Chapter 17
Wolof Quantifiers

Khady Tamba, Harold Torrence, and Malte Zimmermann

17.1 Introduction

Wolof is a member of the Atlantic sub-branch of the Niger-Congo family. Although classification schemes differ, there is consensus that the Atlantic group represents one of the earliest branchings within the Niger-Congo phylum (Greenberg 1963, Heine and Nurse 2000). Within Atlantic, Wolof is a member of the Senegambian group of the Northern branch. Pulaar and Sereer are Wolof's closest relatives (Sapir 1971, Doneaux 1978, Wilson 1989).

Wolof is spoken principally in Senegal, The Gambia, and Mauritania. There are also small numbers of speakers in Mali and Guinea-Bissau. The total number of native speakers is estimated to be approximately 3.2 million for all countries. However, the total number of speakers is approximately 7 million (Ethnologue) as Wolof is one of the national languages of Senegal and The Gambia and functions as a lingua franca. In no country however is it a language of formal education at any level (although there are materials for literacy programs). There are significant immigrant communities of speakers in France and the United States.

There are a number of Wolof dialects (Sauvageot 1965, Dialo 1983, Gamble 1991). The dialects mentioned in the literature oftentimes correspond to present or former political entities such as Waalo, Njamboor, Cajor, Jolof, Bawol, Presque'île (Cape Verde), Saalum, and Gambia. Sauvageot (1965) makes the observation that the differences between the dialects are principally in the phonetics and lexicon, but there are also differences in the morphology and syntax to a lesser extent. All dialects are mutually intelligible. In the present work, we focus on the variety spoken in Thiès, but bring in data from the St. Louis (Ndar) and Dakar dialects. There have been very few studies of specific dialects of Wolof (Sauvageot 1965 (Jolof), Njie 1982 (Gambia), and Halaoui 1984 (Mauritania)).

K. Tamba (✉)
Department of Linguistics, University of Kansas, Lawrence, KS 66044, USA
e-mail: khadija@ku.edu

The chapter is organized as follows. Section 17.2 presents background on Wolof clause and DP-structure including determiners, noun classes, relative clauses, and numerals. In Section 17.3, we turn to the expression of existential quantification in Wolof. Section 17.4 focuses on universal quantification. Value judgment quantifiers are discussed in Section 17.5. Section 17.6 covers proportional quantifiers. DPs modified with 'only' are introduced in Section 17.7, while Section 17.8 discusses Boolean compound quantifiers. Adverbial quantification is presented in Section 17.9. The Wolof existential construction is discussed in Section 17.10. Section 17.11 presents scopal interactions between universal quantifiers and indefinites. Section 17.12 discusses outstanding issues in the description and analysis of Wolof quantifiers.

17.2 Syntax

17.2.1 Clause Structure

This section presents the basic morpho-syntax of Wolof clauses and DPs. Wolof displays basic SVO word order and typologically mixed head-initial/head-final characteristics (e.g. post-nominal relative clauses, post-nominal definite determiners, and prepositions, but pre-nominal indefinite determiners, and Wolof is almost exclusively suffixing):

(1) Ayda   ak   Jeynaba   lekk-na-ñu   ceeb
     ayda   and   jeynaba   eat-FIN-3PL   rice

     b-i   ci   kër   g-i[1]
     CL-DEF.PROX   P   house   CL-DEF.PROX
     'Ayda and Jeynaba ate the rice at the house'

In (1), the verb *lekk* 'eat' and the preposition *ci* 'at, on, in' are both followed by their complements, *ceeb* 'rice' and *kër* 'house' respectively. However, the determiners *bi* and *gi* both follow their NP complements *ceeb* and *kër*. The articles, *bi* and *gi*, are distinct because *ceeb* and *kër* each belong to different noun classes (see Section 17.2.2.1 below). Verbs in Wolof show number agreement, but they do not agree with their subjects or objects in class. The *ñu* '3PL' in (1) is simply '3PL' and would occur with any 3PL subject in this construction. Because no single constituent in (1) is being focused, the verb surfaces in the left periphery of the clause after the topicalized subject and precedes the 'neutral' complementizer –*na* (which sits in FIN (Rizzi 1997, Zribi-Hertz and Diagne

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[1] Abbreviations: CL: noun class marker, C_REL: relative clause complementizer, DEF.DIST: definite distal, DEF.PROX: definite proximal, FIN: head of FinP, IMPERF: imperfective auxiliary, INF: non-finite clause complementizer, NDEF: indefinite article, PART: partitive clitic, PL.AGR: plural agreement marker.

(2)   **Table 17.1** Subset of Wolof clause types

Type	Example
Na **Clause**	a. Xale yi lekk-na-ñu gato bi child the.pl eat-FIN-3PL cake the 'The children ate the cake' (Entire clause is new information. No subconstituent is in focus.)
Negative	b. Xale yi lekk-u-ñu gato bi child the.pl eat-NEG-3PL cake the 'The children did not eat the cake' (No emphasis on anything. Negative of *na*-clause.)
Subject cleft	c. Xale yi (ñu) a lekk gato bi child the.pl 3PL COP eat cake the 'It's the children who ate the cake' (Subject is in focus.)
Non-subject cleft	f. Gato bi l-a xale yi lekk cake the XPL-COP child the.pl eat 'It's the cake that the children ate' (Non-Subject is in focus.)
Subjunctive	g. Bëgg-na-a ñu lekk-ko want-FIN-1sg 3PL eat-3SG 'I want them to eat it' (CP complement of predicates of desire, command, wish, etc.)
Adverbial	h. Tusuur ñu lekk-ko always 3PL eat-3SG 'They always eat it' (CP/TPs introduced by certain adverbs)
Optative	i. Xale yi na-ñu lekk gato bi child the.pl OPT-3PL eat cake the 'The children, may they eat the cake!' (Wish or desire of speaker)
Negative optative	j. Xale yi b-u ñu lekk gato bi child the.pl COMP-NEG-3PL eat cake the 'The children, may they not eat the cake!' (Wish or desire of speaker)
Presentative	m. Xale y-àngi lekk gato bi child CL-PROG eat cake the 'The children are eating the cake' (Ongoing actions or current states)
Predicate focus cleft	p. Xale yi da-ñu lekk gato bi child the.pl do-3PL eat cake the 'The children did eat the cake' 'Eat the cake is what the children did' (Focus on predicate)

2002, Koopman 2006)). Wolof clausal morpho-syntax is structured around a large number of clause types, some of which are given in Table 17.1[2]:

The clause types are distinguished by a number of structural factors, such as, the form of subject marker, the position of subject marking and the form and position of negation. For example, the verb precedes negation in (2b), but follows negation in (2j). Similarly, the subject marker (*ñu*) precedes the main verb in (2c), but follows main V in (2a). Table 17.1 also shows that Wolof morpho-syntactically distinguishes three kinds of focus clauses (Njie 1982, Robert 1991, Kihm 1999, Torrence 2005): subject focus, non-subject focus, and predicate focus. Wolof does not have predicate clefting. Instead, the predicate focus construction involves a grammaticalized form of the verb *def* 'do, make'.[3]

17.2.2 DP Structure

In what follows, we first lay out the elements found in DPs like (3) below[4]:

(3) juróóm   i   xaj [y-u   réy] y-ii
    five   PL.AGR dog   CL-C$_{REL}$ big   CL-this
    'these five big dogs'

The linear order of the items in (3) can be summarized as:

(4)   Num > Agr > N > Adj > Det/Dem

In our description, we begin with the noun itself and move on to the other items inside of DPs.

