* to the leftward spreading of +ATR requires the absence of a morphological boundary between *a* and the vowel from which +ATR spreads.

In addition to ATR harmony, some affixes and clitics containing close vowels are affected by roundedness harmony, which is however always optional. For example, *bì-fùlá* ‘girls’ (where *bì-* is the +ATR variant of the plural prefix *bì-*) can optionally be realized as *bù-fùlá*, and the two realizations vary freely in all contexts.

### 2.3 Syllable structure

In Ganja, the canonical syllable structure is  $C_1V(C_2)$ , with a single consonant in onset as well as coda position. Apart from prefixes consisting of a vowel (for example the 2<sup>nd</sup> person singular prefix *ó-*), empty onsets that do not result from the elision of an initial *h* are exceptional.

An interesting particularity of Ganja is that prefixation is responsible for the existence of initial consonant clusters that contradict the regularities observed in words containing no prefix. Ganja has three nominal prefixes consisting of a consonant only (*b-*, *f-*, and *g-*), and no epenthetic vowel is inserted between them and the initial consonants of noun stems, which means that, in principle, consonant clusters with *b*, *f*, or *g* as their first element and any consonant as their second element can occur at the beginning of words containing the prefixes in question. However, the following transformations can be observed:

*f+h* → *f*:

*b+h* → *p*:

*g+h* → *k*:

*f+b* → *p*:

*g+j* → *c*:

*b+gb* → *kp*:

*g+gb* → *kp*:

Note also that *bb* and *gg* sequences resulting from prefixation are realized as [p:] and [k:] respectively. Since *b* and *g* in word-initial position are represented by their voiced allophone, this means that, although non-phonemic, the voiced vs. voiceless distinction contributes to the contrast between *bV* and *b-bV* (as in *b-bànáanà* [p:àná:nà] ‘banana-tree’ vs.  $\emptyset$ -*bànáanà* [bàná:nà] ‘banana-trees’) or *gV* and *g-gV*.

## 2.4 Tone

As evidenced by minimal pairs such as *sáda* ‘sacrifice’ vs. *sàda* ‘calf’ or *àfulá* ‘girl’ vs. *àfulà* ‘Fula’, Ganja has a tone system relying on a H vs. L contrast. There are also a rising and a falling tone, analyzable as LH and HL sequences associated to single syllables, and a downstep, analyzable as manifesting the presence of a floating L tone. The floating L tones may result from phonological processes, as illustrated in (1b), or may be part of the underlying form of some morphemes (for example the nominal prefixes *b-* and *g-*).

As regards the functional load of tone, minimal pairs are not very numerous in the lexicon, and all verbs have the same lexical tone, but tone plays an important role in verbal morphology.

Some variation can be observed in the tonal realizations, due to the following rules:

$$B\boxed{H}H \rightarrow B\boxed{B}H$$

$$H\boxed{B}B \rightarrow H\boxed{H}B$$

$$H\boxed{B}H \rightarrow H\boxed{H}H$$

however, as illustrated in (1), these rules are never obligatory:

(1a) *í-ím-mà-dò*-sɔɔg ~ *í-ím-mà-dò*-sɔɔg  
 si:1SG-NEG-oi:clHA-INEV-call      si:1SG-NEG-oi:clHA-INEV-call  
 ‘I was not obliged to call him.’

(1b) *À-fulá*  $\boxed{mà}$  *bóɔñj-ò*. ~ *À-fulá*  $\boxed{má}$  *’bóɔñj-ò*.  
 SG-girl(HA)<sup>2</sup> DEF be\_beautiful-FV      SG-girl(HA) DEF be\_beautiful-FV  
 ‘The girl is beautiful.’

<sup>2</sup> Note that, in the glosses of noun forms, the prefixes are glossed as ‘SG’ or ‘PL’, whereas the agreement pattern triggered by the noun form is indicated between parentheses after the lexical gloss

## 2.5 Liaison

A striking characteristic of connected speech in Ganja is the pervasiveness of sandhi phenomena at the junction between successive words (liaison). The precise conditions in which liaison can/must operate have not been established, but when it operates:

- if the second word begins with a consonant, the first word invariably ends with a close vowel, whatever its ending in the absence of liaison;
- if the second word begins with a vowel, a long vowel is observed at the junction between the two words, even if the first word has no final vowel.

(2a) *b-dĩm* + *`b-súm-è* → *bdì:n[ɨ]psúmè*  
 SG-milk(B)      clB-be\_good-RESULT  
 ‘good milk’

(2b) *f-ndélà* + *ʃ-jóólè* → *vndél[ɨ]fcó:lè*  
 SG-wind(F)      clF-cool  
 ‘cool wind’

(2c) *Ø-mfól* + *ù-lóodè* → *mvól[ɨ]ló:dè*  
 SG-frog(U/HA)<sup>3</sup>      clU-dead  
 ‘dead frog’

(2d) *Ø-bítí* + *ò-môon* → *bít[ɨ]mô:n*  
 SG-dog(U/HA)      clU-black  
 ‘black dog’

## 3 Canonical predication and major lexical categories

### 3.1 Canonical verbal predication

The structure of canonical verbal predication in Ganja can be summarized as SVOX (S = subject, V = verb, O = object, X = oblique). The subject and the object share the absence of

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<sup>3</sup> The notation U/HA signal nouns triggering a hybrid agreement patterns (see § 5.2.1).

any flagging and the ability to be indexed by bound forms attached to the verb (indexes). However, they are indexed by distinct sets of indexes occupying distinct positions within the verb form (see §6.2). As evidenced by vowel harmony and other phonological processes that they undergo, subject and object indexes are morphologically bound to the verb, but they are not obligatory formatives of the verb form: syntactically, as illustrated in (3) and (4), they are in complementary distribution with NPs occupying the syntactic slots S and O. In other words, they are not agreement markers.

(3a) *F-lìmbírè f-jóólè mà gób-ù.*  
 SG-citrus(F) clF-sweet DEF fall-FV  
 ‘The orange fell down.’

(3b) *F-gób-ù.*  
 si:clF- fall-FV  
 ‘It fell down (the orange).’

(4a) *Mbáǵì-jéd f-lìmbírè f-jóólè mà!*  
 PROH-take SG-citrus(F) clF-sweet DEF  
 ‘Don’t take the orange!’

(4b) *Mbáǵì-f-jéd!*  
 PROH-oi:clF-take  
 ‘Don’t take it (the orange)!’

Obliques differ from subjects and objects in their inability to be represented by indexes attached to the verb. They are usually encoded as prepositional phrases. Among prepositions, the locative preposition *à* and the comitative-instrumental preposition *ɲǵì* are particularly frequent. Other simplex prepositions include *bíthi* ‘toward’, *díinà* ‘more/rather than’ (borrowed from Mandinka), *fǒ ~ fǒndí* ‘except’ (borrowed from Mandinka), *gàntígì* ‘without’, *gìndìmbá* ‘toward’, *hân* ‘until’, *ñǵǵal* ‘like’, and *títí* ‘since’.

Ganja has double object constructions in which the two objects can be represented by the same object indexes as the single object of monotransitive constructions; these are the only possible constructions with verbs such as ‘give’ or ‘sell’. In double object constructions, as illustrated in (5), the relative order of the object NPs is free, but if both objects are indexed,

the index representing the recipient or beneficiary obligatorily precedes the index representing the theme.

(5a) *D-gáandâ b-ògó mà Sáajó.*  
 st: 1SG-sell SG-millet(B) DEF Sadio  
 ‘I sold the millet to Sadio.’

(5b) *D-gáandâ Sáajó b-ògó mà.*  
 st: 1SG-sell Sadio SG-millet(B) DEF  
 ‘I sold the millet to Sadio’

(5c) *D-gáandâ-bí Sáajó.*  
 st: 1SG-sell-oi:clB Sadio  
 ‘I sold it to Sadio.’

(5d) *D-gáandâ-mà b-ògó mà.*  
 st: 1SG-sell-oi:clHA SG-millet(B) DEF  
 ‘I sold the millet to him.’

(5e) *D-gáandâ-mà-bí.* vs. *\*D-gáandâ-bí-mà.*  
 st: 1SG-sell-oi:clHA-oi:clB  
 ‘I sold it to him.’

Tritransitive constructions are not attested with simplex verbs, but may result from valency increasing operations (see §7.3.2).

### 3.2 Nouns and verbs

Nouns are characterized by their ability to head noun phrases occupying the S or O slot in canonical verbal predication. The minimal form of common nouns consists of a stem and an obligatory prefix. For most nouns, the obligatory prefix has two possible values expressing the singular vs. plural contrast, as for example *f-bàagé* ‘hat’ pl. *g-bàagé*. Nouns occupy syntactic positions in which they act as agreement controllers. There is a close relationship between the morphological characterization of nouns and their division into genders, but a

straightforward one-to-one correspondence between genders and pairs of prefixes is found in inanimate genders only (see §5.2).

Verbal lexemes are characterized by an inflectional system generating forms able to occupy the V slot in the canonical verbal predication (see §6.1).

An important contrast between nominal and verbal lexemes is that tone is a lexical property of nominal lexemes, whereas verbal lexemes do not have inherent tone (or alternatively, can be analyzed as having a uniform basic tonal contour HL), the tone of verb forms being entirely determined by grammatical rules.

