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Morphology-syntax mismatches in agreement systems:

the case of Jóola Fóoñi

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The present study examines the agreement system of Jóola Fóoñi, an Atlantic language of Senegal with a developed noun class system of the Niger-Congo type. In these systems noun forms divide into subsets, each of them characterized by a distinct agreement pattern. The morphological paradigm of agreement targets in noun class languages is generally treated as reflex of the division of noun forms into subsets. However, the data from Jóola Fóoñi show that the values structuring the inflectional paradigm of agreement targets cannot be reduced to agreement values triggered by nominal controllers for two reasons: (i) the range of subsets of noun forms and the range of values on the agreement targets do not match and (ii) inflection for a subset of class values is associated with its own semantic and syntactic properties that are independent of agreement configurations with nouns. This implies that the grammar of the Jóola Fóoñi noun-class system has two related but independent components: the classification of noun forms into subsets based on their agreement properties and the cells of the inflectional paradigm of adnominal and pronominal agreement targets. Out of the 15 class-values that structure the inflectional paradigm of adnominals and pronouns involved in the expression of agreement with heads or antecedents, only 13 class-values function as agreement value with a set of potential nominal controllers. The remaining 2 class-values only appear on agreement targets. Furthermore, we show that synchronically, the inflectional paradigm characterising agreeing adnominals and pronouns is syntactically heterogeneous in several respects. Of the 15 class-values in the inflectional paradigm, 12 allow uses without a nominal controller (NON-CONTEXTUAL USES). In the absence of a nominal controller these 12 class-values are each

associated with a particular meaning. The class value CLÑ only has marginal non-contextual uses. The non-contextual uses of the other 11 class-values fall into two groups: the 5 class-values expressing time, manner, and different conceptualizations of location have the syntax of adverbials, while the other 7 class-values give rise to pronominal syntax. The 5 class-values associated with adverbial syntax do not form a homogeneous class. In particular, in the non-contextual uses of the relative linker, the 3 locative classes display a different syntax from classes associated with time and manner with respect to relativisation. The semantic and syntactic contrasts between class-values in non-contextual uses suggests that this information has to be attached to the class-values of the inflectional paradigm in the lexicon. We propose to analyse these differences as the reflex of a reorganisation of the system: the forms inflected for class that express place, time or manner in their non-contextual use have become adverbs, and the locative relativisers have been reanalysed as locative relative pronouns.

1 Outline

The present study examines the syntactic behaviour of the cells that constitute the inflectional paradigm of adnominals and pronouns in Jóola Fóoñi.¹ Jóola Fóoñi has a noun-class system of the Niger-Congo type.

- (1) a. e-suk y-ajake ε-kañɔkañɔ
 SG-village CLE-good SI:CLE-was.destroyed
 b. si-suk s-ajake sɪ-kañɔkañɔ
 PL-village CLS-good SI:CLS-was.destroyed
 ‘The good village was destroyed. / The good villages were destroyed.’
 c. si-sindo s-ajake sɪ-kañɔkañɔ
 PL-home CLS-good SI:CLS-was.destroyed
 ‘The good homes were destroyed.’

In traditional descriptions of the Niger-Congo languages that have a gender system of the same kind as Jóola Fóoñi, the term “NOUN CLASS” is used to cover three domains:

- (2) (i) the division of noun lexemes depending on their pattern of singular and plural marking,
 (ii) the division of noun forms depending on their agreement pattern and

¹ The main references on Jóola Fóoñi are Weiss (1938), Sapir (1965), and Hopkins (1995).

(iii) the values of the inflectional paradigm of agreeing adnominals and pronouns

Applied to the examples in (1) the distinctions in (2) appear as follows:

- (3) (i) the noun lexeme *e-suk/si-suk* ‘village’ belongs to the inflectional type marking singular and plural by *e-/si-*
- (ii) the plural noun forms *si-suk* ‘villages’ and *si-sindo* ‘homes’ are associated with the same agreement pattern in (1): *s-* for *-ajake* ‘good’/ *-kañɔkañɔ* ‘was.destroyed’. The singular noun form *e-suk* ‘village’ is associated with a different agreement pattern.
- (iii) in the inflectional paradigm of the agreeing adjective *-ajake* ‘good’ the prefixes *y-/s-* in *y-ajake/s-ajake* mark agreement with two different subsets of potential controllers

Diachronically, these three systems have a common origin, and synchronically, they are still closely intertwined. Note that (2i) and (2ii) divide noun forms and noun lexemes into subsets. It has been shown in the literature that (i) and (ii) should not be amalgamated and a clear distinction between INFLECTIONAL TYPE of a noun lexeme (2i) and the AGREEMENT CLASS of a noun lexeme/form (2ii) is necessary (Corbett 1991, Creissels to appear, Creissels et al. to appear, Güldemann & Fiedler 2017). In Jóola Fóoñi, singular and plural noun *forms* have distinctive agreement patterns that may recombine, in what follows we therefore reason primarily in terms of AGREEMENT CLASSES OF NOUN **FORMS** that are sets of noun forms sharing the same agreement pattern. For lack of an unambiguous and commonly accepted term for this notion, we will use the abbreviation ACNF (AGREEMENT CLASSES OF NOUN **FORMS**). AGREEMENT CLASSES OF NOUN **LEXEMES** (i.e., ‘controller genders’ in the sense of Corbett 1991: 151) will be simply designated as **GENDERS**. In Jóola Fóoñi, the singular noun form *e-suk* ‘village.SG’ belongs to the ACNF associated with E-agreement and the plural noun form *si-suk* ‘village.PL’ belongs to the ACNF associated with S-agreement, while the noun lexeme *e-suk/si-suk* ‘village’ belongs to the set of noun lexemes triggering E-agreement in the singular and S-agreement in the plural (the agreement class of noun lexemes defined by E-/S-agreement, or gender E/S).

The present study focuses on (2iii), the values of the inflectional paradigms of potential agreement targets. In contrast with the domains in (2i) and (2ii) that concern subsets of nouns sharing the same inflectional forms (inflectional types) and subsets of noun lexemes or noun

forms sharing the same agreement patterns (genders/ ACNFs), (2iii) structures the values of the inflectional paradigm of agreeing adnominals and pronouns and therefore concerns subsets of forms of agreement targets. Under a view of agreement as an asymmetrical relationship between a controller and a target, the paradigm of agreement targets is expected to mirror the classification of the nominal controllers, possibly with an additional default agreement form (cf. Corbett & Fedden 2016).

The present study shows that the role of the inflectional paradigm of potential agreement targets is not limited to marking agreement with nouns. Consequently, the values of the inflectional paradigm of agreeing targets have to be studied in their own right, not just as a reflex and diagnostic of a division among nominal controllers. We therefore distinguish the division of nouns based on their agreement properties from the values marked in the inflectional paradigm of agreeing modifiers. We will refer to the cells of the inflectional paradigms of agreeing modifiers and pronouns as CLASSES.²

We begin with an overview of the properties of nouns in Jóola Fóoñi, with the division of noun lexemes into inflectional types, the division of noun forms into subsets sharing a given agreement pattern (ACNFs), and of noun lexemes into genders in Jóola Fóoñi (section 2). Section 3 examines the relationship between genders and the inflectional paradigm of agreement targets. We show that the inflectional paradigm of modifiers, predicates and pronouns cannot be understood straightforwardly as an agreement-paradigm as two classes do not have corresponding nominal controllers and one class cannot be used as agreement. We proceed to examine noun-less uses of class-inflected adnominal modifiers and pronouns, showing that two types have to be distinguished: contextual uses of class-inflection that function as pronominals and non-contextual uses of class-inflection, that have their own distinctive semantic and syntactic properties. In particular, non-contextual uses display pronominal or adverbial syntax, depending on the class-value (section 4). Section 5 focuses on non-contextual uses of the relative linker showing that the class-values with adverbial non-contextual syntax have to be further differentiated: the relative linker marked for the 3 locative class-values displays a different syntax from the relative linker marked for the temporal and manner class-values. Section 6 summarises the analysis.

² In the terminology traditionally used in Niger-Congo studies, this is one of the meanings carried by the term ‘class’. In order to avoid any confusion, we use it exclusively with this meaning. For the other meanings commonly attached to ‘class’ in the description of so-called ‘noun-class systems’, we use the transparent terms ‘inflectional type’, ‘agreement pattern’ and ‘agreement class of noun forms’ (abbreviated as ACNF).

2 Nouns in Jóola Fóoñi: inflectional types, ACNFs and genders

The present section briefly summarises the facts regarding number marking and agreement behaviour of nouns in Jóola Fóoñi. Nouns in Jóola Fóoñi are associated with two properties often subsumed under the single label NOUN-CLASS: (i) the division of noun lexemes into INFLECTIONAL TYPES³ depending on the singular/plural marking pattern (section 2.1), and (ii) the division of noun forms according to the AGREEMENT PATTERNS associated with them in the syntax (AGREEMENT CLASS OF NOUN FORMS, ACNF, section 2.2).

As discussed in Creissels (to appear), Creissels et al. (to appear) and Güldemann & Fiedler (2017) for Niger-Congo “noun-class systems” more generally, the prefixal marking of number and the agreement patterns of noun forms are interrelated but distinct aspects of the grammatical system.