17.2.2.1 Nouns and Noun Class

Like the other Atlantic languages (Migeod 1911, Greenberg 1963, Sapir 1971, Wilson 1989), Wolof is a noun class language with an intricate system of noun class (NC) agreement. Nouns do not occur with synchronic noun class prefixes or suffixes. Instead, noun class membership is expressed on other elements in DP, such as articles and demonstratives. Table 17.2 below shows different complex forms of the definite article. Wolof has approximately 15 noun classes (varying according to dialect)[5]: 8 singular, 2 plural, 2 locative, 1 diminutive, 1 manner, and 1 collective human class. Throughout, we refer to the different

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[2] See Zribi-Hertz and Diagne (2002) and Torrence (2005) for a more complete list of clause types.

[3] See Church (1981).

[4] See Seck (1997) for additional overview of Wolof nouns and determiners.

[5] The Dakar dialect, for example, essentially uses the *bi*, *yi*, *ki*, and *ñi* classes for the most part.

noun classes by the form of the proximal definite article. The plural class of most nouns is the *yi*-class. A small group of human nouns take plurals in the *ñi*-class:

(5)   **Table 17.2**   Wolof noun classes

Noun	Definite article	Translation	Class name	Number
yàmbaa	**j**-i	the marijuana	'*ji*-class'	Singular
nit	**k**-i	the person	'*ki*-class'	
xaj	**b**-i	the dog	'*bi*-class'	
mbagg	**m**-i	the shoulder	'*mi*-class'	
weñ	**w**-i	the metal	'*wi*-class'	
suuf	**s**-i	the ground	'*si*-class'	
ndap	**l**-i	the pot	'*li*-class'	
góór	**g**-i	the man	'*gi*-class'	
xaj	**y**-i	the dogs	'*yi*-class'	Plural
góór	**ñ**-i	the men	'*ñi*-class'	

Notice that the noun góór 'man' is in the *gi*-class in the singular, but in the *ñi*-class in the plural. Similarly, the noun *gaal* 'boat', is in the *gi*-class in the singular, but in the *yi*-class in the plural.

There are three 'defective' noun classes which do not contain any overt nouns. These classes nonetheless contain demonstratives, articles, and wh-words. The defective classes consist of the two locative classes and a manner class:

(6)   **Table 17.3**   Defective noun classes

'this X'	wh-word	Class name	Semantics
n-ii 'this way'	**n**-an 'how?'	'*ni*-class'	manner means
f-ii 'here'	**f**-an 'where?'	'*fi*-class'	location
c-ii 'in/at/on here'	%**c**-an 'in/at where?'[6]	'*ci*-class'	location

Noun class membership is determined by a number of factors. Sy (2003) identifies phonological, semantic and morphological criteria that condition noun classification in Wolof and proposes an Optimality theoretic analysis to account for it. Phonologically, it has been noted for example that many nouns that begin with [w] are in the *wi*-class, many nouns in the *mi*-class have an initial [m], etc. (Thiam 1987, McLaughlin 1992, 1997). That lexical semantics plays a role can be seen from the fact that all trees are in the *gi*-class, while all fruits are in the *bi*-class (*tandarma **gi*** 'the date palm', *tandarma **bi*** 'the date (fruit)'). In Section 17.4.1.2, we will encounter more evidence showing that at least some NC-markers carry a certain amount of semantic load.

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[6] The '%' symbol indicates that not all speakers share this judgment.

The role of morphology in noun classification can be seen when certain derivational suffixes are present:

(7) a. dox   'walk (V)'   a'. dox-in **wi**   'the way of walking'
     b. fecc   'dance (V)'   b'. fecc-in **wi**   'the way of dancing'
     c. bëgg   'want (V)'   c'. bëgg-in **wi**   'the way of desiring'
     d. bëgg   'want (V)'   d'. mbëgg-éél **gi**   'the desire'

Deverbal manner nouns with the *–in* suffix are invariably in the *wi*-class (7a–c), while deverbal nouns with the *–eel* suffix are in the *gi*-class (7d).

For some nouns, some speakers may put them in more than one noun class[7]:

(8) a. góór **y**-ii   'these men'   *yi*-class plural
     b. góór **ñ**-ii   'these men'   *ñi*-class plural

The semantic basis of the noun class system can also be seen from the presence of 'default' noun classes. The singular human noun class is the *ki*-class, while the default plural human noun class is the *ñi*-class. These are default classes in the sense that if one wants to ask about a singular human as opposed to a plural human, different forms of the equivalent of *who* are used:

(9) a. **k**-an   'who (SG)'
     b. **ñ**-an   'who (PL)'

Similarly, the default singular *thing* classes are the *li*-class and the *bi*-class, whereas the default plural *thing* class is the *yi*-class. This distinction can be seen in the words for *what*:

(10) a. **l**-an   'what (SG)'
      b. **y**-an   'what (PL)'

17.2.2.2 Determiners

The determiner system of Wolof is built around three determiner vowels and a numeral-like expression. There are no simple equivalents to English expressions like *the* or *a*. Instead, Wolof has two definite articles and two indefinite articles, all agreeing in class with the NP. However, indefinite and definite NPs differ in word order, see below.

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[7] These two forms are not equivalent, however. This can be seen when the demonstrative is focused (and prenominal):

(i)   **y**-ii   góór   'THESE men'
(ii) *****ñ**-ii   góór

(ii) shows that the *yi*-class demonstrative can precede the noun, but the *ñi*-class demonstrative cannot.

(11) a.   xaj   **b-i**   b.   xaj   **b-a**
           dog   CL-DEF.PROX   dog   CL-DEF.DIST
           'the dog (here)'   'the dog (there)'

      c.   **u/a**-b   xaj   d.   **b-enn**   xaj
           NDEF-CL   dog   CL-some   dog
           'a dog'   'a/some dog', 'one dog'

The first definite article, *cl-i*, encodes proximity in space, time, or conversation
(roughly, 'the x mentioned recently'), as in (11a). The second definite article, *cl-a*,
encodes distance in space, time, or conversation (roughly, 'the x mentioned a
while ago'), as in (11b). One indefinite article, *u/a-cl*, has two variants. In the first
variant, the determiner vowel is *u-*, while in the other form, the determiner vowel
is *a-*. We do not know of any interpretive difference between the form with *u-* and
that with *a-*. However, individual speakers may have preferences for one form or
the other. The second indefinite article, *cl-enn*, is numeral-like (see Section
17.2.2.4), as indicated in the second translation in (11d). However, it also has
plural forms, which means that it is not simply the numeral '1':

(12) a.   **y-**enn   xaj
           CL.PL-some   dog
           'some dogs'

      b.   **ñ-**enn   góór
           CL.PL-some   man
           'some men'

The precise relationship between the two indefinite articles is unclear, as they
appear to surface simultaneously:

(13) **g-enn**   **u-g**   garab[8]
      CL-some   NDEF-CL   tree
      'a tree'

As for the differences in word order, the definite articles obligatorily follow
NP, while the indefinite articles obligatorily precede NP.[9] The orders are
summarized in Table 17.4:

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[8] See (52) for further intricacies of multiple determiners.

[9] Bare NPs are also indefinite and are typically interpreted as non-specific indefinites or
generics; see Sections 17.3.1.1, 17.3.1.2 and 17.3.1.3 for more discussion.