#### 4 Constructional morphology

Two general characteristics of Ganja constructional morphology are that (a) compounding is not attested as a regular word-formation process, and (b) the functions typically fulfilled by constructional morphology in the languages of the world may be fulfilled by changing the inflectional type (and for nouns, the gender) of lexemes without modifying their stem.

##### 4.1 The formation of nominal lexemes

In Ganja, there is no derivational affix that can be used to form nouns from other nouns, but alternation in gender and inflectional type assume functions commonly fulfilled by N-to-N derivation in the languages of the world (see §5.2.3),

The derivation of nouns from verbs involves minimally the assignment of an inflectional type and a gender to the derived noun, and the assignment of a tone pattern, since verbal lexemes do not have inherent tone. It may also involve prenasalization of the initial (analyzable as the prefixation of *N-*) and the addition of derivational suffixes.

As illustrated in (6), there is no uniformity in the formation of event nouns, which in particular may involve different prefixes, in an apparently unpredictable way.

(6a) *gì-bàab-á* < *baab* ‘approach’

*gì-ηgúól* < *gúól* ‘empty’

*gì-ndòf-í* < *dòf* ‘raise’

(6b) *g-béenθ-è* < *béenθ* ‘sharpen’

*g-dóωη* < *dóωη* ‘follow’

(6c) *b-băay* < *baay* ‘play’

In Ganja, manner and result nouns derived from verbs are often distinct from the corresponding event nouns. Most of the time (with some exceptions), their stem results from the mere adjunction of a H tone to the verbal lexeme, and they take the prefix *b-* (as for example *b-fɔ̃t* ‘way of walking’ < *fɔ̃t* ‘walk’).

The other types of deverbal nouns are agent nouns (which, as illustrated in (7), all belong to gender HA–BI (the human gender) and take the prefixes *à-* / *bì-*, but show no uniformity in other aspects of their formation, i.e. in tonal alternations or addition of affixes), instrument nouns (which, as illustrated in (8), are formed by suffixing *-i* or *-tí* to the L-toned verbal lexeme and may be assigned to inflectional types *f-* / *g-* or *gì-* /  $\emptyset$ -), and place nouns (which, as illustrated in (9), are assigned to inflectional type *gì-* /  $\emptyset$ -, but show no uniformity in other aspects of their formation).

(7)	<i>à-ríb</i>	pl. <i>bì-ríb</i>	‘singer’	< <i>ríb</i>	‘sing’
	<i>à-yêem</i>	pl. <i>bì-yêem</i>	‘thief’	< <i>yêem</i>	‘steal’
	<i>à-ndàant-í</i>	pl. <i>bì-ndàant-í</i>	‘wrestler’	< <i>daanta</i>	‘wrestle’
	<i>à-ndét-ì</i>	pl. <i>bì-ndét-ì</i>	‘runner’	< <i>det</i>	‘run’
	<i>à-nsòg-té</i>	pl. <i>bì-nsòg-té</i>	‘tailor’	< <i>sog</i>	‘sew’

(8)	<i>f-ròt-tí</i>	pl. <i>g-ròt-tí</i>	‘object used to beat’	< <i>rɔs</i>	‘beat’
	<i>gì-liŋ-tí</i>	pl. $\emptyset$ - <i>liŋ-tí</i>	‘object used to cover’	< <i>liŋ</i>	‘cover’
	<i>f-wòs-í</i>	pl. <i>g-wòs-í</i>	‘object used to clean’	< <i>wɔsa</i>	‘clean’

(9)	<i>gì-dáantá-lè</i>	pl. $\emptyset$ - <i>dáantá-lè</i>	‘arena’	< <i>daanta</i>	‘wrestle’
	<i>gì-fáad-ántè</i>	pl. $\emptyset$ - <i>fáad-ántè</i>	‘forge (N)’	< <i>faad</i>	‘forge (V)’

#### 4.2 The formation of verbal lexemes

The formation of verbs from nouns is very rare. There are a few verbs, such as *buuñat* ‘treat with respect and honor’, analyzable as derived from the corresponding noun *bùuñâ* ‘reward’, but interestingly, such N/V pairs have been borrowed from Mandinka, and the *-t* derivational suffix that can be recognized in a strictly synchronic analysis of Ganja results from the reanalysis of an inflectional suffix of Mandinka verbs (*-tá* ‘completive’).

Iterative verbs can be formed by suffixation or reduplication, and an intriguing aspect of Ganja word formation is that exactly the same morphological operations are available to derive causative verbs: *sib-ir* is the iterative form of *sib* ‘cut’, whereas *gbit-ir* is the causative form of *gbit* ‘be contiguous’; similarly, *θiθ-θiir* is the iterative form of *θiir* ‘write’, whereas *bab-baay* is the causative form of *baay* ‘play’.

The other suffixes used productively to derive verbs from verbs are as follows:

- the dedicated causative suffix *-Vt* (as in *dvul-ot* ‘make small’ < *dvul* ‘be/become small’),
- the applicative suffix *-Vd* (as in *yaaθ-ad* ‘work for someone’ < *yaaθ* ‘work’),
- the mediopassive suffix *-(V)l* (as in *wubt-ul.e* ‘open (intr.), be opened’ < *wubut* ‘open (tr.)’),
- the reciprocal suffixes *-nd, -d, -ind, -dind, -ndind* (as in *sum-nd.e* ‘greet each other’ < *sum* ‘greet’).<sup>4</sup>

There are also about ten transitive verbs with an antipassive form. Five of these antipassive forms involve a derivational suffix identical to the causative suffix *-Vt*, but they do not belong to the same inflectional type as causatives. The other five are morphologically identical to reciprocal or mediopassive forms.

### 4.3 The formation of adjectival lexemes

There are two productive suffixes deriving adjectives from verbs: *-è ~ -nè* derives adjectives from intransitive verbs (as in *súm-è* ‘good’ < *sum* ‘be/become good’, and *díym-è* ‘short’ < *dígm* ‘be/become short’), while *-áθ ~ -náθ* derives adjectives from transitive verbs (as in *lòt-áθ* ‘cooked’ < *lòt* ‘cook’).

## 5 The nominal system

### 5.1 NP structure

With the exception only of the negative determiner *ân* (which precedes the noun, as in *ân à-nîn* ‘no woman’), noun modifiers follow the noun they modify. Nouns not accompanied by

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<sup>4</sup> There does not seem to be any clear distributional pattern accounting for the choice between these reciprocal suffixes.

any determiner have two possible readings: specific indefinite, as in (10a), or generic, as in (10b).

(10a) *θòòbó*            *dîrs*    *ándòmbó*.

SG-mouse(U/HA)    pass    here

‘A mouse has been here.’

(10b) *À-jăa*            *ân-nâη*    *b-déεηná*.

SG-Balant(HA)    NEG-like    SG-disregard(B)

‘Balant people don’t like being despised.’

Some noun modifiers express gender-number agreement with their heads, some others don’t. The agreeing modifiers are characterized by an inflectional paradigm of seven classes, each of them corresponding to a subset of noun forms that are its potential controllers. The (types of) modifiers that do not express agreement are as follows:

- *ân* (negative determiner)
- the definite marker *mà*
- the anaphoric marker *dágát* ‘aforementioned’
- *bìsàmá* ‘so-and-so’
- genitival modifiers
- relative clauses
- some of the numerals

## 5.2 Classes, agreement patterns, genders, and inflectional types of nouns

Ganja has seven classes in the sense of cells in the inflectional paradigm of agreement targets (HA, BI, B, GI, F, U, and G), and seven noun prefixes involved in the expression of the singular vs. plural contrast (*à-*, *bì-*, *b-*, *gì-*, *f-*,  $\emptyset$ -, and *g-*), which at first sight might suggest a straightforward one-to-one correspondence between the inflectional affixes of nouns and their behavior as agreement controllers. However, as will be shown in what follows, the complexity of the relationship between the inflectional prefixes of nouns and the agreement patterns they govern cannot be captured within the frame of a description based on the

traditional notion of “class” conflating the inflectional affixes of nouns and the agreement affixes of agreement targets into a single category of “class markers”.

### 5.2.1 Classes and agreement patterns

In this chapter ‘class’ is used exclusively with reference to one of the seven cells that constitute the inflectional paradigm of adnominals, pronouns or indexes acting as targets in agreement mechanisms controlled by nouns. Some of the classes express agreement with singular forms only, some others with plural forms only, but class U corresponds to two sets of potential controllers, one of them consisting of singular forms, the other consisting of plural forms. The paradigms of classes are summarized in Table 3.<sup>5</sup>

Table 3. The class paradigms of Ganja

	1	2	3	4	5	6
HA	<i>à-</i>	<i>h-</i>	<i>hí</i>	<i>à-</i>	<i>-mà ~ -hí</i>	SG
BI	<i>bì-</i>	<i>big-<sup>6</sup></i>	<i>bá</i>	<i>bì-</i>	<i>-bá</i>	PL
B	<i>b-</i>	<i>b-</i>	<i>bí</i>	<i>b-</i>	<i>-bí</i>	SG
GI	<i>gì-</i>	<i>g-</i>	<i>gí</i>	<i>gì-</i>	<i>-gí</i>	SG
F	<i>f-</i>	<i>f-</i>	<i>fí</i>	<i>f-</i>	<i>-fí</i>	SG
U	<i>ò-</i>	<i>w-</i>	<i>wí</i>	<i>ò-</i>	<i>-wí</i>	SG or PL
G	<i>g-</i>	<i>g-</i>	<i>gí</i>	<i>g-</i>	<i>-gí</i>	PL

1: agreement prefix for adnominals whose stem begins with a consonant

2: agreement prefix for adnominals whose stem begins with a vowel

3: 3rd person pronoun

4: subject index

5: object index

6: number value

In the syntactic configurations involving agreement governed by nouns, most noun forms consistently trigger the choice of one of the seven classes listed above, whatever the

<sup>5</sup> In the case of phonological variation conditioned by the context, this chart gives only the allomorph analyzable as reflecting the underlying form most directly.

