

THE OXFORD HANDBOOK OF

INFLECTION

Edited by

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CHAPTER 18

INFLECTION IN PULAAR

FIONA MC LAUGHLIN

18.1 INTRODUCTION

PULAAR is the westernmost dialect of Fula, a language noted for having one of the largest gender systems found in natural language and for the way in which it expresses much of its inflectional morphology through consonant mutation. Fula is an Atlantic language of the Niger-Congo phylum whose speakers are dispersed across a 5,000 or so kilometre stretch of the West African Sahel, aptly dubbed the Fula archipelago by Boutrais (1994). The dispersion of Fula speakers from Senegal and Mauritania in the west to Chad and Sudan in the east is a consequence of their historical mobility as pastoralists, but there are also many sedentary Fula-speaking groups. By the most conservative estimates there are at least 12 to 15 million speakers of the language, but Fula is a minority language in every country in which it is spoken, with the possible exception of Guinea, and as a result most speakers are bilingual or multilingual. The westernmost dialects of Fula more often than not go by a p-initial variant of the name for the language: Pulaar (Senegal), Pular (Guinea), and Peul in French (from Wolof Pël); the central and eastern dialects on the other hand are f-initial: Fulfulde and Fulani, the latter being from Hausa. The p/f alternation illustrates the phenomenon of initial consonant mutation, a salient aspect of Fula inflectional morphology discussed in some detail in this chapter. The overall architecture of Fula grammar is much the same across dialects, but there are significant phonological, morphological, and syntactic differences between them, as well as lexical differences, many of which have their origin in the diverse languages with which Fula has been in contact. Fula speakers constitute many different ethnic groups across the Sahel, including but not limited to transhumant pastoralists or Fulbe, the semi-nomadic Wodaabe of Niger, and the sedentary and long islamized Haalpulaar'en (often referred to in the literature as Tukuloor or Toucouleur) who live on both banks of the Senegal River in southern Mauritania and northern Senegal. The dialect discussed in this chapter is

Fuutankoore Pulaar, the dialect of the Fuuta Tooro region of northern Senegal and southern Mauritania whose speakers call themselves Haalpulaar'en. Pulaar is a conservative Fula dialect and is spoken in or near the region in which the language originated. Fula's closest sister language, Seereer-Siin, and the more distant yet structurally similar Wolof, both of which are spoken in Senegal, will be discussed briefly in Section 18.5 to provide a comparative perspective.

18.2 GRAMMATICAL CONTEXT

Typologically, Pulaar is a relatively synthetic and somewhat fusional language that exhibits many of the grammatical characteristics typical of the Niger-Congo languages in general and the Atlantic languages in particular.¹ It has a basic SVO word order, a robust gender or noun class system, a small number of underived adjectives, and a set of derivational verbal extensions. Nouns, their determiners, and concordant adjectives, as well as third person pronouns and anaphora, are inflected for noun class, but in contradistinction to the Bantu languages, subject and object class markers do not appear on the verb. Pulaar exhibits no inflectional marking of case on nouns, but distinguishes between subject and object pronouns, although not between accusative and dative pronouns. Pulaar has a very small number of underived adjectives, and a larger number of adjectives derived from nouns and from stative verbs of the kind *wulde* 'to be hot', *hoyde* 'to be light', etc. Degree is handled by a periphrastic construction that utilizes the verb *burde* 'to exceed or surpass', in conjunction with an adjectival verb, thus it is not an inflectional category in Pulaar. There are also some instances of inherently comparative or superlative adjectival verbs such as *heccude* 'to be older than' and *faddude* 'to be more beautiful than'.

The Pulaar pronominal system exhibits an inclusive/exclusive distinction in the first person plural. In typical Niger-Congo fashion there is no distinction based on gender in the pronominal system; third person anaphora, however, are inflected for the noun class of their referent, giving rise to a striking multiplicity of forms.

Pulaar verbs are inflected for voice (active, middle, and passive), aspect (perfective and imperfective), and polarity. In addition, there is a suite of morphosyntactic properties that go to make up a category that has been referred to in the literature on Fula as 'relative tense', and which I use interchangeably with the more abstract term, R-construction, in this chapter. Included in this category are narrative clauses, relative clauses, *wh*-phrases, phrases introduced by the temporal marker *nde* 'when', and clauses in which the salience

¹ It is a matter of some debate as to whether Atlantic (formerly West Atlantic) is a coherent genetic subgroup of Niger-Congo. There appears to be no shared innovation between the Atlantic languages, and rates of cognacy are fairly low, so they may well simply be a typological grouping. There is enough similarity between the Senegal languages of Northern Atlantic, however, to maintain a close genetic relationship between those languages, which include Fula, Seereer, and Wolof.

of some constituent has been increased and therefore promoted on the information hierarchy. The habitual use of quotation marks around the term ‘relative tense’ (Arnott 1970; McIntosh 1984; Gottschligg 2006; etc.) implies less than full satisfaction with the term, and further elucidation of the distinction between relative and general verbal forms awaits a better understanding of information and discourse structure in Pulaar. What is clear, however, is that information within the Pulaar clause is organized by a combination of syntactic and pragmatic considerations that are highly discourse sensitive. In addition to clefts and pseudo-clefts which focus constituents, there is a focus particle, *ko*, which marks identificational focus in specificational, but not predicational, clauses (Cover 2009), and which also has a copular function.

Verbs are not inflected for tense, but a preterite or aorist marker */-no(o)/* is found across Fula dialects. McIntosh (1984: 76) calls it an ‘anteriority marker’ and says that ‘[e]ssentially, it sets the action depicted by the verbal complex one step back in time, using the moment of utterance or a time determined in the discourse as its point of reference’. Gottschligg (2006: 147) claims that the anteriority marker is not part of the inflectional system of Fula and that it can attach to non-verbal forms in some dialects, thereby consolidating its status as a clitic.² Finally, verbs in Pulaar are not inflected for person, and are only minimally inflected for number through stem-initial consonant mutation.

18.3 FEATURES, FORMS, AND PARADIGMS

18.3.1 Phonological and Morphological Overview

Pulaar is primarily a suffixing language as illustrated in the examples in (1) and (2). There is no overt prefixation in the language, although consonant mutation can be analysed as an abstract kind of prefixation as we shall see in Section 18.3.1.1. Reduplication is not very productive, and in any case is limited to derivational processes.³ In (2), the noun class marker occurs as a suffix to a nominal stem in contradistinction to the Bantu languages where class markers occur as prefixes.⁴

- (1) *haal-t-ii-no*
 speak.SG-ITER-PFV-ANT
 ‘spoke again’

² This issue merits further probing, but it is perhaps relevant to note that Zribi-Hertz and Diagne (2002: 831) also raise questions about the puzzling distribution of the (possibly cognate) past marker */-oon/* in Wolof, although they do not go so far as to claim that it is a clitic.

³ Although restricted, reduplication in Pulaar is of significant theoretical interest because of its interaction with consonant mutation. See McLaughlin (2005) for a discussion of this issue in comparative Northern Atlantic perspective.

