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Joola Keeraak : A grammatical introduction¹

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Introduction

Keeraak (also referenced as Keeraku or Her) belongs to the Joola cluster of Atlantic languages and their Bak subgroup (Pozdniakov & Segerer, this volume). Joola languages are spoken in the Lower Casamance region in South-West Senegal, and also in the neighbouring part of Guinea-Bissau. Among this group, Keeraak is solely spoken in Kabrousse (Ziguinchor region, southwest), the last village on the Senegalese coast before the Guinea border. Kabrousse was named from Portuguese Cabo Roxo (designating a still existing lighthouse nowadays out of service) but its traditional name is Eer [εεɾ]. Thus Keeraak (*k(ɔ)-εεɾ-a-ak*) literally means “the (language) of Eer”. When asked about the resemblances between Keeraak and neighbouring Joola varieties, Keeraak speakers say that they globally understand the languages spoken East and South of Kabrousse, up to Youtou and EfoK in Senegal and Varela and Susana in Guinea-Bissau. However, they admit that there are various differences, mostly in the lexicon and a few pronunciation features. According to the literature (Carlton & Rand 1993), the said area hosts the Ejabat (or Floupe) Joola lect.

According to Ethnologue (2006), Keeraak is estimated to be spoken by some 13 200 speakers (<https://www.ethnologue.com/language/hhr>). However, in 2015, there were only about 5000 inhabitants in Kabrousse according to the chief of the village. The total number of Keeraak speakers must include those living outside the village. The language use is vigorous and transmission is solid, at least for those living in the Kabrousse village. Except for old illiterate persons, Kabrousse inhabitants also know French (due to primary education), Wolof (commercial activities) and sometimes some other varieties of Joola when they have spent some time with other Joola speakers. Despite the proximity of the Bissau-Guinean border, Kriol does not seem to have penetrated the Kabrousse area.

Keeraak speakers recognise themselves as Joola people, and their culture share many features with that of other Joola communities: the traditional activities are centered around rice cultivation and fishing, as well as salt collecting and palm wine tapping. The society is patrilineal, for the name as well as for the rice fields transmission, and the community is organised around the compound in a concentric manner, defining various important solidarities for land use, farming and social or religious practices: the individual house (*ελσσfaj*) is part of a sub-compound (*hanasah*) shared with aunts and uncles; the latter in turn is part of a compound (*hulimetəh*) and the compounds are grouped in bigger compounds (*hɔsusah*) which together form a district (*kεεlɔmak*). There are three districts in Kabrousse: when you enter the village you first find Mossor (*Mɔɔɔɔɔɔɔɔ*), then Kadiakay (*Kaɟaakaaj*), and finally Nyalou (*Ñaalɔ*), the last place before the Guinea border, Kadiakay being the most ancient one out of which Mossor developed first until some of its inhabitants created Nyalou, apparently some five generations ago. The vast majority of Kabrousse inhabitants are catholic. There are also some muslims and, more recently, a few protestants. Remarkably, older regional religion based on shrine veneration practices survive harmoniously and coexist with the newer religions. Shrine owners (male or female) continue to play an important part in this society where there is no

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king or higher authority. The various districts of Kabrousse also have special friendship relationships with different districts of two neighbouring villages (Diembereng and Bouyouye).

Despite a clear common cultural identity, the Joola cluster is made of variously differentiated languages. Keeraak is probably not very different from the Ejamat variety spoken in North-Eastern Guinea-Bissau. However, while Keeraak speakers claim to understand most of the other Joola dialects, the opposite is not true: Keeraak is not understood by the speakers of other Joola languages.

This article is the first grammatical sketch of Keeraak. This language was undocumented (and wrongly referenced as Her) when the two authors started their study. This work is based on fieldwork conducted during several field trips between 2009 and 2015 in Ziguinchor and Kabrousse, with a dozen of consultants (male and female) aged from eighteen to sixty. Due to space limitations the syntax was left aside.

This article is built as follows: in section 1, the main phonological features, including vowel harmony, are presented. Sections 2 to 4 are dedicated to word categories and their morphology. This includes the noun class system and all the agreeing elements (sec. 2), verb morphology (sec. 3) and other categories such as adjectives and ideophones, a special paragraph on locatives, adverbs and prepositions (sec. 4). The whole section 5 is devoted to the very complex verbal system. After a presentation of its general organising principles (5.1) and of the personal markers (5.2), simple (5.3), complex (5.4) and negative (5.5) inflectional paradigms are analyzed and exemplified. The past suffix is given attention in 5.6. Converbs and dependent forms conclude this section (5.7).

Our corpus consists of a dictionary of 2,800 words, more than 2,500 elicited sentences, dozens of verb paradigms and 15 short texts. All examples use a phonological IPA-based transcription. Long vowels are doubled.

Occasionally, reference is made to other Joola varieties, for which we consulted the following works: Banjal: Bassène 2007, Sagna 2008, Tendeng 2007; Fonyi: Hopkins 1995, Sapir 1965, Weiss 1939; Kasa: Wintz 1909; Karon: Sambou 2007.

1 Phonology

1.1 Consonants

The consonant system has the following elements:

Table 1: Consonant phonemes

	labials	dentals	palatals	velars
voiceless stops	(p)	t	c	k
voiced stops	b	d	ʃ	g
fricatives	f	ɬ	s	h
nasals	m	n	ɲ	ŋ
sonorants	w	l	j	
trill		r		

The two salient features of this inventory are the presence of the voiceless lateral fricative /ɬ/ and the absence of /p/: /f/, phonetically [ɸ], regularly corresponds to [p] in other Joola varieties. However [p] may still be found in a few ideophones and in the cluster *mp*. All consonants may occur in initial, medial or final position.

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1.2 Vowels

As in all Joola languages, there are ten vowel qualities:

Table 2: Vowel qualities

	i		u
	ɪ		ʊ
	e	ə	o
	ɛ	a	ɔ

Vowel length is phonemic, even though true minimal pairs are not numerous: *mɔɔ* ‘to draw water’ / *mɔɔɔ* ‘watch until out of sight’; *bak* ‘to tighten’ / *baak* ‘to be high’. Long vowels do not seem to occur word-finally.

1.3 Phonotactics

1.3.1 Consonant clusters

Regardless of recent borrowings, only three kinds of consonant clusters are attested:

- NC clusters, where C is a stop and N is a homorganic nasal: *ɡɔnt* ‘to sing’, *hɔ-tɔŋ-ah* ‘heel’, *mbiil* ‘to play musical horn’. Two such clusters may occur in the same stem: *ʃə-ndɛŋɡul-əw* ‘bird sp. (dove)’. NC clusters are rare in stem-initial position. NC clusters never occur after a long vowel.
- LL clusters, where L is a lateral consonant (either /l/ or /ɭ/): *ɛ-hɔllɔŋ-aj* ‘corpse’, *hɔ-ɟullɔŋ-ah* ‘bell’, *e-ɬu-ɛj* ‘laughter’. There seems to be a fair amount of variation in the pronunciation of ɬ clusters, many of them being actually voiced. This voicing seems unpredictable and idiosyncratic and may not lead to posit a ɬ/ɮ phonological contrast. Regarding /ll/ clusters, most of them occur in words ending with a suffix, either productive or frozen. It is worth noting that for each of these words, the corresponding bare stem is not attested: *ʃllɛn* ‘explain’, *ə-halliin-əw* ‘old person’. The doubling of /l/ could then originate in suffixation, as is still the case with /n/ in some cases: *hɛn* ‘to graze’ > *hɛnnɛn* ‘to feed cattle’. Only one stem shows an initial /ll/: *ɲɪ-llɔh-aj* ‘fish sp. (eel)’.
- NN clusters are rare, especially those that do not result from suffixation (see above): *humməare* ‘today’, *ka-nnaar-ak* ‘verandah’, *ɛ-nnam-aj* ‘seat’.

1.3.2 Syllables

56% of the stems are of the CVC type (where C may be a single consonant, a NC cluster or a geminate). Other common patterns include CV...C (CVCVC, CVCVCV etc., 20%) and CV...V (CVCV, CVCVCV etc., 11%). All the remaining patterns put together are marginal: they count for no more than 13%. Affixes tend to adapt to a general CVCV...C pattern: while prefixes are usually of the CV type (sometimes only V), suffixes are more of the VC type (sometimes only V).

1.3.3 Vowel harmony

Vowel harmony operates in Keeraak, as in many languages of the region. The ten vowels are divided into two sets, namely /a/, /ɛ/, /ɪ/, /ɔ/, /ʊ/ and /ə/, /e/, /i/, /o/, /u/. Within the limits of the (phonological) word, all the vowels belong to the same set. Most authors use the label ATR (Advanced Tongue Root) to refer to the articulatory nature of this contrast. So far however, no study has shown that this feature is effectively in play. Basing on auditory perception, we will therefore use the labels ‘open’ and ‘closed’ for the two sets, and present them as follows:

Table 3: Vocalic phonemes

	front	mid-front	center	mid-back	back
open	ɪ	ɛ	a	ɔ	ʊ

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closed i e ə o u

Keeraak has a dominant-controlled type of vowel harmony, the closed series being dominant, which means that an inherently closed vowel in a stem will cause every other vowel in the word to be closed as well, propagating towards prefixes as well as suffixes. This rule should be enough to account for vowel harmony in Keeraak:

ɔɔ 'bone' > *hu-ɔɔ-əh* (citation form: HU² class pfx + stem + HU class det.)

ɔɔ 'decision' > *hɔ-ɔɔ-ah* (citation form: HU class pfx + stem + HU class det.)

However, there are a some apparent inconsistencies or exceptions, all the details of which cannot be given within the scope of this paper. A few additional information may nevertheless be of interest:

- an affix may have an inherently closed vowel:

<i>-um</i> 'INSTRUMENTAL'	<i>bɔɔt</i> 'to fish'	<i>mu-buutum-əm</i> 'bait'
	<i>mɛr</i> 'to swallow'	<i>e-mer-um-əj</i> 'throat'
- an open/closed alternation is sometimes used to reinforce a lexical derivation:

<i>mɔɔm</i> 'to lie'	<i>si-moom-en-əs</i> 'lies' (neither the SI class prefix nor the <i>-en</i> suffix usually triggers vowel harmony).
<i>saaf</i> 'to greet'	<i>bu-səəfoor-əb</i> 'greetings' (neither the BU class prefix nor the reciprocal <i>-ɔɔr</i> usually triggers vowel harmony).
<i>sɛɲa</i> 'to marry'	<i>bu-sɛɲə-əb</i> 'wedding'
- an open/closed alternation is sometimes observed between words that have very similar meanings:

<i>m-uɬ-am</i> '(breast) milk'	<>	<i>m-iit-əm</i> '(cow) milk'
<i>rur</i> 'to plait'	<>	<i>riir</i> 'to comb'
<i>fɔm</i> 'to jump'	<>	<i>fum</i> 'to cross'
- the dominant status of closed vowels, combined with their relative paucity (they are 2.7 times less numerous than open vowels) make them the marked member of the open/closed opposition.

2 Morphology 1 : the noun

2.1 Noun classes

The nominal morphology of Keeraak is characterised by a rich and fully operative noun class system. This system is described in some detail in Segerer (2015), and we will only present an overview here. When the present data or analysis differs from the above source (because of the work carried out since), it will be indicated in the text with the sign (+).

The citation form of nouns minimally includes a class prefix, a stem and a suffix of the shape $-AC_x$, where A may be [a] or [ə] according to vowel harmony and C_x is a consonant which copies the consonant of the class prefix. For the E and U classes C_x is [y] and [w] respectively; the A class and one of the JA classes deviate from this model, showing an *-aw* suffix. In most Joola languages the class suffix has a definite value. However, in Keeraak, it has become obligatory in most contexts (and specifically in the citation form of nouns and verbs), thus loosing its original value. We call it *default determiner*. The 21 noun classes (including 3 locative pseudo-classes) are exemplified in Table 4:

Table 4: Keeraak noun classes

² The labels for class prefixes (see Table 4 below) are based on the phonological shape of the prefix and written in capital letters.

