Morphology-syntax mismatches in agreement systems: The case of Jóola Fóoñi

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Abstract

The present study examines the agreement system of Jóola Fóoñi (Atlantic, Niger-Congo). In Niger-Congo languages, noun forms divide into subsets according to their agreement patterns. The morphological paradigm of the agreement targets is generally analysed as a reflex of agreement triggered by nominal controllers. For Jóola Fóoñi this view is not correct since (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, independent of agreement configurations with nouns. In Jóola Fóoñi the classification of noun forms based on their agreement properties and the cells of the inflectional paradigm of adnominal and pronominal agreement targets are related but independent components of the grammar. 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 values with nominal controllers; the other 2 class-values only appear on agreement targets. The inflectional paradigm characterising agreeing adnominals and pronouns is heterogeneous in several respects. (i) Of the 15 class-values in the inflectional paradigm, only 12 allow NON-CONTEXTUAL USES without a nominal controller, each associated with a particular meaning. (ii) Non-contextual uses of the 5 class-values expressing time, manner and different conceptualizations of space display adverbial syntax, while the other class-values show pronominal syntax. (iii) Of the 5 class-values associated with adverbial syntax, the 3 locative classes differ from the classes associated with time and manner with respect to relativisation. We propose that

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.

Keywords: Agreement, inflectional class, inflectional paradigm of agreement targets, non-contextual uses of agreement, noun–class systems

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-ajakɛ   ɛ-kañɔkañɔ
         SG-village   CLE-good   sI:CLE-was.destroyed
     b. si-suk   s-ajakɛ   sɪ-kañɔkañɔ
         PL-village   CLS-good   sI:CLS-was.destroyed
         'The good village was destroyed. / The good villages were destroyed.'
     c. si-sindo   s-ajakɛ   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
      (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 *-ajakɛ* '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 *-ajakɛ* 'good' the prefixes *y-/s-* in *y-ajakɛ/s-ajakɛ* mark agreement with two different subsets of potential controllers

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

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. 2021; 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]

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[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).

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 (§2). §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 (§4). §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 three locative class-values displays a different syntax from the relative linker marked for the temporal and manner class-values. §6 summarises the analysis.

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 TYPES depending on the singular/plural marking pattern (§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, §2.2). As discussed in Creissels (to appear), Creissels et al. (2021) 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. 2021). 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-/ bʊk-*

SINGULAR NOUN FORM	PLURAL NOUN FORM
Ø-an 'person'	bʊk-an 'persons'

Lexeme: PERSON

   b. Inflectional type *a-/ k(ʊ)-*

SINGULAR NOUN FORM	PLURAL NOUN FORM
a-sɛɛk 'woman'	kʊ-sɛɛk 'women'

Lexeme: WOMAN

   c. Inflectional type *ɛ-/ s(ɪ)-*[3]

SINGULAR NOUN FORM	PLURAL NOUN FORM
e-suk 'village'	si-suk 'villages'

Lexeme: VILLAGE

   d. Inflectional type *Ø-/ s(ɪ)-*

SINGULAR NOUN FORM	PLURAL NOUN FORM
Ø-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, *sambʊn* 'fire' and *sʋuut* 'dream' resemble pluralia tantum, in the sense that they behave in all respects like the plural of nouns belonging to the inflectional types *ɛ-/ sɪ-* or *Ø- / sɪ-*, except for the fact that there is no corresponding singular form.[4]

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[3] 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).

[4] Note that the nouns without a dedicated singular form do not form a homogeneous class. While *sʋuut* 'dream' combines with numerals, including the numeral one (i), *sambʊn* '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)	sʋuut	s-ʁkon	sʋuut	sɪ-gaba
	dream(S)	CLS-one	dream(S)	CLS-two
	'one dream'		'two dreams'	
(ii)	na-yabɛnɛ	sambʊn-as	tɪn	tɪ-gaba.
	sI:CLA-lit	fire(S)-DET.CLS	place(T)	CLT-two
	lit. 'He lit fire in two places.' > 'He lit two fires.'			

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′)[5] evoke the phonological form of the corresponding agreement markers.[6] In what follows, the agreement pattern of each noun form is included as part of the gloss: e.g. Ø-*sindo* '[SG-home]ₑ'/ *si-sindo* '[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 Table 1[7] illustrate agreement as displayed on the vowel-initial adjectival stem -*ajakɛ* 'good' (for more detailed examples of agreeing modifiers and pronouns see §3 below).