(i)   Xaj   d-u   macc   màngo
      dog   IMPERF-NEG   suck   mango
      'Dogs don't suck mangos'

(ii) Gis-na-a   **xaj**
      see-FIN-1SG   dog
      'I saw a dog (i.e. some dog or other)'

Plural marking on the head noun is scarce in Wolof as most singular nouns are homophonous with plural nouns. Likewise, there are no plural determiners as such. Because of this, we gloss plural nouns by indicating 'PL ' following the plural class marker, cf. ((15b,d)):

(15) a. xaj   **b**-i   b. xaj   **y**-i
          dog   CL-DEF.PROX   dog   CL.PL-DEF.PROX
          'the dog (here)'   'the dogs (here)'

      c. jigéén   **j**-i   d. jigéen   **ñ**-i
          woman   CL-DEF.PROX   woman   CL.PL-DEF.PROX
          'the woman'   'the women'

Wolof possesses a number of demonstrative forms, all morphologically complex and agreeing in class with the NP. The demonstratives all seem to contain one of the determiner vowels *u/i/a*:

(14)   **Table 17.4** Wolof determiners[10]

Definite proximal		NP cl-i
Definite distal		NP cl-a
Indefinite	u/a-cl	NP
Indefinite/numeral	cl-enn	NP

The demonstratives with *–i* are proximal, those with *–a* express distance, while the forms with *–u* are unspecified with respect to location. This suggests that the demonstratives literally contain the determiner vowels. As indicated in the translations, some of the demonstratives are 'discourse' demonstratives and express how long ago a given referent was mentioned.[11]

The examples in Table 17.5 show that demonstratives canonically follow the noun. However, demonstratives can precede the noun when focused, as in (17b):

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[10] The precise inventory and interpretation of the determiner vowels seems to vary according to dialect. Extrapolating from Pichl (1972), in some dialects, the equivalent of *NPcl-i* means, 'the NP here or now', *NP cl-a* means, 'the NP somewhere (here)', and *NP cl-u* means, 'the NP far away'. Seck (1997) also reports the existence of a (post-nominal) definite article, *cl-u* and indicates that this form does not provide any information about the spatial or temporal location of the NP. Unfortunately, neither Pichl nor Seck mention the dialects that they worked with and we do not know speakers that use these forms.

[11] Demonstratives form a phonological unit with the noun and are ATR harmonic to it. See Ka (1988), Sy in preparation.

(16)   **Table 17.5** Wolof demonstratives

DET	Form	Example
-i	**NP CL-ii**	xaj b-ii
	NP CL-ile	'this dog'
	NP CL-oo-CL-ii	xaj b-oo-b-ii
	NP CL-oo-CL-ile	'this dog'
		'this aforementioned dog'
		'this recently aforementioned dog'
-a	**NP CL-ee**	xaj b-ee
	NP CL-ale	dog CL-that 'that dog'
	NP CL-oo-CL-a	xaj b-oo-b-a
		'that dog'
		'that long ago aforementioned dog'
	NP CL-oo-CL-ee	xaj b-oo-b-ee
	NP CL-oo-CL-ale	'that long ago aforementioned dog'
-u	**NP CL-oo-CL-u**	xaj b-oo-b-u
	NP CL-oo-ule	'aforementioned dog'

(17)   a.   xaj   b-ii   N dem
            dog   CL-this
            'this dog'

       b.   b-ii   xaj   DEM N
            CL-this   dog
            'THIS dog'

One way of analyzing the word order differences would consist in assuming N(P)-movement into the left DP-periphery in (17a) (Longobardi 1994, Aboh 2004), which is blocked whenever the demonstrative itself is in focus (17b):

(18)   [$_{DP}$ xaj$_1$ [b-ii   [$_{NP}$ t$_1$]]]

Wolof also possesses a general wh-determiner expression CL–*an* 'which', which agrees in class with an overt noun restriction if one is present. The wh-determiner can either precede or follow the NP (with no known interpretive difference):

(19)   a.   góór   g-an
            man   CL-*wh*
            'which man'

       b.   g-an   góór
            CL-*wh*   man
            'which man'

If there is no overt NP restriction, then the class marker is drawn from one of the default classes (as in (9a–b)):

(20) a. **f**-an   'where'   (*fi*-class = default locative class)
        b. **n**-an   'how'   (*ni*-class = default manner class)

17.2.2.3 Relative Clauses and Adjectives

There are three basic types of relative clauses in Wolof (Torrence 2005):

		u-Relative Clause			
(21)	a.	(u/a-b)	tééré	b-**u**	Abdu	jënd-óón
		NDEF-CL	book	CL-C_Rel	abdu	buy-PAST

'a book that Abdu bought'

		i-Relative Clause				
	b.	tééré	b-**i**	Abdu	jënd-óón	(b-i)
		book	CL-C_Rel	abdu	buy-PAST	CL-DEF.PROX

'the book here that Abdu bought'

		a-Relative Clause				
	c.	tééré	b-**a**	Abdu	jënd-óón	(b-a)
		book	CL-C_Rel	abdu	buy-PAST	CL-DEF.DIST

'the book there that Abdu bought'

We refer to the underlined strings in (21) as the 'relative markers', which are analyzed in Torrence (2005) as complementizers that agree in class with the relativized head noun. The presence of the different relative markers CL-*i*, CL-*u*, and CL-*a* corresponds to different interpretations of the head noun. Notice that the three vowels of the relative markers are identical to the by-now-familiar determiner vowels *u/i/a*. As the translations indicate, when the relative marker is CL-*u*, the head noun is interpreted as indefinite. When the relative marker is CL-*i*, the head noun is interpreted as definite and proximal. Similarly, when the relative marker is CL-*a*, the head noun is interpreted as definite and distal. These are the same interpretations as with ordinary NPs when they occur with these determiner vowels. The relative markers cannot be dropped, and they are followed by the relative clause material (e.g. subject, verb, and tense). Notice, too, that both the definite and indefinite articles are optional with relative clauses. When present, they surface on the far left (indefinite) and right (definite) edge of the entire DP. Templatically, relative clauses have the following form:

(22) a. (*u/a*-CL)   NP   CL-*u*   S V O   *u*-Relative
        b.   NP   CL-*i*   S V O (CL-*i*)   *i*-Relative
        c.   NP   CL-*a*   S V O (CL-*a*)   *a*-Relative

The translational equivalents of attributive adjectives surface as relative clause structures in Wolof, with the adjectives being inflected like verbs (Church 1981, McLaughlin 2004). That attributive adjective modification involves relativization in Wolof can be seen from the occurrence of all three of the relative markers with attributive adjectives[12]:

(23) a. (a/u-g)   garab   g-**u**   wert   *u*-Rel Marker
          NDEF-CL   tree   CL-C$_{Rel}$ green
          'a green tree'

      b. garab   g-**i**   wert   (g-i)   *i*-Rel Marker
          tree   CL-C$_{Rel}$ green   CL-DEF.PROX
          'the GREEN tree'

      c. garab   g-**a**   wert-*(oon)   (g-a)   *a*-Rel Marker
          tree   CL-C$_{Rel}$ green-PAST   CL-DEF.DIST
          'the formerly green tree'

Relative clauses are germane to the discussion of Wolof quantification because a number of quantificational concepts, such as the value judgment quantifier corresponding to *many*, are expressed in the form of relative clauses[13]:

