(pre-final version of) Creissels, Denis, Alain Christian Bassène & Boubacar Sambou. 2021. Orphan classes, chameleon stems, ghost controllers, adverbial classes, and versatile relativizers in Jóola Fóoñi (Atlantic)'. *Faits de Langues* 52(2). 157-176.

Orphan classes, chameleon stems, ghost controllers, adverbial classes, and versatile relativizers in Jóola Fóoñi (Atlantic)

Denis Creissels*, Alain Christian Bassène** and Boubacar Sambou***

*University of Lyon **University of Dakar ***University of Dakar

Abstract. The traditional approach to Niger-Congo gender systems conflates the number markers of nouns and the gender-number markers of adnominals and pronouns into a single category of 'class markers'. Using Jóola Fóoñi as an illustration, this paper discusses several types of phenomena commonly found in these systems that are problematic for the traditional notion of noun class and support the necessity of a revision of the conceptual and terminological framework commonly used in the description of Niger-Congo gender systems.

Résumé. Le traitement traditionnel des systèmes de genre Niger-Congo confond les marqueurs de nombre des noms et les marqueurs de genre-nombre des adnominaux et pronoms en une catégorie unique de 'marqueurs de classe'. En se fondant sur l'exemple du Jóola Fóoñi, cet article discute divers types de phénomènes couramment rencontrés dans ces systèmes qui sont problématiques pour la notion traditionnelle de classe nominale et fournissent des arguments en faveur d'une révision du cadre conceptuel et terminologique communément utilisé pour la description des systèmes de genre Niger-Congo.

Keywords: agreement, Atlantic languages, gender, Jóola (Diola), noun classes, number inflection.

Mots-clés: accord, classes nominales, flexion en nombre, genre, Jóola (Diola), langues atlantiques.

1. Introduction

Jóola Fóoñi (aka Diola-Fogny), spoken in south-western Senegal by approximately 500,000 speakers, belongs to the Bak branch of the Atlantic family.¹ The main references on Jóola Fóoñi are Weiss 1938, Sapir 1965, and

¹ As discussed by Barry (1987), who to the best of our knowledge was the first to use the term 'Central Jóola', Jóola languages can be divided into the Central Jóola dialect continuum and peripheral Jóola varieties such as Karon, Kwaataay, Mlomp-North, or Bayot. Jóola Fóoñi is part of the Central Jóola dialect continuum. On the classification of Jóola languages, see also Segerer & Pozdniakov (Forthcoming).

Hopkins 1995.² This article is based on the analysis of a corpus of about twelve hours of recorded naturalistic texts and on Boubacar Sambou's Master thesis, supervised by Alain Christian Bassène (Sambou 2019).

The present article uses Jóola Fóoñi as a basis for discussing some phenomena commonly found in Niger-Congo gender systems (traditionally referred to as 'noun class' systems) that are problematic for the conceptual framework commonly used in Niger-Congo studies. As discussed by Güldemann & Fiedler (2017), the traditional notion of 'noun class' conflates logically distinct notions whose coincidence is far from perfect in the systems of individual languages. Crucially, the number markers of nouns and the gender-number markers that constitute the inflection of adnominals and pronouns are traditionally viewed as instantiations of the same category of 'class markers', making this framework hardly reconcilable with mismatches between nominal inflection and genders and other intricacies commonly found in Niger-Congo gender systems. In this paper, we discuss aspects of Jóola Fóoñi that are problematic for the notion of noun class as it is generally used in Niger-Congo studies.³

The article is organized as follows. After some terminological clarifications (section 2), section 3 discusses the definition of 'class' as the inflectional paradigm of the adnominals and pronouns that can be the target of agreement mechanisms. Section 4 introduces the notions of orphan class and chameleon stem. Section 5 describes the system of nominal prefixes, their number value and relationship with the agreement system. Section 6 discusses the relationship between inflectional types of nouns and genders. Section 7 is devoted to the question of semantic agreement. Section 8 discusses the distinction between contextual and non-contextual uses of classes and between non-contextual use of pronominal type and non-contextual use of adverbial type. Section 9 discusses the possibility of accounting for the non-contextual uses of classes in terms of ellipsis of understood controllers. Section 10 analyses the particular behavior of classes B, T and D' in relativization. Section 11 summarizes the conclusions.

2. Terminological clarifications

Gender is a classification of nominal lexemes that manifests itself in their behavior as agreement controllers, and a gender is a subset of nominal lexemes that have the same agreement behavior in all their inflected forms and in all the constructions in which they control agreement. In addition to a relatively high number of genders, a major characteristic of Niger-Congo systems is that the division of nouns into genders (based on their agreement properties) and their division into inflectional types (based on the particular pairs of singular/plural markers they select) are closely related, but do not fully coincide.

 $^{^{2}}$ On the gender systems of other Central Jóola varieties, cf. Sambou (1979) on Kaasa, Bassène (2007) and Sagna (2008) on Banjal, Segerer (2015a) on Keeraak, Watson (2015) on Kujireraay. For a general survey of Atlantic gender systems, cf. Creissels & Pozdniakov (2015).

³ Some important aspects of the noun class system, such as semantic regularities in gender assignment, or the derivational function of gender alternations, are not discussed in the present article, because they have no direct impact on its central theme.

We agree with Güldemann and Fiedler (2017) on the necessity of articulating the notions of nominal inflection and agreement patterns without trying to conflate them. We also agree with their criticism of Corbett's (1991) approach. In particular, we agree with them that, at some stage of the description of gender systems, it is useful to operate with a division of the set of noun forms into subsets based exclusively on their agreement properties and abstracting from any other property, in particular their number value.

The theoretical framework we develop in this article and the terminology we use are discussed by Creissels (Forthcoming) in the context of a general discussion of agreement in Niger-Congo gender systems.

The main aim of this article is to draw the attention to the fact that the adnominal and pronominal morphology involved in the expression of agreement with nouns may have functions that, synchronically, cannot be described in terms of agreement with a controller noun. This phenomenon, particularly prominent in Jóola Fóoñi, makes even more problematic the traditional notion of noun class.

In order to clarify the situation and to prevent any risk of misunderstandings, we avoid using 'class' with reference to sets of nouns, be it with reference to their agreement properties or morphological characteristics. In our terminology, 'class' refers exclusively to the inflection of the adnominals and pronouns that can act as targets of agreement mechanisms controlled by nouns. Moreover, the definition of 'class' is formulated so as not to exclude the possibility of functions other than the expression of agreement.