In Jóola Fóoñi, the exponents of number agreement cannot be decomposed into exponents for gender and number as e.g. in the Spanish example (5).[8] The plural forms of *ka-sɔnd* / *ʋ-sɔnd* 'roof sg/pl' and *bʋ-rʋŋ* / *ʋ-rʋŋ* 'road sg/pl' trigger identical U agreement (6a/a') even though the corresponding singular forms are associated to different agreement patterns K and B (6b/b')

(5)   (Spanish)
    alt–o   *alt–o–s*   *alt–a*   *alt–a–s*
    high-M   high-M-PL high-F high-F-PL

(6)   a. ʋ-sɔnd   w-ajakɛ   a.′ ʋ-rʋŋ   w-ajakɛ
        [PL-roof]ᵤ CLU-good   [PL-road]ᵤ CLU-good
        'good roofs(U)'   'good roads(U)'
    b. ka-sɔnd   k-ajakɛ   b.′ bʋ-rʋŋ   b-ajakɛ
        [SG-roof]ₖ CLK-good   [SG-road]ᵦ CLB-good
        'a good roof(K)'   'a good road(B)'

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[5] 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.

[6] 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.

[7] 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 -*ajakɛ* 'good' is in fact -*a-jak-ɛ*, where -*jak* is the verb root 'be good', -*a*- is a participial prefix, and -*ɛ* 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. 2021).

[8] 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* (M.SG) / *alt-a* (F.SG) / *alt-i* (M. PL) / *alt-e* (F.PL).

Table 1: Agreement patterns of noun forms

	AGREEMENT PATTERN	NOUN FORM	MODIFIER	
a.	A	Ø-an [SG-person]$_A$	Ø-ajakɛ CLA-good	'a good.CLA person(A)'
b.		a-sɛɛk [SG-woman]$_A$	Ø-ajakɛ CLA-good	'a good.CLA woman(A)'
c.	E	e-suk [SG-village]$_E$	y-ajakɛ CLE-good	'a good.CLE village(E)'
d.		Ø-sindo [SG-home]$_E$	y-ajakɛ CLE-good	'a good.CLE home(E)'
e.	BK	bʊk-an [PL-person]$_{BK}$	k-ajakɛ[1] CLBK-good	'good.CLBK persons(BK)'
f.		kʊ-sɛɛk [PL-woman]$_{BK}$	k-ajakɛ CLBK-good	'good.CLBK women(BK)'
g.	S	si-suk [PL-village]$_S$	s-ajakɛ CLS-good	'good.CLS villages(S)'
h.		si-sindo [PL-home]$_S$	s-ajakɛ CLS-good	'good.CLS good homes(S)'

[1]The distinction between the agreement pattern triggered by *bʊk-an* and *kʊ-sɛɛk*, 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 *-ajakɛ* 'good' (cf. ex (7)).

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 into the agreement pattern of all their inflected forms (Corbett 2006: 126). In contrast, agreement patterns in Jóola Fóoñi as illustrated in Table 1 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-sɔnd/ ʊ-sɔnd* 'roof sg/pl' is associated with the same agreement pattern K as the plural form of *fʊ-nak / kʊ-nak* 'days' (7a/b).

(7)　a. kʊ-nak　　k-ajakɛ　　　　　　b. ka-sɔnd　　k-ajakɛ
　　　　[PL-day]$_K$　CLK-good 'good days'　　[SG-roof]$_K$　CLK-good　'a good roof'

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

Table 2: Gender (pair of agreement patterns for sg/pl)

	Gender	Inflectional type[1]	Example	
a.	A/BK	Ø– / bʊk– a– / k–	Ø–an / bʊk–an a–sɛɛk / kʊ–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– / ʊ– ba– / ʊ–	bʊ–rʊŋ / ʊ–rʊŋ ' ba–caac / ʊ–caac	'road SG/PL' 'bed SG/PL'
d.	F/K	f– / k–	fʊ–nak / kʊ–nak	'day SG/PL'
e.	K/U	ka– / ʊ–	ka–sɔnd /ʊ–sɔnd	'roof SG/PL'
f.	J/M	j– / m–	jʊ–bɛcɛl / mʊ–bɛcɛl	'palm tree SG/PL'
g.	A/S[2]	a– / s– Ø– / s–	a–mpa / sʊ–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	ɲ– /ʊ–	ɲʊ–wʊj / ʊ–wʊj	'chain SG/PL'

[1]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.

[2]The two nouns that constitute this gender ('father' and 'mother') show fluctuation in their plural prefix (*k(ʊ)*– or *s(ʊ)*–) and in their plural agreement pattern (S or BK). In other words, they may alternatively behave as gender A/BK nouns.

of a noun-lexeme. The genders of Jóola Fóoñi are listed in Table 2: some genders coincide with inflectional types (Table 2 d/e/f/i/j), while others conflate 2 or 3 distinct inflectional types (Table 2 a/b/c/g).

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 A/BK, E/S, B/U and A/S (Table 2 a/b/c/g). Inflectional type and gender are lexical properties of each noun lexeme, as shown in Table 3 for the lexemes in example (4).