(24) góór   **y-u**   bëri
      man   CL.PL-C$_{Rel}$ many
      'many men'

17.2.2.4 Numerals

Unlike in a wide range of languages including German, English, and Hausa (Hoeksema 1983, Higginbotham 1987, Zimmermann 2008), in which numerals behave like attributive adjectives in terms of word order, agreement, and other morpho-syntactic properties, numerals in Wolof are clearly not adjectival in nature: they occur without any signs of relativization, and unlike attributive (adjectival) relative clauses, numerals precede the noun (the construction corresponding to English modified numerals like *more than ten* is still different structurally, see Section 17.6). The different structural positions of numerals and adjectival relative clauses are illustrated again in (25d):

(25) a. b-enn   xale
          CL-some/one   child
          'one child'

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[12] In fact, there are a number of extremely interesting differences between ordinary relative clauses and adjectival relative clauses. For example, as indicated by the translations, changing the relative marker with adjectival relative clauses can trigger an emphatic reading, as in (23b). We leave these issues for future research as there is no systematic description of these effects. (See Torrence (2005) for some discussion.)

[13] See Section 17.5 on value judgment quantifiers.

b. ñett   i   xale
    3   PL.AGR   child
    'three children'

c. ñeent   i   xale
    four   PL.AGR   child
    'four children'

    [Numeral   ]   [Adjectival   RC]
d. **juróóm ñett**   i   xale **y-u**   **bég**
    five   three   PL.AGR   child CL-C$_{Rel}$ happy
    'eight happy children'

As (25a–c) show, the form of the head noun does not change in the presence of a (plural) numeral. Instead, numerals higher than '1' are followed by an *i* morpheme when they occur with a noun. We analyze this *i* as a marker of plural agreement because it appears with non-singular nouns and the *i* itself is the vowel equivalent of *y-*, the default plural noun class marker in the language. Note that not all speakers use the plural agreement marker *i*. For these speakers, (25c) would be *ñeent xale* 'four children'.

Higher numerals pattern similarly, with the noun following the largest multiple of 10:

(26) a. ñaar   fukk   ak   juróóm
          two   ten   and   five
          '25'

      b. ñaar   fukk   i   góór   ak   juróóm
          two   ten   PL.AGR   man   and   five
          'twenty five men'

      c. tééméér   i   xale
          hundred   PL.AGR   child
          'one hundred children'

      d. tééméér i   xale   ak   ñaar fukk ak   juróóm
          hundred PL.AGR child   and   two ten   and five
          'one hundred and twenty five children'

In addition to the plural agreement maker, plural numeral DPs like (25b–c) trigger plural agreement on verbs (*-ñu*) and plural noun class agreement on relative clause complementizers (*y-u*), and take plural articles:

(27) a. [A-**y**   juróóm   i   xale   **y-u**   njool]
          NDEF-CL.PL   five   PL.AGR   child   CL.PL-C$_{Rel}$ tall

          jàng-na-**ñu**   tééré   b-i
          read-FIN-3PL   book   CL-DEF.PROX
          'Five tall children read the book'

    b.   Juróóm   i   xale   **y-u**   njool   y-i
         five   PL.AGR   child   CL.PL-C$_{Rel}$ tall   CL.PL-DEF

         jàng-na-ñu   tééré   b-i
         read-FIN-3PL   book   CL-DEF.PROX
         'The five tall children read the book'

The plural agreement is also found with a subclass of nominal dependents, like *other* in the plural:

(28)   a.   w-eneen   wundu
          CL-other   cat
          'another cat'

       b.   y-eneen   **(i)**   wundu
          CL-other   PL.AGR   cat
          'other cats'

Finally, when a definite determiner is added to an NP modified by numerals and (relative clause) adjective, it must occur after the adjective to yield a structure like the following:

(29)   a.   %**ñett**   xale   **y-u**   rafet   y-i
            three   child   CL.PL-C$_{Rel}$ beautiful   CL.PL-DEF.PROX
            'the three beautiful children'

       b.   [$_{DP}$[**ñett**   xale   **y-u**   rafet]$_{NP}$ y-i   t$_{NP}$]^{14}
            three   child   CL.PL-C$_{Rel}$ beautiful   CL.PL-DEF.PROX

In (29a), the determiner is added only after all other modifiers have been attached to the head noun. Again, the resulting linear order can be accounted for by assuming movement of the entire modified NP to the left DP-edge as suggested in (18) in Section 17.2.2.2, and shown in (29b). Data like (29a) are telling for they suggest that what moves to the left edge of DP in Wolof is not just a syntactic N-head, but always a full NP, even in simpler cases. That a full NP raises is also supported by the existence of stranding in relative clauses. Wolof, like most other Niger-Congo languages, possesses a large class of idiom-like adverbs, so-called 'ideophones' (Welmers 1973, Diallo 1985). Ideophones are idiom-like in the sense that they typically only occur with literally a single specific predicate or one semantic class of predicate. (This makes ideophones similar to modifiers like *pitch* in the English *pitch black*.) Typically ideophones indicate intensity, manner, or degree.

---

[14] Recall that not all speakers use the plural agreement marker *i*.

(30)   a.   Daf-a   **weex**/*xees/*ñuul/*diis   **tàll**
            do-COP   white/light/black/heavy   IDEO
            'It is very white'

       b.   Daf-a   **diis**/*réy/*gàtt   **gann**
            do-COP   heavy/big/small   IDEO
            'It is very heavy'

(30a) is intended to show that the ideophone *tàll* only occurs with the predicate *weex* 'white'. Semantically similar predicates like *xees* 'light' cannot occur with *tàll*. Similarly, (30b) shows that the ideophone *gann* only occurs with the predicate *diis* 'heavy'. It is therefore significant that the ideophone can occur to the right of a definite determiner in a relative clause construction:

(31)   [ñett   i   [xaj   [y-u   **diis**]]]   y-i   **gann**
       three   PL.AGR   dog   CL.PL-C_{Rel} heavy   CL.PL-DEF.PROX   IDEO
       'three very heavy dogs'

Torrence (2005) argues that ideophones like *gann* select for the predicates that they occur with. Under that analysis, cases like (31) are derived by movement of a large piece of syntactic structure containing a full NP into the left periphery of the DP, stranding the ideophone lower down.

17.3 Existential Quantifiers

17.3.1 Indefinites

17.3.1.1 Introduction

We showed in Section 17.2 two ways of expressing indefinite DPs in Wolof, namely, with either the *u/a-CL* or the *CL-enn*, as in (32a). In fact, there is a third type of indefinite which involves zero-marking, as shown in (32b)[15]:

(32)   a.   Xadi   gis-na   **a-b**/**b-enn**   sàcc
            Xadi   see-FIN   NDEF-CL/CL- some   thief
            'Xadi saw a thief', 'Xadi saw a certain thief'

       b.   Xadi   gis-na   ∅   sàcc
            Xadi   see-FIN   DET   thief
            'Xadi saw a thief', 'Xadi saw a certain thief'

---

[15] We discuss cases like (32b) in terms of a null determiner for the purpose of symmetry with the overt determiners. However, these could also simply involve bare NPs. We leave this as an open question here.