<sup>6</sup> Among the adnominals whose stem begins with a vowel, demonstratives show an irregularity in their class BI form, see §5.

agreement target. For example, *à-fùlá* ‘girl’ governs agreement pattern HA, *bì-fùlá* ‘girls’ governs agreement pattern BI, *f-tá* ‘stick’ governs agreement pattern F, etc. There is, however, a subset of noun forms that govern a hybrid agreement pattern mixing class U and class HA.

The hybrid agreement pattern U/HA characterizes the singular form of nouns referring to non-human animates, such as *θòvó* ‘mouse’. The prevailing tendency with such nouns is the selection of U agreement in noun-modifier agreement, whereas HA agreement is preferred in other syntactic configurations, but this is not a strict rule.

Table 4 summarizes the possible correspondences between the seven possible obligatory prefixes of noun forms and the agreement patterns they govern. This table makes apparent that *bì-* and *f-* are the only prefixes that uniquely determine the agreement pattern of the noun forms they mark.

Table 4. Noun prefixes and agreement patterns

	HA	U/HA	BI	B	GI	F	U	G
à-	+	+						
bì-			+					
b-	+			+				
gì-			+		+			
f-						+		
∅-	+	+					+	
g-			+					+

### 5.2.3 Genders and inflectional types of nouns

Genders are defined as sets of nominal lexemes that govern the same agreement patterns in the singular and in the plural. In other words, each gender is characterized by a particular singular-plural pairing of agreement patterns. The possible pairings of the six agreement patterns available for singular noun forms and the three agreement patterns available for plural noun forms give rise to eight genders. Two of them can be characterized semantically as the human gender (HA–BI) and the non-human animate gender (U/HA–BI). Inanimate nouns are divided between the remaining six genders.<sup>7</sup>

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<sup>7</sup> In the Ganja variety described by Mansaly (2017), a single agreement pattern corresponds to agreement patterns HA and U/HA, and consequently, the gender system consists of seven genders, with a single animate

Ganja has eleven inflectional types of nouns, each defined by a particular pairing of a singular prefix and a plural prefix. As can be seen from the following enumeration, two pairings of singular and plural prefixes can be found in more than one gender each:  $\emptyset$ - / *g* (U–G, HA–BI, and U/HA–BI) and *b*- / *g*- (B–G and HA–BI).

(a) the human gender HA–BI

In Ganja, human nouns uniformly govern HA agreement in the singular, and BI agreement in the plural, whatever their singular and plural prefixes. Gender HA–BI nouns divide into four inflectional types, among which type  $\grave{a}$ - / *b* $\grave{i}$ - is strongly predominant statistically.

$\grave{a}$ - / <i>b</i> $\grave{i}$ -	<i>\grave{a}</i> - <i>láantè</i>	pl. <i>b</i> $\grave{i}$ - <i>láantè</i>	‘man’
$\emptyset$ - / <i>b</i> $\grave{i}$ -	$\emptyset$ - <i>fàafá</i>	pl. <i>b</i> $\grave{i}$ - <i>fàafá</i>	‘father’
$\emptyset$ - / <i>g</i> -	$\emptyset$ - <i>mbùutá</i>	pl. <i>\eta</i> - <i>mbùutá</i>	‘child’
<i>b</i> - / <i>g</i> -	<i>b</i> - <i>bítì</i>	pl. <i>g</i> - <i>bítì</i>	‘younger sibling’

(b) the non-human animate gender U/HA–BI

In Ganja, non-human animate nouns uniformly govern U/HA agreement in the singular, and BI agreement in the plural, whatever their singular and plural prefixes. Gender U/HA–BI nouns divide into four inflectional types.

$\emptyset$ - / <i>g</i> -	$\emptyset$ - <i>dǎal</i>	pl. <i>g</i> - <i>dǎal</i>	‘cat’
$\emptyset$ - / <i>g</i> $\grave{i}$ -	$\emptyset$ - <i>\eta g\grave{o}b\acute{o}r</i>	pl. <i>g</i> $\grave{i}$ - <i>\eta g\grave{o}b\acute{o}r</i>	‘tortoise’
$\grave{a}$ - / <i>g</i> $\grave{i}$ -	$\grave{a}$ - <i>sálà</i>	pl. <i>g</i> $\grave{i}$ - <i>sálà</i>	‘fly’
$\grave{a}$ - / <i>g</i> -	$\grave{a}$ - <i>húu</i>	pl. <i>g</i> - <i>húu</i>	‘bee’

(c) the inanimate genders: B–U, GI–U, F–G, U–G, B–G, GI–G

Contrary to the situation observed in the human gender and in the non-human animate gender, each of the six inanimate genders groups together nouns belonging to the same inflectional type:

B–U	<i>b</i> - / $\emptyset$ -	<i>b</i> - <i>tá</i>	pl. $\emptyset$ - <i>tá</i>	‘tree’
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gender conflating two genders that are distinct in the variety on which the present sketch of Ganja grammar is based: the human gender and the non-human animate gender.

GI–U	<i>gì-</i> / <i>Ø-</i>	<i>gì-làdí</i>	pl. <i>Ø-làdí</i>	‘neck’
F–G	<i>f-</i> / <i>g-</i>	<i>f-bàagé</i>	pl. <i>g-bàagé</i>	‘hat’
U–G	<i>Ø-</i> / <i>g-</i>	<i>Ø-mbáñjì</i>	pl. <i>η-mbáñjì</i>	‘knife’
B–G	<i>b-</i> / <i>g-</i>	<i>b-hùwá</i>	pl. <i>g-hùwá</i>	‘hole’
GI–G	<i>gì-</i> / <i>g-</i>	<i>gì-ló</i>	pl. <i>g-ló</i>	‘ear’

Note that:

(a) Zero prefix and agreement pattern U characterize the singular form of nouns in gender U–G, and the plural form of nouns in genders B–U and GI–U.

(b) The prefix *gì-* is a plural prefix (associated with agreement pattern BI) for some nouns of gender U/HA–BI, but a singular prefix (associated with agreement pattern GI) in inanimate genders.

(c) Genders B–G and GI–G are statistically marginal.

### 5.2.3 Gender semantics

Due to space limitations, it is not possible to discuss the semantics of inanimate genders in detail here. In general, the relationship between genders and semantic types of nouns in Ganja does not differ significantly from that observed in other Atlantic languages (and more generally across Niger-Congo), except for the fact that none of the genders of Ganja shows a clear concentration of mass nouns or liquid nouns. For more details, see Creissels and Biaye (2016: 52–72).

### 5.2.4 Gender alternations

The following gender alternations are fully productive in Ganja:

- tree names belonging to gender B–U correspond to fruit names belonging to gender F–G (*m-máŋgò* ‘mango-tree’, pl. *Ø-máŋgò* / *f-máŋgò* ‘mango’, pl. *η-máŋgò*);
- ethnonyms belonging to gender HA–BI correspond to glossonyms characterizable as singularia tantum of gender F–G (*à-jǎa* ‘Balant’, pl. *bì-jǎa* / *f-jǎa* ‘the Balant language’);
- nominal lexemes referring to persons correspond to abstract quality nouns characterizable as singularia tantum of gender GI–U (*à-nîn* ‘woman’, pl. *bì-nîn* / *gì-nîn* ‘femininity’);

- lexemes referring to concrete entities correspond to terms expressing ‘a particular type of’ that can be characterizable as *singularia tantum* of gender B–G (*à-nîn* ‘woman’, pl. *bì-nîn / m-nîn* ‘kind of woman’).

There are other semantic relationships occasionally expressed by gender alternations, which must be viewed as more or less lexicalized, and are sometimes quite isolated in the lexicon (for example, *gì-làdí* ‘neck’ / *f-làdí* ‘voice’). In contrast to other Atlantic languages, Ganja has no productive gender alternation expressing diminutive or augmentative.

### 5.3 Adjectives

Noun modifiers expressing typically adjectival semantics are included in a wider category of adnominals that agree in gender and number with the noun they modify and show class prefixes whose underlying form is identical to that of the corresponding noun prefixes, with the exception of agreement pattern U, mostly triggered by noun forms whose prefix is  $\emptyset$ - (see the enumeration of genders and inflectional types of nouns in §5.2.2). The agreement of attributive adjectives is illustrated in (11) with the adjective *CL-ndâŋ* ‘big’.