2.1 Inflectional types of nouns

In Jóola Fóoñi the paradigm of noun lexemes has 2 cells: the singular noun form and the plural noun form. The prefixes of the singular and plural noun forms are not predictable from the noun stem and have to be specified for the lexeme. Nouns divide into inflectional types according to the way they express the singular vs. plural distinction (for a full list see Creissels et al. to appear). The inflectional type will be referred to by the pair of prefixes that are the morphological exponents of the singular and plural form of the noun as exemplified in (4).

(4) Examples of inflectional types of nouns

a. Inflectional type *Ø-/bok-*

SINGULAR NOUN FORM	PLURAL NOUN FORM
Ø-an ‘person’	bok-an ‘persons’

Lexeme PERSON

b. Inflectional type *a-/k(o)-*

SINGULAR NOUN FORM	PLURAL NOUN FORM
a-seek ‘woman’	kʊ-seek ‘women’

Lexeme WOMAN

c. Inflectional type *ɛ-/s(i)-*⁴

⁴ Note that Jóola Fóoñi has ATR vowel harmony. The underlying form of the inflectional prefixes is the [-ATR] pair (*ɛ-/sɪ* in this example), the realisation as [+ATR] (*e-/si* in this example) is phonologically predictable (Hopkins 1995: 18-20).

SINGULAR NOUN FORM	PLURAL NOUN FORM
e-suk ‘village’	si-suk ‘villages’

Lexeme: VILLAGE

d. Inflectional type \emptyset -/*s(t)*-

SINGULAR NOUN FORM	PLURAL NOUN FORM
\emptyset -sindo ‘home’	si-sindo ‘homes’

Lexeme: HOME

As there is only a partial match between the inflectional types of nouns and the inflectional paradigm of agreement targets examined here, we will gloss the nominal prefixes as SG/PL only. Jóola Fóoñi also has a sizeable minority of nouns that do not have contrasting singular and plural forms. For example, *sambon* ‘fire’ and *sɛuut* ‘dream’ resemble pluralia tantum, in the sense that they behave in all respects like the plural of nouns belonging to the inflectional types ε -/*st*- or \emptyset -/*st*-, except for the fact that there is no corresponding singular form.⁵

2.2 Agreement patterns of nouns in Jóola Fóoñi

As shown in 2.1, noun lexemes in Jóola Fóoñi differ with respect to the exponents marking their singular and plural forms. In addition to this, the singular and plural noun forms differ with respect to the agreement they trigger on predicates, modifiers, pronouns and pronominal indices. Based on their agreement patterns, noun forms fall into 13 subsets (ACNFs). The labels of the agreement patterns (A, BK, E, S, B, U, F, K, J, M, Ñ, T, D’)⁶ evoke the phonological form of the corresponding agreement markers.⁷ In what follows, the agreement pattern of each noun-form is included as part of the gloss: e.g. \emptyset -sindo ‘[SG-home]_E’/ si-sindo

⁵ Note that the nouns without a dedicated singular form do not form a homogeneous class. While *sɛuut* ‘dream’ combines with numerals, including the numeral one (i), *sambon* ‘fire’ is incompatible with numerals and behaves as a mass noun; for example, ‘He lit two fires’ can only be rendered as ‘He lit fire in two places’ (ii).

(i) *sɛuut* s-ɛkon *sɛuut* si-gaba
dream(S) CLS-one dream(S) CLS-two
‘one dream’ ‘two dreams’
(ii) *na-yabɛnɛ* sambon-as *tɛn* ti-gaba.
SI:CLA-lit fire(S)-DET.CLS place(T) CLT-two
lit. ‘He lit fire in two places.’ > ‘He lit two fires.’

⁶ In contrast with Bantu, there is no generally accepted nomenclature for different agreement patterns in Atlantic. We will therefore use mnemonic labels that take up a characteristic form of the agreement morphology.

⁷ The choice of the label D’ for one of the agreement patterns is motivated by the fact that the current orthography of Jóola Fóoñi marks the +ATR feature by means of the acute accent, and the agreement marks characteristic of the D’ pattern are underlyingly +ATR, and impose the +ATR feature to the stems to which they attach.

‘[PL-home]_s’. Note that the agreement pattern is associated with the prefix+stem combination, not with the stem or the prefix individually.

The examples in (5) illustrate agreement as displayed on the vowel-initial adjectival stem *-ajakε* ‘good’ (for more detailed examples of agreeing modifiers and pronouns see section 3 below.)

(5) Agreement patterns of noun forms⁸

	AGREEMENT PATTERN	NOUN FORM	MODIFIER	
a.	A	Ø-an [SG-person] _A	Ø-ajakε CLA-good	‘a good.CLA person(A)’
b.		a-sεεk [SG-woman] _A	Ø-ajakε CLA-good	‘a good.CLA woman(A)’
c.	E	e-suk [SG-village] _E	y-ajakε CLE-good	‘a good.CLE village(E)’
d.		Ø-sindo [SG-home] _E	y-ajakε CLE-good	‘a good.CLE home(E)’
e.	BK	bok-an [PL-person] _{BK}	k-ajakε ⁹ CLBK-good	‘good.CLBK persons(BK)’
f.		ko-sεεk [PL-woman] _{BK}	k-ajakε CLBK-good	‘good.CLBK women(BK)’
g.	S	si-suk [PL-village] _s	s-ajakε CLS-good	‘good.CLS villages(S)’
h.		si-sindo [PL-home] _s	s-ajakε CLS-good	‘good.CLS good homes(S)’

⁸ Throughout this article, we use a simplified system of segmentation and glossing in which formatives that play no direct role in the aspects of Jóola Fóoñi grammar we analyse are neither segmented nor glossed separately. For example, the stem *-ajakε* ‘good’ is in fact *-a-jak-ε*, where *-jak* is the verb root ‘be good’, *-a-* is a participial prefix, and *-ε* is an ‘actualizer’, i.e. one of three suffixes that, in Jóola Fóoñi, constitute the characteristic inflection of relative verb forms and participles (Creissels et al. to appear).

⁹ The distinction between the agreement pattern triggered by *bok-an* and *ko-sεεk*, labeled BK, and another pattern for which we use the label K, is neutralized in some paradigms, as for example with qualifying modifiers such as *-ajakε* ‘good’ (cf. ex (7b)).

In Jóola Fóoñi, the exponents of number agreement cannot be decomposed into exponents for gender and number as e.g. in the Spanish example (6).¹⁰ The plural forms of *ka-sənd* / *ɔ-sənd* ‘roof sg/pl’ and *bɔ-roŋ* / *ɔ-roŋ* ‘road sg/pl’ trigger identical U agreement (7a/a’) even though the corresponding singular forms are associated to different agreement patterns K and B (7b/b’)

(6) (Spanish)

alt-o	alt-o-s	alt-a	alt-a-s
high-MASC	high-MASC-PL	high-FEM	high-FEM-PL

(7)

a.	ɔ-sənd	w-ajakɛ	a.’	ɔ-roŋ	w-ajakɛ
	[PL-roof] _U	CLU-good		[PL-road] _U	CLU-good
	‘good roofs(U)’			‘good roads(U)’	
b.	ka-sənd	k-ajakɛ	b.’	bɔ-roŋ	b-ajakɛ
	[SG-roof] _K	CLK-good		[SG-road] _B	CLB-good
	‘a good roof(K)’			‘a good road(B)’	

2.3 Gender in Jóola Fóoñi

The division of noun forms into ACNFs should not be confused with gender, although it constitutes the basis on which genders can be established. Gender is a property of *noun lexemes* reflected in to the agreement pattern of all their inflected forms (Corbett 2006:126). In contrast, agreement patterns in Jóola Fóoñi as illustrated in (5) above subdivide singular or plural *noun forms* (not noun lexemes) into subsets. In Jóola Fóoñi, the noun lexemes for ‘roof’ and ‘day’ belong to distinct genders, but the singular form of *ka-sənd* / *ɔ-sənd* ‘roof sg/pl’ is associated with the same agreement pattern K as the plural form of *fɔ-nak* / *kɔ-nak* ‘days’ (8a/b).

(8)	a.	kɔ-nak	k-ajakɛ	b.	ka-sənd	k-ajakɛ
		[PL-day] _K	CLK-good ‘good days’		[SG-roof] _K	CLK-good ‘a good roof’

¹⁰ In this respect, the gender-number agreement systems found across the Niger-Congo family are essentially similar to the Italian system, as illustrated by the impossibility of dissociating gender agreement from number agreement in the inflection of an Italian adjective such as ‘tall’: *alt-o* (MSG) / *alt-a* (FSG) / *alt-i* (MPL) / *alt-e* (FPL).

Given the complex relationship between the agreement patterns of singular and plural noun forms, in the Niger-Congo languages that have gender systems of the same type as Jóola Fóoñi, gender as a property of the lexeme can be defined as a derived notion corresponding to a pair of agreement patterns: the singular and plural agreement patterns of a noun-lexeme. The genders of Jóola Fóoñi are listed in (9): Some genders coincide with inflectional types (9d/e/f/i/j), while others conflate 2 or 3 distinct inflectional types (9a/b/c/g).