⁴ See Greenberg (1977) for a historical perspective on how eroded noun class prefixes were ‘renewed’ as suffixes in Fula.

- (2) ngil-ngu
 earthworm-CL_{ngu}
 'earthworm'

Besides suffixation, much of the inflectional morphology of Pulaar involves stem alternations such as those found in the singular/plural pairings of nouns⁵ in (3) and verbs in (4).

(3) Singular class	Plural class	
<i>hoo-re</i>	<i>koʔ-e</i> ⁶	'head'
<i>ngaa-ri</i>	<i>gaʔ-i</i>	'bull'
<i>ree-du</i>	<i>dee-di</i>	'belly'
<i>wow-ru</i>	<i>boʔ-i</i>	'mortar'
<i>gawl-o</i>	<i>ʔawl-(u)ʔe</i>	'griot'
<i>dim-o</i>	<i>rim-ʔe</i>	'noble'

(4) Singular	Plural & R	
<i>hirt-</i>	<i>kirt-</i>	'dine'
<i>yah-</i>	<i>njah-</i>	'go'
<i>rokk-</i>	<i>ndokk-</i>	'give'

These patterns of alternation, referred to in the literature as consonant mutation, are found widely in the Atlantic languages. In Pulaar they are generally regular and extend even to the morphological integration of loanwords in the language.⁷

Consonant mutation has been the subject of intense theoretical inquiry, much of which revolves around the question of whether it reflects an Item-and-Process or an Item-and-Arrangement type of mapping between phonological form and morphosyntax (Hockett 1954), and there is as yet no consensus. It is possible to treat mutating stems as lexical lists of allomorphs as Green (2006) has done for similar phenomena in the Celtic languages where mutation is not as systematic, but an alternative autosegmental treatment can also account successfully for the systematicity of Pulaar mutations (Lieber 1984, 1987; Wolf 2007; etc.). In the autosegmental approach adopted here, stem-initial consonant mutation is understood as the result of the prefixation of a morpheme whose exponence is smaller than a segment, namely a floating feature or autosegment, which is realized on the stem-initial consonant. There are two and only two such featural exponents in Pulaar, [−continuant] and [+nasal]. Morphemes with both exponents play a role in nominal inflection (noun class), while

⁵ Number and noun class are interdependent, so although I have listed the singular and plural forms of these nouns, it is actually their noun class that determines the initial consonant.

⁶ An intervocalic glottal stop is often pronounced as a palatal glide before a front vowel.

⁷ Arnott (1970: 109) also states that 'assimilated' loanwords in the Gombe (Nigeria) dialect of Fula exhibit consonant mutation, resulting in what, from a pre-autosegmental perspective, he considers to be backformations. Breedveld (1995: 69), on the other hand, reports that loanwords in the Malian dialect of Maasinankoore tend not to undergo consonant mutation.

Table 18.1 The consonants of Pulaar

Voiceless plosives	p	t	c	k
Voiced plosives	b	d	j	g
Implosives	ɓ	ɗ	ɟ	
Fricatives	f	s		h
Nasals	m	n	ɲ	ŋ
Prenasalized stops	mb	nd	nj	ng
Liquids		r		
		l		
Glides	w		y	w

Table 18.2 Pulaar gradation sets^a

	Labial		Coronal			Dorsal			
Continuant	w	f	r	s	y	h	y	w	ʔ
Stop	b	p	d	c	j	k	g	g	g
Nasal	mb	p	nd	c	nj	k	ng	ng	ng

^a Voiceless prenasalized stops are not permitted in Pulaar; voiceless consonants occur in stop form in the nasal grade.

verbal inflection makes use of only the latter (plurality and R). If we accept this view, then Pulaar can be said to have prefixes, albeit abstract ones with minimal exponence. The fact that they are the only prefixes in the language is compatible with the historical and comparative facts since noun class markers are the only prefixes in many Niger-Congo languages. The following discussion, which necessarily delves into the phonology of Pulaar, provides the necessary background information for understanding the abstract nature of inflectional exponence evidenced in Pulaar consonant mutation.

18.3.1.1 *The phonology of consonant mutation*

Of the set of Pulaar consonants, given in Table 18.1, all but the voiceless stop /t/, the implosive consonants /ɓ/, /ɗ/, and /ɟ/, the plain nasals /m/, /n/, /ɲ/ and /ŋ/, and liquid /l/ participate in the mutation system.⁸

Consonants may alternate between three homorganic grades, a continuant, a stop, and a nasal (prenasalized stop). There are nine such gradation sets in Pulaar (Table 18.2).

⁸ Here I follow the conventional Senegalese Roman script orthography for Pulaar with one exception: I use the IPA symbol [ɟ] for the palatal implosive stop which is conventionally written as a hooked y.

The prefixation of [–continuant] or [nasal] to a continuant-initial stem such as /wur-/ ‘village’ results in the outputs *gur-* and *ngur-*, respectively. Prefixation of [–continuant] to a non-continuant-initial stem such as /deft-/ ‘book’, or [nasal] to a prenasalized stop-initial stem such as /ngool-/ ‘cobra’, on the other hand, is vacuous and results in no change. Prenasalized stop-initial stems, then, do not exhibit consonant mutation; stop-initial stems show a two-way alternation; and continuant-initial stems may exhibit all three grades, as illustrated in the following examples.

(5) Gradation with different stem types

	Base	[–continuant]	[nasal]	
Continuant initial	<i>wor-</i>	<i>gor-</i>	<i>ngor-</i>	‘man’
Stop initial	<i>jul-</i>	<i>jul-</i>	<i>njul-</i>	‘trader’
Nasal initial	<i>ngool-</i>	<i>ngool-</i>	<i>ngool-</i>	‘cobra’

The behaviour of French loanwords provides further evidence for such an approach to consonant mutation. Given the appropriate morphological environment, continuant-initial stems such as /raj-/ from French *rang* ‘queue’ can become *day-* or *nday-*, while stop-initial stems such as /diskit-/ from French *discuter* ‘to argue’ can become *ndiskit-* but never *riskit-*, because while there are noun class morphemes whose exponence is [–continuant] and [nasal], there are no morphemes whose exponence is [+continuant]. Finally, because Pulaar does not allow onsetless syllables, a glottal stop is epenthesized to vowel-initial French borrowings and the glottal stop then undergoes mutation in the right morphological environment; thus the French verb *ourler* ‘to hem’ is borrowed as the Pulaar stem /?url-/ and gives rise to the related forms *gurl-* and *ngurl-* (Mc Laughlin 2011). The patterns of consonant mutation, then, are quite regular, but there are a number of native stems like *hoggo* ‘beak’ that do not undergo mutation and can therefore be considered lexical exceptions:

(6) Singular	<i>hoggo</i>	<i>ngo</i>
Plural	<i>hoggooji di</i>	* <i>koggooji di</i>
Diminutive plural	<i>hoggoyon kon</i>	* <i>koggoyon kon</i>

18.3.2 Features

The inflectional features of Pulaar which will be discussed in this section, include GENDER, which manifests itself as noun class, CASE as seen in the pronominal system, NUMBER, the trio VOICE, ASPECT, and POLARITY, all of which are expressed cumulatively on the verb, along with SALIENCE (traditionally called focus or emphasis) and the related abstract category R.⁹ Pulaar verbs are not inflected for person.