We consider crucial to posit as a basic principle that, whatever their possible historical relationship, phonetic resemblance, and shared involvement in agreement chains, the inflectional affixes of nouns must not be assimilated to those of adnominals and pronouns. The inflectional prefixes of nouns are not 'class' prefixes, but number prefixes, and accordingly, we do not gloss them CL, but SG (singular) or PL (plural).⁴ In our glossing system, the agreement pattern associated with a given noun form is indicated between parentheses immediately after the lexical gloss. For example, *kalaak* 'field' (plural *o-laak*) is not glossed as elK-field, but as SG-field(K), where (K) means that the form *ka-laak* triggers K agreement, and noun-modifier constructions involving gender-number agreement are glossed as in (1), where it can incidentally be observed that *k-ool* 'bone' (plural *w-ool*) and *k-al* 'rivers' (singular *f-al*), in spite of their different number value, have identical prefixes and the same agreement pattern.⁵

(1a)	kəəl keeme	k
. ,	'big bone'	
	k-əəl	k-eemek
	SG-bone(K)	clK-big

⁴ The noun prefixes exclusively found with nouns that do not have distinct singular and plural forms are glossed as NN ('number neutral').

 $^{^5}$ Our transcription of Jóola Fóoñi departs from standard Jóola orthography in the notation of vowels. In standard Jóola orthography, the acute accent marks the +ATR feature. In this article, in order to avoid any risk of confusion, the vowels are transcribed by means of the IPA symbols, i.e. a, ϵ , r, o, and υ for the -ATR vowels, and ϵ , e, i, o, and u for the +ATR vowels.

(1b) kal kvemek 'big rivers' k-al k-vemek PL-river(K) clK-big

3. 'Classes' as cells in the inflectional paradigm of adnominals and pronouns

Our definition of 'class' as cells in the inflectional paradigm of the adnominals and pronouns that can act as the target of agreement mechanisms controlled by nouns implies that:

- if a noun combines with a modifier inflected for class, the class value expressed by the modifier is determined by the noun; for example, the indefinite determiner 'some' can only be *a-cee* if its head is *a-ñul* 'child', *kv-cee* if its head is *ka-laak* 'field', etc.
- if a pronoun inflected for class refers to an antecedent present in the context, it is the antecedent that determines the class value expressed by the pronoun; for example, the third person pronoun can only be *k*-*oo* if its antecedent is *ka-laak* 'field', *b-oo* if its antecedent is *bo-ron* 'road', etc.

However, our definition does not necessarily imply that marking agreement with a noun is the only possible function of classes. This is indeed crucial, since most cells in the inflectional paradigm of adnominals and pronouns also have uses that do not imply reference to a controller (i.e., the kind of uses for which the term 'non-contextual uses' will be proposed in §8), and some of them (the 'orphan classes') have no potential controller, and consequently cannot express agreement with nouns.

In Jóola Fóoñi, with the exception of a limited number of invariable adnominals or pronouns (such as *burom* 'all') adnominals and pronouns have up to 15 distinct forms designated here as classes A, BK, E, S, B, U, F, K, J, M, Ñ, T, D, D' and N.⁶ These labels evoke the phonological shape of the corresponding affixes.⁷ Semantically motivated labels would be confusing, due to the semantic heterogeneity of most of the sets of nouns associated with a given agreement pattern, and the difficulties in establishing cognacy between the classes attested in the various branches of the Atlantic family are such that it is impossible to propose a numbering system based on the same principles as that used for Bantu languages. In such a situation, the only practical and non-confusing solution is to use language-specific and phonetically motivated labels.⁸

4

⁶ In the paradigms of indexes, the same distinctions are found in the 3rd person.

⁷ The agreement system of Jóola Fóoñi is far from being perfectly alliterative. For example, the exponents of class A may be *a* (as in adjectives), *w* (as in the definite article), or *m* (as in demonstratives). In such cases, the choice of a label was mainly motivated by the concern of avoiding ambiguity with the other classes.

⁸ The labels D and D' call for a comment, since the distinction between their exponents is not immediately obvious. Formally, with stems beginning with a vowel, they differ only in the ATR value they impose to the vowels of the stem. For example, the third person pronoun is d-zz in

For example, non-subject relatives are introduced by a relativizer *-an* with the 14 distinct forms listed in (2):⁹

(2) class relativizer

Α	Ø-an
BK	k-an
Е	y-an
S	s-an
В	b-an
U	w-an
F	f-an
Κ	k-an
J	j-an
Μ	m-an
Ñ	ñ-an
Т	t-an
D	d - $an \sim r$ - an^{10}
D'	d-en ~ r-en
Ν	n-an

When an object relative clause modifies a noun, the class value expressed by the relativizer is determined by the head noun (and conversely, each class value selects a subset of noun forms as the potential heads of the relative clause), as in (3). Nouns are in the definite form, characterized by the enclitic definite article *-a*-CL. Only 13 of the 15 forms of the relativizer are illustrated in (3), since the other two (the 'orphan classes') can only be found in free relatives.

(3)	a-sɛɛk-a-w	Ø-an	1-jok-0-m	'the woman I saw'	(A)
	SG-woman(A)-D-clA	clA-REL	sIaSG-see-EP-ACT		
	kʊ-sɛɛk-a-k	k-an	1-jok-0-m	'the women I saw'	(BK)
	e-yen-e-y	y-an	ı-jok-o-m	'the dog I saw'	(E)
	si-yen-a-s	s-an	1-jok-0-m	'the dogs I saw'	(S)
	bu-beer-e-b	b-an	1-jok-0-m	'the tree I saw'	(B)
	u-beer-e-w	w-an	ı-jok-o-m	'the trees I saw'	(U)
	f-al-a-f	f-an	1-jok-0-m	'the river I saw'	(F)
	k-al-a-k	k-an	1-jok-0-m	'the rivers I saw'	(K)
			U		

class D and *d-oo* in class D'. Given that, in the vowel system of Jóola Fóoñi, -ATR and +ATR can be analyzed as the default value and the marked value of the ATR feature, we analyze the underlying forms of the markers of class D and class D' as *d* and d^{*ATR} (i.e. *d* plus a floating +ATR feature), respectively. Since the acute accent is used in Jóola orthography to mark +ATR vowels, D' is a convenient label for a class whose exponents include a +ATR feature. Semantically, class D expresses 'vague reference to things or events', whereas class D' expresses 'place conceived as an interior'.

 $^{^{\}circ}$ There are only 14 distinct forms in (2) due to the use of the same form for classes BK and K. The exponents of classes BK and K are clearly distinct in the paradigm of non-subject indexes (i.e., the verbal suffixes that refer to objects and the nominal suffixes that refer to possessors: *-nl* for class BK, *-k*₂ for class K), but have a syncretic form in many other paradigms.

¹⁰ In Jóola Fóoñi, the possibility of contrast between d and r is limited to relatively recent borrowings (mainly from Mandinka, Wolof, or French). In the markers of classes D and D', d and r are in free variation.

j1-bɛcɛl-a-j	j-an	1-jok-0-m	'the palm tree I saw'	(J)
mʊ-bɛcɛl-a-m	m-an	ı-jok-o-m	'the palm trees I saw'	(M)
ñı-woj-a-ñ	ñ-an	ı-jok-o-m	'the chain I saw'	(Ñ)
t-ın-a-t	t-an	ı-jok-o-m	'the place I saw'	(T)
d-in-e-d	d-en	1-jok-0-m	'the place I saw'	(D')

4. Canonical classes and orphan classes

We designate as CANONICAL CLASSES the 11 classes that correspond to sets of potential controllers including at least two noun forms that cannot be viewed as variants of each other: A, BK, E, S, B, U, F, K, J, M, and Ñ.