(9) Gender (pair of agreement patterns for sg/pl)

	Gender	Inflectional type ¹¹	Example	
a.	A/BK	Ø- / buk- a- / k-	Ø-an / buk-an a-sɛɛk / ku-sɛɛk	‘person SG/PL’ ‘woman SG/PL’
b.	E/S	ɛ- / s- Ø- / s-	e-suk / si-suk Ø-sindo / si-sindo	‘village SG/PL’ ‘home SG/PL’
c.	B/U	b- / u- ba- / u-	bu-rɔŋ / u-rɔŋ ‘ ba-caac / u-caac	‘road SG/PL’ ‘bed SG/PL’
d.	F/K	f- / k-	fɔ-nak / ku-nak	‘day SG/PL’
e.	K/U	ka- / u-	ka-sɔnd / u-sɔnd	‘roof SG/PL’
f.	J/M	j- / m-	ji-bɛcɛl / mu-bɛcɛl	‘palm tree SG/PL’
g.	A/S ¹²	a- / s- Ø- / s-	a-mpa / su-mpa Ø-ɲaay / s-ɲaay	‘father SG/PL’ ‘mother SG/PL’
i.	J/K	j- / k-	ji-cil / ku-cil	‘eye SG/PL’
j.	Ñ/U	ñ- / u-	ñt-wɔj / u-wɔj	‘chain SG/PL’

The inflectional type of a noun – i.e. the prefixal marking of its singular and plural noun forms – is not part of the agreement pattern associated with the noun but a separate (although closely related) system. Inflectional type is correlated with gender: gender is predictable from inflectional type but inflectional type is not predictable from gender as shown by the genders

¹¹ In this column, the number prefixes whose pairing defines the inflectional types of nouns are given in the form that can be analysed as their basic (or underlying) form. As can be seen in the column ‘Examples’, depending on a purely phonological conditioning, phonologically predictable epenthetic vowels may be inserted, vowels may alternate with the corresponding semi-vowels, and the prefix *a-* may have a phonologically null variant.

¹² The two nouns that constitute this gender (‘father’ and ‘mother’) show fluctuation in their plural prefix (*k(u)-* or *s(u)-*) and in their plural agreement pattern (S or BK). In other words, they may alternatively behave as gender A/BK nouns.

A/BK, E/S, B/U and A/S in (6a/b/c/g). Inflectional type and gender are lexical properties of each noun lexeme, as shown in (10) for the lexemes in example (4).

(10)

	LEXEME	GENDER	INFL. TYPE	NOUN FORMS	
a.	PERSON	A/BK	Ø- / bøk-	Ø-an / bøk-an	‘person / persons’
b.	WOMAN	A/BK	a- / k-	a-sɛɛk / kɔ-sɛɛk	‘woman / women’
c.	VILLAGE	E/S	ɛ- / s-	e-suk / si-suk	‘village / villages’
d.	HOME	E/S	Ø- / s-	Ø-sindo / si-sindo	‘home/homes’

In sum, noun-lexemes in Jóola Fóoñi are associated with two types of information: Gender information (a pair of agreement patterns) and inflectional type (the pair of prefixes marking singular and plural for the noun). Contrary to many treatments of noun-class in Niger-Congo languages in the literature, inflectional type should not be treated as part of the agreement system (cf. Corbett 1991, Creissels to appear for Atlantic languages, Güldemann & Fiedler 2017 for Niger-Congo). As inflectional type is not part of the agreement system, in the following discussion of agreement only the agreement patterns associated with noun forms are marked (using upper-case letters) while the nominal prefixes that vary between inflectional types are only glossed as SG/PL.

3 Class-morphology and agreement in Jóola Fóoñi

In the previous section we have seen that in Jóola Fóoñi nouns are associated lexically with an inflectional class and agreement patterns for the singular and plural noun forms.

In this section we examine the relationship between these nominal properties and the inflectional paradigm of agreement targets in Jóola Fóoñi: adnominal modifiers, subject and non-subject indices and pronouns. We provide evidence that given the synchronic grammar of Jóola Fóoñi, the inflectional paradigm of agreement targets cannot be reduced to a reflex of the agreement properties associated with nouns.

The inflectional paradigm of modifiers and pronouns in Jóola Fóoñi has 15 cells, exemplified in (11) by the inflectional paradigm of the modifier *-ceen*¹³ ‘some’.¹⁴

(11)

CLASS	-ceen ‘some’		CLASS			CLASS	
A	a-ceen		U	u-ceen		Ñ	ñi-ceen
BK	ku-ceen		F	fɔ-ceen		T	ti-ceen
E	ɛ-ceen		K	ku-ceen		D’	di-ceen
S	si-ceen		J	ji-ceen		D	di-ceen
B	bu-ceen		M	mu-ceen		N	ni-ceen

We refer to the cells of the inflectional paradigm of modifiers as CLASSES (class morphology is glossed CLX in what follows.)

In traditional descriptions of the Niger-Congo languages that have a gender system of the same kind as Jóola Fóoñi, the cells of the inflectional paradigm of modifiers are referred to under the cover term “NOUN CLASS” that also subsumes the patterns of inflectional number-marking on nouns (see INFLECTIONAL TYPES of nouns section 2.1) and the division of noun forms into ACNFs, section 2.2.). However, given the synchronic grammar of Jóola Fóoñi, the term “noun class” is particularly misleading for the values of the inflectional paradigm of modifiers as in (8). In fact, in Jóola Fóoñi the cells of the paradigm do not uniformly reflect a categorization of nouns: there are no noun forms that control agreement of the classes D and N. Out of the 15 classes marked on modifiers, only 13 classes can be used adnominally.

For these reasons, as already discussed above, we avoid the cover term “NOUN CLASS” in the present discussion, distinguishing INFLECTIONAL TYPES of number marking on nouns and AGREEMENT PATTERNS associated with noun forms. We reserve the term CLASS (glossed CLX) for the cells in the inflectional paradigm of adnominals and pronouns that show a set of inflected forms as in (11) above.

It has to be stressed that the relationship between the cells of the inflectional paradigm and syntactic agreement is complex, as observed by Creissels et al to appear.

¹³ In Jóola Fóoñi final consonants are unstable. In particular, the stem *-ceen* alternates with *-cee* without any discernible syntactic or semantic differences. It is not possible to formulate strict rules predicting the deletion of final consonants, but an important factor in the weakening of final consonants seems to be the speed of speech.

¹⁴ In this paradigm, as in many others, the distinction between class BK and class K is neutralised. However, the distinction between the object indexes *-ni* (agreement pattern BK) and *-ko* (agreement pattern K) shows that the agreement patterns BK and K have to be distinguished.

Firstly, while inflection for class of adnominals and pronouns marks agreement with a controller in some uses (that we call CONTEXTUAL USES), 12 of the 15 classes also allow NON-CONTEXTUAL USES that cannot be analysed as agreement (see section 4 below for details).

Secondly, as already mentioned, in addition to 13 class values that have corresponding noun forms, the paradigm includes two ‘orphan classes’ (D and N) that have no corresponding noun forms. The forms inflected for CLD and CLN are therefore never used to express agreement with a noun (Creissels et al. to appear, see section 4.2 for details)).

Class morphology appears on most adnominal modifiers, e.g. the enclitic definite article (12), determiners (13-17), the genitive linker (18), adjectives (19), relative linker (20), and numerals (21) as well as on subject predicate agreement (22), indexes (bound pronouns) (23) and pronouns (24). The examples illustrate the agreement forms of *e-suk* ‘[SG-village]_E’ (agreement in class E) and *bυ-rυη* ‘[SG-road]_B’ (agreement in class B).

- | | | | | | |
|---------|---|--|---|--|--|
| (12) a. | e-suk-ey
[SG-village] _E -DET.CLE
‘the village’ | b. | bυ-rυη-ab
[SG-road] _B -DET.CLB
‘the road’ | (definite DET) | |
| (13) a. | e-suk-ey
[SG-village] _E -DET.CLE
‘this village’ | υ-yυ
DEM-CLE | b. | bυ-rυη-ab
[SG-road] _B -DET.CLB
‘this road’ | υ-bυ
DEM-CLB
(demonstrative DET) |
| (14) a. | e-suk
[SG-village] _E
‘which village’ | y-ey?
CLE-WH | b. | bυ-rυη
[SG-road] _B
‘which road?’ | b-ey?
CLB-WH
(wh-DET) |
| (15) a. | e-suk
[SG-village] _E
‘some village’ | ε-cεen
CLE-some | b. | bυ-rυη
[SG-road] _B
‘some road’ | bυ-cεen
CLB-some
(indefinite DET) |
| (16) a. | e-suk
[SG-village] _E
‘any village’ | y-anoosan
CLE-any | b. | bυ-rυη
[SG-road] _B
‘any road’ | b-anoosan
CLB-any
(free choice DET) |
| (17) a. | e-suk-ey
[SG-village] _E -DET.CLE
‘the village of my father’ | y-att
CLE-of | ampaom
my father | | |
| | b. | bυ-rυη-ab
[SG-road] _B -DET.CLB
‘the road of the village’ | b-att
CLB-of | e-suk-ey
[SG-village] _E -DET.CLE | (genitive linker) |
| (18) a. | e-suk
[SG-village] _E
‘good’ | y-ajake
CLE-good | b. | bυ-rυη
[SG-road] _B
‘good’ | b-ajake
CLB-good |