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

Table 3: Example lexemes with gender and inflectional type

	LEXEME	GENDER	INFL. TYPE	NOUN FORMS	
a.	PERSON	A/BK	Ø– / bʊk–	Ø-an / bʊk-an	'person / persons'
b.	WOMAN	A/BK	a– / k–	a-sɛɛk / kʊ-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'

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 Table 4 by the inflectional paradigm of the modifier –cɛɛn[9] 'some'.[10]

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, §2.1, and the division of noun forms into ACNFs, §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 Table 4. 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.

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[9] In Jóola Fóoñi final consonants are unstable. In particular, the stem –cɛɛn alternates with –cɛɛ 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.

[10] In this paradigm, as in many others, the distinction between class BK and class K is neutralised. However, the distinction between the object indexes –ul (agreement pattern BK) and –kɔ (agreement pattern K) shows that the agreement patterns BK and K have to be distinguished.

Table 4: Agreement paradigm of -cɛɛn 'some'

CLASS	–cɛɛn 'some'		CLASS			CLASS	
A	a–cɛɛn		U	ʊ–cɛɛn		Ñ	ñɪ–cɛɛn
BK	kʊ–cɛɛn		F	fʊ–cɛɛn		T	tɪ–cɛɛn
E	ɛ–cɛɛn		K	kʊ–cɛɛn		D′	di–ceen
S	sɪ–cɛɛn		J	jɪ–cɛɛn		D	dɪ–cɛɛn
B	bʊ–cɛɛn		M	mʊ–cɛɛn		N	nɪ–cɛɛn

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 Table 4.

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. (2021).

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 §4 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. 2021, see §4.2 for details).

Class morphology appears on most adnominal modifiers, e.g. the enclitic definite article (8), determiners (9–12), the genitive linker (13), adjectives (14), relative linker (15) and numerals (16) as well as on subject predicate agreement (17), indexes (bound pronouns) (18) and pronouns (19). The examples illustrate the agreement forms of *e-suk* '[SG-village]ₑ' (agreement in class E) and *bʊ-rʊŋ* '[SG-road]ᵦ' (agreement in class B).

(8) a. **e-suk-ey**
        [SG-village]ₑ-DET.CLE
        'the village'

    b. **bʊ-rʊŋ-ab**
        [SG-road]ᵦ-DET.CLB
        'the road'   (definite DET)

(9) a. **e-suk-ey**   ʊ-**yʊ**
        [SG-village]ₑ-DET.CLE DEM-CLE
        'this village'

    b. **bʊ-rʊŋ-ab**   ʊ-**bʊ**
        [SG-road]ᵦ-DET.CLB DEM–CLB
        'this road'   (demonstrative DET)

(10) a. e-suk   **y-ɛy?**
        [SG-village]ₑ CLE-WH
        'which village?'

    b. bʊ-rʊŋ   **b-ɛy?**
        [SG-road]ᵦ CLB-WH
        'which road?'   (wh-DET)

(11) a. e-suk   **ɛ-cɛɛn**
        [SG-village]ₑ CLE-some
        'some village'

    b. bʊ-rʊŋ   **bʊ-cɛɛn**
        [SG-road]ᵦ CLB-some
        'some road'   (indefinite DET)

(12) a. e-suk   **y**-anoosan b. bʊ-rʊŋ   **b**-anoosan
         [SG-village]~E~ CLE-any   [SG-road]~B~ CLB-any
         'any village'   'any road'   (free choice DET)

(13) a. e-suk-ey   **y**-atɪ   ampaɔm
         [SG-village]~E~–DET.CLE CLE-of my father
         'the village of my father'
      b. bʊ-rʊŋ-ab   **b**-atɪ   e-suk-ey
         [SG-road]~B~–DET.CLB   CLB-of [SG-village]~E~–DET.CLE
         'the road of the village'   (genitive linker)

(14) a. e-suk   **y**-ajakɛ   b. bʊ-rʊŋ   **b**-ajakɛ
         [SG-village]~E~ CLE-good   [SG-road]~B~ CLB-good
         'good village'   'good road'   (adjective)

(15) a. e-suk-ey   **y**-an iyisenim
         [SG-village]~E~–DET.CLE CLE-REL I.showed.you
         'the village that I showed you'
      b. bʊ-rʊŋ-ab   **b**-an iyisenim
         [SG-road]~B~–DET.CLB   CLB-REL I.showed.you
         'the road that I showed you'   (relative linker)

(16) a. e-suk   **y**-ʁkon / si-suk   **sɪ**-gaba
         [SG-village]~E~ CLE-one / [PL-villages]~S~ CLS-two
         'one village'   / 'two villages'
      b. bʊ-rʊŋ   **b**-ʁkon / ʊ-rʊŋ   **ʊ**-gaba
         [SG-road]~B~   CLB-one / [PL-roads]~U~   CLU-two
         'one road'   / 'two roads'   (numerals)