We designate as ORPHAN CLASSES the two classes (D and N) that do not correspond to sets of potential controllers and hence never mark agreement with a noun assuming the role of controller.

The remaining two classes (T and D') are neither canonical classes nor orphan classes. They can be involved in agreement mechanisms controlled by nouns, but their involvement in agreement mechanisms controlled by nouns is both atypical and relatively marginal in discourse.

T agreement can only be controlled by *t-m* ~ *t-an* 'place conceived as delimited in a precise way', and D' agreement can only be controlled by *d-in* ~ *d-en* 'place conceived as an interior', which means that there is no possible choice about the possible head or antecedent of a class T or D' form. Moreover, the only possible controllers of classes T and D' are formed on what we propose to call a CHAMELEON STEM (*-m* ~ *-an*) also found in *b-m* ~ *b-an* 'place conceived as vaguely delimited' and in \emptyset -*an* pl. *bok-an* 'human being'. Such a stem can be analyzed as having no content of its own, and as serving to form nouns expressing a notion basically expressed by a class in its non-contextual use (see section 8), which makes problematic the very notions of agreement and control.ⁿ

5. The inflectional prefixes of nouns

Abstracting from phonologically predictable variations, Jóola Fóoñi can be analyzed as having 19 prefixes of nouns related to the agreement system. However, this count relies on analytical decisions that are not always easy to make. In this section, we present what we consider the simplest and most consistent account of noun prefixes without discussing the problematic points, since the decision on the precise number of nominal prefixes to be

ⁿ Noun stems showing these properties (sometimes called 'omniclass roots') are common in Niger-Congo languages. The Bantu root *-ntò is a well-known example. Among Atlantic languages, such stems have been described by Cobbinah (2013) for Gubëeher and by Segerer (2015b) for Manjaku. A plausible explanation for the existence of such noun stems is that the chameleon nouns were originally adnominal or pronominal forms inflected for class, subsequently reanalyzed as nouns with a lexical meaning corresponding to the meaning originally carried by the class marker. This hypothesis finds some support in the fact that the reanalysis of pronouns meaning 'someone' as nouns meaning 'human being' is attested in quite a few languages, as for example Cape Verdan *algen* 'human being' < Portuguese *alguém* 'someone' (Nicolas Quint, pers.com.).

recognized has no impact on the questions that constitute the central topic of this paper.

The 17 prefixes listed in (4) unequivocally determine the agreement pattern and number value of the noun forms they mark. A dash in the 'number value' column indicates prefixes only attested in nouns that do not have distinct singular and plural forms.

(4)	nominal prefix	agreement pattern	number value
	а-	А	sg.
	E-	E	sg.
	. <i>f</i> -	F	sg.
	fa-	F	_
	fa- ka-	K	sg.
	<i>b</i> -	В	sg.
	ba-	В	sg.
	ñ-	Ñ	sg.
	.j-	J	sg.
	ja- bʊk-	J	-
	bok-	BK	pl.
	<i>S</i> -	S	pl.
	ΰ-	U	pl.
	<i>m</i> -	М	pl.
	ma-	М	_
	<i>t</i> -	Т	_
	d'-	D′	-

Each of the two nominal prefixes presented in (5) is found in two sets of noun forms that differ in their agreement pattern.

(5)	nominal prefix	agreement pattern	number value
	Ø-	A or E	sg.
	<i>k</i> -	BK or K	pl.

The plural suffix *bok*- has the particularity of being found with just one noun (*an* 'person' plural *bok-an*). All other (non-diminutive) human nouns share their plural suffix (*k*-) with those non-human nouns whose singular prefix is *f*-, although the agreement patterns are different.

With the exception of d'- (whose underlying representation includes a floating +ATR feature), the nominal prefixes are –ATR, and when they include vowels, they copy the +ATR feature in contact with +ATR stems.

The forms noted in (4) and (5) are underlying forms whose realization is subject to the following rules:

- before vowel-initial stems, ε- and υ- alternate with the corresponding semi-vowels, cf. ε-yεn 'dog', e-suk 'village' vs. y-on 'crocodile', or υ-roŋ 'roads', u-beer 'trees' vs. w-ut 'rice fields'.
- before consonant-initial stems, k-, s-, f-, b-, ñ-, j-, and m- have a CV variant whose vowel is *i* ~ *i* after coronals, and *v* ~ *u* after labials or velars, cf. *si-yɛn*

'dogs', *si-suk* 'villages', *s->n* 'crocodiles' with prefix *s-*, and *fu-leeŋ* 'moon, month', *fu-reer* 'play', *f-al* 'river' with prefix f^{-1^2}

6. Inflectional types of nouns and genders

5 of the 19 noun prefixes (*fa-, ja-, ma-, t-,* and *d'-*) are only found in nouns that do not show number variation. Moreover, with the exception of those only found with human nouns (i.e., singular *a-* and plural *bok-*), all other prefixes are also found in nouns that do not have distinct singular and plural forms. For example, *ε-many* 'Mandinka people' (a collective noun corresponding to *a-many* 'Mandinka person' pl. *ko-many*) is a singular tantum, since *ε-* is in principle a singular prefix, whereas *m-of* 'ground' is a plurale tantum, since *m*- is in principle a plural prefix.¹³

For the nouns that have distinct singular and plural forms, taking into account both number marking and agreement patterns, there are 14 possible singular / plural pairings, listed in (6).¹⁴

(6)	singu	ılar	plural		examples		
. ,	Ø- [°]	(A)	bok-	(BK)	Ø-an	pl. bʊk-an	'person'
	Ø-	(A)	k-	(BK)	Ø-ıñaay	pl. <i>k-ıñaay</i>	'mother' ¹⁵
	а-	(A)	k-	(BK)	a-seek	pl. kʊ-sɛɛk	'woman'
	а-	(A)	<i>S</i> -	(S)	a-mpa	pl. sv-mpa	'father'
	Ø-	(A)	8-	(S)	Ø-ıñaay	pl. s- <i>ıñaay</i>	'mother'
	<i>E</i> -	(E)	S-	(S)	e-suk	pl. <i>si-suk</i>	'village'
	Ø-	(E)	<i>S</i> -	(S)	Ø-sindo	pl. <i>si-sindo</i>	'home'
	b-	(B)	<i>σ</i> -	(U)	bʊ-rʊŋ	pl. <i>v-rvŋ</i>	'road'
	ba-	(B)	<i>σ</i> -	(U)	ba-caac	pl. v-caac	'bed'
	<i>f</i> -	(F)	<i>k</i> -	(K)	ุ fʊ-lɛɛŋ	pl. <i>kʊ-lɛɛŋ</i>	'month'
	ka-	(K)	<i>σ</i> -	(U)	ka-sənd	pl. ʊ-sɔnd	'roof'
	j-	(J)	<i>m</i> -	(M)	j1-bɛcɛl	pl. <i>mʊ-bɛcɛl</i>	'palm tree'
	.j-	(J)	k-	(K)	ji-cil	pl. <i>ku-cil</i>	'eye'
	ñ-	(\tilde{N})	ΰ-	(U)	ñı-woj	pl. <i>ʊ-wʊj</i>	'chain'

¹² The apparent exception *so-mpa* 'fathers', syllabified as [som-pa], can be explained by the influence of the labial nasal in coda position on the preceding vowel.