- (19) a. e-suk-ey **y-an** iyisenim
[SG-village]_E-DET.CLE CLE-REL I.showed.you
‘the village that I showed you’

b. bu-run-ab **b-an** iyisenim
[SG-road]_B-DET.CLB CLB-REL I.showed.you
‘the road that I showed you’ (relative linker)
- (20) a. e-suk y-ɛkon / si-suk st-gaba
[SG-village]_E CLE-one / [PL-villages]_S CLS-two
‘one village’ / ‘two villages’

b. bu-run b-ɛkon / u-run u-gaba
[SG-road]_B CLB-one / [PL-roads]_U CLU-two
‘one road’ / ‘two roads’ (numerals)
- (21) a. e-suk-ey ɛ-kañokañ
[SG-village]_E-DET.CLE SI:CLE-was.destroyed
‘the village was destroyed’

b. bu-run-ab bu-kañokañ
[SG-road]_B-DET.CLB SI:CLB-was.destroyed
‘the road was destroyed’ (subject indices)
- (22) a. pan iyiseni-yɔ̃
FUT I.show.you-I:CLE
‘I’ll show it to you (the village)’

b. pan iyiseni-bɔ̃
FUT I.show.you-I:CLB
‘I’ll show it to you (the road)’ (non-subject indices)
- (23) a. e-suk ɛ-cula, **y-ɔ̃** ɛ-kañom
[SG-village]_E CLE-aforementioned CLE-PRON CLE-was.destroyed.FOC
‘The village in question, it’s it that was destroyed.’

b. bu-run bu-cula, **b-ɔ̃** bu-kañom
[SG-road]_B CLB-aforementioned CLB-PRON CLB-was.destroyed.FOC
‘The road in question, it’s it that was destroyed.’ (strong 3rd person pronoun -ɔ̃)¹⁵

The words that are inflected for class maximally have a paradigm of 15 cells as in (11). Certain paradigms lack a form for CLN. As shown below, for some paradigms this can be given an explanation (see section 4.2. for the lack of a subject index for CLN) but this is not always the case. For example, the lack of a CLN form for demonstratives, as opposed to the existence of a CLN form for the 3rd person pronouns is probably accidental.

In the next section, we show that a subset of the class-inflection values is associated with intrinsic semantic content.

4. Noun-less class-inflection

In what follows we examine noun-less uses of class-inflection. We show that class-values expressed in the agreement paradigms of potential agreement targets are associated with semantic and syntactic properties that cannot be reduced to agreement with an abstract elided noun.

Jóola Fóoñi allows class-inflection in the absence of a lexical noun in two syntactically distinct configurations. In the first configuration, class-inflection without a noun is used pronominally to refer anaphorically or deictically to a nominal of the respective class. We refer to such a use of forms inflected for class as their CONTEXTUAL use, as the content of the missing noun can be contextually recovered. The contextual uses of class-inflection are all pronominal in nature and linked to a noun of the relevant gender.

In the second noun-less configuration, class marking without a noun is used in the absence of any explicit or implicit nominal controller (the NON-CONTEXTUAL USE of the class-value). In the absence of a controller, class-marking is associated with a meaning that constitutes an inherent property of each of the classes that allow such a use.

We first present the contextual uses of class-inflection (section 4.1). In stark contrast with the contextual uses, non-contextual uses of class-inflection show a number of properties intrinsic to the class-values: only a subset of class-values allows non-contextual uses, non-contextual uses are associated with their own semantic content and finally, depending on the class-value, non-contextual uses result in adverbial or pronominal syntax of the inflected agreement target (section 4.2).

4.1. Noun-less class-inflection: anaphoric and deictic uses

In contextual uses of class-agreement, noun-less agreement is used pronominally: either anaphorically referring back or deictically referring to a referent designated by a nominal

governing agreement in the relevant class. This use is available for the classes that have associated noun forms, except the classes CLT and CLD' that are peculiar in that they are each associated with a unique noun *t-in / t-an* 'place' and *d-in / d-en* 'place delimited with precision' respectively (see (36) below for discussion). Class inflection of CLA, BK, E, S, B, U, F, K, J, M, Ñ can be used anaphorically and deictically with all adnominal agreeing modifiers (24).

(24) Anaphoric N-less uses of class-inflection

a. Adjective

umaŋot e-rəp-ey y-ukon-ey, **y-ɛɛmek-ey** numaŋɛ.
 I.don't.want [SG-machete]_E-DET.CLECLE-small-DET.CLE **CLE-big-DET.CLE** I.want
 'I don't want the small machete(E), it's the big one(E) that I want.'

b. Numeral

Nɪsɔfɛnsɔf matt a-ñuul ɛ-kon nabajɛ, bare kama **ku-feeji** nabajɛ.
 I.thought that [SG-child]_A CLA-one she.had but in.fact **clBK-three** she.has
 'I thought that she has one child(A) but in fact she has **three (children(BK))**.'

c. Genitive linker

ɛ-luup-ey y-atɪ ampaɔm dɪ **y-atɪ apaalɔɔl** waatɪ yɛkon
 [SG-house]_E-DET.CLE CLE-of my.father and **CLE-OF his.friend** time one
 st-tɛɛpɪ
 SI:CLS.were.built
 'My father's house(E) and **his friend's** (E) were built at the same time.'

d. Relative linker and possessive

ɛ-bekaan y-ɪya dɪ **y-an ɪ-nɔɔmɔm** st-naamot.
 [SG-bicycle]_E CLE-your and **CLE-REL SI:1SG-bought** SI:CLS-be.different
 'Your bicycle(E) and **the one(E) I bought** are different.'

e. Determiner

si-bɛ-ɛs s-an i-yisenim, **s-ey** si-suumisuum?
 [PL-cow]_S-**DET.CLS** CLS-REL SI:1SG-showed.you **CLS-which** CLS-please.you
 'The cows(S) that I showed you, **which ones(S)** do you like?'

Noun-less anaphoric and deictic uses display the same distribution and agreement behavior as noun-phrases with a lexical noun of the same class, exemplified in (25) with subject agreement indices.

(25) a. e-rəp-ey **ɛ-jajak**
 [SG-machete]_E-DET.CLE **SI:CLE-be.good**

‘The machete is good.’

b. y-umbæm / y-æmæk-ey / y-an ɪnɔmɔm ɛ-jajak.

CLE-POSS.1SG / CLE-big-DET.CLE/ CLE-REL I.bought **SI:CLE-be.good**

‘My one/ the big one / the one I bought is good(E).’ (one = machete)

4.2 Noun-less class-inflection: non-contextual uses

In addition to the anaphoric and deictic uses of inflected modifiers discussed in the previous section, in which the class-inflection marks agreement with a nominal controller, there are noun-less uses of class-inflected elements without an implicit nominal controller (NON-CONTEXTUAL CLASS INFLECTION). This phenomenon is described for Jóola Fóoñi as AUTONOMOUS NOUN CLASSES in Sapir (1965:80-83) and for Tswana (Bantu) in Creissels (1996) (taken up in Grinevald 2000). Non-contextual (or autonomous) class-inflection has also been described for Joola Kujireray (Watson 2015: 269-270) and for Bainounk Gubëher (Atlantic, Cobbinah 2013: 351-55).¹⁶

In what follows we show that the class value and the type of host impose restrictions on non-contextual uses. Firstly, the semantic and syntactic properties of the non-contextual uses depend on the class-value (section 4.2.1). And secondly, agreement targets differ with respect to the range of class-values that allow non-contextual uses (section 4.2.2).

4.2.1 Class-values and the syntax and semantics of non-contextual class inflection

Of the 15 class-values marked in the inflectional paradigm of adnominals and pronouns, only 12 classes allow non-contextual uses, including the orphan classes D and N, that only have this use. The noun-less uses of classes F, K and J do not allow a non-contextual interpretation and are only felicitous in contexts with an explicit or implicit controller.

Each of the 12 classes that allow non-contextual uses is associated with an inherent semantic value. In non-contextual uses the values marked by class-inflection are associated with notions such as ‘person’, ‘thing’, ‘place’, ‘time’ or ‘manner’ independently of any contextual conditioning, as illustrated in (26). As apparent in (26), class-values that allow non-contextual uses do not necessarily appear with all inflecting modifiers: the relative linker *CLX-an* does not permit a non-contextual use for the CLÑ form *ñ-an* (that appears in contextual uses with nouns that trigger agreement pattern CLÑ).

¹⁶ For other examples of non-contextual uses of classes in Atlantic languages, see Creissels (to appear) and references therein.

(26) a. The meanings expressed by the relative linker *CLX-an* in its non-contextual uses

	CLASS	CLX-an 'relative linker'	NON-CONTEXTUAL USE TRANSLATION
	class A	Ø-an	'the person that ...'
	class BK	k-an	'the persons that ...'
	class E	y-an	'the thing that ...' ¹⁷
	class S	s-an	'the things that ...'
	class B	b-an	'at the place that ...' ¹⁸
	class U	w-an	'the thing that ...'
	class F	f-an	— no non-contextual uses
	class K	k-an	— no non-contextual uses
	class J	j-an	— no non-contextual uses
	class M	m-an	'in the manner how ...'
	class Ñ	ñ-an	— no non-contextual use with target <i>clX-an</i>
	class T	t-an	'at the place where ...' ¹⁹
	class D'	d-ən	'at the place where ...'
	class D	d-an	'the thing that ...'
	class N	n-an	'at the time when ...'