(17) a. e-suk-ey   **ɛ**-kañɔkañɔ
         [SG-village]~E~–DET.CLE sI:CLE-was.destroyed
         'The village was destroyed.'
      b. bʊ-ruŋ-ab   **bʊ**-kañɔkañɔ
         [SG-road]~B~–DET.CLB sI:CLB-was.destroyed
         'The road was destroyed.'   (subject indices)

(18) a. pan iyiseni-**yɔ**
         FUT I.show.you-I:CLE
         'I'll show it to you (the village).'
      b. pan iyiseni-**bɔ**
         FUT I.show.you-I:CLB
         'I'll show it to you (the road).'   (non-subject indices)

(19) a. e-suk   **ɛ**-cɪla,   **y**-ɔɔ   **ɛ**-kañom
         [SG-village]~E~ CLE-aforementioned CLE-PRON CLE-was.destroyed.FOC
         'The village in question, it's it that was destroyed.'

b. bʊ-rʊŋ   bʊ-cɪla,   **b-ɔɔ**   bʊ-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 -ɔɔ)[11]

The words that are inflected for class maximally have a paradigm of 15 cells as in Table 4. Certain paradigms lack a form for CLN. As shown below, for some paradigms this can be given an explanation (see §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 that triggers the relevant agreement form.

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 (§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 (§4.2).

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[11] Jóola Fóoñi is a pro-drop language. The independent lexical pronouns are only used in contrastive contexts (topicalisation or focalisation). For simple anaphoric uses, the subject and non-subject indices are used. Focalisation requires a specific form of the verb also used in wh-questions and relativisation.

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 for one of its noun forms (see (20b)). 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-ɩn / t-an* 'place delimited with precision' and *d-in / d-ɐn* 'place conceived as an interior' 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 (20).

(20)   Anaphoric N-less uses of class-inflection
    a. Adjective
       ɩmaŋʊt   e-rɐp-ey   y-ʊkʊn-ɛy,   **y-ɐɐmɐk-ey**
       I.don't.want [SG-machete]ₑ-DET.CLE CLE-small-DET.CLE **CLE-big-DET.CLE**
       nɩmaŋɛ.
       I.want
       'I don't want the small machete(E), it's the big one(E) that I want.'
    b. Numeral
       nɩsɔfɛnsɔf matɩ a–ñʊl   ɐ-kon nabajɛ,   barɛ 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-lʊʊp-ɛy   y-atɩ   ampaɔm dɩ **y-atɩ**   **apaalɔɔl** waatɩ yɐkon
       [SG-house]ₑ-DET.CLE CLE-of my.father and **CLE-OF** **his.friend** time one
       sɩ-tɛɛpɩ
       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-bɛkaan   y-ʊya   dɩ **y-an**   **ɩ-nɔɔmʊm**   sɩ-naamʊt
       [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-bɐ-ɐs   s-an   i-yisenim,   **s-ɛy**   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 behaviour as noun-phrases with a lexical noun of the same class, exemplified in (21) with subject agreement indices.

(21)   a. e-rɐp-ey   **ɛ-jajak**
       [SG-machete]ₑ-DET.CLE **sI:CLE-be.good**
       'The machete is good.'
    b. y-umbɐɐm / y-ɐɐmɐk-ey   / y-an   ɩnɔɔmʊm **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 Baïnounk Gubëeher (Atlantic, Cobbinah 2013: 351–55).[12]

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 (§4.2.1). And secondly, agreement targets differ with respect to the range of class-values that allow non-contextual uses (§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, which 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 Table 5. As apparent in Table 5, 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).

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 ɪnɔɔmʊm* 'CLU-REL I bought' can combine with any head noun associated with agreement pattern U, as in (22a). 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, 22b-i). However, it is always possible to interpret *w-an ɪnɔɔmʊm* simply as 'what I bought' (22b-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.

(22) a. ʊ–samata–aw   w–an ɪnɔɔmʊm
         [PL-shoe]_U-DET.CLU CLU-REL I bought
         'the shoes that I bought'

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

Table 5: 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 …'[1]
class S	s-an	'the things that …'
class B	b-an	'at the place that …'[2]
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 *clX-an*
class T	t-an	'at the place where …'[3]
class D′	d-ɐn	'at the place where …'
class D	d-an	'the thing that …'
class N	n-an	'at the time when …'

[1]Non-contextual uses of class D imply vague reference to things, situations, or events, cf. to French *ça*.
[2]CLT implies a more precise delimitation of space than CLB; CLD′ implies reference to the interior of a space.
[3]The only possible controllers of T and D′ agreement are *t-ɪn ~ t-an* 'place (delimited with precision)', and *d-in ~ d-ɐn* 'interior of a place'.