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A	<i>a-nl-aw</i>	'child'
BA	<i>ba-ner-ab</i>	'monkeys'
BU	<i>bu-tiin-əb</i>	'path'
BUK	<i>buk-an-ak</i>	'people'
E ₁	<i>ε-naab-aj</i>	'elephant'
E ₂	<i>ε-kv-aj</i>	'thieves'
HA	<i>ha-aj-ah</i>	'bees'
HU	<i>hɔ-tɛnaj-ah</i>	'banana'
JA ₁	<i>ja-ner-aw</i>	'monkey'
JA ₂	<i>ja-kaan-aj</i>	'doing'
JI	<i>ji-mɛl-aj</i>	'water (a little)'
KA	<i>ka-sɛra-ak</i>	'spoon'
KU	<i>kɔ-tɛnaj-ak</i>	'bananas'
MA	<i>ma-ʔɛgɛn-am</i>	'truth'
MU	<i>mɔ-mɛl-am</i>	'water'
NI	<i>ni-lɔh-aj</i>	'eel'
SI	<i>si-naab-as</i>	'elephants'
U	<i>ʊ-sɛra-aw</i>	'spoons'
B	<i>b-in-ab</i>	'place (large)'
T	<i>t-in-at</i>	'place (limited)'
D ₁	<i>d-in-əd</i>	'place (inner)'

All these classes are called 'noun classes' because they are found primarily on nouns and trigger agreement, even the three locative classes B, T and D₁ which appear on one noun only³. However, there are two additional elements that behave exactly like noun classes as far as morphology is concerned, except that they are never found on nouns. These elements, which may be called (+) *defective classes*, are the N class and the D₂ class. The N class refers to time and is used pronominally in paradigms that usually show class agreement, as for example *ʊCxaj* 'which?': *ʊnaj* 'when?'. (+) The D₂ class is used for vague reference as in *udu* 'this (thing) near you' as opposed to, say, *uju* 'this class E entity near you' (for example *ε-jagɔm-aj* 'dog'). The D₂ class is distinct from the D₁ class in that it bears no locative reference and, unlike D₁, it does not trigger vowel harmony. In fact, the D₁ class is the only one that triggers the closed vowel series⁴, as can be seen in the above table where the same stem *in* yields the nouns *b-in-ab*, *t-in-at* with classes B and T but *d-in-əd* with class D₁. The contrast between the two D classes may also be illustrated by the demonstratives 1 and 3:

D ₁ :	<i>ude</i> '(inside) here'	<i>undə</i> '(inside) there'
D ₂ :	<i>ʊdɛ</i> 'this thing'	<i>ʊnda</i> 'that thing'

2.1.1 The scope of class agreement

The following elements are under the scope of noun class agreement:

- all the noun modifiers, including: default determiners, qualifiers (adjectives, numerals, relativisers, 'other', 'same'), demonstratives (even those used pronominally), possessives, interrogatives.
- pronouns: the base is *-ɔ*.

³ The nouns in question (see Table 4) suggest a stem *-in*. With CV prefixes the regular outcomes should therefore be **bunab*, **tunat* or **diinəd*. The vowel is always short here, and since all the agreement elements are fully predictable (see 2.1.2) with the class consonant only, we cannot attribute any vowel to the class marker and we must posit the labels B, T and D.

⁴ This mere fact suggests that the true class marker has a closed vowel in its underlying form, but (see preceding note) this vowel cannot be recovered.

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- the connective *-ala*.
- the verb subject prefixes (for class A, see next section)

2.1.2 Class exponents

For all the agreement paradigms, the class exponent consists either of a single consonant or of a CV element whose vowel is predictable (see below). The class consonant is selected as follows:

- For CV-shaped classes, the consonant is C (glossed AGR0): HA, HU > *h*, MA, MU > *m*, BA, BU > *b* etc.: *bɔ-b-ɛn-ab b-ala ja-nak-aw* ‘sunset’ (CLbu-fall-CAUS-DETbu AGR0bu-CONN CLja-sun-DETja) ;
- For the E and U classes, the consonants are *j-* and *w-* respectively: *ɛ-maan-aj j-umboom* ‘my rice’ (CLE-rice-DETe AGR0e-1SGPOS).
- The A class, which typically includes nouns denoting human beings, is a very particular case: the possessive and connective agreement is \emptyset -, the pronoun is *ɔɔ*, the demonstratives are made with *m* (*ɔmɛ / umu / ɔmma*): *a-nɪ-aw \emptyset -umboom* ‘my child’ (CLa-child-DETa AGR0a-1SGPOS). The subject agreement for class A is dealt with in the section devoted to the verbal system (for third person see 5.2).

The vowel of the class exponent, when present, is selected as follows:

- The adjectives and the subject relative clauses show a *CA-* agreement (glossed AGR1). The class A agreement is *a-*.
- The numerals and the subject indices of verbs show a *CU-* agreement (glossed AGR2), with the following exceptions:
 - if C is dental or palatal, the vowel is *i-/ɪ-*.
 - the A and JA₂ classes have *a-* or *na-*, the 3rd person singular subject marker.
 - other V classes (E and U) retain their original shape : *e-/ɛ-* and *u-/ʊ-* respectively.

The word for ‘other’ has the shape *CaaCɔ*. The A-class is different again: *aahɔ*.

Table 5 is a general chart of pronouns and noun modifiers for all nominal and defective classes⁵:

Table 5: class paradigms of noun modifiers

structural form	def. det.	pron. ⁶ , rel. (obj)	connect.	DEM1	DEM2	DEM3	‘which?’	‘other’	(+) loc. copula ⁷
	<i>-aC</i>	<i>Cɔ</i>	<i>C-ala</i>	<i>ɔCɛ</i>	<i>uCɪ</i>	<i>ɔNCa</i> ~ <i>ɔCCa</i>	<i>ɔCaj</i>	<i>CaaCɔ</i>	<i>CɔɔCɔ</i>
A	<i>-aw</i>	<i>ɔɔ</i>	<i>ala</i>	<i>ɔmɛ</i>	<i>umu</i>	<i>ɔmma</i>	<i>aj</i>	<i>aahɔ</i>	<i>ɔɔmɔ</i>
BA, BU, B	<i>-ab</i>	<i>bɔ</i>	<i>bala</i>	<i>ɔbɛ</i>	<i>ubu</i>	<i>ɔmba</i>	<i>ɔbaj</i>	<i>baabɔ</i>	<i>bɔɔbɔ</i>
BUK	<i>-ak</i>	<i>bɔkɔ</i>	<i>kala</i>	<i>ɔkɛ</i>	<i>uku</i>	<i>ɔnka</i>	<i>ɔkaj</i>	<i>kaakɔ</i>	<i>kɔɔkɔ</i>
E ₁	<i>-aj~ɛj</i>	<i>jɔ</i>	<i>jala</i>	<i>ɔjɛ</i>	<i>uju</i>	<i>ɔjja</i>	<i>ɔjaj</i>	<i>jaajɔ</i>	<i>jɔɔjɔ</i>
E ₂	<i>-aj~ɛj</i>		<i>jala</i>	<i>ɔkɛ</i>	<i>uku</i>	<i>ɔnka</i>	<i>ɔjaj ~ ɔkaj</i>	<i>kaakɔ</i>	<i>kɔɔkɔ</i>
HA, HU	<i>-ah</i>	<i>hɔ</i>	<i>hala</i>	<i>ɔhɛ</i>	<i>uhu</i>	<i>ɔɣha</i>	<i>ɔhaj</i>	<i>haahɔ</i>	<i>hɔɔhɔ</i>
JA ₁ , JI	<i>-aj</i>	<i>ɔj</i>	<i>ɣala</i>	<i>ɔɣɛ</i>	<i>uɣu</i>	<i>ɔɣja</i>	<i>ɔɣaj</i>	<i>ɣaajɔ</i>	<i>ɣɔɔɣɔ</i>
JA ₂	<i>-aw</i>	<i>ɔɔ ~ ɔj</i>	<i>ala ~ ɣala</i>	<i>ɔmɛ</i>	<i>umu</i>	<i>ɔmma</i>	<i>ɔmaj ~ ɔɣaj</i>	<i>aahɔ</i>	<i>ɔɔmɔ</i>
KA, KU	<i>-ak</i>	<i>kɔ</i>	<i>kala</i>	<i>ɔkɛ</i>	<i>uku</i>	<i>ɔnka</i>	<i>ɔkaj</i>	<i>kaakɔ</i>	<i>kɔɔkɔ</i>
MA, MU	<i>-am</i>	<i>mɔ</i>	<i>mala</i>	<i>ɔmɛ</i>	<i>umu</i>	<i>ɔmma</i>	<i>ɔmaj</i>	<i>maamɔ</i>	<i>mɔɔmɔ</i>

⁵ There are gaps in the table when the expected forms are absent from our data. Hyphens indicate non-existing forms.

⁶ The class pronouns are used as free pronouns, object clitics and relativisers. ‘Human’ classes A and BUK/KU have different object clitics, namely 3SG *-ɔj* and 3PL *-uɪ* respectively.

⁷ The final vowel in this series is a spatial deictic as the one found in the DEM series and may vary in the same way.

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NI	-an	na	na	na	na	na	na	na	na
SI	-as	sa	sala	sa	sa	sa	sa	sa	sa
U	-aw	wa	wala	wa	wa	wa	wa	wa	wa
D ₁	-əd	da	dala	da	da	da	da	da	da
T	-at	ta	tala	ta	ta	ta	ta	ta	ta
D ₂	-	da	-	da	da	da	da	-	da
N	-	na	-	-	-	-	na	-	-

Table 6 shows agreement markers in other categories:

Table 6: other agreement markers

	num AGR2	subj. AGR2	adj. rel. (subj) AGR1	poss. ⁸ AGRO
A	∅-	na~a ⁹	a-	∅-
BA, BU, B	bɔ-	bɔ-	ba-	b-
BUK	kɔ-	kɔ-	ka-	k-
E ₁	ɛ-	ɛ-	ja-	j-
E ₂	kɔ-	kɔ-	ka-	j-
HA, HU	hɔ-	hɔ-	ha-	h-
JA ₁ , JI	ʃt-	ʃt-	ʃa-	ʃ-
JA ₂		na~a~ʃt-	a-	
KA, KU	kɔ-	kɔ-	ka-	k-
MA, MU	mɔ-	mɔ-	ma-	m-
NI	na-	na-	na-	
SI	sa-	sa-	sa-	s-
U	wa-	wa-	wa-	
D ₁		di-~∅-	da-	
T		ta-	ta-	
D ₂	-	-	-	-
N	-	-	na-	-

2.1.3 Other agreeing elements

There are a few other elements that undergo class agreement, for which we do not have the whole paradigms yet:

- *-man* 'such-and-such': *hɔ-nak hɔ-man* 'such-and-such day'
- *C_xan-ɔɔ-C_xan* 'any': *tan-ɔɔ-tan* 'anywhere', *an-ɔɔ-an* 'anyone', *nan-ɔɔ-nan* 'anytime', etc.
- *C_xa-kɛɛl* 'of a particular kind' (ADJ agreement): *ja-leh-aw j-akɛɛl* 'a bird of a particular kind', *bɔk-an ka-kɛɛl* 'some specific people'; there is an extended form for which the difference in meaning is not known: *-kɛɛ mɪɪɛ* (< *-kɛɛl mɪɪɛ*): *bɔk-an-ak ka-kɛɛ mɪɪɛ* 'some (specific ?) people'.
- *-amɔm* 'same': *kɔ-mɛŋgɔ-ak ka-amɔm* 'the same mangoes'.
- *-ɛmɔm* 'numerical determiner'. Among other uses, it appears in the interrogative phrase *-ɛmɔm bu?* 'how many?': *si-jaagɔm-as si-ɛmɔm bu?* 'how many dogs?' (*bu?* 'how?').

2.1.4 Classes and number

Classically, noun classes are intrinsically associated with number. But besides the usual singular/plural contrast (see below), the following points are worth mentioning:

⁸ Possessive pronouns are presented in 5.2. The agreement markers shown here are for non-human possessees only.

⁹ See section 5.2. on third person.

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- For many nominal items, two plurals can be formed: one for a limited, countable quantity of elements, and a second one for an uncountable collection of elements. Only a limited number of classes may function as collective markers:
 - The BA class is the most frequent. It is a collective for pairings such as E/SI (*ε-hemb-aj / si-hemb-as* ~ *ba-hemb-ab* 'fruit sp. '), HU/KU (*hσ-ɔt-ah / kσ-ɔt-ak* ~ *ba-ɔt-ab* 'star'), KA/U (*kə-johali-ək / u-johali-əw* ~ *bə-johali-əb* 'spark').
 - The BU class is a collective for the pairings A/KU (*ə-kuə-əw / e-kuə-əy* ~ *bu-kuə-əb* 'thief'), KA/U (*ka-rɪŋ-ak / σ-rɪŋ-aw / bσ-rɪŋ-ab* 'thorn').
 - The E class is a collective for the pairings A/KU (*ə-ʔum-əw / ku-ʔum-ək* ~ *e-ʔum-əy* 'White, European'), KA/U (*ka-jahand-ak / σ-jahand-aw / ε-jahand-ay* 'palm leaf'), BU/U (*bσ-tɔkɔk-ak / σ-tɔkɔk-aw* ~ *ε-tɔkɔk-ay* 'shrub sp.').
 - HA is a collective for four nouns of the pairing E/SI: 'bee', 'palm nut', and two species of ants. This class has been noted as the plural for four more nouns of the E singular class and of the same semantic domain (a fruit, two species of wasps and a species of ant). Further investigation will probably show that these nouns may have a countable plural in the SI class.