As many noun-less inflected adnominals allow contextual and non-contextual uses, noun-less constructions may be ambiguous. For example, as a headed relative clause, *w-an inɔɔmɔm* 'CLU-REL I bought' can combine with any head noun associated with agreement pattern U, as in (27a). As a free relative, if a noun belonging to gender B/U or K/U is present in the context or simply suggested by the context, it can be interpreted as 'the ones I bought' ('one' referring to the noun in question 27-b-i). However, it is always possible to interpret *w-an inɔɔmɔm* simply as 'what I bought' (27b-ii), and this is the only possibility in contexts that do not suggest a particular noun form associated with agreement pattern U as an understood controller.

(27) a. *ɔ-samata-w w-an inɔɔmɔm*
[PL-shoe]_U-DET.CLU CLU-REL I bought

¹⁷ Non-contextual uses of class D imply vague reference to things, situations, or events, cf. to French *ça*.

¹⁸ CIT implies a more precise delimitation of space than CLB; CLD' implies reference to the interior of a space.

¹⁹ The only possible controllers of T and D' agreement are *t-in* ~ *t-an* 'place (delimited with precision)', and *d-in* ~ *d-ən* 'interior of a place'.

‘the shoes that I bought’

b. *w-an inɔɔmɔm*

CLU-REL I bought

i. ‘the ones (CLU) that I bought’ (e.g. *ɔ-samata* ‘[PL-shoe]_U’) (contextual use)

ii. ‘what I bought’ (non-contextual use)

In the particular case of class U, the non-contextual use of class U forms can be explained by positing that one of the noun forms that trigger agreement pattern U has a special status. The noun *w-aaf* ‘thing’ is a plurale tantum associated with agreement pattern U, and consequently the use of class U forms illustrated in (27b-ii) can be explained by positing that this noun is not subject to the retrievability conditions that normally regulate the possibility of eliding nouns, and consequently acts as a default controller of class U forms in contexts that do not suggest any other controller. However, this kind of explanation cannot be extended to all the classes that have non-contextual uses (see Creissels et al. to appear for a detailed discussion). The non-contextual use of the classes cl A, BK, E, S, U, D concerns forms that occur in typically nominal syntactic positions (e.g. as subject or object), and can consequently be analysed as pronominal. Each class-value is associated with a particular meaning in its non-contextual use:

(28) a. forms of class A or BK: non-anaphoric nominals referring to human beings (sg/pl)

a-cɪla / kɔ-cɪla

CLA-aforementioned/ CLBK-aforementioned

the aforementioned person / persons

b. forms of class E or S: non-anaphoric nominals referring to countable things

y-anɔɔsan ‘everything’ *s-an kɔŋarɔlɔm* ‘what they brought’

CLE-any

CLS-REL they.bring.PST

c. forms of class U and D: non-anaphoric pronouns with inanimate uncountable reference including reference to propositions

CLU: *w-anɔɔsan* ‘everything’, *w-an akaanom* ‘what (s)he did’;

CLU-any

CLU-REL s/he.did

CLD: *dɪ-cɛɛn* ‘something’, *d-an iwɔnɔɔɛ* ‘what I think’.

CLD-some

CLD-REL I.think

Notice that class D forms (as in 28c) only have non-contextual pronominal uses, since class D has no corresponding nouns, and class D forms are not used adverbially.

The non-contextual use of the classes B, T, D', Ñ and N concerns forms that cannot be used as subjects or objects, and can be deemed adverbial, since they typically occur as adjuncts with a meaning entirely determined by the class marker:

- (29) a. forms of class B used as spatial adverbs referring to vaguely delimited places:
bʊ-cɛɛn 'somewhere' *b-anɔɔsan* 'everywhere'
 CLB-some CLB-any
- b. forms of class T used as spatial adverbs referring to places delimited with precision:
t-aa-t-ɛ 'here' *t-an* *anɛnom kɔɔraay* 'where he left the herd'
 CLT-DEM-CLT-PROX CLT-REL s/he.left herd
- c. forms of class D' used as spatial adverbs referring to the interior of something:
d-ɛɛ-r-e 'herein' *d-ɛn* *kɔnɔkɛnom* 'where they entered'
 CLD'-DEM-CLD'-PROX CLD'-REL they.entered
- d. forms of class Ñ used as iterative adverbs, such as *ñi-gaba* CLÑ-two 'twice';
- e. forms of class N used as temporal adverbs:
ni-cɛɛ 'sometimes' *n-anɔɔsan* 'always'
 CLN-some CLN-any

Notice that all uses of class N forms are non-contextual adverbial uses: since class N is an orphan class there are no corresponding nouns with agreement pattern CLN, and noun-less class N forms are never used pronominally. A particularly clear manifestation of the contrast between the non-contextual uses of CLD and CLN is that the paradigm of subject indexes includes a phonologically empty subject index of CLD expressing agreement with pronominal CLD forms in subject function, but includes no CLN subject index.

Class M has the particularity of having non-contextual uses of both pronominal and adverbial type, but with different meanings. Class M forms are particularly frequent in a non-contextual use of adverbial type in which they act as manner adverbs as in (30), whereas CLM forms of possessives and of the genitival linker have a non-contextual use of pronominal type in which they can be glossed 'what concerns X' exemplified in (31).

(30) Adverbial uses of CLM

- a. *m-ɔɔ-mʊ*
 CLM- ɔɔ-CLM 'thus, in this way'
- b. *m-anɔɔsan*
 CLM-ANY 'in any way'

- c. *m-an* *irɛɡim*
CLM-REL I.told.you ‘as I told you’

(31) Pronominal uses of cLM

a. possessive

M-ɔɔl-ul mu-suumənsuum.
CLM-POSS-I:CLBK SI:CLM-pleases.me.
‘[What concerns them](CLM) pleases me.’
lit. ‘Theirs (CLM) pleases me’ > ‘I like them.’

b. genitival linker

M-att apaalt mu-suumənsuum.
CLM-GEN your.friend SI:CLM-pleases.me.
‘[What concerns your friend](CLM) pleases me.’
lit. ‘That of (CLM) your friend pleases me’ > ‘I like your friend.’

It is striking that the non-contextual uses of the orphan classes CLD (22d) and CLN (23e) do not pattern together with respect to their syntactic status: non-contextual uses of CLD are pronominal while non-contextual uses of CLN are adverbial.

Interestingly, this syntactic distinction has some morphological correlates. The classes lending themselves to adverbial non-contextual uses are for example the only ones in which the class prefix of some adnominals or pronouns may show a reduplicated form CɔC- in free variation with the regular C- form (as e.g. *n-ɛy* ~ *nɔn-ɛy* ‘when?’, class N form of the interrogative *-ɛy* ‘which’).

The distinction between nominal and adverbial semantics is visible in the syntax. Pronominal non-contextual uses have the distribution of noun phrases triggering subject agreement of the relevant class (32). The non-contextual uses of the classes B, D’, T, M and N, in contrast, are adverbial: they cannot function as arguments and in particular, they cannot trigger subject agreement. They appear as adverbs occupying the topic position, with default CLD agreement as in (33a/b/c).²⁰

²⁰ CLD agreement acts as default agreement for phrases that occupy the topic position at the left periphery of the clause but lack a status in the agreement system, in a way comparable to the subject clitic *ça* in French. Consider (i), where the subject index of class D of the verb *-let* ‘not to be’ resumes the nominalised clause *man koñulak kokañɔ* ‘(the fact) that children are spoilt’.

(i) Man ku-ñul-a-k ku-kañɔ, Ø-let bok-anɔɔsan.

- (32) a. A-sɛɛk a-cɛɛn a-jaalɔjaw.
[SG-woman]_A CLA-indef SI:CLA-came
'A woman came.'
- b. A-cɛɛn a-jaalɔjaw.
CLA-some SI:CLA-came
'Someone came.'
- c. D-an ɔ-jokɔlɔm dt ka-rɛŋ-ak,
CLD-REL SI:2SG-saw at [SG-sacred.forest](K)-DETK
d-ɔɔ lɛɛ Ø-riiŋuu Ø-sindɐ-ɐy, b-ɔɔ Ø-ɛɛtɛ e-reuu.
CLD-PRO FUT.NEG SI:CLD-reach [SG-home]_E-DETE CLB-PRO SI:CLD-must INF-stop
'[What you saw [in the sacred forest]_i]_j, it_j will not reach_j the home, it_j must stay there_i.'

- (33) No subject agreement
- a. ʉ-to Ø-loi-ut / *ti-loi-ut.
DEM-CLT **SI:CLD**-be.far-NEG / ***SI:CLT**-be.far-NEG
'There (CLT), it is not far (CLD).' (locative, clT)
- b. M-ɔɔ-mɔ Ø-jak-ut / *mɔ-jak-ut.
CLM-DEM-CLM **SI:CLD**-be.good-NEG / ***SI:CLM**-be.good-NEG
'Thus (=in this way), it is not good (CLD).'
- c. N-ɔɔ Ø-naam-ut / *nt-naam-ut.
CLN-PRO **SI:CLD**-be.similar-NEG / ***SI:CLN**-be.similar-NEG
'Then (=by that time), things were different.'