As indicated by the translations for (32a–b), all three indefinite forms allow for a specific ('a certain') and a non-specific interpretation, at least in principle. However, as we show in this section, in most cases, these forms are not ambiguous and each indefinite is associated with a particular interpretation. We noted previously that noun class membership is not synchronically indicated on nouns themselves. Zero-determiner DPs cannot be interpreted as plural:

(33)   a.   Awa   jàpp-na   sàcc
            Awa   catch-FIN   thief
            'Awa caught a thief'
            *'Awa caught some thieves'

       b.   Awa   jàpp-na   a-y   sàcc
            Awa   catch-FIN   NDEF-CL.PL   thief
            'Awa caught some thieves'

If the zero-determiner could occur with plural NPs, then we might expect that (33a) should be ambiguous between a singular or plural reading of NP, contrary to fact.

The first distributional difference between the determiners can be seen in the kinds of nouns that they occur with. Specifically, the overt indefinite determiners do not occur with mass nouns:

(34)   Jënd-na-a   ∅/*a-b/*b-enn   ceeb
       buy-FIN-1SG   DET/NDEF-CL/CL-some   rice
       'I bought rice'

The different behavior of Wolof mass nouns, which cannot occur with overt indefinite determiners, and plural count nouns, which cannot occur with the zero indefinite determiner (33a), is interesting from a cross-linguistic perspective since these two NP-types pattern alike in many languages of the world (e.g. both come with zero-determiners in English and German).

The zero-marked and the two overtly marked indefinites can all occur in a number of environments. (32a–b) involve a perfective episodic context. However, all three types of indefinites can also occur in habitual contexts:

(35)   a.   Saa   y-u   fa   y   jaar   guddi,
            time   CL-C_Rel   there   IMPERF   pass   night

            dey   mbëkkaale   ∅   nag...[16]
            IMPERF   collide   DET   cow
            'Every time that it passes during the night it hits a cow.'

---

[16] These examples sentences are based on those from Chung and Ladusaw (2004, #31).

b. Saa   y-u   fa   y   jaar   guddi,
   time   CL-C_{Rel}   there   IMPERF   pass   night

dey   mbëkkaale   **b-enn**   nag. . .
IMPERF   collide   CL-some   cow
'Every time it passes during the night it hits a cow.'

c. Saa   y-u   fa   y   jaar   guddi,
   time   CL-C_{Rel}   there   IMPERF   pass   night

dey   mbëkkaale   **a-b**   nag. . .
IMPERF   collide   NDEF-CL   cow
'Every time it passes during the night it hits a cow.'

17.3.1.2 Distributional and Interpretive Differences: Episodic Sentences

While the environments for zero-marked and overtly-marked indefinites do
overlap to a significant extent, the three types show a number of differences in
their overall distribution.

First, there is a subject/non-subject asymmetry for indefinites. Specifically,
while zero-determiner indefinites can appear as the object in an episodic context
like the perfective (32b), they cannot appear as subjects in this context (36b). In
contrast, the overtly marked indefinites can appear as subjects in episodic
contexts:

(36) a. **A-b/b-enn**   xale   jàng-na   tééré   b-i
          NDEF-CL/CL-some   child   steal-FIN   book   CL-DEF.PROX
          'A child read the book'

      b. *∅   xale   jàng-na   tééré   b-i
          DET   child   read-FIN   book   CL-DEF.PROX
          Intended: 'A child read the book'

This restriction on zero-determiner indefinites extends to conditional
contexts:

(37) a. Su   sama   **a-m**   mbokk   gañ-u-ee,
          if   my   NDEF-CL   relative   hurt-REFL-PERF

          di-na-a   donn-u   kër
          IMPERF-FIN-1SG   inherit-REFL   house
          'If some relative or other of mine dies,
          I will inherit a house'

b.	Su	sama	**m-enn**	mbokk	gañ-u-ee,
	if	my	CL-some	relative	hurt-REFL-PERF

	di-na-a	donn-u	kër
	IMPERF-FIN-1SG	inherit-REFL	house

'If some / a (certain) relative of mine dies,
I will inherit a house'

c.	*Su	sama	∅	mbokk	gañ-u-ee,
	if	my	DET	relative	hurt-REFL-PERF

	di na-a	donn-u	kër
	IMPERF-FIN-1SG	inherit-REFL	house

'If some/a (certain) relative of mine dies,
I will inherit a house'

There is a scopal difference between (37a) and (37b). In (37a), the indefinite scopes under the conditional obligatorily (i.e. 'if some relative or other of mine dies. . .'). That is, the NDEF-CL is interpreted as a non-specific indefinite in this context. (37b) on the other hand is ambiguous. The indefinite can take scope under the conditional or take wide scope with respect to the conditional (i.e. 'if a particular relative of mine dies. . .'). In other words, the CL-*some* can be interpreted as a specific or non-specific indefinite in this context.

However, a modified zero-determiner indefinite subject is fine:

(38)	**A-b/b-enn/∅**	xale	[b-u	njool]	dem-na
	NDEF-CL/CL- some/DET	child	CL-C$_{Rel}$	tall	left-FIN

'A tall child left'

A different pattern arises in negative episodic contexts. All three indefinite types are licensed as objects, but with different meanings:

(39)	a.	Awa	dóór-ul	**a-b**	xale
		awa	hit-NEG	NDEF-CL	child

'Awa did not hit any child'
'Awa did not hit a certain child'

	b.	Awa	dóór-ul	**b-enn**	xale
		awa	hit-NEG	CL-some	child

'Awa did not hit a single child'

	c.	Awa	dóór-ul	∅	xale
		awa	hit-NEG	DET	child

'Awa did not hit any child(ren)'

The NDEF-CL in (39a) in object position can scope over negation (yielding the specific indefinite reading) or under negation (which corresponds to the non-specific indefinite interpretation). The translations of (39b) and (39c) indicate that both the CL-*enn* and ∅ marked indefinites are obligatorily interpreted in the

scope of negation. Interestingly, the scopal behaviour of the CL-*some* form and the NDEF-CL indefinite under negation is the exact opposite of that found with indefinites in conditional clauses, cf. (37a–b).

For subjects in negative episodic contexts, the overtly marked indefinites are fine, but they have distinct interpretations. In (40a) NDEF-CL scopes above negation and is interpreted as a specific indefinite. In contrast, in (40b) CL-*enn* must scope under negation and is interpreted as non-specific (and emphatic). As before, the zero-determiner indefinite is ungrammatical:

(40) a. **A-b**   xale   jàng-ul   tééré   b-i
          NDEF-CL   child   read-NEG   book   CL-DEF.PROX
          'A (certain) child did not read the book'

      b. **B-enn**   xale   jàng-ul   tééré   b-i
          CL-some   child   read-NEG   book   CL-DEF.PROX
          'Not a single child read the book'

      c. *∅   xale   jàng-ul   tééré   b-i
          DET   child   read-NEG   book   CL-DEF.PROX

Like the CL-*enn* form, numeral indefinites in both subject and object position obligatorily scope under negation:

         ¬ > 3, *3 > ¬
(41) a. Jàng-u-ma   ñett   i   tééré
         read-NEG-1sg   three   PL.AGR   book
         'I did not read three books'

         ¬ > 3, *3 > ¬
      b. **Ñett i   xale**   jàng-u-ñu   tééré b-i
         three PL.AGR   child   read-NEG-3PL   book   CL-DEF.PROX
         'It is not the case that three children read the book'