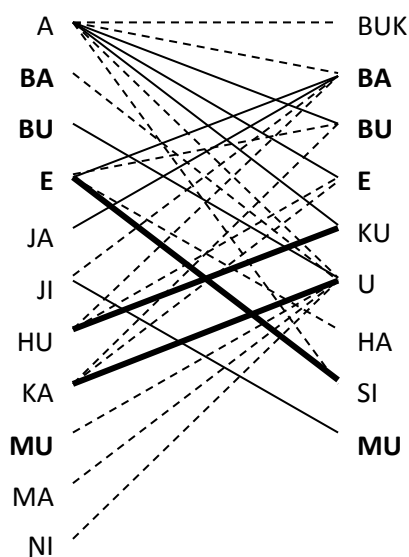
For a portion of nouns, including those denoting small entities (as insects or other small animals), the collective is cited as the default plural, whereas the 'regular' countable plural is considered as marked.
- A small proportion of nouns have no 'number' counterpart, i.e. either no plural or no singular. Such nouns may be found in 'singular' as well as in 'plural' classes: *ba-hɔkɔ-ab* 'thirst', *bσ-ŋɛka-ab* 'lazyness', *hə-sim-əh* 'blood', *ji-boom-əj* 'dance', *ka-waaw-ak* 'palm-wine tapping', etc. However, it cannot be said that number is not associated with these classes, since they are otherwise massively used within singular/plural pairings. There is apparently no dedicated class for mass nouns.

2.1.5 Singular/plural class pairings

The class pairings presented here are those that involve a singular/plural opposition. While there are a lot of such pairings, many of them are either rare or exceptional.

Figure 1 below shows all and only the singular/plural pairings and their relative frequency. Bold lines show the most frequent pairings, dotted lines show the less frequent ones. Bold class labels indicate those classes that may be associated with either singular or plural.

Figure 1: class pairings



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2.1.6 Semantics of noun classes

The complex semantics of noun classes can not be presented in full detail here. Many features are familiar to Niger-Congo specialists, including the following:

- Human beings are typically in the A/KU pairing, but there are many exceptions: A/BA ('child', 'maid'), A/BU ('sibling', 'drummer', 'weaver', 'potter' and agents of other habitual occupations), A/E ('slave', all ethnic names). Actually, it is often the case that A nouns may have their plural in more than one class: A/BA~BU, A/KU~E, A/KU~BU. This variation in the plural class may or may not be associated with a variation in meaning. As an alternate to KU, the second plural is a collective (see 2.1.4).
- There is a preferential class (MU) for nouns denoting liquids: *mɔ-mɛl-am* 'water', *m-iit-am* 'palm-oil', *mɔ-sɔr-am* 'urine'. There are of course some exceptions: *hə-sim-əh* 'blood', *ɛ-gɛɛn-aj* 'sweat', *bɔ-nɔk-ab* 'palm-wine'... as stated above (2.1.4), nouns with mass semantics are not bound to a particular class.
- Trees tend to fall in the BU/U pairing, whereas their fruits are in the HU/KU pairing.
- Big or familiar animals tend to fall in pairing E/SI.
- Noun class substitution is widely used to express dimensional derivation, i.e. augmentatives and diminutives. The most productive classes are: JI (pl. MU) and A (pl. BA) for diminutives, HU (pl. KU) for augmentatives. Only class JI seems to be a purely derivative class, in the sense that i) no noun seems to belong to class JI only; ii) all nouns may form a diminutive in the JI class.
- The MA class seems to be primarily associated with abstract nouns: *mə-ʒub-əm* 'justice', *mə-booteni-əm* 'sadness', *mə-ʒak-am* 'beauty', *mə-ʔɛɛn-am* 'truth'.
- While borrowings tend to be affected to pairing E/SI, there are a few exceptions in which semantics override the general principle: *hɔ-pɔm-ah* / *kɔ-pɔm-ak*¹⁰ 'apple' (< French *pomme*), *mə-fiir-əm* 'jealousy' (< Wolof *fiir* 'to envy').

2.2 Numerals

The numeral system is 5-, 10- and 20-based. Only numerals from 1 to 4 show class agreement. Their citation forms use class E for 'one' and class SI (the regular plural to class E) for 'two', 'three' and 'four'. 'five' and 'ten' use classes HU and KU (regular plural to HU) respectively. In 'ten' one recognises the lexical stem for 'hand' (*ka-ɲɛn* / *ɔ-ɲɛn*) but with a different class. *ə-ji* 'twenty' also means 'king'. This is a case of the anthropomorphic numeral system based on body parts (hand and feet) and the entire person (king) that is widespread in the entire area and also attested in Nyun (Cobbinah, this volume, Lüpke, this volume, Quint, this volume). Table 7 shows the numbers as given in isolation:

Table 7: Numerals from 1 to 10

<i>ɛ-anɔr</i>	'one'	<i>hɔ-tɔk dɪ ɛ-anɔr</i>	'six'	<i>kɔ-ɲɛn dɪ si-həɛʒi</i>	'thirteen'
<i>si-subə</i>	'two'	<i>hɔ-tɔk dɪ si-subə</i>	'seven'	<i>kɔ-ɲɛn dɪ hɔ-tɔk</i>	'fifteen'
<i>si-həɛʒi</i>	'three'	<i>hɔ-tɔk dɪ si-həɛʒi</i>	'eight'	<i>ə-ji</i>	'twenty'
<i>si-bakur</i>	'four'	<i>hɔ-tɔk dɪ si-bakur</i>	'nine'	<i>ə-ji dɪ kɔ-ɲɛn</i>	'thirty'
<i>hɔ-tɔk</i>	'five'	<i>kɔ-ɲɛn</i>	'ten'	<i>ku-ji ku-subə</i>	'forty'

Ordinal numerals are obtained through three different ways:

- a change of lexical stem: *tijer* 'first' (comp. with *anɔr* 'one').
- a *-t* suffix: *subu-t* (< *subə-t*) 'second', *həɛʒi-t* 'third'.
- an *-ɛn* suffix¹¹: *bakur-ɛn* 'fourth', *tɔk-ɛn* 'fifth'.

¹⁰ Note that this is the only word with a [p].

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- after five, the bare numeral may be preceded by *ɲεεmɔm* ‘numbering’

2.2.1 ‘times’

(+) When combined with class HU, ordinals come to mean ‘the Xth time’: *hu-subut-əh* ‘the second time’, *hɔ-tɔken-ah* ‘the fifth time’. However, ‘the first time’ is rendered with class MU: *mu-tijer-əm*.

(+) A cardinal number of times needs class HU in the singular (*hanɔr* ‘once’) and a special *ɲa-* prefix in the plural: *ɲə-subə* ‘twice’, *ɲə-həəɲi* ‘three times’, *ɲə-bakur* ‘four times’. This agreement marker probably refers to a class NI noun meaning ‘time’ (absent from our data). Other numbers of times need the presence of the numerical determiner *-εmɔm*, still with the *ɲ-* agreement: *ɲε-εmɔm kɔ-ɲen di si-bakur* ‘fourteen times’. The same *ɲa-* prefix may be used with *-kεεl* ‘some, certain’ to form *ɲakεεl* ‘perhaps’.

2.3 Demonstratives and pronouns

There are three series of demonstratives (see Table 5 above for the forms):

- the *ɔC_xε* series: close to the speaker (DEM1)
- the *uC_xu* series: close to the hearer (DEM2)
- the *ɔNC_xa ~ ɔC_xC_xa* series: far from both the speaker and the hearer (DEM3)

With the locative pseudo-classes, the demonstratives may be used as adverbs: *ɔtε* ‘here’, *udu* ‘in there’, *ɔmba* ‘over there’.

Proximal demonstratives (DEM1 and DEM2) may be followed by *maa* for precise reference (typically when pointing at something). This is true for locatives as well: *ɔtε maa* ‘here exactly’.

The pronouns are made of the class consonant (AGRO) and the anaphoric morpheme *-ɔ* (see Table 5 above).

2.4 Genitive link

The genitive link, also called connective, is *-ala*, preceded by the class consonant (AGRO), as shown in the table above: *ε-sanken-εj j-ala εεr* ‘the language of Er (Kabrousse)’; *hɔ-caacɔr-ah h-ala kə-loɲ-ək ka-baakɔm* ‘long-tailed parrot’ (CLhu-parrot-DEThu AGR0hu-GEN CLka-tail-DETKa AGR1ka-long-COMPL).

3 Morphology 2 : the verb

3.1 Bare stems

Verb roots are mostly of the CV(V)(N)C shape: *gɔr* ‘to touch’, *faaŋ* ‘to call’, *kɔb* ‘to wait’, *nɔb* ‘to rain’, *nɔŋg* ‘to decide’, *ɬac* ‘to spit’. The exceptions include short roots (*lu* ‘to pierce’, *lɔ* ‘to fall’, *ɬh* ‘to breathe’) as well as long ones (*ɲɔɔb* ‘to follow’, *ɲiker* ‘to watch’, *ɲaɬɔn* ‘to weep’, *ɲentereɲ* ‘to shell’). Many verb stems are only attested with one or more derivational suffixes, which may or may not be productive: *kol-i* ‘to be afraid’ (with *-i* ‘stative’, cf. 3.3.10), *kol-i-en* ‘to frighten’ (with *-i* ‘stative’ and *-en* ‘causative’, cf. 3.3.1), *kεl-εn-ɔɔr* ‘to tilt the head’ (with *-en* ‘causative’ and *-ɔɔr* ‘pluractional’ cf. 3.3.3)...

3.2 Infinitives

When asked to translate a verb in isolation, most Keeraak speakers give a noun-like form in the JA₁ class: *ɲa-fɔn-aj* ‘to count’, *ɲa-baal-aj* ‘to forgive’, *ɲə-mir-aj* ‘to know’. However, for a few verbs, the form is given in another class: *hɔ-ɲɔɔɲɔ-ah* ‘to eat’, *ε-rɔŋ-aj* ‘to live’, *ba-hɔɔɔ-ab* ‘drinking’. In addition,

¹¹ *-en* may have a causative value within verbal morphology, see below.

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most verbal stems also yield a form in the KA or in the E class, which are the preferred infinitive classes in many Joola lects (see Sapir 1965, Bassène 2007, Sagna 2008): *fun* ‘to count’ > *ka-fun-ak* ‘counting’, *nah* ‘to cultivate’ > *ε-nah-aj* ‘cultivation, cultivating’. For some of these verbs, there is a difference between the JA and the E/KA ‘infinitive’. For example, the stem *ɾɔŋ*, when in the JA₁ class, may mean ‘to live’ or ‘to give birth’, but it only means ‘to live’ in the E class and ‘to give birth’ in the KA class. Other kind of differences may be associated with class assignment: the infinitive of the stem *nah* ‘to cultivate’ needs an oblique ‘object’ when in the JA₁ class but not when in the E class: *ja-nah-aj* (*j-ala X*) ‘cultivation (of X)’ vs *ε-nah-aj* ‘cultivation, cultivating’. However, apparently, these cases are not frequent, and the two infinitives may generally be used in the same contexts: *a-ɲul-aw na-jet-ε ja-fun-aj* ~ *ka-fin-ak* ‘the child can count’ (CLa-child-DETa 3SG-can-PUNCT CLja-count-DETja ~ CLka-count-DETKa). We strongly suspect a slight difference either in meaning or in usage, but this could not be demonstrated so far.

3.3 Derivational suffixes

Derivational suffixes, or verbal extensions, transform the meaning of verbs in various ways: they may increase or decrease the valency, modify the semantic roles, the relationship to time or space and even the aesthetic appreciation of the speaker.

3.3.1 *-en* ‘causative’

This extension is very productive or, at least, very common. While ‘causative’ is the label that describes best many of its occurrences, its true value is actually more complex. The true causative derivation includes pairs of items such as *fur* ‘to go out’ > *fur-en* ‘to empty’, *hɛɛf* ‘to cool down’ > *hɛɛf-en* ‘to cool sth down’, *kol-i* ‘to be afraid’, *kol-i-en* ‘to frighten’. However, many verbs that exhibit this suffix are lexicalised and may not be analysed as causatives. Instead, they seem to show some kind of unpredictable shift from the meaning of the underived verb: *hɔk* ‘to dig’ > *hɔk-en* ‘to bury’, *jal* ‘to harvest (rice)’ > *jal-en* ‘to prune (palm-tree)’, *ɬemp* ‘to carve’ > *ɬemp-en* ‘to peel’... A fair number of verbs are only attested with *-en*, so that it is not possible to evaluate the exact meaning of the suffix: *ɬɔɬɛn* ‘to sing (rooster)’, *lɔkɛn* ‘to take revenge’, *naanen* ‘to keep’, *fisen* ‘to think’, *jaalen* ‘to help’...