> b. w-an   ɪnɔɔmʊm
>   CLU-REL   I bought
>   i. 'the ones (CLU) that I bought' (e.g. ʋ-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 (22b-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. 2021 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:

(23) a. forms of class A or BK: non-anaphoric pronouns referring to human beings (sg/pl)
a-cʊla / kʊ-cʊla
CLA-aforementioned/ CLBK-aforementioned
'the aforementioned person / persons'
b. forms of class E or S: non-anaphoric pronouns referring to countable things
y-anɔɔsan 'everything' s-an kʊŋarʊlɔm '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 akaanʊm 'what (s)he did';
    CLU-any CLU-REL s/he.did
CLD: dɩ-cɛɛn 'something', d-an ɩwɔnɔɔrɛ 'what I think'.
    CLD-some CLD-REL I.think

Notice that class D forms (as in 23c) only have non-contextual pronominal uses, since class D has no corresponding nouns, and class D forms cannot be 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:

(24) 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 anɛnʊm kɔɔraay 'where s/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-ɐɐ-r-e 'herein' d-ɐn kʊnɔkɛnʊm 'where they entered'
CLD′-DEM-CLD′-PROX CLD′-REL they.entered
d. forms of class Ñ used as iterative adverbs, such as *ñɩ-gaba* CLÑ-two 'twice';
e. forms of class N used as temporal adverbs:
nɩ-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 (25), 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 (26).

(25)   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   ʊrɛgʊm
       CLM-REL   I.told.you 'as I told you'

(26)   Pronominal uses of clM
    a.   possessive
       m-ɔɔl-ʊl   mu-suumɛnsuum
       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-atɩ   apaalɩ   mu-suumɛnsuum
       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 (23c) and CLN (24e) 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-ɛɣ* ~ *nɔn-ɛɣ* 'when?', class N form of the interrogative *-ɛɣ* '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 (27). 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 (28a/b/c).[13]

(27) a. a-sɛɛk   a-cɛɛn   a-jaalɔjaw
          [SG-woman]A CLA-INDEF sI:CLA-came
          'A woman came.'

      b. a-cɛɛn   a-jaalɔjaw
          CLA-INDEF sI:CLA-came
          'Someone came.'

      c. d-an   ʋ-jʋkʋlɔm dɩ   ka-rɛŋ-ak
          CLD-REL   sI:2SG-saw at   [SG-sacred.forest](K)-DETK
          d-ɔɔ   lɛɛ   Ø-riiŋuu   Ø-sindɛ-ʁy,   b-ɔɔ
          CLD-PRO   FUT.NEG sI:CLD-reach [SG-home]E-DETE CLB-PRO
          Ø-ɛɛtɛ   e-reuu
          sI:CLD-must INF-stop
          '[What you saw [in the sacred forest]i]j, itj will not reachj the home, itj must stay therei.'

(28) No subject agreement

      a. ʋ-**tʋ**   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-mʋ   Ø-jak-ʋt   / *mʋ-jak-ʋt
          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-ʋt   / *nɩ-naam-ʋt
          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 *dɩ-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.

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[13] 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 *-lɛt* 'not to be' resumes the nominalised clause *man kʋñɩlak kʋkañɔ* '(the fact) that children are spoilt'.

(i) man kʋ-ñɩl-a-k   kʋ-kañɔ,   Ø-lɛt   bʋk-anɔɔsan
     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.'

(29)   a.   ɗ-ɔɔ   Ø-jak-ʊt
            cl**D**-PRON   sI:cl**D**-be.good-NEG
            'That is not good.'
       b.   s-ɔɔ-sʊ   sɪ-jak-ʊt
            cl**S**-DEM-cl**S**   sI:cl**S**-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 patterns 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 Fóoñi when the role of subject is fulfilled by a head-modifier construction (30a), 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 (30b).

(30)   a.   e-suk-e-y   ʊ-yʊ   **e-loi-ut**
            [SG-village]$_E$-DET.cl**E**   DEM-cl**E**   sI:cl**E**-be.far-NEG
            'This village (clE) is not far (clE).'
       b.   ʊ-yʊ   **e-loi-ut**
            DEM-cl**E**   sI:cl**E**-be.far-NEG
            'This one (clE) is not far (clE).'

By contrast, with subject noun phrases consisting of *b-ɪn / b-an*, *t-ɪn / t-an* or *d-in / d-ɛn* 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 (31) for *t-ɪn / t-an*, but noun phrases consisting of *b-ɪn / b-an* or *d-in / d-ɛn* with a clB or clD′ modifier behave exactly in the same way.