⁹ Recall from Section 18.2 that R represents the complex of constructions that constitute what have been called the ‘relative tenses’.

18.3.2.1 *Noun class*

Except for the fact that they typically consist of a much larger number of classes, and gender does not play any role in their semantics (the words for man (*gorko*) and woman (*debbo*), for example, are both in the human singular *o*-class), Niger-Congo noun class systems are similar in most respects to the gender systems found in Indo-European and Afro-Asiatic languages in that they trigger agreement throughout the noun phrase; noun class and gender are consequently conflated in the literature as a single inflectional feature. Here I retain the term noun class solely as an Africanist convention without any theoretical implications.

In the Pulaar noun class system there are twenty-one classes, conventionally referred to by their corresponding definite article. Noun class is marked on the inflected noun or adjective by a class suffix and its concomitant stem-initial consonant grade. With the exception of a very small number of native nouns and a larger number of loanwords that fall into the *o*-class (the only class which does not require a noun class suffix) nouns are obligatorily inflected for class and do not occur as bare stems.¹⁰ The classes and their definite articles are listed in Table 18.3, along with the initial consonant grade they condition. The class suffix and the independent definite article are quite similar in phonological form, but the article is nonetheless a distinct word. Historically, the definite article is the source of the suffix (Greenberg 1977), and the closer morphological relationship between suffix and noun stem has resulted in certain phonological changes at the morpheme boundary so that class suffixes also exhibit allomorphy in the form of initial consonant mutation, as illustrated in the examples in (7) where morpheme boundaries are indicated between stem and suffix.¹¹ In general, the grade of the suffix-initial consonant (or its absence) is a lexical property of the stem, although the derivational status of the stem, and sometimes its phonological shape, may also play a role in determining the grade.

(7) *ngol*-class suffixes

<i>kud-ol</i>	'blade of grass'	no initial consonant
<i>dere-wol</i>	'sheet of paper'	continuant initial
<i>jaah-gol</i>	'departure'	stop initial
<i>gon-ngol</i>	'tear'	prenasalized stop initial

Finally, allomorphy in Pulaar nouns can also be seen sometimes in the stem-final consonant, as in the singular (*o*-class) and plural (*be*-class) forms of the word for 'woman':

¹⁰ At a slightly more abstract level we could, of course, posit a \emptyset -suffix for such nouns. Gottschligg (2006: 146) gives some examples of suffixless forms of nouns in Pular, the Fuuta Jalloo (Guinea) dialect of Fula, where they have a generic reading, e.g. *gero* 'chicken' (as meat) vs. *gero-gal* 'chicken' (the bird).

¹¹ In what follows, morpheme boundaries between nominal or adjectival stem and suffix will be marked (e.g. *kud-ol*) only when relevant to the discussion at hand. Boundaries will not be marked in citation forms (e.g. *kudol*). Certain phonological processes such as assimilation and gemination that take place at the boundary between noun or adjective stem and class suffix can render the boundary somewhat difficult to delineate. In the examples in (7), however, they are quite clear.

debb-o 'woman', *rew-be* 'women'. Such alternation of the stem-final consonant is for the most part phonologically conditioned, or was so historically and has now become lexicalized.

The grade of the stem-initial consonant, on the other hand, is conditioned by noun class. Of the twenty-one classes, six condition the continuant grade, eight the stop grade, and seven the nasal grade, thus the distribution of grades is more or less even across classes, with each grade appearing in seven (± 1) classes. There is a semantic core to the system but it is far from being transparent. Semantic categories include natural, physical, and metaphorically extended properties. For example, the *dam* class includes liquids (eg: *ndiyam* 'water', *kosam* 'milk', *fūfam* 'blood'); the *ngol* class includes long, extended objects or concepts (e.g. *cadngol* 'river', *hoggol* 'rope', *lefol* 'woven strip', *koydol* 'dream', *jimol* 'song', *leñol* 'lineage', *tintimol* 'rainbow'); the *ki* class includes trees (e.g. *lekki* 'tree', *ḥokki* 'baobab', *darkaseewi* 'cashew nut tree'). The small *nge* class includes bovines (e.g. *nagge* 'cow', *wiige* 'heifer'), which are culturally highly salient for the transhumant Fulbe, but this class also includes *naange* 'sun', which is related to bovines by the myth-and-belief principle (Lakoff 1986), and five other semantically disparate items.¹² Although these and other classes may contain a semantic core, they almost always include a great number of nouns that fall outside those categories, rendering the semantics somewhat opaque as is typical of noun class systems in general.¹³ The *dum*-class is a neutral or indeterminate class used for unspecified items as seen in the following examples:¹⁴

(8) Ko *dum* woni?
 FOC 3SG_{*dum*} be.SG-PFV.R
 'What is that?'

(9) oolum *dum*
 yellow_{*dum*} DET_{*dum*}
 'That which is yellow'

Morphological considerations can also play a role in noun class assignment. The *o*-class, for example, is a human singular class (eg: *neddo* 'person', *debbo* 'woman'), and almost all human singular nouns fall into it unless they are assigned to the diminutive or augmentative classes,¹⁵ but it is also the default class for loanwords because it

¹² Because it is such a small class, consisting of a total of only six nouns (of which some, like *liige* 'cotton field', have a low frequency) in addition to those that designate bovines, knowledge of all members of the class is considered a playful diagnostic for identifying erudite speakers of the language (Abdoulaye Kane p.c.).

¹³ For a thorough and detailed discussion of the semantics of the noun class system of Maasi-nankooore, a Malian dialect of Fula, see Breedveld (1995).

¹⁴ See also Section 18.3.2.1.3 on how *dum*-class possessive pronouns can occur coreferentially with overt nominal antecedents in a different class.

¹⁵ *Mboomri* 'young girl, virgin' is one of the few human nouns that does not fall into the human *o*-class; it is assigned rather to the *ndi*-class.

Table 18.3 Noun classes, grades, and core semantic content

Singular			Plural		
Class	Grade	Content	Class	Grade	Content
o	stop	humans, loanwords	be	continuant	plural, human
ndu	continuant	hollow, round, inflated	di	stop	
ngu	continuant		de	stop	
nge	continuant	sun, bovines	kon	nasal	diminutive
ngol	stop	long, extended			
nde	continuant				
ndi	nasal				
ngo	continuant	curved up at edges			
ki	nasal	trees, straight upright			
dam	nasal	liquids			
ngal	stop				
ba	nasal				
ka	nasal				
ko	continuant				
dum	nasal	neutral, indeterminate			
ngel	stop	diminutive			
kal	stop	diminutive (mass-nouns)			

does not require an overt class marker (e.g.: *njambala* ‘giraffe’ (<Wolof), *jinne* ‘spirit’ (<Arabic); the human plural *be*-class, on the other hand, does not admit non-human loanwords and maintains a tight semantic integrity. The tendency for a one-to-one correspondence between unique singular and plural classes often found in the Bantu languages can be contrasted with the syncretism of the Pulaar class system where the seventeen singular classes are radically consolidated to a mere four classes in the plural.