3.3.2 *-ɔ* ‘middle’

Verbs carrying this extension show meanings in which the agentive subject is directly affected by the process: *jɔh* ‘to hide (tr)’ > *jɔh-ɔ* ‘to hide o.s.’. *-ɔ* verbs apparently never convey a reflexive meaning (*kiik* ‘to shave (tr)’ > *kiik-o* ‘to get shaved’, *ɬɪb* ‘to cut’ > *ɬɪb-ɔ* ‘to get cut’). True reflexives are formed with the *-ɔɔr-ɔ* combination of suffixes (see below). It is often the case that instead of contrasting with its absence, the middle suffix is opposed to the *-en* suffix: *ɬaal-en* ‘to raise’ / *ɬaal-ɔ* ‘to stand up’. Many verbs are only attested with this extension: *ɲɔɲɔ* ‘to eat’, *hɔɲɔ* ‘to drink’, *leego* ‘to be drunk’, *fatɔ* ‘to keep silent’.

3.3.3 *-ɔɔr* ‘pluractional’, ‘reciprocal’

Verbs with this extension typically have meanings in which more than one occurrence of the process is involved. With plural subjects, and provided that the core meaning of the verb is compatible, the resulting value is ‘reciprocal’: *ɲɪkɛr* ‘to look at, to watch’ > *ɲɪkɛr-ɔɔr* ‘to look at each other’, *mir* ‘to know’ > *mir-oor* ‘to know each other’. However, *-ɔɔr* may occur with many verbs with no possible reciprocal reading. In such cases the resulting meanings are less predictable but very often include the idea of repetition or intensivity: *ɲaaŋ* ‘to go, to walk’ > *ɲaaŋ-ɔɔr* ‘to wander’, *ɬaw* ‘to ask’ > *ɬaw-ɔɔr* ‘to ask constantly’, *ŋɔt* ‘to sleep’ > *ŋɔt-ɔɔr* ‘to do nothing but sleep’. There are some examples of the same verb having two different readings depending on the subject being plural or singular: *bɔɲ* ‘to hit’ > *bɔɲ-ɔɔr* ‘to fight, to hit each other’ (with plural subject) ~ ‘to do nothing but fight’ (with singular subject). In a few cases (and apparently not very productively) this extension is associated

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(here frozen) causative one. Noticeably, and unlike other Joola lects (Bassène 2007), passivised stems seem incompatible with deverbal derivations, including *ja*-infinitives.

3.3.10 **-i* ‘stative’

This ending is found on a few verbs that are not attested without it. All these verbs have a stative meaning, and all of them (except two including one Wolof loanword) use the closed vowel set. We can therefore consider this ending as a frozen suffix: *leeli* ‘to be sweet (palmwine)’, *neki* ‘to be lazy’, *soŋji* ‘to suffer’, *-təli* ‘to be bitter’. The corresponding active verbs are not obtained by the removal of the suffix, but instead by addition of the causative *-en*: *soŋji* ‘to suffer’ > *soŋji-en* ‘to hurt’; *koli* ‘to be afraid’ > *koli-en* ‘to frighten’. In one case the causative seems to have frozen before the stative: *booteni* ‘to be sad’. In our data there is one example of the suffixal nature (and of the closeness of the vowel) of *-i*, which involves a noun and a verb: *bɔ-ɔlaat-ab* ‘greed’ ~ *uləəti* ‘to be greedy’.

3.3.11 *-əli* ‘anticipative’

The meaning of this extension is that of an action carried out early, or in advance. It triggers vowel harmony: *ɲɔɲɔ* ‘to eat’ > *ɲoɔfo-əli* ‘to eat early’, *raagɔ* ‘to die’ > *rəəgo-əli* ‘to die too soon, to die young’.

3.3.12 *-iinəj* ‘aesthetic’

This unusual extension is apparently unknown in other Joola varieties. It adds an aesthetic dimension to the basic meaning of the verb. It may be added to either active or stative verbs: *ɲɔɲɔ* ‘to eat’ > *ɲoɔf-iinəj* ‘to eat in a nice manner; *hur* ‘to be salty’ > *hiir-iinəj* ‘to be correctly salty’. It is apparently quite productive.

3.3.13 *-ikoor* ‘intensive, derogatory’

This suffix has a unique property, in that its vowels are intrinsically closed but don’t trigger the closing of the preceding vowels. Yet, it is a suffix, since the nominal forms of the derived verbs take the default determiner. It adds an intensive, and somewhat derogatory value to the bare stem: *lɔ* ‘to fall’ (citation form *jalɔaj*) > *lɔikoor* ‘to fall heavily’ (citation form *jalɔikoorəj*); *sonji* ‘to hurt’ > *sonjikoor* ‘to hurt badly’; *bɔj* ‘to hit’ > *bɔjikoor* ‘to hit hard’. However, if the stem has an intrinsic positive meaning, the derived verb remains positive: *hɛɛɲ* ‘to smell good’ > *hɛɛɲikoor* ‘to smell wonderful’. This suffix is apparently productive, but the values of some derived verbs are not always easily predictable: *ɲaəŋ* ‘to go, to walk’ > *ɲaəŋikoor* ‘to limp, to walk in a strange way’. *ikoor* is attested in one noun whose stem does not exist as a verbal one, but still with a derogatory meaning: *hɔ-basikoor-əh* / *kɔ-basikoor-ək* ‘sheaf of rice of poor quality’.

3.3.14 *-ɔnɛn* ‘assistive causative’

This suffix, a probable compound of *-ɔn* and the causative *-ɛn*, is rare and has various senses, depending on both the meaning of the bare stem and cultural habits. In the few occurrences that we have found, the meanings range from purely assistive to purely causative: *bɔɔm* ‘to dance’ > *bɔɔm-ɔnɛn* ‘to help dance’ (said about adults making/helping the children dance); *rɔk* ‘to work’ > *rɔk-ɔnɛn* ‘to help someone to work’ or ‘to make someone work hard’; *ɲaəŋ* ‘to go’ > *ɲaəŋ-ɔnɛn* ‘to follow, to track, to join’.

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3.3.15 -um¹³ ‘instrumental’ and ‘applicative’

A productive deverbative suffix *-um* is used to form deverbal nouns denoting instruments: *bɔɔt* ‘to fish’ > *mu-buut-um-əm* ‘bait’; *gəuj* ‘to navigate, to paddle’ > *e-gəuj-um-əj* ‘paddle (noun)’. A small number of verbs, however, seem to bear this suffix too. Some of them may be held to derive from instrumental nouns which in turn come from verbs: *ɲɔt* ‘to sleep’ > *si-ɲotum-əs* ‘dream (noun)’, *ɲotum* ‘to dream’; *ʃab* ‘to start’ > *bu-ʃabum-əb* ‘start (noun)’, *ʃabum* ‘to start’. We found one case where the instrumental suffix is apparently attached to a noun (but there might be a verb, absent from our data): *a-faal-aw* ‘friend’ > *bə-fəalum-əb* ‘friendship’, *fəalum* ‘to be friends’.

This instrumental suffix is also used in verbal predicates as an applicative, introducing a new argument in object position with a semantic role of instrument (*rɔk* ‘to work’ > *rɔk-ɔm* ‘work with (an instrument)’) or locative complement. The locative complement may express the origin or the path but not the goal of a movement: *fur* ‘to go out’ > *fur-um* ‘to go out coming from/through’, *lɔ* ‘to fall’ > *lo-um* ‘to pass by’.

3.3.16 -ɛt ‘denominative’

This is the only denominative suffix, i.e. a suffix that transforms a noun into a verb. It is quite unusual, since in the Joola languages (and in many of the languages of the region in general) it is very often the case that the same lexical stem be used either as verb or noun with no other marking than a noun class assignation: *cuuk* ‘to discuss’ ~ *kə-cuuk-ək* ‘discussion’. Here are a few examples of the *-ɛt* suffix: *kɔ-kɔnt-ak* ‘dirt’ > *kɔnt-ɛt* ‘be dirty’, *ha-kɔr-ah* ‘smoke’ > *kɔr-ɛt* ‘to smoke (intr)’, *a-mukɛl-aw* ‘servant, slave’ > *mukɛl-ɛt* ‘to serve s.o.’. When attached to nouns denoting useful things that are usually picked up or collected, *-ɛt* verbs mean ‘to go and collect X’: *hɔ-mɛŋgɔ-ah* ‘mango’ > *mɛŋgɔ-ɛt* ‘to go and collect/pick up mangoes’, *hɔ-ɔt-ah* ‘oyster’ > *ɔt-ɛt* ‘to go and collect oysters’. When suffixed to a verb (which is very rare in our data), *-ɛt* seems to add a meaning of remoteness: *ɲɔɲɔ* ‘to eat’ > *ɲɔɲɔɛt* ‘to eat away from home’; *ɲaaŋ* ‘to go’ > *ɲaaŋ-ɛt-um* ‘to take away’.

3.3.17 Lexical reduplication

Within verbal derivation, total or partial reduplication is generally used in conjunction with the *-ɛn* extension, whose causative meaning is often hard to detect, or with the pluractional/reciprocal *-ɔr* extension, with no reciprocal meaning. Verbs derived in this way generally denote actions performed little by little, or in some kind of repetitive manner: *fɔm* ‘to jump over’ > *fɔmfɔmɔr* ‘to hop’. Except for the example just cited, the original CVC verb stem is not attested as such or has a quite different meaning: *ɲɔɲɔŋ* ‘to stutter’ (< **ɲɔɲ*), *ɬɬɬɬŋ* ‘to shake’ (< **ɬɬŋ*), *ɲɲɲɲ* ‘to shiver’ (< **ɲɲ*), *babaken* ‘to shiver’ (but *bak* ‘to tighten a knot’), *ɔɔɔɔɛn* ‘to rain little by little’ (< **ɔɔɔ*), *ititɔr* ‘to rock, to swing’ (< **it*). In one case, reduplicated forms with the *-ɛn* suffix and with the *-ɔr* suffix are both attested: *kikilen* ‘to roll sth’ / *kikiloor* ‘to roll’ (< **kil*).

4 Other categories

4.1 Adjectives

Most adjectival modifiers derive from verbs following a relative clause pattern. They are formed with the completive suffix *-ɔm* (see 5.3) and require the *Ca-* (AGR1) agreement prefix series as the subject relativisers do (see Table 6 above): *al* ‘to be ripe’ > *-al-ɔm* ‘ripe’, *hut* ‘to be white’ > *hut-ɔm* ‘white’. Thus many adjectives derive from stative verbs. For the verbs bearing the stative suffix *-i* or the passive suffix *-l*, the adjectival ending is just *-m*, exactly as is the completive suffix *-ɔm* after a vowel (see Table 13): *ɲoobi* ‘to be cold’ > *ɲoobim* ‘cold’; *tɔʃ* ‘to break’ > *tɔʃi* ‘to be broken’ > *tɔʃum* ‘broken’.

¹³ Most occurrences of this suffix justify to posit a closed vowel (i.e. triggering vowel harmony), but in a few examples (see *infra*) the vowels remain open. This contradiction cannot be explained so far.

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Beside these relative structures, there are a few intrinsically adjectival stems: *ar* ‘female’, *in* ‘male’¹⁴, *əmək* ‘big’, *haan* ‘old’, *beesum* ‘youngest (child)’, *ɔnkɔl* ‘new’. The stem **tut* ‘small’ is not attested as such but yields the forms *tuta* ‘small’ beside the verbal form *tiit-i* ‘to be small’.

4.2 Ideophones

Keeraak has three kinds of ideophones, or “marked words depictive of sensory imagery” (as put by Dingemanse 2002):

(i) Quality-specific ideophones, used as intensifiers for a single notion carried by quality verbs or by adjectival stems:

<i>cɔl</i>	with <i>jan</i> ‘to be red’	<i>far</i>	with <i>hut</i> ‘to be white’
<i>sɔf</i>	with <i>fatɔ</i> ‘to be silent’	<i>cum</i>	with <i>sɔf</i> ‘be hot’
<i>jaŋŋ</i>	with <i>ɔnkɔl</i> ‘new’	<i>tɪr</i>	with <i>ʔɛn</i> ‘to be black’

(ii) Action-specific ideophones that accompany action verbs, adding various meanings, including, but not limited to, intensive ones:

<i>tɪr</i>	‘tightly’	with <i>bak</i> ‘to attach’
<i>fac</i>	‘abruptly’	with <i>furul</i> ‘to come out’
<i>hah</i>	‘unappropriately’	with <i>hɪɛn</i> ‘to interfere in a conversation’

(ii) onomatopoeic, noun-specific ideophones, introduced by the quotative verb *an* ‘to say’ or by *kaan* ‘to do’:

<i>fjɔ</i>	describes the rapid movement of an arrow
<i>fər</i> ~ <i>frɔ</i> - <i>frɔ</i>	describes the rapid movement of a passing bird
<i>maʃ</i>	describes the rapid movement of a cat, a child
<i>haah</i>	very relieved

There can be variants and also homophones among ideophones (*cf.* above *tɪr* ideophone of ‘be black’ and ‘attach’) as well as vowel length contrast (*cf.* above *hah* / *haah*).