¹³ At least some of the nouns that do not vary in number may nevertheless be modified by numerals, without any variation in their prefix and agreement properties, as for example *s-euut* 'dream': *s-euut s-ekon* 'one dream', *s-euut s-gaba* 'two dreams' (to be compared with *y- on y-ekon* 'one crocodile', *s-on s1-gaba* 'two crocodiles'). In the case of *s-euut* 'dream', the prefix is in principle a plural prefix, but the same behavior is found with the prefixes *t-* and *d'-*, to which no number value can be attributed: *t-m t-ekon* 'one place', *t-m t1-gaba* 'two places'.

¹⁴ Across Jóola varieties, there is much more variation in the inventories of possible singular / plural pairings than in the inventories of noun prefixes and agreement patterns. For example, Keeraak has the same inventory of noun prefixes and agreement patterns as Jóola Fóoñi, but the inventory of possible singular / plural pairings is considerably larger in Keeraak (Segerer 2015a).

¹⁵ Note that *m̃aay* 'mother has two possible plural forms, *k-m̃aay* and *s-m̃aay*, and two possible agreement patterns in the plural (BK and S). This particularity is shared by *mpa* 'father', pl. *ku-mpa* or *su-mpa*.

In terms of genders, i.e., if nominal lexemes that have exactly the same agreement properties both in the singular and the plural are grouped together (regardless of their prefixes), 9 genders can be recognized (A/BK, A/S, E/S, F/K, J/M, J/K, B/U, K/U and Ñ/U), but 3 of them (A/S, J/K, and Ñ/U) are statistically marginal: we are aware of only two nouns belonging to gender A/S, one noun belonging to gender J/K, and two nouns belonging to gender Ñ/U.

Gender A/BK can be designated as the human gender, since the terms for 'father' and 'mother' (which have the possibility of triggering S agreement in the plural) and the diminutives of human nouns (which like other diminutives belong to gender J/M), constitute the only exceptions to the coincidence between this grammatical gender and the semantic class of human nouns. Gender J/M can be designated as the diminutive gender, since most of the nouns it includes are diminutives of nouns found in other genders with the same stem. The semantic heterogeneity of the other genders excludes referring to them by means of semantically motivated labels.

7. Semantic agreement

Situations where an agreement rule conditioned by semantic properties of the controller overrides the regular associations between nominal inflection and agreement are commonly referred to as semantic agreement.

Semantic agreement conditioned by humanness (or animacy) is common across Niger-Congo, but relatively limited in Jóola Fóoñi. By contrast, like the other Jóola varieties, Jóola Fóoñi has semantic agreement conditioned by genericity in the sense of reference to kinds (as opposed to reference to individuals), a type of semantic agreement that, as far as we know, has never been signaled in other languages.

Semantic agreement conditioned by humanness is possible (but not obligatory) for the two non-diminutive human nouns showing plural prefixes other than those characteristic for common nouns referring to human individuals (*a-mpa* 'father' pl. *sv-mpa* and \emptyset *-maay* 'mother' pl. *s-maay* 'mother'), for common nouns referring to groups of humans, such as *mansakunda* 'government' (borrowed from Mandinka), and for non-human nouns used metonymically with reference to groups of humans, such as *e-suk* 'village' > 'the villagers'.

Semantic agreement conditioned by humanness is the only possible option for proper names. Human proper names trigger A agreement (or BK agreement when combined with the associative plural suffix $-\pi$), whereas non-human proper names (in particular, toponyms) trigger E agreement.

Semantic agreement conditioned by humanness is also found with pronouns and argument indexes resuming noun phrases coordinated by means of dr 'and, with':

- if one of the coordinands has a human referent, NP1 *dr* NP2 triggers BK agreement;
- if both coordinands have non-human referents, NP1 *dr* NP2 triggers S agreement.

Semantic agreement conditioned by genericity operates in clauses whose subject is a singular non-human noun expressing generic reference (i.e., in clauses comparable to English *A lion has a bushy tail*). In such clauses, the subject index normally selected by the subject noun may optionally be replaced by the subject index of class A (i.e., the subject index regularly associated with singular human nouns), irrespective of the gender to which the subject noun belongs. For more details, readers are referred to Bassène (2015).

8. Contextual and non-contextual uses of classes

8.1. The contextual use of classes

By contextual use of classes, we mean the situation implicitly considered as canonical in Niger-Congo studies, in which either a form inflected for class can be related to an overtly expressed controller, or the sentence including this form can only be interpreted with reference to a controller suggested by the context of utterance.

The possibility of analyzing forms inflected for class as targets of agreement with a noun in the role of controller is not limited to situations in which the controller and the target are in a particular type of syntactic relationship, or even to situations in which the controller is present in the context without having a particular type of syntactic relationship with the target. The controller may also be a noun which the speaker decided to leave unexpressed because the context gives clues as to how to select it among the potential controllers of the class in question.

For example, in (7a), none of the nouns present in the context is a potential controller of the class value expressed by the genitival linker *f-ati*, but the meaning would not change if *fv-nak* 'day' were introduced in the role of head, as in (7b). What conditions the possibility of leaving it unexpressed is the presence of *kajam* 'tomorrow' in the role of modifier, and also the fact that temporal indications are expected in the description of a sequence of events.

(7a) ... fatı kajəm, dı kolaañ.

'... and the following day, they returned there.' f-atı kajɔm, dı kʊ-laañ clF-GEN tomorrow SEQ sI:clBK-return

(7b)	<i>fonak fa</i> same mea				
	fʊ-nak			dı	kʊ-laan.
	SG-day(F)	clF-GEN	tomorrow	SEQ	sI:clBK-return

In (8), exactly as in (7a), no potential controller of the class F form of the genitival linker is present, but the fact that *fatt bee buyebo* is the object of *-sancen* 'speak' suggests retrieving *fo-rim* 'word, speech' as the understood (or elided) controller; crucially, the interpretation would not change if *fo-rim-a-f* 'the word' were inserted immediately before *f-att* (cf. *fortmaf fatt bee buyebo* lit. 'word of toward marriage' > 'marriage project').