Note that the analysis of a zero subject index as CLD agreement is supported by the fact that pronominal CLD forms such as *d-ɔɔ* 'that' or *dt-cɛɛn* 'something' in subject position mark subject agreement by a phonologically null subject index contrasting with the non-null indices of the other agreement patterns.

- (34) a. d-ɔɔ Ø-jak-ut
CLD-PRON **SI:CLD**-be.good-NEG
'That is not good.'
- b. S-ɔɔ-su st-jak-ut.

that [PL-child]_{BK}-DET-CLBK SI:CLBK-be.spoilt SI:CLD-not.to.be CLBK-any
'If children are spoilt, there are certain people who are responsible.'
lit. 'That children are spoilt, it is not everybody.'

CLS-DEM-CLS SI:CLS-be.good-NEG

‘Those ones (e.g. dogs, CLS) are not good.’

The classes involved in adverbial non-contextual uses (CLB, CLM, CLT, CLD', CLN) do not form a homogeneous group with respect to the availability of anaphoric uses. The agreement pattern CLB and CLM have corresponding noun forms and can be found in agreement chains with a nominal form in the role of controller, while CLN has no nouns and consequently cannot be found in such a configuration. The agreement patterns CLT and CLD' only have one noun corresponding to the class but show a particular behaviour in head-modifier constructions.

In Jóola Fóoni when the role of subject is fulfilled by a head-modifier construction (35a), if the head noun can be retrieved from the context, it is possible to delete it without any change in the subject index prefixed to the verb, as in (35b).

- (35) a. E-suk-e-y ɔ-yɔ **e-loi-ut**
 [SG-village]_E-DET.CLE DEM-CLE **SI:CLE-be.far-NEG**
 ‘This village (CLE) is not far (CLE).’

- b. ɔ-yɔ **e-loi-ut**
 DEM-CLE **SI:CLE-be.far-NEG**
 ‘This one (CLE) is not far (CLE).’

By contrast, with subject noun phrases consisting of *b-in* / *b-an*, *t-in* / *t-an* or *d-in* / *d-en* and a modifier, if the head noun is deleted, the verb can only express CLD agreement (marked by a zero-prefix). This is illustrated in (36) for *t-in* / *t-an*, but noun phrases consisting of *b-in* / *b-an* or *d-in* / *d-en* with a CLB or CLD' modifier behave exactly in the same way.

- (36) a. **Tun-at** ɔ-to *Ø /^{ok}**ti-loi-ut**
 [place]_T-DET.CLT DEM-CLT *SI:CLD/SI:CLT-be.far-NEG
 ‘This place (CLT) is not far (CLT).’ (head noun CLT)

- b. ɔ-to ***ti-loi-ut**
 DEM-CLT *SI:CLT-be.far-NEG

Not: ‘This place (CLT) is not far (CLT).’ [Agreeing N-less impossible ≠ 35b]

- c. ɔ-to **Ø-loi-ut**
 DEM-CLT SI:CLD-be.far-NEG
 ‘There (CLT), it is not far (CLD).’ (non-contextual CLT)

Consequently, *o-tu* can act as a modifier of *t-in-a-t* ~ *t-an-a-t*, but contrary to other forms that have the same morphological structure (such as *o-yu* ‘this one (CLE)’ in (35b)), the CLT form does not license the ellipsis of its head. The explanation is that, by itself, *o-tu* is always an adverb (‘there’) and cannot fulfill the role of subject. As an adverb, the CLT form of the demonstrative can only occupy the topic position, the subject role is taken over by the index of class D expressing vague reference to things.

4.2.2 Class-inflected hosts and non-contextual class marking

In the previous section we have shown that both the availability and the syntactic category of non-contextual uses depend on the class-value. Here we show that non-contextual uses also depend on the type of class-inflected host.

In general, non-contextual uses concern determiner-like elements such as *CLX-ceen* ‘some’, the 3rd person pronoun *CLX-ɔɔ* and the relativizer *CLX-an*. The non-contextual uses of the relativizer *CLX-an* are given in (26). The same range of non-contextual uses is found with the demonstratives, the 3rd person pronoun *CLX-ɔɔ*, and determiner-like elements such as *CLX-ceen* ‘some’ (37), *CLX-anɔɔsan* ‘any’, or *CLX-acila* ‘aforementioned’.

(37)

	CLASS	CLX-ceen ‘some’	NON-CONTEXTUAL USE TRANSLATION
	class A	a-ceen	‘someone’
	class BK	ku-ceen	‘some persons’
	class E	e-ceen	‘something’ (concrete, countable)
	class S	si-ceen	‘some things’ (concrete, countable)
	class B	bu-ceen	‘somewhere’
	class U	u-ceen	‘something’
	class F	fu-ceen	— no non-contextual uses
	class K	ku-ceen	— no non-contextual uses
	class J	ji-ceen	— no non-contextual uses
	class M	mu-ceen	‘somehow’
	class Ñ	ñi-ceen	— no non-contextual use with target -ceen
	class T	ti-ceen	‘somewhere’
	class D’	di-ceen	‘somewhere’

	class D	dt-cɛɛn	‘something’
	class N	nt-cɛɛn	‘sometimes’

Not all agreement targets allow the same range of non-contextual uses. For example, non-contextual uses of classes with the same meanings illustrated in (37) are found with *CLX-ɛkon* ‘one, same’, but not with the other numerals like *CLX-gaba* ‘two’. For adjectives and the genitival linker *CLX-atu*, we have examples for classes A, BK, and D (for example *r-ajakɛ* ‘CLD-good, something good’, *k-atu Dakaar* ‘CLBK-genitive Dakar, the people of Dakar’), but not for the other classes.²¹

There are also non-contextual uses of classes limited to a particular type of hosts. In particular, class Ñ̃ departs from the other classes that have non-contextual uses in that it only has non-contextual uses with quantitative modifiers (38a), not e.g. with the relativiser (38b) or the determiners (38c). In their non-contextual uses, the CLÑ̃ forms of quantitative modifiers act as iterative adverbs. Note that, in the present state of the language, none of the nouns that govern agreement pattern Ñ̃ has a lexical meaning that could be related to this use of class Ñ̃.

- (38) a. ñ̃-amɛɛɲɛ ‘several times, often’ < amɛɛɲɛ ‘numerous’
b. ñ̃-an CLÑ̃-relativiser: contextual uses only ‘the one which’ (anaphoric to N_{Ñ̃})
c. ñ̃-oo / ñ̃-ey

CLÑ̃-PRON / CLÑ̃-WH- contextual uses only: ‘that N/ which N’ (anaphoric to N_{Ñ̃})

Class M is another case of interaction between host and non-contextual uses of class-inflection. Class M forms have an adverbial non-contextual use with the usual range of hosts (*CLX-cɛɛn* ‘some’, the 3rd person pronoun *CLX-ɔɔ* and the relativizer *CLX-an*), but they also have a pronominal non-contextual use, limited to the genitival linker and the possessive, in which they can be glossed ‘what concerns X’ or ‘what makes the particularity of X’ (see examples (31)/(39)). Here again, none of the nouns governing agreement pattern M has a lexical meaning corresponding exactly to either of these non-contextual uses of CLM forms.

- (39) M-ɔɔl-tɪl mɔ-bamban.
CLM-POSS-I:CLBK SI:CLM-has.finished.

lit. ‘Theirs (CLM) has finished > ‘It’s over for them.’

Class-inflection is also found on NON-SUBJECT INDICES in Jóola Fóoñi that are bound pronominal elements used as arguments on predicates and as possessives in noun phrases.

²¹ Note that CLM has non-contextual uses with the genitive linker, but not with the meaning of “manner” illustrated in (30) – see the example (31b).

Contrary to subject indices, syntactically obligatory prefixes to verb stems, non-subject indices are syntactically optional suffixes. However, they do not behave uniformly in their placement on verbal predicates. While the non-subject indices for the human classes A/BK are closer to the verb stem in the same slot that hosts 1st and 2nd person indices (40a/b), the remaining classes appear in a more peripheral position (40c/d/e). Several non-subject indices can combine (40d/e). As illustrated in (40) this is particularly apparent in the tenses whose formation involves a reduplicative suffix.²² Note that, for the classes that have adverbial non-contextual uses (CLB, CLD', CLT, CLM, CLN), the non-subject indices can express the same adverbial value as the corresponding non-contextual free forms (*there, thus, then*), illustrated in (40d/e). The non-subject indices of these classes occupy the same morphological slot as *-bɔ* 'there' in (40d/e).