4.3 Locative morphemes

Keeraak has a rich system of locative morphemes (prepositions, adverbs, interrogative adverbs, relativisers) formed with (a) spatial morphemes based on the locative pseudo-classes (*cf.* 2.1) and used to specify the nature of the referred space, and (b) a set of spatial deictic suffixes, specifying the distance from the speaker, completed by an anaphoric suffix:

(a) Spatial morphemes:

- <i>t</i>	limited and precise space
- <i>b</i>	large or vaguer space
- <i>d</i>	inner space

The three distance deictics are also used to form the demonstratives (see Table 5 above). As with the demonstratives, the remote deictic morpheme (-*a*) requires the prenasalised series (*i.e.* -*nt*- / -*mb*- / -*nd*-) of the spatial morphemes, and the distal (-*u*) is closed and thus triggers

¹⁴ The nouns *annaraw* ‘woman’ and *anniinaw* ‘man’ are in fact syntagms, respectively *an-aw a-ar-aw* ‘female person’ and *an-aw ə-in-əw* ‘male person’.

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harmony¹⁵. Remarkably, in some cases, the spatial *-d-* seems to trigger the closing of surrounding vowels.

(b)	distance deictics	<i>-ε</i>	close to the speaker
		<i>-u</i>	close to the hearer, or remote or separate from the speaker
		<i>-a</i>	far remote from speaker (and hearer)
	anaphoric	<i>-ɔ</i>	

Beside their use as noun classes markers, the spatial morphemes are used to form the locative indefinite adverb (*bun* 'somewhere (else)'), the generic and polyfunctional locative preposition (*di* 'in, to, at...'), a spatial preposition in a remarkable paradigm (*taat, baab, daad* 'at someone's place'), and the interrogative locatives: *ɔ-t-aj?* 'where (limited space)?', *ɔ-b-aj?* 'where (large space)?' *u-d-aj?* 'where (inner space)?'. The distance deictics combine with the spatial morphemes to form locative adverbs, and with the anaphoric suffix, to form locative relativisers (Table 8).

Table 8: locative adverbs and pronouns

Location in a :	limited space	large space	inner space
here (close to the speaker)	<i>ɔ-t-ε</i>	<i>ɔ-b-ε</i>	<i>u-d-e</i>
there (close to the hearer)	<i>u-t-u</i>	<i>u-b-u</i>	<i>u-d-u</i>
over there (far from speaker and hearer)	<i>ɔ-nt-a</i>	<i>ɔ-mb-a</i>	<i>u-nd-ə</i>
where?	<i>ɔ-t-aj?</i>	<i>ɔ-b-aj?</i>	<i>u-d-aj?</i>
there (anaphoric clitic)	<i>=t-ɔ</i>	<i>=b-ɔ</i>	<i>=d-ɔ</i>
where (relative adverb)	<i>t-ɔ</i>	<i>b-ɔ</i>	<i>d-ɔ</i>

Finally, the distance deictics are used to form locative copulas (see Table 9), which are morphologically related to demonstratives but have a predicative function. They are used in non verbal locative sentences with a noun (e.g. *ɛjagɔmaj j-ɔɔ-j-ε* 'the dog is close to me') or a personal pronoun as subject, and also in two complex conjugations, the Statal Perfect and the Ongoing Present (see 5.4.1). The personal markers show a *-m-* agreement marker for singular and a *-(bɔ)k-* for plural¹⁶.

Table 9: the locative copulas

	close to me	close to you	far from you and me but visible
Persons			
SG	<i>ɔɔm-ε</i>	<i>ɔɔm-ɔ</i>	<i>ɔmm-a</i>
PL	<i>(bɔ)kɔɔk-ε</i>	<i>(bɔ)kɔɔk-ɔ</i>	<i>kɔɔk-a</i>
Nouns			
CL.ε	<i>jɔɔj-ε</i>	<i>jɔɔj-ɔ</i>	<i>jɔɔj-a</i>
CL.ka	<i>kɔɔk-ε</i>	<i>kɔɔk-ɔ</i>	<i>kɔɔk-a</i>
CL.sl	<i>sɔɔs-ε</i>	<i>sɔɔs-ɔ</i>	<i>sɔɔs-a</i>

4.4 Adverbs

Here are listed words or expressions that can be used adverbially, i.e. to add some specification to the predicate. In many temporal adverbs, one can recognise a nominal formation, involving a noun class prefix. However, these pseudo-nouns do not trigger class agreement. Table 10 lists deictic temporal adverbs referring to days and years respectively. These two sets are formed similarly, with

¹⁵ The three series of demonstratives which involve open vowels, closed vowels and prenasalised consonants evoke the origin of consonant alternation in Atlantic as postulated by J.L. Doneux (1991: 140).

¹⁶ However, sometimes speakers give a form with an *-m-* marker for first plural inclusive (*ulaal ɔɔm-aal-ε > ulaame*), and with a *-ɔ* for second plural (*ɔɔɔ-ε*). This point requires further investigations.

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basic stems for elements closer to present (i.e. ‘yesterday’, ‘today’, ‘tomorrow’ and ‘last year’, ‘this year’ and ‘next year’), further elements being derived with common patterns:

Table 10: deictic temporal adverbs

	DAY	YEAR
-4	<i>hukenum jaaja</i>	<i>sunkenum jaaja</i>
-3	<i>hukenum</i>	<i>sunkenum</i>
-2	<i>untibare huken</i>	<i>untibare sunken</i>
-1	<i>huken</i>	<i>sunken</i>
0	<i>hummæare</i>	<i>kajle</i>
+1	<i>kajom</i>	<i>bɔlaj</i>
+2	<i>untibare kajom</i>	<i>untibare bɔlaj</i>
+3	<i>kajomɔm</i>	<i>bɔlajenɔm</i>
+4	<i>kajomɔm jaaja</i>	<i>bɔlajenɔm jaaja</i>

Other temporal adverbs include *tɔtɔlar* ‘during the day’, *hɔɔnnar* ‘in the afternoon / evening’, *dɔɔkar* ‘at night’, *dɔɔrabar* ‘in the morning’, *lɔɔli* ‘never; not even’, *mɪnaa* ‘now’, *mɪnɛɛ* ‘now, soon’, *mɛɛmɪnɛ* ‘right now, at once’, *haahe (maa)* ‘soon’, *taate* ‘a short while ago’, *nɔ* ‘formerly’, *naanaɲ* ‘formerly, before’, *nunnaan* ‘often; next time’, *ɔom* ‘once again’, *hɔɔɔɔɔmah* ‘finally’ (from *-ɔɔɔɔm* ‘last’), *fɪɔ* ‘a long time’.

The following quantitative / qualitative adverbs were found: *mæmæk* ‘very, a lot, too much’, *ɔak* ‘well, nicely’¹⁷, *fɛ* ‘all, completely’, *mɪnam* ‘that way’, *ɔatuta* ‘a few; slowly’¹⁸, *bamɪna* ‘only’. The expression *nɔɔn bɔɔm* is used as an intensifier, expressing the high degree of the predicate. Sometimes *noon* (‘as’) may be used alone, with the same intensive meaning:

- (2) *si-nan-as* *si-suum-e* *nɔɔn*
 CLsi-rice-DEtsi AGR2si-be good-PUNCT as
 ‘The rice is very good’

4.5 Prepositions

The following simple prepositions were found: *di* ‘in’, *bɛ* ‘till’, *loh* ‘close to’, *ɲala* ‘beside’, *nɔɔn* ‘as, like’. Among them, *di* is remarkable, given its wide range of meanings and uses. Besides its original locative meaning as ‘in’, it is used as a generic locative, a comitative, an indirect object marker. It may also be part of prepositional expressions as *bɛ di* ‘towards, to, with (things)’, *baab di* [baabrɪ] ‘at (s.o.’s place)’¹⁹; it appears in the coordinative construction *N1 PRO+di N2: Asambu kɔ di* [kɔrɪ] *Koko* ‘Asambu and Koko’.

In addition, spatial relations may be expressed by a few particular nouns which are used without the default determiner and without any preposition, but instead require an agreeing genitive marker:

- (3) *a-ɲul-aw* *ɔomɔ* ***h-indenər*** *h-ala* *bɔ-mɛɲɔv-ab*
 CLa-child-DETa COPLOC CLhu-under AGR0hu-GEN CLMbu-mango-DETabu
 ‘The child is under the mango tree’

¹⁷ *-əmæk* is also used as an adjective (see 4.1 above), and the *-ɔak* may be used as a verb or an adjective.

¹⁸ See 4.1 above.

¹⁹ The form *baab* has less frequent variants based on the spatial morphemes paradigm: *taat*, *daad* (cf. 4.3.).

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Such ‘locative nouns’ include *tɔtar* ‘in the middle’, *hatijar* ‘on, above’, *kɔɣɛɛnda* ‘behind’ (< *bɔɣɛɛndab* ‘back’), *hɔtɔɔra* ‘between’. The expression of other spatial relations requires a posture verb, such as *-kagɔ* (followed by *di* + noun) ‘to lean against’, *-gand-l* (followed by a locative noun) ‘to hang + PASS’.

5 The verbal system

5.1 Organising principles

Keeraak has a rich verbal system with simple forms composed of subject prefixes and TAM suffixes and complex forms including auxiliaries, particles and copulas. In this paper we will present the paradigms and their semantic values, leaving aside the question of non-verbal predication and syntactic features more generally.

The overall system can be presented in two ordered levels of complexity. At a first level, simple (hereafter ‘primary’) verbal paradigms are made of TAM morphemes suffixed to the inflected root (prefixed with agreement or personal markers). At a second level, complex forms are built using inflected auxiliaries, copulas or particles, followed by the verb root, which is also inflected with the subject markers. We are going to follow this organisation for the presentation of the verbal system, and complete the picture by presenting the negative inflections, and eventually the *-ɛɛn* past suffix and the dependent forms. For space reasons, we will not provide here the complete table of the paradigms with their fused forms but illustrate them while providing their formation patterns, for which some morphological questions are still pending. The semantic values given here for these verbal paradigms are provisional and warrant further investigation about their uses.

5.2 The free pronouns and the two sets of bound subject prefixes

Beside free personal pronouns, Keeraak has two sets of personal subject prefixes, a short, vocalic one and an extended one with an additional *n-*. Table 11 below also includes object and possessive personal paradigms.

Table 11 : Personal markers

	free pronouns	subject prefixes	<i>n</i> -subject prefixes	object suffixes	possessive suffixes
1.SG	<i>ijɲɛ</i>	<i>l-</i>	<i>nl-</i>	<i>-ɔm</i>	<i>-umbə ~ -umboom</i>
2.	<i>aw</i>	<i>ɔ-</i>	<i>nɔ-</i>	<i>-l</i>	<i>-ija</i>
3.	<i>ɔɔ</i>	<i>a-</i>	<i>na-</i>	<i>-ɔɔl</i>	<i>-ɔɔɔl</i>
1.pl incl.	<i>ɔla</i> ²⁰ , <i>ɔlaal</i>	<i>u-...-aal</i>	<i>nu-...-aal</i>	<i>-ɔlal</i>	<i>-ɔɔɔlal</i>
excl.	<i>ɔl</i>	<i>ɔ-</i>	<i>nɔ-</i>	<i>-ɔl</i>	<i>-ɔɔɔl</i>
2.	<i>mijɔl ~ mɔjɔl</i>	<i>ɲ-</i>	<i>(dl) ɲ-</i>	<i>-ɔl</i>	<i>-ɔɔɔl</i>
3.	<i>bɔkɔ</i>	<i>kɔ-</i>	<i>(dɔ) kɔ-</i>	<i>-ul</i>	<i>-ɔɔɔul</i>

For 2PL and 3PL, *n*-forms and short forms are identical but in some inflections, the *n-* morpheme is substituted by *dl*, homophone with (and probably identical to) the polyfunctional (locative) *di*

²⁰ *ɔla* is a dual, and can only be found in the free pronouns paradigm. For other paradigms the inclusive form is used.

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preposition, as it is also the case for the class agreement morphemes in the same contexts. These complex forms with *dl* appear with the Consecutive and the Present negation.

Note that Keeraak has an inclusive (i.e. including the addressee) and exclusive distinction for the 1PL. For the complete list of the free class pronouns (*Class consonant-ɔ*) and subject agreement markers see section 2.1.2.

There are several reasons to posit real 3rd person markers, distinct from class agreement. Remarkably, the short 3rd person subject prefixes are identical to the standard noun class prefixes of nouns denoting human beings (singular A, plural KU~BUKO). These subject prefixes may also be used when referring to nouns bearing different prefixes, insofar as they denote human beings; in addition, 3rd person object and possessive forms may not be deduced from noun class markers. The important point to note is that, by contrast with personal affixes, there is only one set of subject agreement markers for noun classes.

The free pronouns can be used in isolation, after a preposition or in focus position before the verb for subject-focusing verb forms. In this latter case, for primary paradigms, a bound (agreement) subject prefix (short form) is still needed. The motivation for the distribution of the short vs. *n*-forms is not fully understood. So far, two rules can be stated: the *n*-forms never appear after the free pronouns, the short forms never appear at the beginning of an independent assertive clause, except for the negative inflections.