- (11) *à-ndàantí*    *à-ndâŋ*    ‘big wrestler’  
*bì-ndàantí*    *bì-ndâŋ*    ‘big wrestlers’  
*gì-gbél*        *gì-ndâŋ*    ‘big spoon’  
 $\emptyset$ -*gbél*         $\emptyset$ -*ndâŋ*    ‘big spoons’  
*b-săay*        <sup>l</sup>*m-ndâŋ*    ‘big silk-cotton tree’  
 $\emptyset$ -*săay*         $\emptyset$ -*ndâŋ*    ‘big silk-cotton trees’  
*f-dùŋgí*        <sup>l</sup>*f-ndâŋ*    ‘big pot’  
*g-dùŋgí*        <sup>l</sup>*ŋ-ndâŋ*    ‘big pots’  
 $\emptyset$ -*bálá*         $\emptyset$ -*ndâŋ*    ‘big xylophone’  
*g-bálá*        <sup>l</sup>*ŋ-ndâŋ*    ‘big xylophones’

The properties expressed by adjectives can be predicated, either by combining the adjective with the verb *gi* ‘be’, or by means of the completive aspect of a cognate verb.

The interrogative corresponding to attributive adjectives is *-wíŋ* ‘which kind of?’, which expresses agreement like adjectives. Other adnominals agreeing with their heads like

adjectives include the numerals that have class inflection (see §5.4), and the quantity words *CL-déemè* ‘how much?, how many?’, *CL-mbúŋ* ‘much, many’, and *CL-ndùbá* ‘whole, all’.

#### 5.4 Numerals

The numbers from one to ten have a class prefix expressing agreement with a noun, with the exceptions of six and seven. When counting without reference to a particular noun, a form with no overt prefix (the ‘absolute’ form) is used:

<i>CL-hódà</i>	‘one’	abs. <i>bóɔdíbó</i>
~ <i>CL-wódà</i>		
<i>CL-sìbí</i>	‘two’	abs. <i>sìbí</i>
<i>CL-hàbí</i>	‘three’	abs. <i>yàbí</i>
~ <i>CL-yàbí</i>		
<i>CL-tàllá</i>	‘four’	abs. <i>tàllá</i>
<i>CL-jǐf</i> <sup>8</sup>	‘five’	abs. <i>jǐf</i>
<i>fáaj</i>	‘six’	
<i>fáajíŋgódà</i> <sup>9</sup>	‘seven’	
<i>CL-táhtàllà</i>	‘eight’	abs. <i>táhtàllà</i>
~ <i>CL-tántàllà</i>		~ <i>tántàllà</i>
~ <i>CL-táttàllà</i>		~ <i>táttàllà</i>
<i>CL-jíntàllá</i>	‘nine’	abs. <i>jíntàllá</i>
<i>CL-jímmîn</i>	‘ten’	abs. <i>jímmîn</i>

Multiples of ten from 20 to 90 are invariable:

<i>ñ-jímmín-sìbí</i>	‘twenty’
<i>ñ-jímmín-hàbí</i>	‘thirty’
<i>ñ-jímmín-tàllá</i>	‘forty’
<i>ñ-jímmín-jǐf</i>	‘fifty’
<i>ñ-jímmîn-fáaj</i>	‘sixty’
<i>ñ-jímmîn-fáajíŋgódà</i>	‘seventy’

<sup>8</sup> Cognate with *f-jif* ‘hand’.

<sup>9</sup> Contraction of *fáaj ŋgì -wódà* ‘six and one’.

*ñ-jímmîn-táhtállà* ‘eighty’

*ñ-jímmîn-jíntàllá* ‘ninety’

Hundreds and thousands are formed by means of *gèmé*, pl. *g-gèmé* ‘hundred’ and *wílí*, pl. *g-wílí* ‘thousand’ (probably borrowed from Mandinka), which behave grammatically as gender U–G nouns.

As illustrated in (12), the terms for more complex numbers reflect a decimal decomposition, in which *ɲgì* ‘with’ expresses addition.

(12a) *g-gèmé*      *g-sìbí*   *ɲgì*   *CL-jímmîn*   *ɲgì*   *fáaj*  
 PL-hundred(G)   clG-two   with   CL-ten          with   six  
 ‘216’

(12b) *g-wílí*              *g-tàllá*   *ɲgì*   *gèmé*   *ɲgì*   *CL-jímmîn*  
 PL-thousand(G)   clG-four   with   hundred   with   CL-ten  
 ‘4110’

The following types of words can be formed from numerals:

- iterative adverbs like *n-sìbí* ‘twice’ < *-sìbí* ‘two’;
- ordinal adjectives like *CL-n-sìbí-l* ‘second’ < *-sìbí* ‘two’;
- ordinal adverbs like *n-sìbí-l* ‘for the second time’ < *-sìbí* ‘two’.

### 5.5 Demonstratives and other determiners

Ganja demonstratives function as both determiners and pronouns. In determiner function, they follow the noun. The inventory of demonstratives is as follows:

<i>-ó</i>	close to the speaker, non-emphatic
<i>-ó-mbò</i>	close to the speaker, emphatic
<i>-é</i>	close to the addressee, non-emphatic
<i>-é-mbè</i>	close to the addressee, emphatic
<i>-é-lè</i>	far from the speech act participants, non-emphatic
<i>-é-mbé-lè</i>	far from the speech act participants, emphatic

<i>-é-léen</i>	very far from the speech act participants, non-emphatic
<i>-é-mbé-lèen</i>	very far from the speech act participants, emphatic
<i>-á</i>	invisible, non-emphatic
<i>-á-mbà</i>	invisible, emphatic

The class BI forms include two agreement markers, *b-* and *-gì ~ -gè ~ -gà*. Note that, in contrast with regular agreement markers, *gì* and *gè* have +ATR vowels.

<i>b-ó-gì</i>	close to the speaker, non-emphatic
<i>b-ó-mbó-gì</i>	close to the speaker, emphatic
<i>b-é-gè</i>	close to the addressee, non-emphatic
<i>b-é-mbé-gè</i>	close to the addressee, emphatic
<i>b-é-gé-lè</i>	far from the speech act participants, non-emphatic
<i>b-é-mbé-gé-lè</i>	far from the speech act participants, emphatic
<i>b-é-gé-lèen</i>	very far from the speech act participants, non-emphatic
<i>b-é-mbé-gé-léen</i>	very far from the speech act participants, emphatic
<i>b-á-gà</i>	invisible, non-emphatic
<i>b-á-mbá-gà</i>	invisible, emphatic

Other determiners include the definite marker *mà* (invariable), the negative determiner *ân* (invariable), *dágát* ‘aforementioned’ (invariable), *bisámá* ‘so-and-so’ (invariable), *CL-ólò* ‘a certain, another (known)’, *CL-óllà* ‘a certain, another (unknown)’, and the interrogative determiner *CL-ilà* ‘which one?’.

## 5.6 The distributive form of nouns

Ganja nouns have a distributive form, in which the noun is reduplicated, and *-óo* ‘every’ is suffixed to the first occurrence of the reduplicated noun, as in *gîlêer-óo gî-lêer* ‘every pot’. Note that the ATR feature of *-óo* spreads to the first occurrence of the reduplicated noun, but not to the second one.

## 5.7 Pronouns

The inventory of pronouns referring to speech act participants is as follows:

1 singular	<i>ñí</i>
2 singular	<i>hú</i>
1 plural	<i>báa</i>
inclusive	<i>bân</i>
2 plural	<i>bǎa</i>

With the only exception being the irregular form of class BI, third person pronouns consist of the stem *-í* and a class prefix:

class HA	<i>h-í</i>
class BI	<i>bá</i>
class B	<i>b-í</i>
class U	<i>w-í</i>
class GI	<i>g-í</i>
class F	<i>f-í</i>
class G	<i>g-í</i>

Ganja does not have distinct logophoric pronouns (or indexes).

### 5.8 Genitive and possessives

NPs in genitive function are introduced by a genitival linker that does not express class distinctions, but has two possible forms depending on the nature of the genitive NP: *ná* if the genitive NP is human singular, as in (13a), *ní* if it is either non-human or plural, as in (13b-d). The variant *ní* has a reduced form *N*.

(13a) *b-gó ná mbùutá mà*  
 SG-head(B) GEN SG.child(HA) DEF  
 ‘the head of the child’

(13b) *b-gó ní 'mfôl mà*  
 SG-head(B) GEN SG.frog(U/HA) DEF  
 ‘the head of the frog’

(13c) *f-rây ní 'b-tá mà*  
SG-branch(F) GEN SG-tree(B) DEF  
'the branch of the tree'

(13d) *bítí ní bì-dánà mà*  
SG-dog(U/HA) GEN PL-hunter(BI) DEF  
'the dog of the hunters'

Pronouns having the structure *CL-ìná* (in combination with singular human possessors) or *CL-ìní* (in combination with plural or non-human possessors) are used to represent a possessee whose identity can be retrieved from the context ('that/those of ...'):

class HA *h-ìná/í*  
class BI *bìg-ìná/í*  
class B *b-ìná/í*  
class U *w-ìná/í*  
class GI *g-ìná/í*  
class F *f-ìná/í*  
class G *g-ìná/í*

Ganja has a series of possessive enclitics for 1<sup>st</sup> person singular, 2<sup>nd</sup> person singular, 1<sup>st</sup> person plural (exclusive), 2<sup>nd</sup> person plural, and class HA (human singular):

1 singular *dâ*  
2 singular *dê*  
1 plural *ngbàŋ*  
2 plural *dím*  
class HA *ní / mà*

For class HA, *mà*, homonymous with the definite marker *mà* (which probably results from the grammaticalization of possessive *mà*) is used only with *yâa* 'mother', *fâa* 'father', and *măam* (grandfather, grandmother').