(40) The position of non-subject indices

a. kʊ-jʊk-t-jʊk

SI:CLBK-see-I:2sg-RDPL

'They saw you' (non-subject index 2SG)

b. kʊ-jʊk-ɔɔ-jʊk

SI:CLBK-see-I:CLA-RDPL

'They saw him/her'

c. kʊ-jʊ-jʊk-yɔ

SI:CLBK-RDPL-I:CLE

'They saw it(CLE)' (for example ɛ-yɛn-ɛy 'the dog(E)')

d. kʊ-jʊk-ɔɔ-jʊk-bɔ

SI:CLBK-see-I:CLA-RDPL-I:CLB

'They saw him/her there'

e. kʊ-jʊ-jʊk-yɔ-bɔ

SI:CLBK-see-RDPL-I:CLE-I:CLB

'They saw it(CLE) there' (for example ɛ-yɛn-ɛy 'the dog(E)')

The behaviour of non-subject indices shows that non-contextual uses of CLÑ do not behave on a par with the other classes yielding adverbial non-contextual uses. While non-subject indices of the classes B, D', T, M, N have adverbial uses corresponding to *there*

²² The reduplicative suffix does not carry any particular TAM value, and is best analyzed as a finiteness marker, since it occurs obligatorily in some independent tenses but not in the corresponding relative tenses.

(CLB, CLD', CLT), *thus* (CLM) and *then* (CLN), the CLÑ non-subject index only has argumental uses that are anaphoric to a noun triggering clÑ agreement.

4.3 Comparing contextual and non-contextual uses of class marking

As shown in sections 4.1. and 4.2, noun-less uses of class-inflection in Jóola Fóoñi do not present a uniform picture.

- (41) a. Some class-values do not have non-contextual uses (classes F/K/J cf (7)).
 b. Some class-values do not have contextual uses (the orphan classes D and N).
 c. Class Ñ has non-contextual uses only with quantitative modifiers.
- (42) Syntactic properties
 a. **Contextual** noun-less uses are possible for 11 of the 13 class-values that have corresponding nouns (A, BK, E, S, B, U, F, K, J, M, and Ñ), but not for the two classes T and D', i.e., the two classes that have a unique potential controller (*t-in* / *t-an* and *d-in* / *d-en* respectively)
 b. **Non-contextual** uses fall into two groups:
 i. classes A, BK, E, S, U and D give rise to **pronominal** non-contextual uses
 ii. classes B, D', T, and N give rise to **adverbial** non-contextual uses
 iii. class M is the only class that has both pronominal and adverbial non-contextual uses (but with different meanings, and different hosts cf. (30)/(31))

In Jóola Fóoñi all the words or phrases that can fill the modifier slot in a noun-modifier construction and express gender-number agreement with their head can also constitute contextual class-inflected headless noun phrases that are deictic or anaphoric to a noun. Non-contextual uses are neither anaphoric nor deictic and they are the only configurations possible for the orphan classes that do not have any nouns that trigger the corresponding agreement. This situation gives rise to three cases, exemplified here with the stem *-ajake* 'good' (< *-jak* 'be good'). First, with the classes F/K/J that only admit contextual construals, the headless use implies the possibility of retrieving an understood singular controller controlling agreement pattern F, K or J, as in (43). Secondly, the orphan classes D and N only admit a non-contextual construal: the form *r-ajake* "CLD-good" can only have a headless use in which it is interpreted as 'something good' (44). With class values that admit both contextual and non-

contextual construals, the headless use is ambiguous. In its headless use, *w-ajakε* “CLU-good” can be interpreted as ‘the good ones’ with reference to the plural of an implicit controller of gender B/U or K/U retrievable from the context as in (45a), but the non-contextual construal is also possible (45b).

- (43) (*fɔ-rum*) *f-ajakε*
 ([SG-word]_F) CLF-good
 ‘a good one’

(CLF – contextual use only – anaphoric to a noun governing CLF agreement – e.g. *fɔ-rum*
 ‘word(F)’)

- (44) *r-ajakε*
 CLD-good
 ‘something good’ (orphan class CLD – non-contextual use only)

- (45) a. (*u-samata*) *w-ajakε*
 (PL-shoe) CLU-good
 ‘good ones’ (referring to shoes, contextual use)

- b. *w-ajakε*
 CLU-good
 ‘something good’ (non-contextual use)

Headless noun phrases may include two or more forms inflected for the same class, as in (46)

- (46) a. *ɔ-m-ε* *Ø-an* *ɪ-saafɛña*
 DEM-CLA-PROX CLA-REL SI:1SG-be.greeting
 ‘this person that I’m greeting’
 b. *ɔ-t-ε* *t-an* *ɪ-lakɔña*
 DEM-CLT-PROX CLT-REL SI:1SG-be.sitting
 ‘there where I’m sitting’

The following table summarises the properties of noun-less class-marking discussed.

CLASS	A	BK	E	S	F	K	B	Ñ	U	J	M	T	D'	D	N
agr with nouns	+	+	+	+	+	+	+	+	+	+	+	+	+	-	-
								(4)				(1)	(1)		
non-contextual uses	+	+	+	+	-	-	+	+	+	-	+	+	+	+	+
pron. NC	+	+	+	+			-	-	+		(+)	-	-	+	-
adv. NC	-	-	-	-			+	+	-		+	+	+	-	+

NC = non-contextual use

5. Class-values and the relative linker

We have seen in section 4.2 that the non-contextual values for the different class-values fall into three groups: classes CLA, CLBK, CLE, CLS, CLU and CLD yield pronominal non-contextual uses while classes CLB, CLD', CLT and CLN yield adverbial non-contextual uses and CLM has pronominal and adverbial uses, depending on the agreement target it combines with. Here we present evidence that the adverbial non-contextual uses do not form a homogeneous class. More specifically, we show that non-contextual class-inflection on the relative linker with the locative classes CLB, CLD' and CLT contrasts with the class inflection CLN and CLM for the temporal and manner adjuncts. We examine non-contextual uses of the relative linker and headed relatives separately (sections 5.1 and 5.2).

5.1 Non-contextual uses of the relative linker

The contrast between pronominal and adverbial non-contextual uses is also found with non-contextual uses of the relative linker, reflected in the range of free relatives available in Jóla Fooni.

The non-contextual uses of the relative linker inflected for classes CLA, CLBK, CLE, CLS, CLU and CLD are pronominal and the constituent introduced by the relative linker corresponding to these classes behaves like a free relative: formally these constituents look like relative clauses but distributionally they behave like noun phrases.

- (47) a. [s-an uɣɛrulom] si-suumɛnsuum.
CLS-REL 2SG.brought SI:CLS-be.pleasant.for.me
'The things you brought are pleasant for me.'
- b. nɛɔjɔk [y-an / w-an / d-an ɪkaanum.]
I.saw CLE/CLU/CLD-REL youSG.did
'I saw what you did.'

In contrast, the non-contextual uses of the relative linker inflected for the classes CLB, CLT, CLD', CLN and CLM - while morphologically entirely parallel to the other class values - do not introduce free relatives: these constituents only have an adverbial distribution (see (48)) and cannot function as arguments: subject agreement with non-contextual uses of the relative linker inflected for CLB, CLT, CLD', CLN and CLM is excluded (see also (33)).

- (48) [m-an ɛcimem,] suumɛnsuum / *mu-suumɛnsuum
CLM-REL SI:CLA.sings SI:CLD.be.pleasant.for.me / SI:CLM.be.pleasant.for.me
'How she sings, it(CL D) pleases me.'

Non-contextual uses of the relativiser inflected for the locative classes can be taken up by a locative non-subject index on the verb. This locative index can correspond to a subcategorised

locative argument (49a) or to a locative adjunct (49b). The locative non-contextual use of the relativiser commutes with locative PPs (49b/c).

- (49) a. [t-an a-wolum], nt-jajaw-tə
 CLT-REL SI:CLA-was.born SI:1SG-went-I:CLT
 ‘Where s/he was born, I went there.’
- b. [t-an ɪ-nɛnom ba-gaas-ab], buk-an-ak
 CLT-REL SI:1SG-put [SG-luggage]_B-DET.CLB [PL-person]_{BK}-DET.CLBK
 ku-bembɛŋ-tə
 SI:CLBK-gathered-I:CLT
 ‘Where I put the luggage, the people gathered there.’
- c. balamok ɛ-loop-ɛy, buk-an-ak ku-bembɛŋ-tə
 behind [SG-house]_E-DET.CLE [PL-person]_{BK}-DET.CLBK SI:CLBK-gathered-I:CLT
 ‘Behind the house, the people gathered there.’

The non-subject index on the predicate can only be used as an argument if a head-noun triggering the matching agreement pattern is present (50a/b). The strictly adverbial nature of relative clauses with CLT/CLD’ explains why the cognate nouns *t-in/ d-in* have been preserved even though they are the only nouns triggering CLT/CLD’ agreement: the nominal heads are necessary to turn the CLT and CLD’ relative clauses into noun phrases corresponding to light-headed relatives.

- (50) a. *t-an a-wolum, nt-mammanj-tə
 CLT-REL SI:CLA-was.born SI:1SG-know-I:CLT
 ‘Where he was born, I know *there.’
- b. t-in-at t-an a-wolum, nt-mammanj-tə
 [SG-place]_T-DET.CLT CLT-REL SI:CLA-was.born SI:1SG-know-I:CLT
 ‘The place(T) where he was born, I know it(CLT).’

The contrast between the non-contextual uses of the relative linker with different class-inflection values suggests that the relative linkers inflected for classes CLB, CLT, CLD’, CLN and CLM synchronically behave like complementisers introducing circumstantial clauses.