Of these classes, the *ngel*, *kal*, and *kon* classes have an exclusively diminutive function, while the *ngal* class has a secondary function as an augmentative singular class, and the *ndu* class has a secondary function as a supraaugmentative singular class.

Although there is no exact correspondence between every singular class and a plural class, there are some very robust patterns of correspondence: nouns in the *ndu*, *ngu*, *nge*, and *ngol* singular classes consistently take the plural *di*-class; nouns in the *dam* singular class and non-diminutive nouns in the *ngal* singular class consistently take the plural *de*-class; nouns in the diminutive singular *ngel*-class consistently take the diminutive plural *kon*-class; those in the *nde*, *ngo*, and *ki*, singular classes tend to take the plural *de*-class, but sometimes take the *di*-class. Non-human *o*-class nouns, which include a large number of loanwords, take the plural *di*-class, making it something of a default plural. Singular nouns in the *ndi*-class, on the other hand, show no consistent

Table 18.4 Singular–plural noun class correspondences

Singular	Plural
o (human)	be
ngel	kon
o (non-human), ndu, ngu, nge, ngol,	di
dam, ngal	de
ba	mostly di
nde, ngo, ki	mostly de, some di
ndi, ka, ko	de or di

pattern, taking either the *di*-class or the *de*-class in the plural. Singular–plural class correspondences are summarized up in Table 18.4. Nouns in the indeterminate *dum*-class and the diminutive *kal*-class, which contains mass nouns, do not have plural forms.

In addition to simple singular and plural forms, Pulaar nouns typically have diminutive singular and plural forms and an augmentative singular form and most can therefore be assigned to five classes. Idiosyncratically, fewer nouns may have additional augmentative plural and supraaugmentative singular and plural classes for up to a total of eight classes. Although cross-linguistically diminutive and augmentative formation is often a derivational process, in Pulaar it is fully inflectional and integrated into the noun class system. Examples of full nominal paradigms are given in Section 18.4.

18.3.2.1.1 Noun class agreement in adjectives

Class agreement with the noun is found throughout the noun phrase on adjectives and determiners, but not on the verb as is common in Bantu languages. The exponence of class agreement on both derived and underived adjectives is the same as for nouns, consisting of a class suffix and a concomitant initial consonant grade, as in the following examples which illustrate alliterative concord, albeit not on the same scale as in the Bantu languages.

- (10) fow-ru famar-du ndu
 hyena-CL_{ndu} small-CL_{ndu} DET_{ndu}
 ‘the small hyena’

- (11) pobb-i pamar-i di
 hyena-CL_{di} small-CL_{di} DET_{di}
 ‘the small hyenas’

- (12) fac'-o hid'fu-ngo ngo
 shoe-CL_{ngo} old-CL_{ngo} DET_{ngo}
 ‘the old shoe’

- (13) paɗ-e kiɗɗu-ɗe ɗe
 shoe-CL_{ɗe} old-CL_{ɗe} DET_{ɗe}
 'the old shoes'

The examples in (10)–(13) contain fully alternating nominal and adjectival stems and therefore exhibit the same consonant grade in both noun and adjective: continuant in the case of (12) and stop in example (13). A mismatch between the grade of the noun and that of the adjective can, however, occur when a fully mutating adjective (or noun) stem agrees with a non- or partially mutating noun (or adjective) stem. An example of this is given in (14). The stem for 'cobra' /ngool-/, is a non-mutating stem, while the stem for 'white' /raŋee-/ is a fully mutating stem. In the plural form, 'cobra' is in the *ɗi*-class which conditions a simple, non-prenasalized stop which can be seen in the agreeing adjective, but not in the non-mutating noun.

- (14) ngoolwaaji daneeji ɗi
 cobra-CL_{ɗi} white-CL_{ɗi} DET_{ɗi}
 'the white cobras'

18.3.2.1.2 Noun class in cardinal numbers

Cardinal numbers exhibit varying agreement patterns with a head noun. There are three basic patterns. First, the cardinal number one, *go'o* in isolation, behaves like any other adjective in that it agrees in class with the head noun by taking a matching class suffix and exhibiting the concomitant stem-initial consonant grade:

- (15) *neɗɗ-o* *goot-o* 'one person'
hum-re *woote-re* 'one tortoise'
ɓok-ki *ngoot-i* 'one baobab'

Second, cardinal numbers from two to nine consistently agree in class with diminutive plural nouns in the *kon*-class, as shown in (16)–(19).

- (16) caw-on ɗiɗ-on
 stick-CL_{kon} two-CL_{kon}
 'two little sticks'
- (17) pittir-kon ɗiɗ-on
 broom-CL_{kon} two-CL_{kon}
 'two little brooms'
- (18) caw-on njoy-on
 stick-CL_{kon} five-CL_{kon}
 'five little sticks'
- (19) pittir-kon njoy-on
 broom-CL_{kon} five-CL_{kon}
 'five little brooms'

In the third pattern, numbers from two to nine also agree in human-ness with human nouns in which case they take human singular *o*-class ending¹⁶ although the head noun is in the plural *be*-class, as in (20)–(23), and numbers six to nine take an initial prenasalized stop, as in (24)–(25).

- (20) rew-*be* d'id-o
 woman-CL_{be} two-CL_o
 'two women'
- (21) wor-*be* d'id-o
 man-CL_{be} two-CL_o
 'two men'
- (22) rew-*be* tat-o
 woman-CL_{be} three-CL_o
 'three women'
- (23) wor-*be* tat-o
 man-CL_{be} three-CL_o
 'three men'
- (24) rew-*be* njeegom-o
 woman-CL_{be} six-CL_o
 'six women'
- (25) wor-*be* njeegom-o
 man-CL_{be} six-CL_o
 'six men'

In all other cases, cardinal numbers show no agreement with a head noun.

While these examples all show a cardinal number following the noun in the same way that adjectives do in Pulaar, Sylla (1982: 59–62) reports an alternative construction in which numbers above ten precede the noun, in which case the noun is always in its singular form. This, however, is a calque from Arabic that gained considerable currency among the Muslim elite in the Fuuta Tooro and is taught in Qur'anic schools.

18.3.2.1.3 *Noun class in third person pronouns and anaphora*

Third person pronouns and anaphora inflect for noun class in Pulaar. In this section, I provide some representative noun class agreement patterns in pronouns and anaphora, but not all. Readers interested in the full panoply of forms are referred to Arnott (1970) and the appendices contained therein for details from the Gombe dialect of Fula, and Sylla (1993) for the Futankooore dialect, Pulaar.

¹⁶ Arnott (1970: 169) considers -o to be a *be*-class suffix because it agrees with *be*-class (human plural) nouns, and he does not comment on its obvious resemblance to the singular human *o*-class suffixes.

As Corbett (1991: 244) points out, the use of a pronoun without an overt antecedent works well in languages with large gender or noun class systems since the number of possible referents is restricted to members of a single class. Consider the example in (26):

- (26) nge ar-ii
 3SG_{nge} come-PFV
 'it (the cow) came'

Here, the default referent is a bovine, *nagge*, because it is an animate referent and the prototypical member of a very small noun class. The choice, then, is limited by noun class membership, but also presumably by linguistic context and the context of utterance, thereby reducing ambiguity.