For the inclusive person and classes other than HA, Ganja uses the corresponding pronoun preceded by the genitival linker in a reduced form, as in *b-súm ŋ w-í* ‘its door’ (where the class U form of the 3rd person pronoun *w-í* stands for *hódi* ‘room’).

Ganja also has a paradigm of possessive pronouns consisting of a stem *im* or *ím*, a prefix referring to the possessee, and a suffix expressing the person, number, and class of the possessor:

1 singular CL-*ím-dâ*

2 singular CL-*ím-dè*

1 plural CL-*ĩŋ-gbàŋ*

inclusive CL-*ìm-bân*

2 plural CL-*ìm-dím*

class HA CL-*ím-dâ* or CL-*íllí*

class BI CL-*ìm-bá*

class B CL-*ìm-bí*

class U CL-*ĩŋ-wí*

class GI CL-*ĩŋ-gí*

class F CL-*ìm-fí*

class G CL-*ĩŋ-gí*

## 5.9 Relative clauses

The internal structure of relative clauses is described in §8.1. As noun modifiers, they follow all the other modifiers of their head. They can either be simply juxtaposed to their head and its other modifiers, as in (14a), or introduced by the linker *úhúrùn yàa*, as in (14b). This linker, whose literal meaning is ‘about which you know that’ (where the second person must be understood as non-specific), is used with relative clauses referring to individual-level (rather than stage-level) properties of the referent of their heads. See Creissels (2020) for a discussion of this construction in an areal perspective.

(14a) *b-tá*      *'b-díŋmè* *mà* *bâ-yós-nì*  
 SG-tree(B)    clB-short    DEF    1PL-cut-BGR  
 ‘the small tree that we cut’

(14b) *bójà*      *mà* *ú-húr-ùn*      *yàa* *m-méesè*      *ŋ*    *hǎj*    *mà* *ât-tálânθ*.  
 SG.town(U)    DEF    2SG-know-BGR    that    SG-installation(B)    GEN    place    DEF    NEG-be\_easy  
 ‘a town in which it is not easy to live’  
 lit. ‘a town you know that the living circumstances of that place are not easy’

In the ‘noun + relative clause’ construction, the noun cannot be deleted, but it can be represented by a relativizer consisting of a class prefix and a stem *-ìmâ* ‘the one(s) that ...’, if the speaker assumes that its identity can be retrieved from the context:

class HA    *h-ìmâ*  
 class BI    *bìg-ìmâ*  
 class B     *b-ìmâ*  
 class U     *w-ìmâ*  
 class GI    *g-ìmâ*  
 class F     *f-ìmâ*  
 class G     *g-ìmâ*

### 5.10 Noun phrase co-ordination

The comitative-instrumental preposition *ŋgì* ‘with’ is also used as a linker between two NPs sharing the same semantic role. As illustrated in (15), the position of the *ŋgì*-phrase ensures the distinction between the possible interpretations of this preposition.

(15a) *Sámabà* *ŋgì* *Fàató* *bín-tè*.  
 Samba    with    Fatou    come-VEN  
 ‘Samba and Fatou came.’

(15b) *Sámabà* *bín-tè*    *ŋgì* *Fàató*.  
 Samba    come-VEN    with    Fatou  
 ‘Samba came with Fatou.’

## 6 The verbal system

### 6.1 Verb inflection

In Ganja, vowel harmony is essential in the delimitation of words in general, but it is particularly important for the correct delimitation of verb forms, since it constitutes the main criterion for establishing the distinction between synthetic verb forms consisting of a verbal stem and one or more inflectional affixes, and analytical verb forms consisting of an auxiliary and a non-finite verb form.

#### 6.1.1 Tonal properties of verbal lexemes

The verbal lexemes of Ganja have no inherent tone, and the tone of verb stems is entirely determined by the grammatical nature of the verb form. In finite verb forms, each affix has a tone of its own, but the stem invariably shows an all-high contour followed by a low element which may associate to the final vowel (in the precise sense that will be given to this term in §6.1.3), manifest its presence by a downstep, or be deleted.

#### 6.1.2 Inflectional affixes

Ganja verb forms may include the following inflectional affixes:

- subject indexes and object indexes (see §6.2),
- the incompletive marker *N*,
- the hypothetical marker *àtí ~ àC'*,
- the negative markers *átì ~ àC* and *mbáǵì*,
- the sequential marker *nán*,
- the backgrounding marker *nì*,
- the venitive marker *tè*,
- the inevitability marker *dó*.

Among the inflectional affixes of verbs, the subject index, the incompletive marker, the hypothetical marker, and the negative markers invariably precede the stem, and the subject index invariably occurs in the leftmost position. The object indexes, the sequential marker, the backgrounding marker, the venitive marker, and the inevitability marker are variable-position affixes, which in some tenses precede the stem, but in others follow it; see §6.3.

Note that past is not an inflectional category of the verb in Ganja. There are two past markers, *gɛ́* (recent past) and *yɔ́* (remote past), but they cannot be analyzed as bound forms, since their vowels invariably remain –ATR and they are not necessarily adjacent to the verb.

### 6.1.3 Inflectional types

Ganja has three inflectional types of verbs (or voices) manifested in the variation of the final vowel of verb stems. This system must probably be analyzed as historically residual, since voice distinctions (tend to) blur when inflectional suffixes attach to the verb stem, or when a verb form with no suffix attached is followed by another word with no pause intervening, due to the pervasiveness of the sandhi phenomena at word junction (see §2.5). However, they are (still) clearly apparent, and consistently realized, when verb forms including no inflectional suffix occur in clause-final position.

The three inflectional types of verbs, arbitrarily labeled A, B, and C, are characterized by the following variations of the final vowel of the verb stems, in which  $-\emptyset$  for type A,  $-\varepsilon$  for type B, and  $-i$  for type C can be analyzed as the default value found in all but four verb forms:

	A	B	C
completive positive	$-\emptyset$	$-\emptyset$	$-i$
incompletive (positive and negative)	$-i$	$-\varepsilon$	$-i$
imperative positive	$-i$	$-\emptyset$	$-i$
others	$-\emptyset$	$-\varepsilon$	$-i$

On the relationship between inflectional types of verbs and valency, see §7.3.

## 6.2 Subject indexes and object indexes

The subject and object indexes are bound forms expressing the same distinctions as the free pronouns presented in §5.7. The subject indexes vary as follows:

	before simple consonantal onset	before prenasalized onset or vowel
1 singular	N-	í- ~ í-
2 singular	ó- ~ ú-	ó- ~ ú-

1 plural	<i>bâ-</i>	<i>bâ-</i>
inclusive	<i>bân- ~ bá- ... -nà</i>	<i>bân- ~ bá- ... -nà</i>
2 plural	<i>bà-</i>	<i>bà-</i>
class HA	<i>à-</i>	<i>à-</i>
class BI	<i>bì- ~ bì- (~ bò- ~ bù-)</i>	<i>bì- ~ bì- (~ bò- ~ bù-)</i>
class B	<i>b- ~ m-</i>	<i>bì- ~ bì-</i>
class U	<i>ò- ~ ù-</i>	<i>wì- ~ wì-</i>
class GI	<i>gì- ~ gí- (~ gò- ~ gù-)</i>	<i>gì- ~ gí- (~ gò- ~ gù-)</i>
class F	<i>f-</i>	<i>fì- ~ fì-</i>
class G	<i>g- ~ η-</i>	<i>gì- ~ gí-</i>

The object indexes vary as follows:

1 singular	<i>-ní ~ -ní</i>
2 singular	<i>-nà</i>
1 plural	<i>-báa</i>
inclusive	<i>-bân</i>
2 plural	<i>-bǎa</i>
class HA	<i>-mà ~ -hí ~ -hí</i>
class BI	<i>-bá</i>
class B	<i>-bí ~ -bí ~ -b</i>
class U	<i>-wí ~ -wí ~ -w</i>
class GI	<i>-gí ~ -gí ~ -g</i>
class F	<i>-fí ~ -fí ~ -f</i>
class G	<i>-gí ~ -gí ~ -g</i>

The only variation whose conditioning is not purely phonological is the *-mà* vs. *-hí ~ -hí* variation for the object index of class HA. As illustrated in (16), the *-hí ~ -hí* variant is used if and only if the object index of class HA occupies the second position in a sequence of two object indexes.

(16a) *À-wón-mà Sáajó.*  
 sI:clHA-give-oi:clHA Sadio  
 ‘He gave it (the sheep) to Sadio.’

(16b) *À-wôn-ní-hí.*  
 sI:clHA-give-oi:1SG-oi:clHA  
 ‘He gave it (the sheep) to me.’