(31)   a.   **tɪn-at**   ʊ-tʊ   *Ø   /^{ok}**ti-loi-ut**
            [place]$_T$–DET.cl**T**   DEM-cl**T**   *sI:cl**D**/sI:cl**T**-be.far-NEG
            'This place (clT) is not far (clT).'   (head noun clT)
       b.   ʊ-tʊ   *ti-loi-ut
            DEM-cl**T**   *sI:cl**T**-be.far-NEG
            Not: 'This place (clT) is not far (clT).' [Agreeing N-less impossible≠ 30b]
       c.   ʊ-tʊ   **Ø-loi-ut**
            DEM-cl**T**   sI:cl**D**-be.far-NEG
            'There (clT), it is not far (clD).' (non-contextual clT)

Consequently, *ʊ-tʊ* can act as a modifier of *t-ɪn-a-t ∼ t-an-a-t*, but contrary to other forms that have the same morphological structure (such as *ʊ-yʊ* 'this one (clE)' in (30b)), the clT form does not license the ellipsis of its head. The explanation is that, by itself,

ʊ-tʊ 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 being 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-cɛɛn* 'some', the 3rd person pronoun *CLX-ɔ* and the relativiser *CLX-an*. The non-contextual uses of the relativiser *CLX-an* are given in Table 5. The same range of non-contextual uses is found with the demonstratives, the 3rd person pronoun *CLX-ɔ* and determiner-like elements such as *CLX-cɛɛn* 'some' (Table 6), *CLX-anɔɔsan* 'any', or *CLX-acɪla* 'aforementioned'.

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 Table 6 are found with *CLX-ʋkon* 'one, same', but not with the other numerals like *CLX-gaba* 'two'. For adjectives and the genitival linker *CLX-atɪ*, we have examples for classes A, BK and D (for example *r-ajakɛ* 'CLD-good, something good', *k-atɪ Dakaar* 'CLBK-genitive Dakar, the people of Dakar'), but not for the other classes.[14]

There are also non-contextual uses of classes limited to a particular type of hosts. In particular, class Ñ departs from the other classes that have non-contextual uses in that it only has non-contextual uses with quantitative modifiers (32a), not for example with the relativiser (32b) or the determiners (32c). In their non-contextual uses, the CLÑ 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 Ñ has a lexical meaning that could be related to this use of class Ñ.

(32) a. ñ-amɛɛŋɛ 'several times, often' < amɛɛŋɛ 'numerous'
      b. ñ-an CLÑ-relativiser: **contextual uses only** 'the one which' (anaphoric to N$_{\tilde{N}}$)
      c. ñ-oo / ñ-ey
          CLÑ-PRON / CLÑ-WH- **contextual uses only**: 'that N/ which N' (anaphoric to N$_{\tilde{N}}$)

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-ɔ* and the relativiser *CLX-an*), but they also have a pronominal non-contextual use, limited to the genitival linker and

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[14] Note that CLM has non-contextual uses with the genitive linker, but not with the meaning of 'manner' illustrated in (25) – see the example (26b).

Table 6: Non-contextual uses of CLX-*cɛɛn* 'some'

CLASS	CLX-cɛɛn 'some'	NON-CONTEXTUAL USE TRANSLATION
class A	a-cɛɛn	'someone'
class BK	kʊ-cɛɛn	'some persons'
class E	ɛ-cɛɛn	'something' (concrete, countable)
class S	sɪ-cɛɛn	'some things' (concrete, countable)
class B	bʊ-cɛɛn	'somewhere'
class U	ʊ-cɛɛn	'something'
class F	fʊ-cɛɛn	– no non-contextual uses
class K	kʊ-cɛɛn	– no non-contextual uses
class J	jɪ-cɛɛn	– no non-contextual uses
class M	mʊ-cɛɛn	'somehow'
class Ñ	ñɪ-cɛɛn	– no non-contextual use with target -cɛɛn
class T	tɪ-cɛɛn	'somewhere'
class D′	di-ceen	'somewhere'
class D	dɪ-cɛɛn	'something'
class N	nɪ-cɛɛn	'sometimes

the possessive, in which they can be glossed 'what concerns X' or 'what makes the particularity of X' (see examples (26)/(33)). 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.

(33)   m-ɔɔl-ʊl   mʊ-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.

   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 (34a/b), the remaining classes appear in a more peripheral position (34c/d/e). Several non-subject indices can combine (34d/e). As illustrated in (34d) this is particularly apparent in the tenses whose formation involves a reduplicative

suffix.[15] 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 (34d/e). The non-subject indices of these classes occupy the same morphological slot as *-bɔ* 'there' in (34d/e).

(34)   The position of non-subject indices
     a. kʊ–jʊk-**ɪ**–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–see-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* (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 §4.1 and §4.2, noun-less uses of class-inflection in Jóola Fóoñi do not present a uniform picture.

(35)   a. Some class-values do not have non-contextual uses (classes F/K/J cf. Table 5).
     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.

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[15] 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.