In general, third person pronouns and anaphora agree in noun class with their referents. Independent emphatic subject pronouns follow such a class agreement pattern as illustrated in (27)–(30).

- (27) ko kanko yar-i kosam
 FOC 3SG_o drink.SG-PFV.R milk
 's/he drank milk'

- (28) ko kambe njar-i kosam
 FOC 3PL_{6e} drink.PL-PFV.R milk
 'they drank milk'

- (29) ko kayru yar-i kosam
 FOC 3SG_{ndu} drink.SG-PFV.R milk
 'it (the cat) drank milk'

- (30) ko kanji njar-i kosam
 FOC 3PL_{di} drink.PL-PFV.R milk
 'they (the cats) drank milk'

Pronouns and anaphora that refer to humans tend to have greater morphological differentiation than non-human animates or inanimates, in accordance with the animacy hierarchy (Corbett 2000), but the [+human] feature rarely trumps grammatical class for human nouns when they occur in classes other than the human *o*-class, such as the diminutive or augmentative classes, as illustrated in the example in (31).¹⁷

¹⁷ Although all human nouns normally fall into the *o*-class in their singular form, this does not preclude them from occurring in diminutive or augmentative forms, in which case they would fall into the corresponding diminutive and augmentative classes. The singular human noun, *cukalel* 'child', typically occurs in its diminutive form in discourse, and its non-diminutive *o*-class form, *suka*, is not as frequently used.

- (31) o yeh-ii galle cukale_i ngel no o yi'-aani ngel_i/mo_j
 3SG go-PFV house child_{ngel} DET_{ngel} but 3SG see-NEG.PFV OBJ_{ngel}/OBJ_o
 'He went to the child_i's house but didn't see him_{i/j}.'

The anaphor *mo* 'him/her' is in the human *o*-class, and therefore cannot be coreferential with *cukalel* 'child', which is in the diminutive *ngel*-class, because like all nouns in Pulaar, *ngel*-class nouns require grammatical class agreement in anaphora.¹⁸

The only exception to strict grammatical noun class agreement involves the neutral *dum*-class anaphor which can occur optionally in a coreferential relationship with an overt non-human nominal antecedent in another class. Both (32) and (33) are grammatical, but (33) is more common.

- (32) rawaandu ndu dillin-ii laaci mayru
 dog_{ndu} DET_{ndu} wag-PFV tail_{ki} POSS_{ndu}
 'The dog wagged its tail.'
- (32) rawaandu ndu dillin-ii laaci d_{um}
 dog_{ndu} DET_{ndu} wag-PFV tail_{ki} POSS_{dum}
 'The dog wagged its tail.'

If, however, the antecedent is a pronoun, then the possessive pronoun must agree in class with that pronoun, as seen in (34); (35) is ungrammatical.

- (34) ndu dillin-ii laaci mayru
 it_{ndu} wag-PFV tail_{ki} POSS_{ndu}
 'It (the dog) wagged its tail.'
- (35) *ndu dillin-ii laaci d_{um}
 it_{ndu} wag-PFV tail_{ki} POSS_{dum}
 'It (the dog) wagged its tail.'

The possessive pronoun *dum* can only have a non-human referent. The human equivalent is *mum* and it shows a similar distribution to *dum* since it can only appear with a coreferential nominal antecedent:

- (36) Kajaa_i yar-ii ndiyam mum_{i/*j}
 Kajaa drink-PFV water POSS
 'Kajaa_i drank her_i water.'

¹⁸ Compare this to the German noun, *Mädchen* 'girl', which is a diminutive, hence neuter, form. Anaphora that are coreferential with *Mädchen* are often feminine, although more conservative prescriptive grammars of German call for grammatical agreement at the expense of such semantic agreement. Metaphors or epithets in Pulaar, on the other hand, can certainly violate grammatical agreement in Pulaar, as in the following example: *O yehii galle boccoonde nde kono o yi'aani mo^{ne}nde* 'He went to the egg's [idiot's] house, but didn't see him.' If the object pronoun were to agree in class with egg, the metaphorical meaning, 'idiot', would be lost.

- (37) *o_i yar-ii ndiyam mum_{i/j}
 She drink-PFV water POSS
 'She_i drank her_{i/j} water.'

The *o*-class (human singular) possessive pronoun, *makko*, on the other hand, stands in a disjoint relationship to a nominal antecedent:

- (38) Kajaa_i yar-ii ndiyam makko*_{i/j}
 Kajaa drink-PFV water POSS
 'Kajaa_i drank her_j water.'

When the antecedent is pronominal, however, the possessive pronoun *makko* can get either a coreferential or disjoint reading:¹⁹

- (39) o_i yar-ii ndiyam makko_{i/j}
 She drink-PFV water POSS
 'She_i drank her_{i/j} water.'

As these examples along with their full paradigms of twenty-one forms each (see Section 18.4) illustrate, third person agreement patterns in Pulaar pronouns and anaphora make for a multiplicity of forms that by any standard must be considered impressive.

18.3.2.1.4 Noun class resolution

Conjoined subjects in languages with large noun class systems often pose a problem for agreement. Languages with smaller gender systems, like Indo-European languages, generally have a default strategy, so for example, an adjective that modifies a conjoined masculine singular and feminine singular subject will be masculine plural in French. Languages with larger systems, such as the Bantu languages, show a variety of different strategies, many of which are avoidance strategies, especially where the conjoined phrase consists of a human and a non-human noun. To illustrate cases that require some type of noun class resolution I will examine topicalized sentences such as (40) and (41) where a subject is left-dislocated and a resumptive pronoun must be used:

- (40) pobbi d_i, d_i mbar-aama
 hyena-PL_{d_i} DET_{d_i} 3PL_{d_i} kill.SG-PASS.PFV
 'The hyenas, they were killed.'

- (41) dawaadi d_i, d_i mbar-aama
 dog-PL_{d_i} DET_{d_i} 3PL_{d_i} kill.SG-PASS.PFV
 'The dogs, they were killed.'

¹⁹ For further discussion of the distribution of these pronouns, see Culy and Dicko (1988); Culy (1996); and Cover (2005).

A left-dislocated conjoined subject consisting of two nouns that take the same plural class poses no problem:

- (42) fowru ndu e rawaandu ndu, di mbar-aama
 hyena_{ndu} DET_{ndu} and dog_{ndu} DET_{ndu} 3PL_{di} kill.PL-PASS.PFV
 'The hyena and the dog, they were killed.'

A problem arises, however, when the conjoined nouns take different plural classes. In sentence (43) the plural form of cricket, *tenke*, is in the *dê*-class, while the plural form of hyena, *pobbi*, is in the *dî*-class. The *dî*-class is something of a default plural and contains loanwords whose singular form is in the *o*-class, thus the sentence in (43) is marginally acceptable. Sentence (44), on the other hand, involves a conjoined subject in which one noun is human and thus takes plural class *be*, while the other is not human and takes the plural class *dî*. This situation is unresolvable, and an alternative construction must be utilized.