### 6.3 TAM and negation markers

The following chart summarizes the contribution of TAM and negation markers to verb inflection. In the formulas given in the middle column, sI indicates the position of the subject index, and LEX the position of the stem; the suspension points indicate the position occupied by variable-position affixes.<sup>10</sup> The final vowel of the stem for each of the three inflectional types of verbs is given in the rightmost column.

completive positive	(sI) LEX ...	o/ɔ/ɪ
completive negative	(sI) <i>âC</i> ... LEX	Ø/ɛ/ɪ
subjunctive positive	(sI) LEX ...	Ø/ɛ/ɪ
subjunctive negative	(sI) <i>mbáǵì</i> ... LEX	Ø/ɛ/ɪ
imperative positive singular	LEX ...	ɪ/ɔ/ɪ
imperative positive plural	LEX <i>nà</i> ...	ɪ/ɔ/ɪ
imperative negative (singular) <sup>11</sup>	<i>mbáǵì</i> ... LEX	Ø/ɛ/ɪ
incompletive positive	(sI) <i>N</i> LEX ...	ɪ/ɛ/ɪ
incompletive negative	(sI) <i>átì N</i> LEX ...	ɪ/ɛ/ɪ
hypothetical	(sI) <i>âC'</i> ... LEX	Ø/ɛ/ɪ
sequential completive	(sI) LEX ... <i>nán</i> ...	Ø/ɛ/ɪ
sequential incompletive	(sI) ... <i>nán</i> ... LEX	Ø/ɛ/ɪ

For more details, see Creissels and Biaye (2016: 156–173).

<sup>10</sup> The relative ordering of variable-position affixes is oI-VEN-BGR-oI-INEV, with two possible positions for object indexes: *mà* (class HA) and *nà* (2nd person singular) precede all the other variable-position affixes, while the other object indexes occupy the slot between BGR and INEV. In the sequential, the object affixes *mà* and *nà* and the venitive marker precede the sequential marker, while the other variable-position affixes follow it.

<sup>11</sup> Ganja has no specific form for the imperative negative plural, and uses the subjunctive negative as a substitute.

## 6.4 Other inflectional categories of verbs

### 6.4.1 The venitive marker

The venitive marker is a variable-position affix *tè* (*t(i)* in non-final position) whose venitive meaning is obvious in combination with movement verbs, as in *à-júig-ù* '(s)he went back' vs. *à-júig-t-ù* '(s)he came back'. In combination with the other verbs, it may express not only associated motion, but also altrilocative or aspectual meanings. However, a precise description of the uses of the venitive marker would require further investigation.

### 6.4.2 The backgrounding marker

In the completive aspect (but not in the incompletive), the verb form may include the backgrounding marker *nì*. This marker occurs in relative clauses (see §8.1) and in wh-questions (see §7.5.2). However, in Ganja, in contrast with functionally similar markers in other languages, NP focalization does not trigger the presence of the backgrounding marker.

### 6.4.3 The inevitability marker

The use of the inevitability marker *dó* is illustrated in (17).

(17a) *Bì-júig-tì-dú.*

si:clBI-go.back-VEN-INEV

'They were obliged to come back.'

(17b) *Í-im-mà-dó-sôog.*

si:1SG-NEG-oi:clHA-INEV-call

'I was not obliged to call him.'

## 6.5 Event nouns and the progressive periphrasis

As already explained in §4.1, there is no obvious regularity in the formation of event nouns, which in particular may belong to any non-human gender. Event nouns have no morphological or syntactic property distinguishing them from ordinary nouns (in particular, the object of the corresponding verb is converted into a genitival modifier of the event noun, as in (18a), and can be represented by a possessive, as in (18b)). Syntactically, the progressive

periphrasis in which event nouns are involved is just a particular case of the use of *gi* ‘be’ with a complement consisting of an NP introduced by the locative preposition *à*.

- (18a) *Bì-nîn      mà   gî   à   g-gbúgè      ní   f-θàambé.*  
 PL-woman(BI)   DEF   be   LOC   PL-plough.EVN(G)   GEN   SG-rice.field(F)  
 ‘The women are ploughing the rice-field.’  
 lit. ‘The women are in the ploughing of the rice-field.’

- (18b) *Á-gî      à   gî-dàgá      dâ.*  
 si:clHA-be   LOC   SG-plait.EVN(GI)   POSS.1SG  
 ‘She is plaiting my hair.’  
 lit. ‘She is in my plaiting.’

## 6.6 The infinitive

Ganja has two verbal forms with a very specific distribution for which the label ‘infinitive’ can be used. None of the inflectional affixes described in §6.3 and §6.4 can attach to them, but they show no nominal characteristic either, and never occur in syntactic positions in which they would function as agreement controllers in the same way as nouns. The two infinitive forms are in complementary distribution.

One of these two forms (arbitrarily designated as infinitive 1) is used exclusively as the complement of auxiliary verbs. It is characterized by a HL tone pattern and a final vowel  $\emptyset$ ,  $\varepsilon$ , or  $l$ , depending on the inflectional type to which the verb belongs.

Infinitive 2 is used as the complement of some auxiliaries, and also in control constructions, in particular with the verbs *janga* ‘be obliged to’ and *mada* ‘be able to’. For verbs of type B, infinitive 2 has exactly the same form as infinitive 1. For verbs of types A and C, it has a distinct form, characterized by a suffix *-(n)á* and an all-L tonal contour for the verb stem.

As illustrated in (19) with infinitive 2, the object of verbs in the infinitive is indexed on the higher verb.

- (19a) *Ñ-jàngá      bìθà-ná   à-fúlá      mà.*  
 si:1SG-must   see-INF   SG-girl(HA)   DEF  
 ‘I must see the girl.’

(19b) *Ñ-jáŋgá-mà*      *bìθà-ná.*

SI:1SG-must-oi:clHA see-INF

‘I must see her.’

### 6.7 Auxiliaries and analytical verb forms

Ganja has a rich inventory of analytical verb forms in which finite morphology attaches to an auxiliary, and the auxiliated verb is in one of the two infinitive forms. Note that, in Ganja, the distinction between TAM prefixes in synthetic verb forms and auxiliaries relies mainly on the observation of the spreading of the +ATR feature from the verbal lexeme, and consequently may sometimes be problematic because of the particular behavior of *a*.

The following meanings are commonly encoded by means of auxiliaries: habitual, hypothetical negative, cessative, recent past, continuative, counterfactual, ‘never’, ‘not yet’, ‘be about to’, ‘occur/do something early’, ‘occur/do something first’, ‘fail’, ‘occur/do something at the same time’, ‘still’, and ‘often’. Sequential is among the meanings expressed by synthetic conjugation, but there are also auxiliaries expressing the same meaning.

For a detailed account of the analytical verb forms of Ganja (which cannot be given here due to space limitations), see Creissels and Biaye (2016: 186–207).

### 6.8 Verb focalization

Verb focalization is expressed by adding a second occurrence of the verbal lexeme followed by a suffix *-ní* or *-é* to the verb forms described in the previous sections. The variant *ní* of the suffix is selected by the verbs whose infinitive 2 is formed by means of the suffix *-ná*. In this form, the second occurrence of the verbal lexeme has an all-L tonal melody.

(20a) *À-jìig-jìig-é.*

SI:clHA-go.back-go.back-VFOC

‘He WENT BACK.’

(20b) *À-n-sáf-tì-ní-sáf-ní.*

SI:clHA-INCPL-write-VEN-oi:1SG-write-VFOC

‘He will WRITE me a letter.’

This form is commonly used in the following contexts: in yes/no questions (‘is it really the case that ...?’), in explicative contexts (‘it is because ...’), and in rectification contexts (‘what is happening is rather that ...’).

## 7 The clause

### 7.1 Verbal predication

The main characteristics of canonical verbal predication have been presented in §3.1. Two special cases deserve to be mentioned here: the quotative verb *yàa* ‘say’, and the impersonal use of *ɲat.ɛ* ‘remain’.

The quotative verb *yaa* ‘say’ is morphologically a regular verb, but it occurs in a construction in which no other verb can be found. In addition to a subject representing a speaker, and an object representing an addressee, it introduces quotations (either direct or indirect) but cannot take a noun referring to speech (such as ‘truth’ or ‘lie’) as its complement, whereas the other verbs of saying are compatible with object NPs referring to speech, but cannot introduce quotations without the use of the complementizer *yàa*, cognate with *yaa* ‘say’.

(21a) *Yáamdè yâa “ÿyôô”.*

Yamdé say O.K.

‘Yamdé said “O.K.”

(21b) *\*Yáamdè yâa f-nsé.*

Yamdé say SG-truth(F)

intended: ‘Yamdé said the truth.’

The verb *ɲat.ɛ* ‘remain’ is to the best of my knowledge the only Ganja verb whose independent forms, other than the imperative, can be found in a construction involving neither a subject NP in preverbal position nor a subject index. With other verbs, the presentational meaning encoded by this construction can only be expressed periphrastically.

(22a) *Dátè hál à-wódà.*

remain SG.person(HA) clHA-one

‘There is one person left.’

- (22b) *Dátè g-lěy g-sìbí.*  
 remain PL-day(G) clG-two  
 ‘There are two days left.’

## 7.2 Equative, ascriptive, locational, existential, and possessive clauses

The verb *gi* in the form designated as ‘completive’ (characterized by the lack of any overt TAM marking) expresses the same stative meaning as the present of *be* in English, whereas the incompletive of *gi* implies future reference. However, this is not a unique property of *gi*: other verbs, such as *hur* ‘know’ or *gaad.ε* ‘have’, are also used in the completive with reference to states not necessarily conceived as the stabilization of dynamic processes.