17.3.1.3 Distributional and Interpretive Differences: Generic Sentences

In non-episodic contexts, such as generic sentences, the zero-marked indefinites can function as subjects, while NDEF-CL is ungrammatical and the CL-*enn* yields an emphatic future episodic reading:

(42) a. ∅   xaj   d-u   lekk   màngo
         DET   dog   IMPERF-NEG   eat   mango
         'Dogs don't eat mangos'

      b. ?**B-enn**   xaj   d-u   lekk   màngo
         CL-some   dog   IMPERF-NEG   eat   mango
         'Not a single dog will eat a mango'
         *'A dog does not eat mangos'

   c.   ***A-b**   xaj   d-u   lekk   màngo
        NDEF-CL   dog   IMPERF-NEG   eat   mango

Just as in (40b), the subject CL-*enn* in (42b) must scope under negation and has a non-specific indefinite interpretation. The same difference obtains in affirmative generic clauses. A preverbal zero-marked DP is fine (43a). However (43b) and (43c) show that both of the overtly marked DP are ungrammatical:

(43)   a.   Xaj   di-na   lekk   yàpp
            dog   IMPERF-FIN   eat   meat
            'Dogs eat meat'
            *'A dog eats/will eat meat'

       b.   ??*A-b   xaj   di-na   lekk   yàpp
            NDEF-CL   dog   IMPERF-FIN   eat   meat
            *'A dog will eat meat'
            ??'A dog eats meat'

       c.   ***B-enn**   xaj   di-na   lekk   yàpp
            CL-one   dog   IMPERF-FIN   eat   meat

17.3.1.4 Summary

The data dicussed in this section are summarized in Table 17.6 below.

(44)   **Table 17.6** Indefinite DPs in Wolof

	∅-DET N	NDEF-CL N	CL-some N
Count noun	✓	✓	✓
Mass noun	✓	*	*
Episodic object	✓	✓	✓
Episodic subject	*	✓	✓
Conditional	*	✓	✓
Generic Subj/Obj	✓	*	*

The data show that at least the zero-marked indefinites do not simply contain a dropped indefinite article. If this were so, one might expect the zero-marked form to pattern like NDEF-CL or CL-some, contrary to fact. In the range of environments reported in Table 17.6, the NDEF-CL and CL-some indefinites pattern identically. However, we show in Section 17.8, on existentials, that these two types of indefinites do not pattern the same in all environments. This suggests that these two forms are not just variants of each other.

17.3.2 Negative Indefinites and Negative Polarity Items

There are no dedicated negative indefinite pronominal paradigms in Wolof, such as the English *nobody/nowhere/nothing/etc.* series or negative determiners like *no*, as in *no book*. Instead, negative indefinites are expressed using indefinite articles or NPIs in the presence of sentential negation. Negative indefinite pronominals are formed using the by-now-familiar *CL-enn*:

(45) a. **K-enn**   jàng-ul   tééré   b-i   ¬ > ∃, *∃ > ¬
          CL-some   read-NEG   book   CL-DEF.PROX
          'Nobody read the book'
          *'Somebody did not read the book'

      b. Gis-u-ma   **k-enn**
          see-NEG-1SG   CL-some
          'I did not see anyone'

      c. Dem-u-ñu   **f-enn**
          go-NEG-3PL   CL-some
          'They did not go anywhere'

      d. Lekk-o-o   **l-enn**
          eat-NEG-2SG   CL-some
          'You did not eat anything'

The *CL-enn* forms in (45) differ only in the initial noun class consonant. Recall that the *ki*-class is the default singular human noun class. Therefore, in (45a) and (45b), the noun-less forms are interpreted as *anybody, nobody*. Similar considerations apply to (45c) and (45d) given that the *fi*-class is the default locative class and the *li*-class is the default singular *thing* class. As indicated in (45a), even when a subject, the *CL-enn* form obligatorily scopes under negation. Thus, it cannot be interpreted with wide scope for the existential. To get the wide scope reading for the indefinite, an existential construction is used with the indefinite modified by a relative clause (underlined in (46)):

(46) Am-na   **k-enn**   [k-u   jàng-ul   tééré   b-i]
      have-FIN CL-some   CL-C$_{Rel}$ read-NEG   book   CL-DEF.PROX
      'Somebody did not read the book'
      (Literally, 'There is somebody who did not read the book')

The *CL-enn* forms can be used in affirmative clauses:

(47) a. **K-enn**   jàng-na   tééré   b-i
          CL-some   read-FIN   book   CL-DEF.PROX
          'Someone read the book'

      b. Dem-na-a   **f-enn**
          go-FIN-1SG   CL-some
          'I went somewhere'

For some speakers and dialects, some of the *CL-enn* forms are like NPIs, *l-enn* in particular:

(48)   %Jàng-na-a   **l-enn**
         read-FIN-1SG   CL-some
         'I read something'

For some speakers, (48) is perfectly grammatical, while for others it is either ungrammatical or extremely marginal. Note that speakers that find (48) barely grammatical still consider (47a–b) to be fine.

The equivalent of the negative determiner *no* in English can be expressed using bare nouns or *CL-enn* plus a noun.

(49)   a.   Jàng-u-ma   **tééré**
              read-NEG-1SG   book
              'I read no book'
              'I did not read any book'

         b.   Jàng-u-ma   **b-enn**   **tééré**
              read-NEG-1SG   CL-some   book
              'I did not read a single book'

As the translations indicate, the use of *CL-enn* +*NP* yields an emphatic interpretation. We noted previously that bare NPs do not occur as subjects in episodic clauses like (49a–b). The *CL-enn* + *NP* can occur as a subject, again taking scope under negation:

(50)   **B-enn**   **xale**   jàng-ul   tééré   b-i   (= (40b))
         CL-some   child   read-NEG   book   CL-DEF.PROX
         'Not a single child read the book'
         *'There is one child who did not read the book'

Wolof possesses several negative polarity items (NPIs). However, the inventory of NPIs varies according to dialect. Thus, *dara* 'nothing' is an NPI in the St. Louis dialect, but an indefinite in the Thiès variety:

(51)   a.   Lekk-u-ñu   **dara**   ✓Thiès, ✓St. Louis
              eat-NEG-3PL   *dara*
              'They did not eat anything'

         b.   %Lekk-na-ñu   **dara**   ✓Thiès, *St. Louis
              eat-FIN-3PL   *dara*
              'They ate something'

17.3.3 Numerals and Partitive DPs

There are three partitive constructions in Wolof. These involve a complex DP, a preposition *ci*, or a partitive clitic pronoun, *ci*.