- (43) ?tenkere nde e fowru ndu, di mbar-aama
 cricket_{nde} DET_{nde} and hyena_{ndu} DET_{ndu} 3PL_{di} kill.PL-PASS
 'The cricket and the hyena, they were killed.'

- (44) *gujjo o e fowru ndu, be/di mbar-aama
 thief_o DET_o and hyena_{ndu} DET_{ndu} 3PL_{be/di} kill.PL-PASS
 'The thief and the hyena, they were killed.'

Possible alternative constructions that would answer a question like 'What happened to the thief and the hyena?' are given in (45)–(47).

- (45) gujjo o e fowru ndu fof mbar-aama
 thief_o DET_o and hyena_{ndu} DET_{ndu} both kill.PL-PASS
 'The thief and the hyena were both killed.'
- (46) dîdî fof mbar-aama
 two all kill.PL-PASS
 'both were killed'
- (47) gujjo o e fowru ndu mbar-d-aama
 thief_o DET_o and hyena_{ndu} DET_{ndu} kill.PL-ASSOC-PASS
 'The thief and the hyena were killed together.'

Example (45) uses *fof* 'all', which does not show agreement, while (46) combines *dîdî* 'two' and *fof* 'all' to mean 'both'. In sentence (47) the associative verbal extension, *-d-*, shows that the thief and the hyena were killed together.

18.3.2.2 Case

Case in Pulaar is not inflectionally marked on nouns. The pronominal system, however, exhibits distinct sets of subject, object, and possessive pronouns, but with considerable

Table 18.5 Human subject, object and possessive pronouns

	Subject (short)	Subject (long) ^a	Object	Possessive
1SG	mi	mido	kam, mi	-am
2SG	a [daa, aa]	ada	ma, maa	maa ~ maafa
3SG ^b	o	omo	mo, moo	makko, mum
1PL.EXCL	min	amin	min	amen
1PL.INCL	(en) [den]	eden	men, en	men ~ meeden
2PL	(on) [don]	odon	mon, on	mon ~ moodon
3PL	be	abe	be	mabbe

^a The long form subject pronouns have a stative or durative connotation (Sylla 1982: 76). Ard (1979: 129–32) argues plausibly that the long forms are derived historically from a short pronoun plus a locative marker.

^b I have only listed the third person human (*o*-class) pronouns in this table. There are, of course, distinct third person pronouns for every noun class.

syncretism, as illustrated in Table 18.5. There is no morphological distinction between direct and indirect object pronouns, neither is there any morphological distinction between non-human subject and non-human object pronouns.

Forms in brackets, like [den], are used uniquely in R-constructions where they follow the verb. Forms in parentheses, like (en), are always used in general (non-R) constructions, and may be used optionally in R-constructions. There is complete syncretism of the subject and object forms for the first person plural exclusive (min) and third person plural (be). The three remaining sets of forms, however, fall somewhere in the middle. With regard to the first person singular object forms, *kam*, is the normal form except in situations of emphasis where *mi* is used interchangeably with *kam*, resulting in partial syncretism with the first person singular subject form. For the two remaining pairs, namely the first person plural inclusive, and the second person plural, the object pairs *men~en* and *mon~on* are in free variation, once again resulting in what could be termed ‘optional’ case syncretism. Turning now to the possessive pronouns, we see that the long forms of the second person singular, first person plural inclusive, and second person plural, which are hardly ever used, also have contracted forms which are much more common for these pronouns. It is these very forms that show optional syncretism with the equivalent object forms. There is, however, no syncretism of subject and possessive forms.

There is no morphological distinction between accusative and dative pronouns, as illustrated in the sequence (48)–(49) and in (50).

- (48) mi tott-ii rawaandu ndu sawru ndu
 1SG give-PFV dog_{ndu} DET_{ndu} stick_{ndu} DET_{ndu}
 ‘I gave the dog the stick.’

- | | | | | | | | |
|------|-----|-------------|----------------------|------|-----|-------------|-------------------------|
| (54) | mi | def-ii | lacciri | (55) | 6e | ndef-ii | lacciri |
| | 1SG | cook.SG-PFV | couscous | | 3PL | cook.PL-PFV | couscous |
| | | | 'I cooked couscous.' | | | | 'They cooked couscous.' |

Given that the singular/plural distinction in verbs is marked only by stem-initial consonant mutation, verbs that begin with a non-mutating consonant, such as *lootde* 'to wash', will have identical singular and plural forms.

18.3.2.4 Voice, aspect, and polarity

Verbal inflection in Pulaar is highly synthetic. Voice, aspect, and polarity are expressed via cumulative exponence and are generally considered to be formally inextricable from each other. There are three voices in Pulaar: active, middle, and passive, as seen in the infinitival forms in (56):

- | | | | | |
|------|---------|-----------------|--------------------|--------------|
| (56) | ACTIVE | <i>suudde</i> | 'to hide' | TRANSITIVE |
| | MIDDLE | <i>suudaade</i> | 'to hide' | INTRANSITIVE |
| | PASSIVE | <i>suudeede</i> | 'to be/get hidden' | |

Like *suud-*, certain stems can combine with all three voices; others may combine with only two voices, active and middle, while others, like *haal-* 'speak' take active and passive but not middle forms; and some stems can combine with only one voice. The stem *hoy-* 'be light in weight', for example, only combines with active forms, while the stem *daan-* 'sleep' can only occur in the middle voice.

Passive verbs cannot take agents but, if augmented by an instrumental verbal extension, they can take an instrumental argument:

- | | | | | |
|------|----------|------|--|-------|
| (57) | gertogal | ngal | war-aama | |
| | chicken | DET | kill-PASS.PFV | |
| | | | 'The chicken was killed.' | |
| (58) | gertogal | ngal | war-ir-aama | labi |
| | chicken | DET | kill-INS-PASS.PFV | knife |
| | | | 'The chicken was killed with a knife.' | |

The verbal system of Pulaar, as mentioned in Section 18.2, is aspectually rather than temporally oriented. In conjunction with a non-stative verb, perfective aspect implies a completed action and often has a past reading, but as example (60) shows, in some lexically restricted cases including verbs of directed motion, this is not necessarily the case. In conjunction with a stative verb, as in (60), perfective aspect may also have a present reading.

- | | | | |
|------|-----|--------|-----------------------------------|
| (59) | mi | yeh-ii | wuro |
| | 1SG | go-PFV | town |
| | | | 'I went to town/I'm off to town.' |

- (60) mi nan-ii pular
 1SG hear-PFV Pular
 'I understand Pular.'

There are three sets of perfective verbal endings: a general or neutral set, a set used in R-constructions and in clauses where an argument, either the subject or object, has increased salience and is thus promoted in the information hierarchy, and a third set that is used when the verb has increased salience and is promoted in the information hierarchy. Promotion on the information hierarchy has often been called FOCUS, and certainly focus is a part of information structure, but not all instances of increased salience are focus, thus I prefer to use the term SALIENCE instead. Given the three different sets of perfective endings, we might well include salience as an inflectional category in Pular, with the caveat that salience arises out of a configuration of syntactic and morphological properties within a clause. The perfective endings are given in the chart in (61). Syncretism holds between the neutral active and argument salience middle voice forms, and also between the argument salience active and verb salience middle voice forms.