(8)	Kaarı dı Kaarı kəə kəndı basangab yək kəsancen fatı bee buyebo. 'So and so have a love affair to the point that they are discussing a						
	marriage pr	oject.'	•				
	Kaarı	dı	Kaarı	k-əə	k-ən-dı		
	so.and.so(A)	and	so.and.so(A) clBK-PRO	sI:clBK-be-	-PREP	
	ba-sang-a-b		yɔk	ko-sancen	f-atı	bee	bu-yebo.
	SG-love.affair(B)-D-C	Lb until	sI:clBK-speak	clF-GEN	ALL	SG-marriage(B)

8.2. The non-contextual use of classes

Forms inflected for class are not always analyzable as the target of an agreement mechanism controlled by a noun present in the context or suggested by the context. They may also have NON-CONTEXTUAL uses in which no controller is present, and the particular context in which they are uttered plays no role in their interpretation.

For example, 11 out of the 15 forms of the relativizer CL-*an* may be found in constructions in which no head noun is present, and the context plays no role in the selection of the domain within which the property expressed by the relative clause delimits a sub-domain. In its non-contextual use, the relativizer is interpreted as indicated in (9), regardless of the context.

(9)	Ø-an	(A)	'the person that'
	k-an	(BK)	'the people that'
	y-an	(E)	'the thing that
	s-an	(S)	'the things that'
	b-an	(B)	'where'
	w-an	(U)	'the thing that'
	m-an	(M)	'how'
	t-an	(T)	'where'
	d-an	(D)	'the thing that'
	d-ɐn	(D')	'where'
	n-an	(N)	'when'

The 11 classes listed in (9) have similar non-contextual uses with a variety of adnominals and pronouns. A twelfth class (\tilde{N}) lends itself to a non-contextual use with quantitative modifiers only: regardless of the context, the class \tilde{N} form of quantitative modifiers (for example \tilde{n} -amesys 'several times' < -amesys 'numerous', participle of the verb mesy 'be numerous'), can be used as an iterative adverb.¹⁶

Only 3 classes out of 15 (F, K and J) do not lend themselves to noncontextual uses. The question that arises is to what extent the non-contextual use of classes can be analyzed as a particular type or agreement with an understood controller. However, before discussing this question, a further distinction must be introduced between two types of non-contextual uses of classes.

¹⁶ In principle, class Ñ is a singular class, but in its non-contextual use, the prefix *ñ*- occurs not only in *ñ-vkon* 'once', but also in *ñr-gaba* 'twice', *ñi-feeji* 'three times', etc.

8.3. Two possible types of non-contextual uses of classes

8.3.1. Pronominal non-contextual uses

The non-contextual use of the following classes concerns forms that occur in typically nominal syntactic positions (including those of subject and object), and can therefore be described as pronominal:

- forms of class A or BK used as antecedentless pronouns¹⁷ referring to human beings, such as *a-cila* 'the aforementioned person', or *kv-cɛɛn* 'some persons';
- forms of class E or S used as antecedentless pronouns referring to things, such as *y-an>osan* 'everything',¹⁸ or *s-an koŋarolom dı lekooley* 'what they brought from school';
- forms of class U used as antecedentless pronouns referring to things, such as *w*-ancosan 'everything', or *w*-an akaanom 'what (s)he did';
- forms of class D used as antecedentless pronouns referring to things, such as *dr-cee* 'something', or *d-an twonoore* 'what I think'; class D forms have no other possible use, since class D is an orphan class, and class D forms are not used adverbially either (see below).

Note that antecedentless pronouns referring to things may belong to four distinct classes. Class S implies a plural meaning, but no clear semantic distinction emerges from the observation of the non-contextual use of forms of classes E, U or D in our corpus. We leave open the question of the extent to which they can be used interchangeably.

8.3.2. Adverbial non-contextual uses

The non-contextual use of the following classes concerns forms that cannot be used as subjects or objects, and can be described as adverbial, since they typically occur as adjuncts with a semantic role entirely determined by the class marker:

- forms of class B used as spatial adverbs referring to vaguely delimited places, such as *bv-cɛɛn* 'somewhere', or *b-anɔɔsan* 'everywhere';
- forms of class T used as spatial adverbs referring to places delimited with precision, such as *t-aa-t-ε* 'here', or *t-an anenom kooraay* 'where he left the herd';
- forms of class D' used as spatial adverbs referring to the interior of something, such as *d-vv-r-e* 'herein', or *d-vn konokenom* 'where they entered';
- forms of class Ñ used as iterative adverbs, such as *ñ1-gaba* 'twice';

12

¹⁷ By 'antecedentless pronouns', we mean pronouns whose interpretation is not conditioned by the identification of a particular noun acting as their antecedent, such as English *somebody* or *nothing*. ¹⁸ The identification of a particular noun acting as their antecedent, such as a series of the solution of the s

¹⁸ The indefinite determiner/pronoun CL-*anɔɔsan* 'every, any' has a variant in which the class marker is repeated: CL-*an*-*ɔɔ*-CL-*an* (as for example class E *y*-*an*-*ɔɔ*-*y*-*an*). The etymology of this variant is more transparent, since it involves the reduplication of a formative -*an*- probably cognate with the stem of the relativizer CL-*an*, and a formative -*o*-*o*-cognate with distributive/free-choice *oo* triggering reduplication of noun stems, as in *a*-*sɛɛk oo sɛɛk* 'every/any woman' or *ɛ-loop oo loop* 'every/any house'.

forms of class N used as temporal adverbs, such as *nr-cee* 'sometimes', or *n-anosan* 'always'; class N forms have no other possible use, since class N is an orphan class, and class N forms are not used pronominally either.

A decisive proof of the adverbial nature of the forms in question in their noncontextual use is that, when they immediately precede the verb, and a priori might be analyzed as fulfilling the function of subject, the verb can only express D agreement (equivalent of impersonal *it* in English). The case of classes B, T, and D' is particularly interesting to observe, since they have potential controllers formed on the chameleon stem $-an \sim -in$ that express exactly the same meaning as the corresponding class in its non-contextual use (see (9) above).

Normally, in Jóola Fóoñi, as illustrated in (10), when the role of subject is fulfilled by a head-modifier construction, the ellipsis of the head noun does not trigger any change in the subject index of the verb.

(10a)	Esukey vyv eloiut. 'This village is not far.'					
	e-suk-e-y	о-уо	e-loi-ut			
	SG-village(E)-D-clE	DEM-clE	sI:clE-be.far-NEG			

(10b) *Üyʊ eloiut.* 'This one (cl.E) is not far.' *v*-yv e-loi-ut DEM-clE sI:clE-be.far-NEG

By contrast, with subject NPs 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 class D agreement (marked by a zero-prefix).

- (11a) *Tinat oto tiloiut.* 'This place is not far.' t-m-a-t v-tv ti-loi-ut NN-place(T)-D-clT DEM-clT sI:clT-be.far-NEG
- (11b) *Uto tiloiut. intended 'This place is not far.' *v-tv ti-loi-ut DEM-clT sl:clT-be.far-NEG
- (11c) *Utv loiut.* 'This place is not far.' v-tv Ø-loi-ut DEM-clT sl:clD-be.far-NEG

The explanation is that v-tv can act as a modifier of t-m-a-t ~ t-an-a-t, but contrary to other forms having the same morphological structure (such as v-yv 'this one (cl.E)'), it does not license the ellipsis of its head. Left alone, v-tv is an adverb ('there') and cannot fulfill the role of subject. In fact, the exact equivalent of (11c) is rather 'There, it is not far': the class T form of the

demonstrative can only occupy the topic position, the subject role being taken over by the class D index expressing vague reference to things.