(36) 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-ɪn / t-an* and *d-ɪn / d-ɐn* 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. (25)/(26))

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 *-ajakɛ* '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 controller whose singular form controls agreement pattern F, K or J, or whose plural form controls agreement pattern K, as in (37). Secondly, the orphan classes D and N only admit a non-contextual construal: the form *r-ajakɛ* 'CLD-good' can only have a headless use in which it is interpreted as 'something good' (38). With class values that admit both contextual and non-contextual construals, the headless use is ambiguous. In its headless use, *w-ajakɛ* '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 (39a), but the non-contextual construal is also possible (39b).

(37) (fʊ-rɪm)   f-ajakɛ
      ([SG-word]_F) CLF-good
      'a good one'
      (CLF: contextual use only – anaphoric to a noun whose singular form governs CLF agreement – e.g. *fʊ-rɪm* 'word(F)')

(38)   r-ajakɛ
       CLD-good
       'something good' (orphan class CLD – non-contextual use only)

(39) a. (ʊ-samata) w-ajakɛ
         (PL-shoe)   CLU-good
         'good ones' (referring to shoes, contextual use)
      b. w-ajakɛ
         CLU-good
         'something good' (non-contextual use)

Headless noun phrases may include two or more forms inflected for the same class, as in (40)

(40) a. ʊ-**m**-ɛ   **Ø**-an   ɩ-saafɛñaa
       DEM-CLA-PROX   CLA-REL   sI:1SG-be.greeting
       'this person that I'm greeting'

     b. ʊ-**t**-ɛ   **t**-an   ɩ-lakɔñaa
       DEM-CLT-PROX   CLT-REL   sI:1SG-be.sitting
       'there where I'm sitting'

Table 7 summarises the properties of noun-less class marking discussed.

5. Class-values and the relative linker

We have seen in §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 (§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 Jóola Fóoñi.

    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.

(41) a. [s-an   uŋɐrulom]   si-suumɐnsuum
       CLS-REL   2SG.brought   sI:CLS-be.pleasant.for.me
       'The things you brought are pleasant for me.'

     b. nɩjʊjʊk   [y-an / w-an / d-an   ɩkaanʊm.]
       I.saw   CLE-REL / CLU-REL / CLD-REL   2SG.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

Table 7: Noun-less class marking in Jóola Fóóñi

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, numbers in brackets = number of noun lexemes concerned

values – do not introduce free relatives: these constituents only have an adverbial distribution (see (42)) 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 (28)).

(42) [m-an   ɐcimem,]   suumɐnsuum   / *mu-suumɐnsuum
      CLM-REL sI:CLA.sings sI:CLD.be.pleasant.for.me / sI:CLM.be.pleasant.for.me
      'How she sings, it(CLD) 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 (43a) or to a locative adjunct (43b). The locative non-contextual use of the relativiser commutes with locative PPs (43b/c).

(43)   a. [t-an   a-wɔlɪm],   nɪ-jajaw-tɔ
          CLT-REL sI:CLA-was.born sI:1SG-went-I:CLT
          'Where s/he was born, I went there.'
       b. [t-an   ɪ-nɛnʊm   ba-gaas-ab],   bʊk-an-ak
          CLT-REL   sI:1SG-put   [SG-luggage]B-DET.CLB   [PL-person]BK-DET.CLBK
          kʊ-bɛmbɛŋ-tɔ
          sI:CLBK-gathered-I:CLT
          'Where I put the luggage, the people gathered there.'
       c. bɐlɐmuk   ɛ-lʊʊp-ɛy,   bʊk-an-ak   kʊ-bɛmbɛŋ-tɔ
          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 (44a/b). The strictly adverbial nature of relative clauses with CLT/CLD′ explains why the cognate nouns t-ɪn/ d-ɪn 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.

(44)   a. *t-an   a-wɔlɪm,   nɪ-mammanj-tɔ
          CLT-REL sI:CLA-was.born sI:1SG -know-I:CLT
          'Where he was born, I know *there.'
       b. t-ɪn-at   t-an   a-wɔlɪm,   nɪ-mammanj-tɔ
          [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.

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

(45) kʊ-sɛɛk-ak   k-an   a-mansa-aw   a-maŋeriitum
      [PL-women]ʙᴋ–ᴅᴇᴛ.ᴄʟBK ᴄʟBK–ʀᴇʟ [SG-king]ᴀ–ᴅᴇᴛ.ᴄʟA sI:ᴄʟA-does.not.want
      man   ku-pur
      that   sI:ᴄʟBK-go.out
      lit. 'the women that the king doesn't want that they go out'

Table 8 and example (45) 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-ɐn* or the locative use of *b-an* can modify nouns of any gender, as illustrated in (46).