(61) Perfective verb endings

ACTIVE	MIDDLE	PASSIVE	
-ii	-iima	-aama	Neutral
-i ~ Ø ²²	-ii	-aa	Argument salience
-Ø	-i	-a	Verb salience

The following examples illustrate the different active perfective forms in relation to information structure. The choice of one form over another would, of course, depend on the discursive context. Example (62) is a neutral or unfocused sentence, while in (63), which could be the answer to the question 'What did she put on the mat?', the argument *tumude* 'calabash' is promoted to a position of salience, thus the concomitant verb form is required. In example (64), which could be the answer to a question such as 'Did she drop the calabash on the mat?', the verb is most salient, as reflected in the Ø-suffix verbal form, *faw*.

- (62) o faw-ii tumude nde e dow daago ngo
 3SG put.SG-PFV.NEUTR calabash_{nde} DET_{nde} ON LOC mat_{ngo} DET_{ngo}
 'S/he put the calabash on the mat.'
- (63) ko tumude nde o faw-i e dow daago ngo
 FOC calabash_{nde} DET_{nde} 3SG put.SG-PFV.ASAL ON LOC mat_{ngo} DET_{ngo}
 'It's the calabash that s/he put on the mat.'

²² The suffix *-i* is dropped when the subject pronoun follows the verb, as in R-constructions.

- (64) o faw tumude nde e dow daago ngo
 3SG put.SG-PFV.VSAL calabash_{nde} DET_{nde} ON LOC mat_{ngo} DET_{ngo}
 'S/he put the calabash on the mat.'

Imperfective aspect in Pulaar expresses incompleteness, and thus has any number of incomplete readings, including potential, progressive, iterative, imperative, future, etc. Some of these, such as the future and progressive, are expressed by a combination of an imperfective verb and a grammatical particle. There are four sets of imperfective verbal endings, provided in (65). Three of them are analogous to the perfective forms with regard to information structure (neutral, argument salience, verb salience), and the fourth has an imperative function.

(65) Imperfective verb endings

ACTIVE	MIDDLE	PASSIVE	
-a	-o	-ee	Neutral
-ata	-otoo	-etee	Argument salience
-at	-oto	-ete	Verb salience
∅	-o	-e	Imperative

Consider the following examples. Wh-questions automatically entail argument salience, as in (66) and, because the answer in (67) is an activity, it entails verb salience.

- (66) ko Ceerno waf-ata? (67) o yim-at
 WH Ceerno do.SG-IPFV.ASAL 3SG sing.SG-IPFV.VSAL
 'What's Ceerno doing?' 'He's singing.'

In (68) the passive verb 'to be hidden' appears in a sentence showing argument salience. It could answer, for example, the question 'What is being hidden/has been hidden?' The form in (69) shows verbal salience and could be used in a contrastive context implying that money gets hidden rather than spent.

- (68) ko kaalis suud'-etee (wonaa njogitaari)
 FOC money hide.SG-PASS.ASAL NEG arms
 'Money is being/has been hidden (not arms).'
- (69) kaalis suud'-ete
 money hide.SG-PASS.VSAL
 'Money is for hiding.'

Thus far we have considered verbal forms that exhibit positive polarity. These constitute the unmarked case in Pulaar since negation is expressed on verbs by somewhat different endings, all of which involve a negative marker, /-aa-/. The interaction with information structure that we find in the affirmative is neutralized in negative forms, of which there is only one set each for perfective and imperfective aspect:

(70) Negative perfective verb endings

ACTIVE	MIDDLE	PASSIVE
-aani~ -aa ²³	-aaki	-aaka

(71) Negative imperfective verb endings

ACTIVE	MIDDLE	PASSIVE
-ataa	-otaako	-etaake

Most researchers have considered negation to be inextricable from the rest of the verbal inflectional complex, but Sylla (1982: 100) argues that a negative morpheme /-aa-/ is in fact isolatable. This presents a concatenation problem, which in turn leads Sylla to consider the morpheme an infix, rendering the synthetic expression of voice and aspect discontinuous in the imperfective forms. The issue can thus be argued either way, but there is a cost to both approaches. Finally, it should be noted that negation in imperatives is expressed by periphrasis involving a negative marker that precedes an inflected verb. The examples in (72)–(74) illustrate various types of negative sentences.

(72) ɓingel-am ɗaan-aaki jamma haŋki
 child-1SG.POSS sleep-MID.NEG.PFV night yesterday
 'My child didn't sleep last night.'

(73) kaalis suuf-etaake
 money hide.SG-PASS.NEG.IPFV
 'One doesn't hide money.'

(74) woto ngar-e
 NEG come.PL-IMP.PL
 'Don't (you all) come!'

18.3.2.5 *A Note on R-constructions*

As mentioned in Section 18.2, R-constructions constitute the category that has been referred to in the literature on Fula as 'relative tense'. It includes a variety of constructions including narrative clauses, relative clauses, *wh*-phrases, and phrases introduced by the temporal marker *nde* 'when'. What these categories have in common, other than their morphosyntactic form, is as yet unclear, but Frajzyngier (2004) suggests a pathway for future research on the relationship between aspect and information structure that may prove elucidating in the case of Pulaar.²⁴ The morphosyntactic properties associated with R-constructions are as follows. First, they take the verbal inflection

²³ This contracted form is only used when it precedes the anterior marker.

²⁴ Eric Potsdam (p.c.) suggests that R-constructions all have a particular syntax that involves some kind of A' movement. This is clearly the case for focus movement, *wh*-questions, and relative clauses. *Nde*-clauses might be analysed as involving movement of a null temporal operator, and narrative clauses could potentially be accounted for by positing a null topic operator that links multiple clauses in a narrative.

(both perfective and imperfective) associated with argument salience; second, the subject and verb are inverted in the first and second person singular and in the first person plural inclusive and second person plural; and third, when the subject is inverted, the verb takes the nasal grade of the stem-initial consonant, otherwise a marker of plurality in verbs, even if it is singular. These properties are illustrated in the following examples, where R stands for relative. Example (75) is a regular non-R construction, while (76) and (77) are R-constructions.

- (75) mi rokk-ii ceerno o deftere
 1SG give-PFV.NEUTR marabout_o DET_o book_{nde}
 'I gave the marabout a book.'
- (76) nde ndokku mi ceerno o deftere
 when give.R 1SG marabout_o DET_o book_{nde}
 'When I gave the marabout a book.'
- (77) mido siftor-a nde ngon mi cukalel
 1SG remember.SG.IPFV when be.R 1SG child
 'I remember when I was a child.'

Finally, the following sequence of clauses taken from a narrative, show consistent use of the R-construction:

- (78) njaawn-ii mi, callig-ii mi, njuul mi,
 hurry.R-MID.PFV 1SG do.ablutions.R-MID.PFV 1SG pray.R-ACT.PFV 1SG
kacit-ii mi...
 have.breakfast.R-MID.PFV 1SG
 'I hurried up, did my ablutions, prayed, had breakfast...'