8.3.3. The particular case of class M

Class M has non-contextual uses of both types, adverbial and pronominal, but with different meanings.

Class M forms are particularly frequent in an adverbial non-contextual use in which they act as manner adverbs, such as *m-ɔɔ-mʊ* 'thus', *m-anɔɔsan* 'anyway' or *m-an rrɛgɪm* 'as I told you'.

Class M forms of possessives and of the genitival linker also have a pronominal non-contextual use in which they can be glossed 'what concerns X'. For example, in (12), *m->>l-ul* 'theirs (cl.M)' must be understood as 'what concerns them'.

(12a)	<i>Məəlril musuum</i> 'I like them.' lit.	<i>ænsuum.</i> 'Theirs (cl.M) pleases me.'
	m-əəl-нl clM-POSS-I:clBK	mu-suum-ɐn-suum sI:clM-please-I:1SG-RDPL

(12a) Məəlul məbamban. 'It's over for them.' lit. 'Theirs (cl.M) is finished.' m-əəl-ııl mə-bam-ban clM-POSS-I:clBK sI:clM-finish-RDPL

Historically, this use of the class M form of the genitival linker is probably the source of the grammaticalization of m-atr (class M form of the genitival linker) as a preposition 'about', 'with respect to', 'because of', and as a conjunction 'because', 'that'.

8.4. Summary

(13) summarizes the ability of forms inflected for class to be used (a) with reference to a controller noun, (b) non-contextually as pronouns, and (c) non-contextually as adverbs.

(13)		(a) use with reference to a controller noun	(b) pronominal non-contextual use	(c) adverbial non-contextual use
	А	+	+	_
	BK	+	+	-
	Е	+	+	-
	S	+	+	-
	В	+	—	+
	U	+	+	-
	F	+	—	—
	Κ	+	—	—
	J	+	—	-
	Μ	+	+	+
	Ñ	+	_	+

14

Т	(+)	_	+
T D' D N	(+)	_	+
D	_	+	_
Ν	-	_	+

9. Non-contextual use of classes and ellipsis

The non-contextual use of some classes can be explained in terms of head ellipsis in noun-modifier constructions, if one accepts the idea that certain nouns have the property of being elidable without any contextual conditioning. However, within the framework of synchronic description, such an explanation only makes sense for pronominal non-contextual uses, since forms inflected for class used non-contextually as adverbs have a syntactic distribution different from the phrases in which the same forms act as modifiers.

9.1. Classes with a pronominal non-contextual use

Out of the 7 classes that have pronominal non-contextual uses, only 3 lend themselves to an explanation in terms of head ellipsis. For the other 4, this analysis cannot be considered within the limits of synchronic description, unless one accepts positing underlying structures including GHOST NOUNS that cannot surface in the phonological form of sentences.

Non-contextual ellipsis of a particular noun among the potential controllers of a given class value is a possible explanation of the non-contextual use of classes A and BK with reference to 'person' or 'people', since gender A/BK includes the noun \emptyset -an 'human being' pl. *bok-an*, which makes it possible to posit that:

- from the point of view of the speaker, in contrast to the other nouns of gender A/BK, the ellipsis of Ø-an / bvk-an is not bound to any contextual conditioning;
- from the point of view of the hearer, when a class A or BK form occurs in a context that does not provide or suggest a particular controller, Ø-an / bvk-an is taken as the default controller.

A similar explanation holds for class U forms referring to 'thing' in the absence of any controller suggested by the context, since *w*-*aaf* 'thing' triggers agreement pattern U, which makes it possible to posit that:

- from the point of view of the speaker, in contrast to the other noun forms triggering agreement pattern U, the ellipsis of *w*-*aaf* is not bound to any contextual conditioning;
- from the point of view of the hearer, when a class U form occurs in a context that does not provide or suggest a particular controller, *w-aaf* is interpreted as the default controller.

By contrast, the non-contextual use of classes E and S with reference to 'thing(s)' cannot be explained in terms of non-contextual ellipsis, since

gender E/S includes no noun whose lexical meaning could be glossed as 'thing'.

An explanation in terms of non-contextual ellipsis is also problematic for the pronominal non-contextual use of class M, since the lexicon of Jóola Fóoñi includes no noun with a lexical meaning coinciding exactly with the meaning 'what concerns X' expressed by class M in this use.

Finally, regarding class D, the ellipsis analysis is ruled out by the mere fact that class D has no potential controller.

9.2. Classes with an adverbial non-contextual use

As already mentioned above, within the frame of synchronic description, adverbial non-contextual uses cannot be dealt with in terms of head ellipsis in head-modifier constructions. However, one may wonder whether such uses of classes could nevertheless be related to nouns lexicalizing the same meanings, at least historically. In all cases, the answer is no.

The only nouns lexicalizing the general notion of 'time' expressed by class N forms are the gender E/S nouns *tembe* and *waati*, both borrowed from Mandinka.¹⁹

As regards the use of class M forms as manner adverbs, we are aware of no Jóola Fóoñi noun lexicalizing the general notion of 'manner'. There is a productive derivation of manner nouns from verbs, but the nouns in question (such as *ba-kor-ɛr* 'way to educate' < *kor* 'educate') control B agreement.

As regards the use of class \tilde{N} forms as iterative adverbs, the only noun lexicalizing the notion of 'time' in the sense of 'repetition' is *bv-yaas* pl. *v-yaas* (gender B/U) with a variant *ka-yaas* pl. *v-yaas* (gender K/U), probably an adaptation of Guinea-Bissau-Casamance Portuguese Creole *biyás* 'travel', itself from Portuguese *viagem*.

The only cases for which a noun lexicalizing the same notion can be found are those of class B, T and D' forms used as spatial adverbs. However, the corresponding nouns are chameleon nouns, and consequently are not plausible reflexes of the hypothetical nouns that may have been the historical source of the use of class B, T and D' forms as spatial adverbs.

9.3. A possible historical scenario

A plausible hypothesis is that, originally, the non-contextual use of classes referred in all cases to an understood controller. Later, some of the nouns in question disappeared, but the possibility of a non-contextual use of the corresponding classes with reference to the notions they expressed was maintained. However, further investigation would be necessary in order to determine to what extent cognates of the ghost controllers involved in the non-contextual uses of classes could be identified in the other Atlantic languages, otherwise this hypothesis will remain purely speculative.

¹⁹ The ultimate origin of *waati* is Arabic *waqt*.