*Gi* is found in combination with nominal or adjectival complements in equative or ascriptive clauses, but also with prepositional phrases or place adverbs in locational clauses.

- (23a) *W-é gí b-jóodì à b-bôɔr m bá mà.*  
 clU-dist be SG-error(B) LOC SG-side(B) GEN clBL.PRO DEF  
 ‘This is an error on their part.’

- (23b) *F-θèré dè mà gí f-dòvoló.*  
 SG-basket(F) POSS.2SG DEF be clF-small(F)  
 ‘Your basket is small.’

- (23c) *Blùthí à-η-gí à f-θàambé.*  
 tomorrow SI:clHA-INCPL-be LOC SG-rice\_field(F)  
 ‘Tomorrow she will be at the rice field.’

Ganja has a special non-verbal construction for questions about location, in which an NP simply combines with the invariable interrogative word *dóv* ‘where is?’.

- (24) *Nnâ ndím mà dóv?*  
 mother POSS.2PL DEF where\_is  
 ‘Where is your mother?’

Non-verbal identificational clauses, in which the entity identified is not designated explicitly, can be formed by combining the NP expressing the identification with an enclitic expressing agreement with its host, designated as identification marker. This identification marker, also used in NP focalization (see §7.4), probably results from the grammaticalization of third person pronouns, since it only differs from them in that its vowel undergoes ATR harmony, whereas third person pronouns invariably have +ATR vowels.

(25a) *Lísà w-í.*  
 SG.wine(U) clU-ID  
 ‘This is wine.’

(25b) *Bì-láantè bá.*  
 PL-man(BI) clBI.ID  
 ‘These are men.’

As illustrated in (26), predicative possession can be expressed in two ways, either by combining *gi* ‘be’ with the preposition *ɲgi* ‘with’, or by means of the transitive verb *gaad.ɛ* ‘have’.

(26a) *Gì-lêer-ôo gî-lêer gî ɲgi gî-gúbêérò ɲ g-í.*  
 SG-pot(GI)-DISTR SG-pot(GI) be with SG-lid(GI) GEN clGI-PRO  
 ‘Every pot has its own lid.’

(26b) *À-nîn-ôo à-nîn gáadè à-ntó.*  
 SG-woman(HA)-DISTR SG-woman(HA) have SG-husband(HA)  
 ‘Every woman has a husband.’

Ganja does not have a dedicated existential construction, and plain locational clauses with indefinite subjects constitute the usual equivalent of the existential constructions found in other languages, as in (27).

(27) *Wèdé âg-gî hǎj.*  
 SG.water(U) NEG-be place  
 ‘There is no water here.’

lit. ‘Water is not here.’

### 7.3 Verbal valency

#### 7.3.1 Verbal valency and inflectional types of verbs

Among the three inflectional types of verbs, type A is the unmarked one in the sense that (a) the majority of Ganja verbs belong to this type, and (b) transitive and intransitive verbs are equally common among type A verbs. By contrast, type B verbs are overwhelmingly intransitive, whereas all type C verbs are transitive.

Moreover, some verbal lexemes can be found in two types, and in such cases, the choice of the inflectional type is bound to transitivity:

type A (tr.)	<i>bɛɛnθ</i>	‘sharpen’	type B (intr.)	<i>bɛɛnθ.ɛ</i>	‘be sharpened’
	<i>gaŋ</i>	‘protect’		<i>gaŋ.ɛ</i>	‘protect oneself, be protected’
type B (intr.)	<i>rɪθ.ɛ</i>	‘be full’	type C (tr.)	<i>rɪθ.ɪ</i>	‘fill’
	<i>fas.ɛ</i>	‘be late’		<i>fas.ɪ</i>	‘delay’
type A (intr.)	<i>gʊʊθ</i>	‘be long’	type C (tr.)	<i>gʊʊθ.ɪ</i>	‘lengthen’
	<i>yaat</i>	‘enter’		<i>yaat.ɪ</i>	‘introduce’

The number of verbs involved in the type A (tr.) ~ type B (intr.) alternation is particularly high.

#### 7.3.2 Valency operations

Reflexivity is only marginally expressed by means of inflectional type alternations or mediopassive derivation, and is standardly expressed by ‘*b-gó* ‘head’ + possessive’ in a reflexive pronoun function, as in (28).

- (28) *À-hâb*    *b-gó*    *ní.*  
 s1:clHA-kill    SG-head(B)    POSS.clHA  
 ‘He killed himself.’

As already mentioned in §4.2, Ganja has productive causative, applicative, reciprocal, and mediopassive derivational suffixes, and about ten transitive verbs have a distinct antipassive form. Moreover, causative verbs can also be formed by reduplication. By and large, these derivatives have the syntactic behavior that can be expected. Two remarks are in order, however, about mediopassive derivation and about valency-increasing derivations applied to ditransitive verbs.

The verbs derived by means of the mediopassive derivational suffix *-(V)l.ε*, exactly in the same way as the verbs involved in the type A ~ type B alternation when they are used as type B verbs, lend themselves to anticausative or passive readings, depending on contextual and semantic factors, in particular the possibility of conceiving events as more or less spontaneous processes affecting a single participant.

As regards the behavior of ditransitive verbs with respect to valency-increasing derivations, there are probably restrictions on the use of causative or applicative forms of ditransitive verbs, but at least under certain conditions such forms can be found in tritransitive constructions with three objects, which can all equally be represented by object indexes attached to the verb.

(29a) *Ñáa-d-ní Sáajó gódì mà!*  
 give-APPL-oi:1SG Sadio SG.money(U) DEF  
 ‘Give the money to Sadio for me!’

(29b) *Ñáa-d-mà-ní-wí!*  
 give-APPL-oi:clHA-oi:1SG-oi:clU  
 ‘Give it to him on my behalf!’

Tritransitive constructions may also result from applicativization of the causative form of monotransitives.

(30a) *D-wóm-ír-îd Fàató mbùutá mà f-mbùur mà.*  
 si:1SG-eat-CAUS-APPL Fatou SG.child(HA) DEF SG-bread(F) DEF  
 ‘I made the child eat the bread for Fatou.’

(30b) *D-wóm-ír-îd-mà-hí-fí.*  
 si:1SG-eat-CAUS-APPL-oi:clHA-oi:clHA-oi:clF

‘I made him eat it for her.’

#### 7.4 Focalization

Verb focalization is expressed within verbal inflection, and consequently the verb form expressing verb focalization has been presented in §6.8. NP or adverb focalization is standardly expressed by means of a cleft construction in which the focalized term followed by the identification marker already mentioned in §7.2 precedes the remainder of the clause. The focalized term is not resumed in the second part of the construction. The verb form undergoes no change, which is somewhat unexpected in a language in which a special backgrounding form of the verb is used in relative clauses and wh-questions.

- (31) *Sáajó h-í η-gáandâ b-ògó mà.*  
 Sadio clHA-ID SI:1SG-sell SG-millet(B) DEF  
 ‘It is to Sadio that I sold the millet.’

#### 7.5 Object fronting

In Ganja, objects can be found in clause-initial position without being resumed by an object index, and without the addition of any morphological material. The precise conditioning of this construction is not well understood, but there is no doubt that it is not an alternative way of expressing object focalization. Like left-dislocated objects resumed by an object index, fronted objects are topical. As illustrated in (32b), this construction is particularly common in proverbs, with a non-specific (or ‘impersonal’) index of class BI (human plural) in subject function.

- (32a) *G-θàambé g-ó tǝm jéd-ù.*  
 PL-rice.field(G) clG-PROX SG.salt(U) take  
 ‘These rice fields have been invaded by salt.  
 lit. ‘These rice fields salt has taken.’

- (32b) *F-sàmté f-dàndí bì-ηgê gbálâg.*  
 SG-shoe(F) clF-old SI:clBI-AUX<sub>never</sub> throw  
 ‘One does not throw away an old shoe.’

## 7.5 Questioning

### 7.5.1 Yes/no-questions

The only differences between wh-questions and assertive clauses are either a rising intonation at the end of interrogative clauses, or the presence of the interrogative particle *gǎ* at the end of the clause.

### 7.5.2 Wh-questions

Ganja has four interrogative words inflected for class, and six invariable interrogative words:

CL- <i>ilà</i>	‘which?’
CL- <i>wîŋ</i>	‘which kind of?’
CL- <i>déémè</i>	‘how much/many?’
CL- <i>ndéémè</i>	‘at which rank?’
<i>wí</i> ~ <i>wîŋwí</i>	‘what?’
<i>gillà</i>	‘where?’
<i>dóv</i>	‘where is?’
<i>nθilà</i>	‘when?’
<i>hállà</i>	‘how?’
<i>ndéémè</i>	‘how many times?’

There is no special word for ‘who?’; instead it is rendered as *h-ilà* (class HA form of the interrogative determiner *-ilà*).

Syntactically, the interrogative word (or a phrase in which it is included) precedes the remainder of the clause. However, in contrast to focalized NPs or adverbs, interrogative words are not usually followed by the identification marker, but in the completive aspect, the verb form must include the backgrounding marker. Wh-questions optionally end with the enclitic particle *ŷy*, whose vowel copies the preceding vowel.