18.4 PARADIGMS

Given the pervasiveness of noun class agreement in Pulaar, this section provides some representative paradigms that illustrate the extensive nature of the phenomenon and the multiplicity of inflectional forms it gives rise to. All other things being equal, most nouns can take singular and plural diminutive forms and a singular augmentative form in addition to the basic singular and plural forms. The typical Pulaar noun, then, can be inflected for five noun classes. Some nouns may belong to additional classes on an idiosyncratic basis.²⁵ Representative nominal paradigms for 'village', 'fish', 'woman', and 'man' are given in (79).

²⁵ The diminutive and augmentative classes, including supraaugmentatives, could ostensibly be analysed as derivational categories, the way they are in many languages, but I follow Anderson (1982b: 586) in claiming that diminution and augmentation in Pulaar are inflectional processes since they are fully integrated into the noun class system.

(79) Representative nominal paradigms

CLASS	'village'	'fish'	'woman'	'man'
SINGULAR	wuro	liingu	debbo	goroko
PLURAL	gure	lid'di	rewbe	worbe
DIMINUTIVE SINGULAR	gurel	liingel	dewel	gorel
DIMINUTIVE PLURAL	nguron	liikon	ndewon	ngoron
AUGMENTATIVE	gural	liingal	dewal	goral
SINGULAR				
AUGMENTATIVE	∅	∅	dewe	gore
PLURAL				
SUPERAUGMENTATIVE	∅	liingiri	rewru	wordu
SINGULAR				
SUPERAUGMENTATIVE	∅	∅	∅	gorbi?
PLURAL				

Adjectives agree in noun class with a head noun, thus they have twenty-one distinct forms, as illustrated by the following full paradigms for the adjectives, 'pleasant', 'light (in weight)', and 'white'.

(80) Adjectives inflected for noun class

CLASS	'pleasant'	'light'	'white'
o	beldo	koydo	daneejo
be	welbe	hoybe	raneebe
ndu	welndu	hoyndu	raneeru
ngu	mbelngu	koyngu	ndaneewu
nge	welnge	hoynge	raneewe
ngol	belngol	koyngol	danewol
nde	welnde	hoynde	raneere
ndi	mbelndi	koyndi	ndaneeri
ngo	welngo	hoyngo	raneewo
ki	mbelki	koyki	ndaneewi
dfam	mbeldfam	koydfam	ndanejam
ngal	belngal	koyngal	danewal
ba	mbelba	koyba	ndaneewa
ka	mbelka	koyka	ndaneewa
ko	welko	koyko	raneewo
dfum	mbeldfum	koydfum	ndanejum
ngel	belngel	koyngel	danewel
kal	belkal	koykal	danewal
di	beldi	koydi	daneeji
de	belde	koyde	daneeje
kon	mbelkon	koykon	ndanewon/ ndaneyon

Third person anaphora also agree in noun class with their antecedents, as illustrated in the representative paradigms in (81). The class marker seen in the first column is also identical to the simple subject and object pronouns.

(81) Third person pronouns and anaphora inflected for noun class

CLASS	POSSESSIVE PRONOUNS	INDEPENDENT EMPHATIC SUBJECT PRONOUNS	SUBJECT PRONOUNS (DURATIVE)
o	makko	kanko	ombo
be	maβbe	kamβe	eβe
ndu	mayru	kayru	undu
ngu	maggu	kaŋngu	ungu
nge	magge	kaŋnge	enge
ngol	maggol	kaŋngol	ongol
nde	mayre	kayre	ende
ndi	mayri	kayri	indi
ngo	maggo	kaŋngo	ongo
ki	makki	kaŋki	iki
ɗam	majjam	kaŋjam	aɗam
ngal	maggal	kaŋgal	angal
ba	mabba	kamma	aba
ka	makka	kaŋka	aka
ko	makko	kaŋko	oko
ɗum	majjum	kaŋjum	uɗum
ngel	maggel	kaŋgel	engel
kal	makkal	kaŋkal	akal
ɗi	majji	kaŋji	idi
ɗe	majje	kaŋje	eɗe
kon	makkon	kaŋkon	okon

18.5 A COMPARATIVE PERSPECTIVE

Inflection in Pulaar, and especially the complex morphophonology of its noun class agreement system, naturally invites the question as to whether its sister languages show similar characteristics. In comparing Pulaar to its sister languages along these lines, we see a continuum of morphological complexity. Pulaar and Seereer-Siin are more closely related to each other than they are to Wolof, but the three-way comparison is nonetheless revealing. The Seereer noun class system consists of fifteen classes, eight singular

and seven plural, and the typical noun may be inflected for five classes, as in Pulaar (singular, plural, diminutive singular and plural, and augmentative singular). Class inflection on nouns and adjectives takes the overt form of a prefix for ten of the fifteen classes; the remaining five classes have no prefix. In addition, all classes condition stem-initial consonant mutation, of which there are two types in Seereer: a Pulaar-like system that shows alternation between a continuant, a stop, and a prenasalized stop, and a second system that shows alternation between a voiced stop, a voiceless stop, and a prenasalized stop. There are no class suffixes in Seereer, but there is an enclitic determiner that indicates noun class.

Wolof, on the other hand, has almost no nominal inflection. It has ten noun classes, eight singular and two plural, but nouns are not inflected for class (nor, consequently, for number); noun class inflection shows up only on determiners and some anaphora. There are no adjectives in Wolof, only adjectival verbs (Mc Laughlin 2004), so the question of noun class agreement in adjectives does not arise. There is a singular diminutive class, but no plural diminutive or any augmentative classes. Noun class inflection in the form of consonant mutation has all but disappeared in Wolof, with the exception of a handful of lexical items still used in rural dialects spoken by older people. Consonant mutation is still productive in derivational morphology, however.

The chart in (82) sums up the type of class inflection found in the three languages, illustrated by the cognate paradigms in (83).

(82) Comparative Northern Atlantic (Senegal) noun class inflection (Mc Laughlin 1997: 7)

	PREFIX	CONSONANT MUTATION	SUFFIX	CLITIC DETERMINER	INDEPENDENT DETERMINER
PULAAR		✓	✓		✓
SEEREER-SIIN	✓	✓		✓	
WOLOF		(traces)			✓

(83) Cognate forms for 'man' in Pulaar, Seereer-Siin, and Wolof

'man'	PULAAR	SEEREER-SIIN	WOLOF
HUMAN SINGULAR CLASS	gor-ko o	o-koor oxe	góor gi
HUMAN PLURAL CLASS	wor-ɓe ɓe	goor we	góor gi

In Greenberg's (1977) schema of the evolution of noun class inflection in Niger-Congo, Seereer-Siin has the most archaic class inflection, primarily because it maintains class prefixes. In Wolof, the loss of the original class prefixes did not give rise to their renewal as suffixes as it did in Pulaar, so most of traces of class inflection on nouns has disappeared. Pulaar represents the intermediate case with robust noun class inflection but only stem-initial consonant mutation left as the trace of an earlier system of prefixation.

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