(46) ɛ-lʊʊp-ey   d-ɐn   ʊ-jɛɛ-m   bɛɛt   e-loi-ut
      [SG-house]ᴇ–ᴅᴇᴛ.**ᴄʟE** ᴄʟ**D′**–ʀᴇʟ sI:2SG-go.ICPL-ACT towards **sI:ᴄʟE**-be.far-ɴᴇɢ
      'The house(ᴄʟE) where you are going is not far(ᴄʟE).'

While the relativisers of the other classes function like agreeing linkers that do not mark the function of the relativised element, the locative relativisers function like locative pronominals, relativising a subcategorised (47a) or circumstantial (47b) locative in the relative clause.

(47) a. e-suk-ey   t-an   ɩ-jawʊm
         [SG-village]ᴇ–ᴅᴇᴛ.ᴄʟE ᴄʟT–ʀᴇʟ sI:1SG-went
         'the village where I went'
     b. e-suk-ey   t-an   ɩ-nɔɔmʊm   si-bɐ-ɐs
         [SG-village]ᴇ–ᴅᴇᴛ.ᴄʟE ᴄʟT–ʀᴇʟ sI:1SG-bought [PL-cow]s–ᴅᴇᴛ.ᴄʟS
         '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 ᴄʟD and ᴄʟN that lack any potential nominal controllers in the present state of the language. As the non-contextual uses marked for ᴄʟN are adverbial in nature, forms inflected for ᴄʟN never appear in a canonical controller-target agreement configuration and ᴄʟN does not have corresponding subject agreement indices.

Table 8: Agreement on the relative linker

CLA	a-sɛɛk-aw [SG-woman]_A-DET.CLA	Ø-an CLA-REL	ɩ-jʊkʊm sI:1SG-saw	'the woman I saw'
CLBK	kʊ-sɛɛk-ak [PL-women]_{BK}-DET.CLBK	k-an CLBK-REL	ɩ-jʊkʊm	'the women I saw'
CLE	ɛ-yɛn-ɛy [SG-dog]_E-DET.CLE	y-an CLE-REL	ɩ-jʊkʊm	'the dog I saw'
CLS	sɩ-yɛn-as [PL-dogs]_X-DET.CLS	s-an CLS-REL	ɩ-jʊkʊm	'the dogs I saw'
CLB	bu-bɐɐr-ɐb [SG-tree]_B-DET.CLB	b-an CLB-REL	ɩ-jʊkʊm	'the tree I saw'
CLU	u-bɐɐr-ɐw [PL-trees]_U-DET.CLU	w-an CLU-REL	ɩ-jʊkʊm	'the trees I saw'
CLF	f-al-af SG-river]_F-DET.CLF	f-an CLF-REL	ɩ-jʊkʊm	'the river I saw'
CLK	k-al-ak [PL-rivers]_K-DET.CLK	k-an CLK-REL	ɩ-jʊkʊm	'the rivers I saw'
CLJ	jɩ-bɛcɛl-aj [SG-palm.tree]_J-DET.CLJ	j-an CLJ-REL	ɩ-jʊkʊm	'the palm tree I saw'
CLM	mʊ-bɛcɛl-am [PL-palm.trees]_M-DET.CLM	m-an CLM-REL	ɩ-jʊkʊm	'the palm trees I saw'
CLÑ	ñɩ-wʊj-añ [SG-chain]_Ñ-DET.CLÑ	ñ-an CLÑ-REL	ɩ-jʊkʊm	'the chain I saw'
CLT	t-ɩn-at [SG-place]_T-DET.CLT	t-an CLT-REL	ɩ-jʊkʊm	'the place I saw'
CLD'	d-in-ɐd [SG-place]_{D'}-DET.CLD'	d-ɐn CLD'-REL	ɩ-jʊkʊm	'the place I saw'

Secondly, while Spanish (48) has non-contextual uses for all available gender-number values, Jóola Fóoñi shows that this need not be the case: only a subset of inflectional values allows non-contextual uses and agreement targets vary in the range of non-contextual class marking they admit.

(48) a. *el inteligente – los inteligentes* the intelligent one.M.SG/ones.M.PL
     b. *la inteligente – las inteligentes* the intelligent one.F.SG/ones.F.PL

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 Jóola Fóoñi 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 analysed as an expletive / default subject of class D (see (28)).

Furthermore, in their non-contextual uses the time/location/manner classes have a corresponding adverbial non-subject index (see (34)). 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* 'here' but no subject pronouns and no verbal subject agreement forms. The system of Jóola Fóoñi circumstantial non-subject indices is richer than the oblique clitic system in French, in that the weak pronominal system of Jóola Fóoñi 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 (47)) as long as the relativised 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 *ɛ-mɪt* '[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 (49). 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.

(49)   ɛ-mɪt-ɛy   y-an   ɪ-wɔlɪm
       [SG-year]ₑ-DET.CL**E** CL**E**-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.

Acknowledgments

Abbreviations

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

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