The plural partitive construction involves a complex plural DP with two determiners:

(52) a. **Y-enn**   **góór**   **y-i**   jàng-na-ñu-ko
          CL.PL-some   man   CL.PL-DEF.PROX read-fin-3PL-3SG$_{OBJ}$
          'Some of the men read it'

      b. Jàng-na-a   **y-enn**   **tééré y-i**
          read-fin-1SG CL.PL-some book CL.PL-DEF.PROX
          'I read some of the books'

The examples in (52) suggest that the CL-*enn* can take either zero-marked DPs (or bare NPs) or definite DPs as its argument:

(53) [y-enn   [$_{DP}$ góór y-i]]   (= (52a))
          CL.PL-some   man CL.PL-DEF.PROX
          'some of the men'

The existence of the plural partitive construction is surprising because the DP contains both an indefinite (*y-enn*) and a definite (*y-i*) determiner. The plural partitive construction, as the name implies, is only available for plural DPs:

(54) *Jàng-na-a   **b-enn**   tééré   **b-i**
          read-FIN-1SG   CL-some   book   CL-DEF.PROX
          Intended: 'I read some of the book'

The *NDEF-CL* indefinite article does not occur in this partitive construction:

(55) ***a-y**   góór   **y-i**
          NDEF-CL.PL   man   CL.PL-DEF.PROX
          Intended: 'some of the men'

The second partitive construction involves the preposition *ci*. This can be seen by first looking further at numeral constructions:

(56) a. ñeent   'four'

      b. ñeent-*(i)   góór   Numeral-*i* NP DET
          four-PL.AGR man
          'four men'

   c.   ñeent-*(i)   góor   ñ-i   Numeral-*i* NP DET
        four-PL.AGR man   CL.PL-DEF.PROX
        'the four men', 'four of the men'

   d.   ñeent-(*i)   ci   góor   Numeral *ci* NP DET
        four-PL.AGR P   man
        'four men'

   e.   ñeent-(*i)   ci góor ñ-i   Numeral *ci* NP DET
        four-PL.AGR P   man CL.PL-DEF.PROX
        'the four men', 'four of the men'

There are two alternative forms used to express simple numeral DPs. In one form, the '*i*-form', (56b–c), the numeral is followed by an *–i*. As noted, the *-i* plausibly marks plurality, since all numerals except '1' require it when they occur with an overt NP.[17] In the second construction, the '*ci*-form', in (56d–e), the numeral is followed by a preposition-like element, *ci*, that we gloss as 'P' since it is homophonous with the general preposition *ci*. As indicated in the (56), the *–i* and *ci* are in complementary distribution. The *i*-form and the *ci*-form have identical syntactic distributions, i.e. that of DPs:

(57) a.   Gis-na-a   juróom **i**   góor ñ-i
         see-FIN-1SG   five   PL.AGR man   CL.PL-DEF.PROX
         'I saw the five men'

     b.   Gis-na-a   juróom **ci**   góor   ñ-i
         see-FIN-1SG   five   P   man   CL.PL-DEF.PROX
         'I saw the five men.' / 'I saw four of the men'

The two translations of (57b) are the result of a structural ambiguity:

(58) a. [ñeent [**ci** **góor** **y-i**]]   = four of the men
        four   P   man   CL.PL-DEF.PROX

     b. [[**ñeent** ci **góor**] y-i]   = the four men
        four   P   man   CL.PL-DEF.PROX

---

[17] Note that in some dialects, e.g. Gambian Wolof (Gamble 1991) this marker has been generalized so that even the numeral '1' may take the i:

(i)   benn   (i)   xale
     one   PL.AGR child
     'one child, a child'

The NP can be raised out of neither the *i*- nor the *ci*- forms (59a), but the *ci + NP* string can be fronted, as in (59b):

(59) a. *Xale   y-i   l-a-a   gis   **ñeent-i/ci**
          child   CL.PL-DEF.PROX   XPL-COP-1SG   see   four-PL.AGR/P
          Intended: 'It's the children that I saw four of'

      b. **Ci   xale   y-i**   l-a-a   gis   ñeent-(*i)
          P   child   CL.PL-DEF.PROX   XPL-COP-1SG   see   four-PL.AGR
          'It's of the children that I saw four'

This pattern suggests that the *ci + NP* string forms a constituent to the exclusion of the numeral.

The wh-expression corresponding to the numeral is *ñaata* 'how many, how much', which does not show class agreement with the following bare noun, although it obligatorily triggers plural subject agreement:

(60) Ñaata   (ci/*i)   xale ño-o
      how.many   P/PL.AGR   child 3PL-COP

      dajaloo   ca   lekkool b-a
      gather   P   school CL-DEF.DIST
      'How many children gathered at the school?'

Note that while the *ci*- form is compatible with Wh, the *i*-form is not. The noun and *ñaata* can be split when the P *ci* is present, as shown in (61a)

(61) a. Ñaata   l-a   Isaa jënd   *(ci) jën
          how.many   XPL-COP   isaa buy   P   fish
          'How many fish did Isaa buy?'

      b. Ñaata   (ci) jën   l-a   Isaa jënd
          how.many   P   fish   XPL-COP   isaa buy
          'How many fish did Isaa buy?'

The *wh* can only be extracted from the *ci*-form. This is consistent with *ñaata* and the *ci + NP* string forming an underlying constituent (to the exclusion of the numeral) out of which the wh-expression is extracted, roughly:

(62)

```
            XP
          /    \
    numeral    YP
              /  \
            ci    NP
```
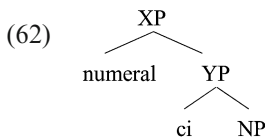
The analysis in (62) is supported by the fact that the $ci+ NP$ string can be pronominalized as the clitic *ci*, leaving only the numeral:

(63) Di-na-a-**ci**   dóór   ñeent(*i)[18]
      IMPERF-FIN-1SG -PART   hit   four-PL.AGR
      'I will hit four of them'

Further support for a structure like (62) comes from the fact that the plain numeral can be split from the noun when the *ci* is present, as in the non-subject cleft in (64) below:

(64) **Juróóm**   l-a-a   gis   *(ci)   jën
      five   XPL-COP-1SG   see   P   fish
      'I saw FIVE fish'

This pattern is strongly reminiscent of *combien* extraction in French, where the NP can be stranded only if it is preceded by the preposition *de*.

To summarize what we have seen so far:

(65) a.   *i* and *ci* are in complementary distribution (56d), (56e).
      b.   *i* and *wh* are in complementary distribution (60).
      c.   *ci* and *wh* co-occur (60).
      d.   *wh* (*ñaata*) can only be extracted from a *ci*-form.

The distributional facts above are interesting because there are two dependencies that do not seem to match up. That is, if *i* and *ci* are in complementary distribution, we might plausibly say that they are of the same category and thus the presence of one excludes the presence of the other; or that they are of different categories, but make partial use of the same pieces of structure (as for example, a Wh DP and a focus DP). The same could be said regarding the complementary distribution of *i* and Wh. Given this, we might expect *ci* and Wh to be in complementary distribution. But, they are not.

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[18] As pointed out by a reviewer, (63) looks very much like the partitive *en* construction in French:

(i)   J'en   ai   tappé   quatre
      I of.them   have hit   four
      'I hit four of them'

Wolof possesses a third partitive construction, one which involves the partitive clitic, *ci*:

(66) Di-na-a-**ci**   dóór
       IMPERF-FIN-1SG-PART   hit
       'I will hit some of them'

The partitive clitic is identical in form to one of the locative clitics:

(67) Di-na-a-**ci**   teg   tééré   y-i
       IMPERF-FIN-V-LOC   put   book   CL-DEF.PROX
       'I will put the books in/on it'

Subjects and direct objects interact differently with the partitive clitic. An overt DP direct object can be partitioned, but only if the preposition *ci* is also present:

(68) Di-na-a-**ci**   gis   **ci**   góór   ñ-i
       IMPERF-FIN-1SG -PART   see   P   man   CL.PL-DEF.PROX
       'I will see some of the men'

Surface subjects on the other hand, cannot be associated with the partitive clitic:

(69) (*Ci)   góór   ñ-i   da-ñu-**ci**   gis   ceeb   b-i
       P   man   CL.PL-DEF.PROX   DO-3PL-PART   see   rice   CL-DEF.PROX
       *'Some of the men saw the rice'
       ✓'The men saw the rice in/on it'

The partitive clitic can resume a non-*ci*-marked DP that has been left dislocated:

(70) Xale   y-i,   di-na-a-ci   dóór
       child   CL.PL-DEF.PROX   IMPERF-FIN-1SG -PART   hit
       'The kids, I will hit some of them'

It was shown in (61) that *ñaata* 'how many, how much' is only extractable from a *ci*-form DP. Similarly, *ñaata* can be split from the partitive clitic. This is expected since the numeral can be split from the clitic (see (63)):

(71) **Ñaata**   nga-**ci**   gis
       how.many   2SG+XPL+COP-PART   see
       'How many of them did you see?',
       'How much of it did you see?'