9.4. An alternative analysis

The question we would like to discuss now is whether the meaning expressed by the classes in their non-contextual use could be explained as reflecting abstract or prototypical meanings characterizing the corresponding sets of potential controllers. Note however that such an explanation cannot be considered, not only for the two orphan classes (D and N), which have no potential controller at all, but also for the two classes (T and D') whose only possible controllers are chameleon nouns.

Many attempts have been made at an analysis of the semantics of Niger-Congo gender systems in terms of abstract or prototypical meanings of genders, both for individual languages and in the perspective of historical reconstructions, see Contini-Morava (1996), Demuth (2000), Dingemanse (2006), Katamba (2003), Palmer & Woodman (2000), Selvik (2001), and the references therein.

In Niger-Congo gender systems, it is often possible to observe concentrations of nouns belonging to certain ontological categories in certain genders, but it is also common that a given gender shows a concentration of nouns belonging to two or more semantic categories that have no obvious link between themselves. For example, the agreement pattern M of Jóola Fooñi is typically found with names of liquids and masses, but also with plurals of diminutives, and with a significant proportion of abstract nouns.

In the particular case of the Jóola Fóoñi classes lending themselves to a non-contextual use, the possibility of recognizing a prototypical meaning of the corresponding set of potential controllers coinciding with the meaning expressed by the class in its non-contextual use is obvious for classes A and BK, since gender A/BK only includes human nouns, and virtually all non-diminutive nouns having a human reference belong to gender A/BK, including the hypernym *an / bok-an* 'human being(s)'. Consequently, the meaning 'human being(s)' expressed by classes A and BK in their non-contextual use can equally be explained as a default agreement with the hypernym *an / bok-an*, or as referring to the prototypical meaning of gender A/BK.

Things are very different for the other classes lending themselves to noncontextual uses. In Jóola Fóoñi, apart from gender A/BK, there is no coincidence between concentrations of nouns belonging to certain semantic categories in certain genders and the possibility of the non-contextual use of classes. For example, the most obvious relationships between genders and semantic categories of non-human nouns in Jóola Fóoñi are the concentration of names of trees in gender B/U and the concentration of names of liquids and masses in the plural of gender J/M. However, class B in its non-contextual use cannot express the meaning 'tree', but only the meaning 'place', in spite of the fact that 'place' is not (one of) the prototypical meaning(s) of gender B/U. Similarly, class M in its non-contextual use cannot express 'liquid/mass', but only 'manner', in spite of the fact that nouns referring to manner (in contrast to those denoting liquids or masses) do not constitute a significant subset of the set of potential controllers for M agreement.

The only possible conclusion is that the search for links between the meanings expressed by classes in their non-contextual use and the prototypical meanings of genders is rather a question of historical reconstruction. Even if one finds plausible the idea that the meanings expressed by classes in their non-contextual use originally corresponded to prototypical meanings of the corresponding set of potential controllers, one must admit that, in most cases, subsequent evolutions have blurred the correspondence.

10. The particular behavior of classes B, T and D' in relativization

In addition to properties they share with the other classes that have adverbial non-contextual uses, classes B, T and D' show a special behavior in relativization.

As can be expected, the class B, T and D' forms of the relativizer are compatible with *t-m* / *t-an*, *d-in* / *d-en* or *b-m* / *b-an* 'place' in the role of head. When the subject role is fulfilled by one of these nouns modified by a relative clause, the verb expresses class T, D' or B agreement, but if the head noun is elided, the verb can only express D agreement, which is in conformity with the general behavior of the classes that have adverbial non-contextual uses (see section 8.3.2).

(14a)	<i>Tinat tan inenom sibees tiloiut.</i> 'The place where I left the cows is not far.'				
	t-ın-a-t	t-an	1-nen-v-m	si-be-ɐ-s	ti-loi-ut
	NN-place(T)-D-clT	clT-REL	sIaSG-put-EP-ACT	PL-cow(S)-D-clS	sI:clT-be.far-NEG
(14b)	*Tan menom sibres tiloiut. intended 'The place where I left the cows is not far.' *t-an I-nɛn-ʊ-m si-be-ɐ-s ti-loi-ut clT-REL sl:ISG-put-EP-ACT PL-cow(S)-D-clS sl:clT-be.far-NEG				IEG
(14c)	<i>Tan mɛnʊm sib</i> Where I left th				

t-an เ-nɛn-ʊ-m si-be-ɐ-s Ø-loi-ut clT-REL sI:ISG-put-EP-ACT PL-cow(S)-D-clS sI:clD-be.far-NEG

Example (15) further illustrates the fact that, in the 'noun-relative clause' construction, relatives introduced by the class B, T or D' form of the relativizer can be interpreted as <code>OBJECT</code> relatives, whereas as free relatives, they can only be interpreted as <code>LOCATIVE</code> relatives that cannot fulfill the syntactic role of subject.

(15a)	<i>Trnat tan kuyisenim tiloiut.</i> 'The place which they showed me is not far.'				
	t-ın-a-t NN-place(T)-D-clT		ku-yisen-i-m sI:clBK-show-I:1SG-ACT	ti-loi-ut sI:clT-be.far-NEG	

(15b) Tan kuyisenim sibres loiut.Where they showed me the cows, it is not far.'

t-an	ku-yisen-i-m	si-be-ɐ-s	Ø-loi-ut
clT-REL	sI:clBK-show-I:1SG-ACT	PL-cow(S)-D-clS	sI:clD-be.far-NEG

What is special in the case of the class B, T or D' forms of the relativizer is that, as illustrated in (16), relative clauses introduced by *t*-*an*, *d*-*vn* or locative *b*-*an* have the ability to modify, not only nouns generally associated to agreement patterns B, T or D', but also nouns associated to any other agreement pattern.

(16)						
	'The house where you are going is not far.'					
	ε-loop-ε-y d-en		σ-ja(w)-ε-m	beet	e-loi-ut	
	SG-house(E)-D-clE	clD'-REL	sI:2SG-go-ICPL-ACT	ALL	sI:clE-be.far-NEG	

In this construction, contrary to its regular behavior in the 'noun-relative clause' construction, the relativizer cannot be analyzed as a mere linker in a head-modifier construction, since it does not express agreement with the head noun, and at the same time refers to its role in the relative clause. Its behavior is rather that of a relative pronoun/adverb 'extracted' from the relative clause, comparable to English *where* or French $o\dot{u}$.

Interestingly, the relativizer of class M in non-contextual use (*m-an* 'how') and the relativizer of class N (*n-an* 'when') could be expected to behave in the same way, but this is not the case. Manner relatives and time relatives can only occur as free relatives, never as modifiers of nouns. Example (17) shows that, in the Jóola Fóoñi equivalent of 'the day when he left', the relativizer can only be *f-an* expressing agreement with the head noun *fo-nak* 'day'.