5.2 Class-inflection of the relative linker in headed relative clauses

As a rule, in headed relative clauses, the relativiser obligatorily agrees with the head noun and does not mark the function of the relativised constituent in the relative clause, which makes it possible to analyse it as a mere linker in a head-modifier construction.

(51)	a-sɛɛk-aw	Ø-an	ɪ-jokom	‘the woman I saw’	(A)
	[SG-woman] _A -DET.CLA	CLA-REL	sɪ:1sg-saw		
	kʊ-sɛɛk-ak	k-an	ɪ-jokom	‘the women I saw’	(BK)
	[PL-women] _{BK} -DET.CLBK	CLBK-REL			
	ɛ-yɛn-ɛy	y-an	ɪ-jokom	‘the dog I saw’	(E)
	[SG-dog] _E -DET.CLE	CLE-REL			
	sɪ-yɛn-as	s-an	ɪ-jokom	‘the dogs I saw’	(S)
	[PL-dogs] _X -DET.CLS	CLS-REL			
	bu-bɛɛr-ɛb	b-an	ɪ-jokom	‘the tree I saw’	(B)
	[SG-tree] _B -DET.CLB	CLB-REL			
	u-bɛɛr-ɛw	w-an	ɪ-jokom	‘the trees I saw’	(U)
	[PL-trees] _U -DET.CLU	CLU-REL			
	f-al-af	f-an	ɪ-jokom	‘the river I saw’	(F)
	SG-river] _F -DET.CLF	CLF-REL			
	k-al-ak	k-an	ɪ-jokom	‘the rivers I saw’	(K)
	[PL-rivers] _K -DET.CLK	CLK-REL			
	jɪ-bɛɛl-aj	j-an	ɪ-jokom	‘the palm tree I	(J)
	[SG-palm.tree] _J -DET.CLJ	CLJ-REL		saw’	
	mʊ-bɛɛl-am	m-an	ɪ-jokom	‘the palm trees I	(M)
	[PL-palm.trees] _M -DET.CLM	CLM-REL		saw’	
	ñɪ-wʊj-añ	ñ-an	ɪ-jokom	‘the chain I saw’	(Ñ)
	[SG-chain] _Ñ -DET.CLÑ	CLÑ-REL			
	t-ɪn-at	t-an	ɪ-jokom	‘the place I saw’	(T)
	[SG-place] _T -DET.CLT	CLT-REL			
	d-ɪn-ɛd	d-ɛn	ɪ-jokom	‘the place I saw’	(D')
	[SG-place] _{D'} -DET.CLD'	CLD'-REL			

The following example, in which the head noun corresponds to the subject of an embedded clause, illustrates the fact that the relativizer remains the same whatever the function of the head noun within the relative clause.

- (52) kʊ-sɛɛk-ak k-an a-mansa-aw a-maɲɛriitum
 [PL-women]_{BK}-DET.CLBK CLBK-REL [SG-king]_A-DET.CLA sɪ:CLA-does.not.want
 man ku-pur

that SI:CLBK-go.out

lit. ‘the women that the king doesn’t want that they go out.’

The examples (51/52) show that in headed relative clauses, the linker agrees in class with the head noun. In contrast, relative clauses introduced by the relativisers *t-an*, *d-en* or the locative use of *b-an* can modify nouns of any gender, as in (53).

- (53) ɛ-loop-ɛ-y d-en ʊ-jɛɛ-m bɛɛt e-loi-ut.
[SG-house]_E-DET-CLE CLD'-REL SI:2SG-go.ICPL-ACT towards SI:CLE-be.far-NEG

‘The house(CLE) where you are going is not far(CLE).’

While the relativisers of the other classes function like agreeing linkers that do not mark the function of the relativized element, the locative relativisers function like locative pronominals, relativizing a subcategorised (55a) or circumstantial (55b) locative in the relative clause.

- (54) a. e-suk-ey t-an ɪ-jawom
[SG-village]_E-DET.CLE CLT-REL SI:1SG-went
‘the village where I went’
b. e-suk-ey t-an ɪ-nɔɔmɔm si-bɛ-ɛs
[SG-village]_E-DET.CLE CLT-REL SI:1SG-bought [PL-cow]_S-DET.CLS
‘the village where I bought the cows’

6 Analysis

In Jóola Fóoñi the formally homogeneous system of class-inflection markers shows heterogeneity in the syntactic and semantic behaviour of the different class-values.

Firstly, the inflectional paradigm of adnominals and pronouns contains two orphan classes CLD and CLN that lack any potential nominal controllers in the present state of the language. As the non-contextual uses marked for CLN are adverbial in nature, forms inflected for CLN never appear in a canonical controller-target agreement configuration and CLN does not have corresponding subject agreement indices.

Secondly, while Spanish (56) has non-contextual uses for all available gender-number values, Jóola Fóoñi shows that this need not be the case: only a sub-set of inflectional values allows non-contextual uses and agreement targets vary in the range of non-contextual class-marking they admit.

- (55) a. el inteligente - los inteligentes the intelligent one.MS/ones.MPL
b. la inteligente - las inteligentes the intelligent one.FS/ones.FPL

In Spanish, the non-contextual uses of gender have a nominal distribution. Jóola Fóoñi shows that the syntactic properties of the non-contextual use can depend on the class-value of the

inflection: pronominal with classes A, BK, E, S, U, D, adverbial with classes B, D', T, N and Ñ, both pronominal and adverbial with class M. The possibility of non-contextual uses and the syntactic properties of the available non-contextual uses therefore appear to be an intrinsic property of the class-value that has to be marked in the lexicon, not the product of a syntactically uniform mechanism (for example licensing by an empty noun). In particular, the class values of Jóla Fóoni differ in whether they allow free relative uses.

The class values associated with time, location and manner are being reanalysed as markers of adverbial temporal, locative and manner adjuncts that do not function as noun-phrases anymore and differ from noun phrases in their agreement behaviour. For subject agreement the class values with adverbial non-contextual uses behave on a par: Non-contextual uses of the adjunct class values cannot occupy subject position and they appear as adjuncts to a clause with a phonologically null subject index that can be analyzed as an expletive / default subject of class D (see ex 33).

Furthermore, in their non-contextual uses the time/location/manner classes have a corresponding adverbial non-subject index (see ex 40). In this respect the behaviour of the adjunct classes is parallel to the systems found with locatives in some Romance languages where locative PPs have relative and adverbial non-subject forms integrated into pronominal paradigms as e.g. French *où* ‘REL.where’ and *y* ‘there’ but no subject pronouns and no verbal subject agreement forms. The system of Jóla Fóoni circumstantial non-subject indices is richer than the oblique clitic system in French, in that the weak pronominal system of Jóla Fóoni includes forms for time and manner in addition to a range of locatives.

With respect to the inflected relativiser the classes yielding adverbial non-contextual uses do not pattern together, however.

The locative forms of the relativiser (CLB, CLT, CLD') are not targets of agreement with the head-noun: locative relativisers allow headed relative uses irrespective of noun-class of the head noun (see 45) as long as the relativized position is a locative. The lack of agreement can therefore be interpreted as an indication that the locative relativisers are reanalysed as locative relative pronouns, so in contrast with the relativising linker for other classes the locative class marking with a locative interpretation is not an instance of agreement but marks the syntactic function inside the relative clause. This pattern does not extend to the class-values CLN and CLM associated with temporal and manner interpretation in their non-contextual use. The relativiser with the temporal agreement of CLN only has non-contextual adverbial uses: when combining with temporal nouns such as *ε-mt* '[SG-year]_E' the relative clause cannot be in the form CLN associated with temporal interpretation but is subject to gender agreement with the

noun (57). The configuration of a noun meaning 'manner' with the manner form of the relativiser does not arise in Jóola Fóoñi either, since the nouns expressing such meanings trigger agreement in a different class value.

- (56) ε-mit-ey y-an t-wolum
 [SG-year]_E-DET.CLE CLE-REL SI:1SG-was.born
 'the year that I was born'

7. Conclusion

Jóola Fóoñi has a morphologically transparent system of class-inflection that appears as agreement-marking on a wide range of modifiers, adnominal elements and pronouns. Synchronically, in Jóola Fóoñi the values of the inflectional paradigm have a grammatical status independent of their use as markers of agreement with nouns.

Firstly, the paradigm of class-inflection in Jóola Fóoñi shows that inflectional systems can preserve inflectional values that no longer operate as agreement markers synchronically (CLN) in addition to a default agreement form (CLD). Secondly, non-contextual uses are not generated by a uniform process in the syntax: certain classes do not have non-contextual uses. And finally, strikingly, the non-contextual uses of the different class values are syntactically heterogeneous: some class-values yield pronominal elements while other class-values result in adverbial elements.

In addition to these syntactic mismatches between the class-values on agreeing targets and the noun classes in the nominal domain, a subset of the class-values of the inflectional paradigm is also semantically independent from the nominal domain in that the class-values that allow non-contextual uses are associated with intrinsic semantic content such as person, thing, time, manner, and different conceptualisations of place.

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Abbreviations

Abbreviations follow the Leipzig glossing rules, except for ACT = actualiser, CLX = inflection of class X, ICPL = incomplete, I:X = non-subject index (bound pronoun) of inflection X, POSS = possessive, SI:X = subject index of inflection X

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