- (33) *H-ilà*      *ó-gáandá-nì*    *b-ògó*      *mà*    (*áy*)?  
 clHA-which    SI:2SG-sell-BGR    SG-millet(SG)    DEF    Q  
 ‘To whom did you sell the millet?’

Among wh-questions, why-questions have a special status, since they are expressed by means of a complex construction with the verb *tíngá* ‘cause’.

(34) *Wí tíngá-nì à-át-tì-bîn?*

what cause-BGR si:clHA-NEG-VEN-come

‘Why didn’t he come?’

lit. ‘What caused (that) he didn’t come?’

## 8 Complex constructions

### 8.1 Relativization

In relative clauses immediately postposed to their head, the gap strategy is not limited to the relativization of subjects and objects. A resumptive element is used only in the relativization of genitives. In the completive aspect, the verb is marked for backgrounding.

(35a) *à-láantè mà wús-nì f-ñjógób*

SG-man(HA) DEF buy-BGR SG-chair(F)

‘the man who bought a chair’

(35b) *f-ñjógób mà à-láantè mà wús-nì*

SG-chair(F) DEF SG-man(HA) DEF buy-BGR

‘the chair that the man bought’

(35c) *hòtò mà n-tóo-nì Dàagâr*

SG.car(U) DEF si:1SG-go-BGR Dakar

‘the car with which I went to Dakar’

lit. ‘the car (that) I went to Dakar’

(35d) *b-tá mà bì-bííthá-nì háś*

SG-tree(B) DEF si:clBI-see-BGR (SG)monkey

‘the tree on which they saw a monkey’

lit. ‘the tree (that) they saw a monkey’

- (35e) *à-láantè mà à-nîn ní mà dée-nì*  
 SG-man(HA) DEF SG-woman(HA) POSS.clHA DEF give\_birth-BGR  
 ‘the man whose wife has given birth’  
 lit. ‘the man (that) his wife has given birth’

By contrast, the relative clauses referring to individual-level properties introduced by the linker *úhúrún yàa* include an obligatory resumptive element (in (36), *hǎj mà* ‘the place’), and the backgrounding marker, already included in the linker, does not show up on the verb of the relative clause.

- (36) *bójà mà ú-húr-ùn yàa m-méèsè ŋ hǎj mà át-tálânθ.*  
 SG.town(U) DEF si:2SG-know-BGR that SG-installation(B) GEN place DEF NEG-be\_easy  
 ‘a town in which it is not easy to live’  
 lit. ‘a town you know that the living circumstances of that place are not easy’

## 8.2 Complementation

The conjunction *yàa* (cognate with the quotative verb *yaa* ‘say’) is used for the complementation of verbs of speech, cognition, and opinion.

- (37) *D-húr yàa bì-tów-ò.*  
 si:1SG-know that si:clBI-leave-FV  
 ‘I know that they have left.’

Indirect wh-questions are simply inserted into the matrix clause, whereas indirect yes/no-questions are introduced by the conjunction *fǒ* (borrowed from Mandinka).

- (38a) *Ú-húr gǎ nθílà Yáamdè n-tóy-ì?*  
 si:2SG-know Q when Yamdé INCPL-leave-FV  
 ‘Do you know when Yamdé will leave?’
- (38b) *Ú-húr gǎ fǒ Yáamdè gáθ-ò?*  
 si:2SG-know Q whether Yamdé arrive-FV  
 ‘Do you know whether Yamdé has arrived?’

The conjunction *sǎm` ~ sǎa` ~ sàmíndì* introduces subjunctive clauses expressing indirect commands, and is also used in the complementation of *raa* ‘be desired by’ (the usual Ganja equivalent of English *want*, but with the experiencer in object function and the stimulus in subject function).

(39a) *À-yáa sǎm` ʼñ-jìgè.*  
 si:clHA-say so\_that si:1SG-go\_back  
 ‘He told me to go back.’

(39b) *Wíl rāa Sáajó sǎm` ʼn-tó.*  
 thing be\_desired\_by Sadio so\_that si:1SG-go  
 ‘Sadio wants me to go.’  
 lit. ‘It is desired by Sadio that I go.’

The complementation of the following verbs involves control constructions in which the dependent verb is an infinitive 2: *gínθ* ‘try’ (illustrated in (40)), *jaŋga* ‘be obligated’, *jej* ‘hurry’, *jɔ* ‘forbid’, *ñob* ‘be numerous to do something’, *ñoom* ‘dare’, *sum* ‘be easy’, *tεεg* ‘be morally obligated’, *tɔ* ‘go’.

(40) *À-gínθ θàg-á ʼñég mà.*  
 si:clHA-try catch-INF SG.hen(U/HA) DEF  
 ‘He tried to catch the hen.’

### 8.3 Adverbial subordination

The conjunction *yàa* already encountered in §8.2 also serves to introduce explicative clauses.

(41) *Gì-mmírà dā mà lígír-ù ndáani,*  
 SG-think.EVN(GI) POSS.1SG DEF become\_big-FV much  
 ‘I am very surprised

*yàa bì-ñáŋ mà ríθì fámfàŋ.*  
 that PL-people(BI) DEF be.numerous really  
 that there are so many people.’

The conjunction *sǎm` ~ sǎa` ~ sàmindì* already encountered in §8.2 also serves to introduce purpose clauses. The three forms of this conjunction are in free variation.

- (42) *À-ñâa-ní gódi sàmindì ŋ-wút-tè tîw.*  
 si:clHA-give-oi:1SG SG.money(U) so\_that si:1SG-buy-VEN SG.meat(U)  
 ‘He gave me money to buy meat.’

The conjunction *ndí* ‘if’ (borrowed from Mandinka) introduces hypothetical (43) and counterfactual (44) clauses.

- (43) *Ndí fàlí fǔr-nà, ndí ó-fǔr-mà, bà-láŋ-ò.*  
 if SG.donkey(U/HA) kick-2SG if si:2SG-kick-oi:clHA 2PL-be\_equal-FV  
 ‘If a donkey kicks you and you kick it, you are equal.’

- (44) *Ndí gí-lóodè m-béhdè gé,*  
 if SG-death(GI) INACP-chase PST  
 ‘If death chased [people],

*gì-n-tô gé ðàg-á bìg-óllà à jógè.*  
 si:clGI-INCPL-go PST catch-INF clBI-other LOC SG.sea(U)  
 it would go out and catch people in the sea.’

Other conjunctions used for adverbial subordination include *bimâ* ‘when’, *bó* ‘since’, *dóróŋ* ‘as soon as’ (postposed to the subordinate clause, borrowed from Mandinka), *gàató* ‘because’ (borrowed from Mandinka), *gántí* ‘even if’, *hân* ‘until’ (also used as a preposition), *jàndí* ‘before, instead of’ (borrowed from Mandinka), *ndíwí* ‘even if’, *títimà* ‘since’.

#### 8.4. Clause co-ordination and sequentialization

Ganja does not have a coordinating conjunction available to join clauses with a meaning similar to that expressed by *and* in English, but does have dedicated sequential verb forms (see §6.3 and §6.7). Moreover, a subjunctive clause immediately following another clause is ambiguous between a purposive reading and a sequential reading. For example, in (45), the context rules out a purposive reading of the subjunctive form *à-lôod* and imposes a sequential reading.

- (45) *Wé náan mà thédè à-lôod.*  
then SG.elephant(U/HA) DEF catch\_fire clHA-die  
'Then the elephant caught fire and died.'

## 9 Conclusion

On the whole, the typological characteristics of Ganja are those commonly found among Atlantic languages. The following points, however, are worth emphasizing:

- a consonantal system with just one voiced vs. voiceless contrast;
- an inventory of 9 vowel phonemes with a  $\pm$ ATR contrast;
- consonant clusters in word-initial position;
- a tonal system in which tone is a lexical property of nouns but is determined by grammatical rules for verbs;
- the pervasiveness of sandhi phenomena at the junction between successive words;
- a gender system with a human gender, a non-human animate gender, and six non-human genders, in which human agreement and non-human animate agreement is not related to particular inflectional types, and the singular of non-human animate nouns is characterized by a hybrid agreement pattern,
- a relatively restricted system of gender-number agreement; in particular, the definite article does not express agreement, and the subject indexes prefixed to verbs cannot be analyzed as agreement markers, since they are not obligatory;
- a particularly rich system of demonstratives;
- a contrast between three inflectional types of verbs that can be analyzed in terms of voice;
- a very productive object fronting construction in which a topical object moves to the left of the subject without being resumed by an object index, and without any particular morphological marking on the verb;
- in relativization, a particularly wide use of the gap strategy.

## Abbreviations

APPL	applicative
AUX	auxiliary
BGR	backgrounding marker
CAUS	causative
CL	class (in the sense of cell in the inflectional paradigm of agreement targets)
DEF	definite
DIST	distal
DISTR	distributive
EvN	event noun
FV	final vowel of verb forms
GEN	genitive
ID	identification marker
INCPL	incompletive
INEV	inevitability marker
INF	infinitive
LEX	stem
LOC	locative
NEG	negative
O	object
oI	object index
PL	plural
POSS	possessive
PRO	pronoun
PROH	prohibitive
PROX	proximal
PST	past
Q	interrogative particle
RESULT	resultative
S	subject
SG	singular
sI	subject index

V	verb
VEN	venitive
VFOC	verb focalization
X	oblique

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