- (17a) *nan ajawom* 'when he left' n-an a-jaw-ʊ-m clN-REL sI:clA-go-EP-ACT
- (17b) *fonakaf nan ajawom intended: 'the day when he left'
 *fo-nak-a-f n-an a-jaw-o-m SG-day(F)-D-clF clN-REL sI:clA-go-EP-ACT
- (17C) fonakaf fan ajawom 'the day when he left' fo-nak-a-f f-an a-jaw-o-m SG-day(F)-D-clF clF-REL sI:clA-go-EP-ACT

12. Conclusion

In this article, Jóola Fóoñi has served to illustrate the necessity of a revision of the conceptual framework and terminology traditionally used in the description of Niger-Congo gender systems, if one is concerned with avoiding false problems, logical inconsistencies and/or misunderstandings in the description of their intricacies. After clarifying some definitional and terminological questions, we have analyzed the non-contextual uses of forms inflected for class in Jóola Fóoñi, and the distinction between pronominal and adverbial non-contextual uses. The main conclusion is that the hypothesis according to which certain nouns lend themselves to non-contextual ellipsis, or the hypothesis of a link between the non-contextual use of classes and the prototypical meanings of genders, whatever their historical validity, do not provide a valid framework for a comprehensive synchronic analysis of this phenomenon.

More generally, the gender system of Jóola Fóoñi is characterized by a striking contrast between the high degree of morphological homogeneity of the class paradigms of adnominals or pronouns, and their remarkable syntactic heterogeneity. In fact, across Niger-Congo, this is the norm rather than the exception, but this characteristic of Niger-Congo gender systems tends to be masked by traditional descriptions, because the theoretical framework they use does not provide the tools to account for the kinds of syntax-morphology mismatches that have been discussed in this paper.

Abbreviations

Capital letters between parentheses immediately after the lexical gloss of nouns (for example, 'woman(A)', or 'dog(E)') indicate the agreement pattern associated to the form in question.

The other abbreviations are as follows: ACT = actualizer,²⁰ ALL = allative, clX = class X, D = definite, DEM = demonstrative, EP = epenthetic vowel, GEN = genitive, I = index (other than subject index, cf. sI), ICPL = incompletive, NEG = negation, NN = number neutral, PL = plural, POSS = possessive, PREP = preposition,²¹ PRO = pronoun, RDPL = reduplicative suffix, REL = relativizer, SEQ = sequential, SG = singular, sI = subject index.

References

- Barry A., 1987, *The Joola languages. Subgrouping and reconstruction* [PhD thesis], London, University of London.
- Bassène A. C., 2007, *Morphosyntaxe du jóola banjal, langue atlantique du Sénégal,* Cologne, Rüdiger Köppe Verlag.
- Bassène A. C., 2015, Accords de classe et référence générique dans les parlers joola, in
 D. Creissels & K. Pozdniakov (eds.), Les classes nominales dans les langues atlantiques, Cologne, Rüdiger Köppe Verlag, p. 171-782.
- Cobbinah A. Y., 2013, Nominal classification and verbal nouns in Baïnounk Gubëeher [PhD thesis], London, SOAS.
- Contini-Morava E., 1996, 'Things' in a noun-class language. Semantic functions of agreement in Swahili, in E. Adrews & Y. Tobin (eds.), *Towards a calculus of*

 $^{^{20}}$ Actualizers are suffixes found in relative verb forms that characterize the event to which the relative verb form refers as irrealis, realis, or having a close relationship with the time of utterance.

²¹ This gloss is used for the multifunctional preposition dt (equally productive in comitative, instrumental and locative uses). The other prepositions are glossed according to their meaning.

meaning. Studies in markedness, distinctive features and deixis, Amsterdam, John Benjamins. 251-290.

Corbett G., 1991, Gender, Cambridge, Cambridge University Press.

- Creissels D., Forthcoming, Noun class agreement in Niger-Congo languages, *The Wiley-Blackwell Companion to Morphology*, Hoboken (NJ), Wiley-Blackwell.
- Creissels D. & Pozdniakov K. (eds.), 2015, Les classes nominales dans les langues atlantiques, Cologne, Rüdiger Köppe Verlag.
- Demuth K., 2000, Bantu noun class systems: loanword and acquisition evidence of semantic productivity, in S. Senft (ed.), Systems of nominal classification, Cambridge, Cambridge University Press, p. 270-292.
- Dingemanse M., 2006, *The semantics of Bantu noun classification: a review and comparison of three approaches* [MA thesis], Leiden, Leiden University.
- Güldemann T. & Fiedler I., 2017, Niger-Congo "noun classes" conflate gender with declension, in F. Di Garbo & B. Wälchli (eds.), *Grammatical gender and linguistic complexity*, Berlin, Language Science Press, p. 85-135.
- Hopkins B. L., 1995, *Contribution à une étude de la syntaxe diola-fogny* [PhD thesis], Dakar, Cheikh Anta Diop University.
- Katamba F., 2003, Bantu nominal morphology, in D. Nurse & G. Philippson (eds.), *Bantu languages*, London, Routledge, p. 103-120.
- Palmer G. B. & Woodman C., 2000, Ontological classifiers as polycentric categories, as seen in Shona class 3 nouns, in M. Pütz & M. H. Verspoor (eds.), *Explorations in linguistics relativity*, Amsterdam, John Benjamins, p. 225-249.
- Sagna S., 2008, Formal and semantic properties of the Gújjolaay Eegimaa (a.k.a Banjal) noun classification [PhD thesis], London, SOAS.
- Sambou B., 2019, *Classification nominale et détermination en Joola Fooñi* [MA thesis], Dakar, Cheikh Anta Diop University.
- Sambou P. M., 1979, Diola Kaasa Esulaaluur. Phonologie, Morphophonologie et Morphologie [PhD thesis], Dakar, Cheikh Anta Diop University.
- Sapir D. J., 1965, A Grammar of Diola-Fogny, Cambridge, Cambridge University Press.
- Segerer G., 2015a, Les classes nominales en keerak (joola de Kabrousse), in D. Creissels & K. Pozdniakov (eds.), *Les classes nominales dans les langues atlantiques*, Cologne, Rüdiger Köppe Verlag, p. 103-146.
- Segerer G., 2015b, Les classes nominales en manjaku, in D. Creissels & K. Pozdniakov (eds.), Les classes nominales dans les langues atlantiques, Cologne, Rüdiger Köppe Verlag, p. 183-207.
- Segerer G. & Pozdniakov K., Forthcoming, A genealogical classification of Atlantic languages, in Friederike Lüpke (ed.), *The Oxford guide to the Atlantic languages of West Africa*, Oxford, Oxford University Press.
- Selvik K.-A., 2001, When a dance resembles a tree: a polysemy analysis of three Setswana noun classes, in H. Cuykens & B. Zawada (eds.), Polysemy in cognitive linguistics: Selected papers from the fifth International Cognitive Linguistics Conference, Amsterdam, John Benjamins, p. 161-184.
- Watson R., 2015, *Kujireraay: morphosyntax, noun classification and verbal nouns* [PhD thesis], London, SOAS.
- Weiss H., 1939, Grammaire et lexique diola du Fogny (Casamance), *Bulletin de l'IFAN*. 1-2/3, p. 412-578.