The short subject prefixes are used :

- for the Basic form, Imperative and Hortative
- after the free pronouns, i.e. for the subject-focusing paradigms
- before the verb stem in the futures and habitual (complex forms)
- in most of the negative paradigms (except the present and progressive negatives)
- with the various dependent forms, and also for the verb in subject relative clauses

The *n*-forms are used in the remaining contexts, that is:

- For the Consecutive²¹ (with a *dl* variant for 2PL and 3PL as for class markers)
- For the Punctual
- For the Terminative
- For the complement-focusing forms
- For the Future 3 auxiliary
- On the verb stem for auxiliated forms using the *mɔ* particle (Statal Perfect, Ongoing Present, Progressive)
- In the auxiliated form of the Present negation (with a *dl* variant for 2PL and 3PL) and that of progressive negative
- for the verb in object relative clauses

5.3 The basic TAM oppositions and primary paradigms

The affirmative Keeraak verbal system can be first described following two basic oppositions criss-crossing the simple and complex paradigms: (i) subject-focusing vs. complement- (or non subject-)

²¹ Capitalized names are used here for language-specific morphological categories (e.g. Consecutive, Future, Perfect) but lower case (e.g. consecutive, future, perfect) for semantic concepts or functions which may be expressed in multiple ways across languages.

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focusing inflections marked by short vs. *n*-forms for subject markers, and (ii) inflections with the three following TAM suffixes in complementary distribution: *-vm* for completive (*cf.* past reading with dynamic verbs vs. present with stative ones), *-em* for concomitance (by default with the time of speech, *cf.* present value for all verb types), and \emptyset for irrealis or non-actualised forms, including futures, habituais (which are complex verb forms), consecutive and dependent forms but not the negative inflections which have their own suffixes. The system looks unbalanced, since in the same verbal slot (post-radical position) an aspectual marker (*-vm*) contrasts with a temporal one (*-em*). Remarkably the present suffix *-em* can also be used in dependent clauses as a concomitant in past contexts, which looks like a typical feature of imperfectives. Furthermore, the *-em* forms are also compatible with the past suffix. However, the *-em* suffix does not convey other expected values of imperfectives (such as habitual or future). There is another element, *emmi*, used to form the Habitual and the Progressive (see below) that we have chosen to label ‘imperfective’. Therefore, despite the fact that *-em* probably was once a true imperfective, today its position in the system points to a temporal rather than aspectual meaning.

Table 12 summarises the various primary paradigms (here for the 2SG) and indicates which set of personal subject affixes is used (here *nʊ*- vs. *ʊ*-).

Table 12: the primary paradigms (example with the root *rɔk* ‘work, make’, 2SG, and *jɛɛnaj* ‘knife’)

	free pronouns or complement	subject 2SG	RAD	RDP	TAM	PTCL
Basic form/Imperative		<i>ʊ</i> -	<i>Rɔk</i>		\emptyset	
Hortative		<i>ʊ</i> -	<i>Rɔk</i>		\emptyset	<i>ma(h)</i>
Consecutive		<i>nʊ</i> -	<i>Rɔk</i>		\emptyset	
Punctual event		<i>nʊ</i> -	<i>Rɔk</i>		<i>-ɛ</i>	
Terminative		<i>nʊ</i> -	<i>Rɔk</i>		<i>-ɛban</i>	
Completive Verb focus		<i>nʊ</i> -	<i>Rɔk</i>	<i>-Rɔk</i>	<i>-vm</i>	
Completive Subj. focus	<i>aw</i>	<i>ʊ</i> -	<i>Rɔk</i>		<i>-vm</i>	
Completive Comp. focus	<i>jɛɛnaj</i>	<i>nʊ</i> -	<i>Rɔk</i>		<i>-vm</i>	
Present Subj. focus	<i>aw</i>	<i>ʊ</i> -	<i>Rɔk</i>		<i>-em</i>	
Present Comp. focus	<i>jɛɛnaj</i>	<i>nʊ</i> -	<i>Rɔk</i>		<i>-em</i>	

Before presenting each verb form, let’s add that the completive suffix *-vm* has three possible realisations, conditioned by the phonological environment, one of them (*mɪ*) producing a confusing homophony with a TAM auxiliary (*emmi*) in certain contexts. These three realisations are: *-vm* after sonorants except *r*, and after plosives except *ʃ* (see examples in Table 13), *-mɪ* after all the nasals which are in turn assimilated as bilabials, and lastly *-m* after vowels, and also *ʃ* and *-r* in which case the consonant is deleted and the preceding vowel lengthened.

Table 13: The three realisations of the completive suffix *-vm* (here for Completive Subject-focus inflection)

suffix	Context	verb root	inflected form (1SG)	translation
<i>-vm</i>	after plosive	<i>rɔk</i> :	<i>ɪŋʃɛ ɪ-rɔk-vm</i>	I have worked
<i>-mɪ</i>	after nasal	<i>nʊŋɛn</i> :	<i>ɪŋʃɛ ɪ-nʊŋɛm-mɪ</i>	I have built
<i>-m</i>	after vowel	<i>ŋɔɔʃɔ</i> :	<i>ɪŋʃɛ ɪ-ŋɔɔʃɔ-m</i>	I have eaten
	after <i>ʃ</i> , <i>r</i>	<i>hɛʃ</i> :	<i>ɪŋʃɛ ɪ-hɛɛ-m</i>	I have seen

Primary verb forms are made of a subject prefix, the verb stem and a TAM marker. Only the TAM suffixes used in main or independent clauses are presented here. Let us start with the forms falling outside the focusing opposition and that of completive (*-vm*) vs. present (*-em*). The Basic (or unmarked) verb form includes a short subject prefix and a verb stem with no suffix (\emptyset). This form is used in some basic questions (see ex. (23) below) and in various dependent or subordinate forms

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such as paratactic conditionals (4) and, with the second person, also for the Imperative. The Hortative is formed by the adjunction of a *ma(h)* particle.

- (4) **σ-juker** *ʃaa* *ʃanakaw* *ʃɔ,* *nσ-haafen-ε* **u-fuum**
 2SG-look COND CLja-sun-DETja long n.2SG-may-PUNCT 2SG-be.blind
 ‘If you look at the sun too long, you may become blind’

Another form, with the *n*-subject prefixes this time, has no TAM suffix, namely the Consecutive (or Aorist): it is a kind of dependent form (not directly asserted), whose uses range from injunction to narratives (tales), through apodosis in complex sentences (5).

- (5) *nσ nammaraɔk keb, nanεg*
 < *nσ* *na-εmmɪ* *a-rɔk* *keb,* **na-nεg**
 when n.(3SG):IPFV 3SG-work only n.3SG-be.tired
 ‘Whenever he works, he’s tired’

Two inflections hold a specific place in the system because they have specific suffixes and a perfective value that must be distinguished from the (*-σm*) completive in the following way:

- the Punctual is formed with an *-ε* suffix that might originate from the proximal deictic *-ε*. This deictic origin could explain its evidential component: without other temporal specifications such as past adverbials, it refers to a recent event, typically witnessed by the speaker (6); with stative verbs it refers to temporary states, implying a process in the background, as exemplified below in (13).

- (6) *ε-bɔɔs-εj* **ε-fak-ε** ≠ *ε-bɔɔs-εj* *ε-fak~fak-σm* *hσken*
 CLe-cow-DETe AGR2e-escape-PUNCT CLe-cow-DETe AGR2e-escape~VFOC-COMPL yesterday
 ‘The cow escaped’ ≠ ‘The cow escaped yesterday’

- the *-εban* suffix, with its terminative overtones, is very likely to be a grammaticalisation of the verb root *-ban* ‘finish’; it is used to indicate that an action has been already completed and does not need to be done anymore, which suggests an actional perfect (Maslov, 1988: 65); it gives an intensive value to stative verbs.

- (7) **ni-tit-εban** *ε-man-aj* *j-umboom* *fε*
 n.1SG-sell-TRM Cle-rice-DETe AGRO-1SG.POSS all
 ‘I sold all my rice’

Another form has a perfective value: the reduplicated completive. It is formed with the *-σm* completive suffix combined with a reduplication of the verb stem. The semantics of this form is not easy to distinguish from the other forms conveying completive values. Apparently it is not used for describing a succession of events but rather in questions and answers about what one has done. As proposed by Sagna (2008: 150) for the reduplicated form in Joola Banjari by contrast with the perfective *-ε* form, here focus seems to be laid on the description of the fact (8) rather than on the happening of the event (as it is the case with the *-ε* suffix). This feature corresponds more or less to the characteristics of a verb focus (Robert 2010).

- (8) *Dɪ* *hσ-ʃam-ah* **ni-rɔk~rɔk-σm** *bare* *ɪ-ʃal-σwa*
 LOC CLhu-raining.season-DEThu n.1SG-work~VFOC-COMPL but 1SG-harvest-NEG
 ‘During the raining season, I did work (a lot) but I did not harvest (much)’

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Last, four forms can be contrasted, that is, completive and present focusing forms, each paired in subject focus vs. complement focus forms. We must add a caveat: if these focusing forms are clearly used for expressing subject and complement focus respectively, in some cases they appear to have a weak focusing effect. These other uses require more investigation in order to find out what triggers the choice of the focusing forms.

Before carrying on with the complex verb forms, a few words about the syntax of the object clitics are in order:

- They always precede the completive suffix *-om*, the vowel of which is dropped (9):

(9)	<i>ijɛ</i>	<i>ɪ-tɔɔm</i> ([<i>ɪtɔɔm</i>])	<i>ɔ-ser-aw</i>	≠	<i>ijɛ</i>	<i>ɪ-tɔɔ-wɔ-m</i> ([<i>ɪtɔɔwwɔm</i>])
	PRO.1SG	1SG-break-PFV	CLu-spoon-DETu		PRO.1SG	1SG-break-PROu-PFV
	'I broke the spoons'				'I broke them (spoons)'	

- They substitute for the Punctual suffix *-ɛ*, leaving it unnoticeable (10):

(10)	<i>ɣ-hɛɣ-ɔ</i>
	2PL-see-(PUNCT-)3SG.OBJ
	'You saw him'

- With the present suffix *-em*, the object cannot be expressed by the clitic. Instead, the free pronoun is used and requires the all-purpose locative preposition *dɪ* (11):

(11)	<i>aw</i>	<i>ɔ-hɛɣ-em</i>	<i>dɪ</i>	<i>ijɛ</i>
	PRO.2SG	2SG-see-PRS	LOC	PRO.1SG
	'You are seeing me (it's you who are seeing me)'			

5.4 The complex paradigms

At a second level, the basic oppositions between completive, present and \emptyset TAM suffixes are refined into complex forms using additional particles or auxiliaries for perfect, ongoing present, progressive, habitual and futures.

5.4.1 Statal perfect, ongoing present and progressives

Four paired forms have a clear and common morphology using a *mɔ* particle (provisionally glossed as MO, and awaiting a better characterisation). Table 14 summarises the different verb forms using the *mɔ* particle.

Table 14: the complex paradigms (1) with *mɔ* (example with the root *ɾɔk* 'work, make', 2SG *nɔ-* and *jɛɛnaj* 'knife')

	free pr./ complt	subj 2SG	COP/ AUX	PTCL	subj. 2SG	RAD	TAM	actual realisation
Statal perfect	<i>aw</i>		<i>ɔɔmɔ</i>	<i>mɔ</i>	<i>nɔ-</i>	<i>Rɔk</i>	<i>-om</i>	[<i>awmɔɔmɔɔɔɔɔɔɔɔɔm</i>]
Ongoing Present	<i>aw</i>		<i>ɔɔmɔ</i>	<i>mɔ</i>	<i>nɔ-</i>	<i>Rɔk</i>	<i>-em</i>	[<i>awmɔɔmɔɔɔɔɔɔɔɔɔem</i>]
Progressive (subj. foc.)	<i>aw</i>	<i>ɔ-</i>	<i>ɛmmɪ</i>	<i>mɔ</i>	<i>nɔ-</i>	<i>Rɔk</i>	<i>-em</i>	[<i>awɔmmɪmɔnɔɔɔɔɔɔem</i>]
Progressive (comp. foc.)	<i>jɛɛnaj</i>	<i>nɔ-</i>	<i>ɛmmɪ</i>	<i>mɔ</i>	<i>nɔ</i>	<i>Rɔk</i>	<i>-em</i>	[<i>jɛɛnajnɔmmɪmɔnɔɔɔɔem</i>]

The first two forms are built with a locative copula followed by the *mɔ* particle and then the verb stem inflected with the *n*-forms, bearing the completive (*-om*) vs. the present (*-em*) suffix. The copula

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shows agreement with the subject through a single form for the singular, another one for the plural (see 4.3), and forms reminiscent of the demonstratives for the class agreement: *C-ɔɔ-C-ɔ* (e.g. *kɔɔkɔ* for KA-class, *ɔɔɔɔ* for E-class).

The identical form of the copula for most persons explains why the free pronouns are generally required with this paradigm. The locative copula gives the verb a meaning of ‘being (there) in the process of...’. The *-ɔ* present in the copula is probably the deictic suffix since, for the present form (only), it can be substituted by the two other deictics, *-ɛ* for proximal and *-a* for distal. However speakers indicate that with the *-ɔ* copula, the verb form does not give information on the place where the process happens whereas with *-ɛ* insistence is laid on its happening here vs in a distant place (or at least different from here) with *-a*.

The meaning of the form with the *-em* present suffix is quite clear: ‘I am presently (in the process of) doing...’. Despite this frequent translation, we have not called it a progressive because, by contrast with other inflections (*i.e.* Progressives, see Table 14 above and example (17) below), it does not imply a progression in the process development over time, nor does it clearly refer to the entry in the process. We have chosen ‘Ongoing Present’ as a tentative label because of the locative copula.

By contrast, the meaning of the completive form is more difficult to characterise. For the stative verbs expressing a quality, this form is clearly used to express permanent states (12) as opposed to the temporary states with the Punctual (13). With dynamic verbs this form has a completive meaning referring to a past event with an epistemic value of certainty. Even more typically, it is not used to describe an event as such but rather implies that the action has been done *with a specific purpose*, and has reached its point of achievement. That is why it often appears with a kind of explanatory value (14). Therefore too this form would sound strange in utterances like ‘I have beaten the child’ or ‘the dog has eaten the meat’ because, as glossed by the consultants, one would ask for which reason, what for, what is the result. For this various reasons we have tentatively labeled this form as Statal Perfect (see Maslov 1988).

- (12) *Kajufəək kɔɔmɔ kɔʔɛɛnɔm*
 < *Ka-ɟufə-ək* *kɔɔkɔ* *mɔ* *kɔ-ʔɛɛn-ɔm*
 CLka-shirt-DETka COPLOCka MO AGR2ka-be.black-COMPL
 ‘The shirt is black (normal state)’

- (13) *Ka-ɟufə-ək* *kɔ-ʔɛɛn-ɛ*
 CLka-shirt-DETka AGR2ka-be.black-PUNCT
 ‘The shirt is black (e.g. for a white shirt tampered by charcoal)’

A person, who was asked whether she had informed her husband that she was going outside, answers:

- (14) *ɪŋje* *ɔɔmɔ* *mɔ* *nɪ-ŋuc-ɔm* *ka-ɟit-ək* *ɪ-walɛn* *tɔ*
 PRO.1SG COPLOC.SG MO n.1SG-write-COMPL CLka-letter-DETka 1SG-leave there
 ‘(no, but) I left a notice ‘
 lit. ‘I have written a notice (that) I left there’

These complex forms have various shortened realisations: e.g. for (*ɛɟagɔmaj*) *ɔɔɔɔ mɔ egecum* ‘(the dog) is vicious’, one finds *ɔɔmɔ egecum*, *ɔɔm egecum* or *ɟemɛeɟecum* (considered less correct).

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The other two forms with the *mɔ* particle are two present progressives, one for subject focus and the other for complement focus. They are made of the imperfective copula²² *emmi* followed by the *mɔ* particle and the present form of the verb (*-em*). For the subject-focusing form, the free pronoun is fronted in subject position followed by a verb phrase made of the *emmi* copula prefixed with short subject prefixes, and followed by the *mɔ* particle and the present verb stem inflected with *n*-forms. As a copula, *emmi* inflects for person as can be seen with the presence of the inclusive suffix for 1PL, both on *emmi* and the verb stem (15). For the complement focus, the short forms are replaced by the *n*-form on *emmi* (16). Considering the presence of *emmi* in the habitual too (cf. infra), we analyze this morpheme as indicating an imperfective process. When combined with the (*mɔ*) particle and the (*-em*) present morpheme, this imperfective would then be interpreted as a present progressive, as suggested by one consultant's gloss on a sentence with the verb 'to work': "it means that I was working before and I am still working now". This form also includes the notion of an effort on doing the action. With the Progressive, stative verbs have an inchoative reading (17).

- (15) *ulaal ɔmaam mɔ nurkaalem*
 < * *ulaal u-emmi-aal mɔ nu-rɔk-aal-em*
 PRO.1PL.INCL 1PL-IPFV-INCL MO n.1PL-work-INCL-PRS
 'We (including you) are the ones who are working'

- (16) *ɛ-lɪw-aj n-emmi mɔ nɪ-tɔkɔŋ-em*
 CLe-meat-DETe n.(1SG)-IPFV MO n.1SG-chew-PRS
 'It is meat I am eating'

- (17) *ijɛemmi mɔ nijuwæatiem*
ijɛ emmi mɔ nɪ-juwæati-em
 PRO.1SG (1SG):IPFV MO n.1SG-be.sick-PRS
 'I am getting sick'

Since it involves the present suffix *-em*, the Progressive does not allow clitic objects and requires the use of the *di* preposition followed by the pronominal object (see 5.3). The prepositional phrase is usually repeated after a focused nominal object (18):

- (18) *e-kereŋ-aj, si-naaŋ-as j-emmi mɔ ɛ-ŋɔɔfɔ-em di sɔ*
 CLe-chicken-DETe CLsi-rice-DEtsi AGR0e-IPFV MO AGR2e-eat-PRS LOC PROsi
 'The chicken, it is rice that it is eating'

5.4.2 Habitual and futures

While the semantics of the habitual and the futures is relatively straightforward, their morphosyntactic analysis is still a problematic issue. Several factors indicate that some of them were originally periphrastic constructions with auxiliaries. However, because of the irregularities in the inflection as well as some hesitations on the part of the consultants (who sometimes correct a form after having uttered it spontaneously), we consider them as auxiliated forms in the process of being grammaticalised. Table 15 gives an overview of this second series of complex paradigms.

Table 15: the complex paradigms (2): habituals and futures (example with the root *rɔk* 'to work', 2SG, and *jɛnaj* 'knife')

	pronoun/ noun	Subj. 2SG	COP/ AUX	Subj. 2SG	RAD	TAM	Actual realisations
Habitual	<i>aw</i>	? ɔ-	<i>emmi</i>	ɔ-	<i>RɔK</i>	∅	[<i>aw ɔmmɔrɔk</i>]

²² The label 'imperfective copula' has been chosen to indicate that *emmi* functions as a predicative inflecting morpheme used only in complex verb forms, but not as a regular copula (i.e. in non-verbal predication).

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(foc. subj)							
Habitual (foc. comp)	<i>jɛɛnaj</i>	? <i>nɔ-</i>	<i>ɛmmɪ</i>	<i>ɔ-</i>	<i>Rɔk</i>	\emptyset	<i>[jɛɛnaj nɔmmɔɔɔk]</i> <i>[nVmmV-RAD]</i>
	pronoun/ noun	PTCL					actual realisation
Future 1			<i>min</i>	<i>ɔ-</i>	<i>Rɔk</i>	\emptyset	
Future 2			<i>min-nɛ</i>	<i>ɔ-</i>	<i>Rɔk</i>	\emptyset	<i>[munɔɔ ɔɔk]</i>
Future 3 (foc. subj)	<i>aw</i>	? <i>ɔ-</i>	<i>ɛm(l)nɛ</i>	<i>ɔ-</i>	<i>Rɔk</i>	\emptyset	<i>[aw ɔɔɔ ɔɔk]</i>
Future 3 (foc. comp.)	<i>jɛɛnaj</i>	? <i>nɔ-</i>	<i>ɛm(l)nɛ</i>	<i>ɔ-</i>	<i>Rɔk</i>	\emptyset	<i>[nɔmmɔɔɔk]</i> <i>[nVmnVV-]</i>

For the two habituais (subject vs complement focus) we find the imperfective copula *ɛmmɪ* again but in a different morphosyntactic environment: in both cases, it is followed by the verb stem inflected with the short forms, and without TAM suffix (cf \emptyset for not actualised). The presence of the short subject prefixes (vs vowel assimilation) on *ɛmmɪ* for the subject-focusing form is not clear: it seems to be present in the singular but not in the 2nd and 3rd person plural; there is also no class agreement marker on *ɛmmɪ* and no repetition of the inclusive marker on the ‘auxiliary’. The complement focusing forms yield the same ambiguity for the *n*-subject prefixes.

The subject focus form refers to general statements with the dynamic verbs, as in (19) and (20). We have noted subtle nuances in the uses of ‘complement focus’ (or *n*-forms): for the dynamic verbs (21) as well as the stative ones (22), they seem to give an occasional meaning to the process when there is no fronted complement.

- (19) *si-ɟagɔm-as, ɛmmɪ si-nɔɔɔ ɛ-lɔw-aj*
 CLsi-dogs-DETSi (CL).IPFV AGR2si-eat CLe-meat-DETe
 ‘Dogs eat meat’ ~ ‘It is the dogs that eat meat’

- (20) *dɪ hɔ-k-ah nɛmmɪ ɪ-rɔk*
 LOC CLhu-night-DEThu n.(1SG):IPFV 1SG-work
 ‘I work (only) at night time’ ~ ‘It is (only) at night time that I work’

- (21) *nɛmmɪ ɪ-rɔk dɪ hɔ-k-ah*
 n.(1SG):IPFV 1SG-work LOC CLhu-night-DEThu
 ‘Sometimes I work at night time’ ~ ‘I happen to work at night time’

- (22) *nɛmm(ɪ) ɪ-nɛɟ*
 n.(1SG):IPFV 1SG-be.tired
 ‘I happen to be tired sometimes’

Last, Keeraak has three distinct futures, not including the possibility for the last one to distinguish between a subject-focusing and a complement-focusing form. Future 1 is a morphologically straightforward form, using a *min* particle followed by the verb inflected with the short-forms. This *min* is clearly the same morpheme as the one used to introduce a subordinate clause with purposive meaning; *min* is also used in narratives as a coordinating conjunction with the sense ‘after, then’. Future 1 is a proximal or immediate future meaning ‘I am now going to..., I am about to do...’ (23) and implies a will on the part of the subject as visible with the meaning taken on by the stative verb ‘to be tired’ (24).

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- (23) – *ɔ-ɲaaŋ baj ?*
 2SG-go where
 ‘Where do you go?’
 – *min ɪ-ɲaaŋ Kaabrus*
 FUT1 1SG-go Kabrousse
 ‘I am going to Kabrousse (right away)’

- (24) *min a-ɲeg*
 FUT1 3SG-be.tired
 ‘He is going to get himself tired’

Future 2 (*min + ɲε*) is used to indicate a delayed future, to refer to an action that will happen later, which time has not arrived yet.

- (25) *ε-ħɔɔ ʃaa (ε-)ban, ε-ʃagɔm-aj ε-ɪw-aj minne ε-ɔkɔŋ*
 AGR2e-drink COND (AGR2e)-finish CLe-dog-DETe CLe-meat-DETe FUT2 AGR2e-chew
 ‘Just after drinking, the dog will eat meat.’

Future 3 (predictive future) is formed with an *εmine* morpheme, usually shortened in *εmne* with vowels assimilating with the personal markers (see Table 15). The difference with Future 2 is not a temporal but a modal one: Future 3 is a future of prediction. It implies that once a condition is fulfilled, the event will necessarily take place. In the absence of a condition, the value is that of likelihood. It is the only possible future after a conditional clause (26). The complement-focusing form (or *n*-form) is often used to indicate what will be done after a first event (27), even in gnomic contexts. The subject-focusing form is used with the sense ‘in any case, at any rate, I will...’ or, with a lexical subject, to call the attention of the addressee about a predictable risk (28).

- (26) *ɔ-rɔk^o ʃaa ʃak, n-εmne ɪ-ɔkɔŋ-ɔɪ-ɪ si-katab-as*
 2SG-work COND well n.(1SG)-FUT3 1SG-buy-CTP-OBJ.2SG CLsi-shoe-DEtsi
 ‘If you work well, I will buy you shoes’

- (27) *n-εm(ɪ)ɲε ɪ-ɲaaŋ Sigicoor, iŋɲε ba-rɔk-εεɪ ɪ-ban*
 n.(1SG)-FUT3 1SG-go Ziguinchor PRO.1SG CVB-work-CVB 1SG-finish
 ‘I will go to Ziguinchor once I have finished working’

- (28) *ε-ʃagɔm-aj εmine ε-ɔkɔŋ ε-ɪw-aj*
 CLe-dog-DETe (CL).FUT3 AGR2e-chew CLe-meat-DETe
 ‘(watch out) the dog might/is going to eat the meat!’

When the verb stem is suffixed with *-εεɪ*, Future 3 refers to a vaguer and uncertain moment:

To somebody who just failed his exam:

- (29) *Nɔmɔɔ hawεεɪ!*
 < *nɔ-εm(ɪ)ɲε ɔ-haw-εεɪ*
 n.2SG-FUT3 2SG-have-REMFUT
 ‘(come on) you will pass it one day ~ another time!’

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5.5 Negation

All the negative inflections share a common *-wa* (*-ɔɔwa* for Perfective) morpheme suffixed to the verb stem or to the negative auxiliary, except the negatives used in the relative clauses for which *-wa* is replaced by *-t-* suffixed with the completive *-ɔm* (30). All the negative paradigms are inflected with the short personal prefixes except the negation of present and progressive present: for these auxiliated forms, the auxiliary is inflected with the short forms whereas the verb stem bears the *n-* forms (31). Here again, several forms show assimilation or contraction with the subject prefixes. The negative forms are presented in Table 16.

Table 16: The patterns of negative inflections (except for relative clauses)

	subj.pref.	particle/auxiliary	subj.pref.	RAD	suffix
NEGATION OF :					
Basic form and perfectives			x	RAD	<i>-ɔɔwa</i>
Consecutive and Hortative		<i>t(ɪ)</i>	x	RAD	<i>-wa</i>
Future(s)		<i>tɪnnɛ</i>	x	RAD	<i>-wa</i>
Present	x	<i>lɛɛ(t)-wa</i>	<i>n-x</i>	RAD	
Progressive	x	<i>lɛɛ(t)-wa mɔ</i>	<i>n-x</i>	RAD	
Habitual	x	<i>ndɪ-wa (~ndɔ-wa)</i>	x	RAD	
Focus		<i>ɪntɪ-wa</i>			various types of phrases

- (30) *ka-ɟɪɔɔn-ak ka-ndɪ-t-ɔm kɔ-ɟɔɟɛn dɪ rab*
 CLka-rooster-DETKa AGR1ka-NEG.HAB-NEG.REL-COMPL AGR2ka-crow LOC daylight
 ‘The rooster that does not crow in the morning’

- (31) *ɪndɛɛɔk < ɪndɔwa ɪɔk <*
ɪ-ndɪ-wa ɪ-ɔk dɪ hɔ-ɟam-ah
 1SG-NEG.HAB-NEG 1SG-work LOC CLhu-rainy.season-DEThu
 ‘I do not work during the raining season’

5.6 The past suffix

All the verbal inflections may bear the *-ɛɛn* past morpheme (suffixed to the verb stem), except the Imperative. The process is then located with regard to a moment in the past and its consequences are not valid anymore at the time of speech (32):

- (32) *ɪɟɔɔmɪnɔk-ɛɛn-ɛm*
ɪnje ɔɔmɔ mɔ nɪ-ɔk-ɛɛn-ɛm
 PRO.1SG COPLOC.SG MO n.1SG-work-PST-PRS
 ‘I was working’ (when you interrupted me)

The *-ɛɛn* suffix can be reduplicated to refer to a more remote past. Interestingly, this past suffix can be used with future inflections and give them a modal (33) or counter-factual reading as exemplified in (34).

- (33) *mɪn ɪ-ɔk-ɛɛn bare ɪ-ɟaɔɟ-ɔwa*
 FUT1 1SG-work-PST but 1SG-go-NEG
 ‘I should have worked but I did not go’

- (34) *ɪɟakɔɛɛnɛmmɪ ɪtɛ, nɛmɛɛɔkɛɛn*
 < * *ɪ-ɟakɔ-ɛɛn-ɛɛn-mɪ ɪtɛ, nɛmɛ ɪ-ɔk-ɛɛn*
 1SG-sit-PST-PST-COMPL here FUT3.1SG 1SG-work-PST

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'If I had been here, I would have been going to work'

5.7 The converb and the dependent predicates

We want to conclude this section by mentioning some verbal morphemes used to form dependent predicates. These dependent predicates have specific morphemes and combine only with the Basic form of the verb (short personal prefixes).

5.7.1 *ki*

The second verb of a complex predicate can be introduced by the preverbal particle *ki* (glossed LNK – verbal linker) followed by the (inflected) Basic form:

- (35) *[ban naŋaŋ kaŋesul kabaŋak kala huɔɔŋkah]*
ban na-ŋaŋ ki a-ŋɛs-ɔl ka-baŋ-ak k-ala hu-ɔɔŋk-ah
 then n.3SG-go LNK 3SG-search-CTP CLka-skin-DETKa AGROka-GEN CLhu-antelope-DEThu
 '...then he went to get an antelope's skin'

Mun can also be used in the same syntactic contexts but then refers to an event that is about to happen at the present moment; *ki* can combine with *mun* (i.e. *mun ki*) to indicate that the process will happen after another action has been completed.

5.7.2 *jaa* and *ban*

jaa, immediately postposed to the verb inflected with the Basic form, is used to form temporal or conditional clauses. Followed by the inflected (Basic) form of *ban* 'finish', the *jaa* clause means 'after having done...', as in (25) above. Otherwise, *jaa* takes on a conditional meaning; the main clause is then formed with the Future (26) or the Consecutive (*n*-prefixes and no TAM marker) as in (36):

- (36) *ɪ-hɔɔŋ jaa bu-nɔk-ab, ni-lɛɛŋɔ*
 1SG-drink COND CLbu-palm.wine-DETBu n.1SG-be.drunk
 'If/Whenever I drink wine, I get drunk'

Noticeably, *jaa* disappears in the negative, cf *ɔ-ban-ɔwa* 'when you have not finished'.

Moreover, the sequence made of the verb followed by the Basic form of *ban* 'finish' is a recurring formula in narratives for expressing sequencing events: 'after having...'; this use of *ban* is in the process of grammaticalisation since it can also appear in the same contexts uninflected. Furthermore, *ban* is also used, inflected or not, at the beginning of a clause as a coordinating conjunction with the sense 'then, after' as in (35).

5.7.3 The converb *ba-...-ɛɛr* and the participial clause

Beside the frequent use of nouns or nominalisation for expressing actions that could be expressed by verbs as well (e.g. 'my work is the watering of the plants' for 'I water the plants' or 'I go to the cultivation' for 'I go farming', 'I go to the work' for 'I go working'...), and that of infinitives with different class markers in various constructions (such as the one for comparative), Keeraak also has a non-finite verb form used to express adverbial subordination. This converb has clear nominal features in that it is prefixed with the *ba-* class marker and suffixed with *-ɛɛr* (cf. Future 3 in 5.4.2) which combine to form nouns expressing the way of doing an action:

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- (37) *ba-ʔaakɛn-ɛɛr-ab* *b-ala* *Antoinette*
 CVB-cook-CVB-DETba AGR0ba-GEN Antoinette
 ‘Antoinette’s way of cooking’

As a converb, this form is used to form participial clauses. In this case the converb is not inflected but shows various verbal properties (compare (37) and (38)): it has a subject (the free pronoun is obligatory even in the presence of a lexical subject), no default determiner as nouns do, its complements are objects instead of genitives, and it may even introduce a complement clause. This form is used to express conditional (38) or temporal (39) subordination and is sometimes given as a variant of the *jaa* form.

- (38) *Nɛm(ɪ)nɛ* *ɪ-ɲaɑŋ* *ɪ-suren,* *bɔ-rɔk-ab* *bɔ* *ba-baw-ɛɛr*
 n.1SG:FUT3 1SG-go 1SG-return AGR2ba-work-DETba PROba CVB-complete-CVB
 ‘I will go back home, when/provided that the work is completed’

When followed by *ban*, inflected with the Basic form, the converb takes on the temporal meaning only (‘once...’, ‘after having...’):

- (39) *Waa* *namna* *a-kaan,* *ijɲe* *ba-ɲaɑŋ-ɛɛr* *ɪ-ban ?* [*bɑɲaɑŋɛɛban*]
 what n.3SG:FUT3 3SG-do PRO.1SG CVB-go-CVB 1SG-finish
 ‘What is he going to do, after I have left?’

Surprisingly we have found this form in main clauses too:

- (40) *hɔkɛn* *nɔɔ* *nɔɲaallɔm* *ijɲe* *ba-ɲɔt-ɛɛr*
 yesterday when n.2SG:go:CTP:COMPL PRO.1SG CVB-sleep-CVB
 ‘Yesterday when you came, I was sleeping’

To conclude this section on the verbal system, we must point out that, beside numerous verbal extensions, Keeraak also has several auxiliaries for aspectual specifications (e.g. ‘to sit’ used as inchoative, ‘to return’ used as iterative, ‘to live’ used as persistent, etc...).

Conclusion

This first attempt at establishing a grammar of Keeraak is highly instructive in many respects. First, Keeraak shares with other Atlantic languages several morpho-syntactic features such as its rich and fully operative noun class system, a large inventory of derivational (mostly verbal) suffixes, a small number of true adjectives but many ideophones, and a remarkable set of demonstratives with three degrees of deictic distance. These features may be considered areal, since they are found in distantly related languages such as the Nyun languages, but other features make it a typical Joola (and Bak) language. For instance, it does not show any consonant alternation (but see note 15 p. 2), has a lateral fricative /ɬ/, three locative classes, locative copulas, complex TAM paradigms, and two sets of bound subject prefixes with an inclusive/exclusive opposition for the 1PL person, which are clearly related to those of other Joola languages as are all the personal morphemes and most of the derivational suffixes.

However, although the Joola cluster is apparently quite homogenous (as far as grammar is concerned, since lexicon shows a great variability), the use of existing descriptions is of no great help for the particular Keeraak case. In fact, many features of the Keeraak language might be restricted to

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this particular lect and might explain (to various extents) the impossibility for speakers of other Joola languages to understand this variety. Remarkable features of Keeraak include: the absence of /p/, which has been spirantised to /f/ realised [ɸ], the inconsistency of vowel harmony (probably undergoing restructuring), the ‘obligatory’ default determiner, some specific verbal derivational suffixes such as the aesthetic or the assistive, and the *-(ɔ)wa* negation. Keeraak also makes an extensive use of the three spatial deictics across several parts of speech, having systematised the combination of these distance suffixes with the three locative class morphemes (disconnected from the lexicon) used to specify the nature of the space (large, small, inner) to produce various morphemes. But most of all, Keeraak shows a remarkable verbal system contrasting with most existing descriptions of Joola languages.

The verbal system is probably the most complex part of Keeraak. Two types of reasons made it difficult to sort out and analyze the twenty paradigms of this inflectional system: first, its complex morphology, second, the morphophonological rules that blur the common underlying patterns. As for morphology, the main difficulties are threefold: (a) Keeraak makes use of two sets of bound subject prefixes in an at first puzzling complementary distribution; moreover, some verbal inflections also requires the free personal pronouns; (b) focus and negation are expressed through verbal morphology; and most of all (c) beside simple forms using TAM suffixes, the language also yields complex verb forms made of an inflectional copula, particles, and also more or less grammaticalised auxiliaries (with personal prefixes both on the verb stem and on the auxiliaries). This morphological complexity is made harder to uncover by the following morphophonological factors: (a) the complex paradigms are generally realised in shortened or fused forms after vowel assimilation, contraction or haplogy; moreover, some inflectional paradigms show morphological irregularities; (b) there is a strong tendency to assimilate the vowels of the auxiliaries or verbal particles with the subject affixes, and in the case of complex forms it is sometimes difficult to decide whether the vowel includes an underlying subject affix or not; (c) the very common completive suffix has three possible realisations, conditioned by the phonological environment.

Some of the features discussed here that were not unknown in the Joola literature have been given a different analysis (e.g. the view of the reciprocal suffix as being rather a pluractional), and of course await more detailed studies. Other features, such as the unusual type of differential object marking, have apparently been overlooked. Further research will undoubtedly yield exciting findings, at least in the following domains: the verbal system, the semantic features of verbal extensions, syntax in general and especially the relationship between transitivity and information structure.

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Abbreviations used (based on the Leipzig Glossing Rules)

:	indicates a segmentable morpheme when the text is not segmented	n.	n.form (for bound personal subjects)
AGRO	Agreement marker made of the sole consonant	NEG	negation
AGR1	Agreement marker (-a series)	NEG.HAB	negation of habitual
AGR2	Agreement marker (-ɔ, -ɪ, ε- series)	NEG.REL	negation in relative clause
CLxx	noun class marker of class xx	OBJ	object
COMPL	completive	PASS	passive
COND	conditional or temporal verbal marker	PL	plural (for personal morphemes)
COPLOC	locative copula	POSS	possessive
CTP	centripetal	PRF	perfect
CTP.RES	resultative centripetal	PRO	pronoun
CVB	converb	PRS	present
DET	default determiner	PTCL	particle
FUT1	immediate future	PST	past suffix
FUT2	delayed future	PUNCT	punctual
FUT3	predictive future	RDP	reduplication
GEN	genitival morpheme	REMFUT	remote future
INCL	inclusive	REPET	repetition
IPFV	imperfective copula	SBJ	subject
LNK	verbal linker	SG	singular
LOC	locative preposition	TRM	terminative
MO	mɔ particle	VFOC	verb focus