17.4 Universal Quantification

17.4.1 Introduction

Universal quantification in Wolof is expressed through three different constructions: a determiner, a relative clause construction, or reduplication. We discuss each in turn.

17.4.1.1 Universal Determiner-Qs

The universal determiner is CL-*epp*, which can precede or follow the noun:

(72) a. xale   (% y-i)   **y-epp**
          child   CL.PL-DEF.PROX   CL.PL-all
          'all of the children'

      b. **b-epp**   xale   (*b-i)
          CL- all   child   CL-DEF.PROX)
          'every child'

(72) shows that when CL-*epp* follows the noun it takes plural noun class agreement (*y*-) and corresponds to *all* in English (which occurs with plural count nouns). For some speakers, the definite article can co-occur with the following universal. If CL-*epp* precedes the noun, then it takes singular noun class agreement (*b*-) and corresponds to English *every* (which occurs with singular count nouns). At least on the face of things, the prenominal construction appears to be structurally parallel to indefinite expressions of the form [CL-*enn* [NP]], see e.g. (36a). The definite article cannot co-occur with the prenominal CL-*epp*, as (72b) shows.

The singular form also occurs postnominally, in which case, it means 'entire, whole', highlighting the modifying nature of postposed CL-*epp*:

(73) Jàng-na-a   **tééré**   **b-épp**
      read-FIN-1SG   book   CL-all
      'I read the whole book'

A generic reading of the universal obtains with the prenominal variant, or when CL.PL-*epp* is postnominal without the definite article. The latter case is similar to combinations of *all + bare NP* in English, which also give rise to generic readings (Matthewson 2001).

(74) a. **B-epp   xale**   bëgg-na   ceeb
          CL-all   child   like-FIN   rice
          'Every child likes rice'

      b. **Xale   y-epp**   bëgg-na-ñu   ceeb
          child   CL-all   like-FIN-3PL   rice
          'All children like rice'

For a subset of speakers, the prenominal CL-*epp* is quite marginal unless the noun is modified (i.e. restricted) with a relative clause, for example:

(75) B-epp   xale $^{??}$(b-u   jàng   tééré   b-i)
      CL-all   child   CL-C$_{Rel}$ read   book   CL-DEF.PROX

      di-na   kontaan
      IMPERF-FIN   happy
      'Every child (who read the book) will be happy'

The CL-*epp* can be used without an overt nominal restriction. As before, the interpretation will be dependent on the noun class:

(76) a. **Ñ-epp**   lekk-na-ñu   ceeb   (*ñi* = plural human class)
          CL.PL-all   eat-FIN-3PL   rice
          'Everyone ate rice'

      b. Lekk-na-a   **l-epp**   (*li* = singular thing class)
          eat-FIN-1SG   CL-all
          'I ate everything'

      c. Dem-na-a   **f-epp**   (*fi* = locative class)
          go-FIN-1SG   CL-all
          'I went everywhere'

The universal quantifier may occur with DPs that have numerals. If the numeral is 'two', as in (77a), it corresponds to English 'both':

(77) a. Ñaar   i   xale   **y-ëpp**   dem-na-ñu[19]
          two   PL.AGR   child   CL.PL-all   go-FIN-3PL
          'Both children went'

      b. Fukk   i   xale   **y-ëpp**   dem-na-ñu
          ten   PL.AGR   child   CL.PL-all   go-FIN-3PL
          'All ten children went'

---

[19] Ka (1988) reports that the post-nominal universal quantifier CL-*epp* is ATR harmonic to the noun. For some speakers though, in certain configurations, the postnominal CL-*epp* is pronounced with a +ATR vowel. These are speakers who otherwise readily harmonize vowels. It is unclear what to make of this lack of vowel harmony. One possibility is that the lack of ATR harmony signals the presence of a related, but distinct universal quantifier. That is one universal is ATR harmonic and the other is not. This is particularly plausible given the data in Section 17.4.1.2 with mass nouns. We don't pursue this further here, but leave it as a question for future research.

Finally, the universal can also occur with wh-expressions, in which case it appears to express the need for an exhaustive answer.

(78) a. f-an   f-epp
          CL-*wh*   CL- all
          'where all'

      b. F-an   **f-epp**   l-a-ñu   dem
          CL-*wh*   CL- all   XPL-COP- 3PL   go
          'Where all did they go?'

17.4.1.2 Universals and Mass Nouns

So far we have focused on universal quantifiers combining with (plural) count nouns, but the postposed plural form can also combine with mass nouns, as shown in (79a–b), which are in the singular, as evidenced by the singular noun class agreement on the definite articles, *m-i* and *b-i*. (79c) shows that the plural universal quantifier cannot combine with a singular count noun:

(79) a. ndox   m-i   **y- ëpp**
          water   CL-DEF.PROX   CL.PL-all
          'all the water'

      b. ceeb   b-i   **y- ëpp**
          rice   CL-DEF.PROX   CL.PL-all
          'all the rice'

      c. *xaj   b-i   **y-ëpp**
          dog   CL-DEF.PROX   CL.PL-all

Notice that the head noun in (79a–b) carries its NC-marker plus the singular definite (proximal) determiner. Thus, there is a mismatch between the singular definite article and the plural noun class marked universal. In addition, speakers that do not allow for the definite article to occur with *CL-epp* do however find (79a–b) grammatical. This suggests that the universal *y-ëpp* that appears in the construction in (79) has a different morpho-syntactic status than the universal that appears with count nouns.

The NC-marker and definite determiner can also be left out, but in such cases a change in meaning obtains: the resulting structures give rise to a plural count kind-reading according to which there are different kinds of water and rice, respectively:

(80) a. ndox   **y-ëpp**
          water   CL.PL-all
          'all the waters'

      b. ceeb   **y-ëpp**
          rice   CL.PL-all
          'all the rices' (literal meaning)

The data in (80) are most relevant for the discussion of NP-semantics in Wolof, for they appear to show that any kind of NP in Wolof, including apparent mass nouns, denotes into the domain of atomic individuals which can be quantified over by *y-epp*. If so, the massifying effect with such nouns would ultimately be due to the presence of the NC-markers *m-* and *b-* in (79a–b), which map the atomic sub-structure onto a lattice-structure without atomic subparts. This would suggest that at least some NC-markers have semantic import.[20] In a second step this lattice-structure is maximalized by means of the definite determiner *–i* in order to be amenable to universal quantification, along the same lines as in English *all the sugar*.

The prenominal singular universal does not occur with mass nouns:

(81) a. ***M-epp**   **ndox**   tuuru-na
          CL-all   water   spill-FIN
          Intended: 'All of the water spilled'

      b. ***B-epp**   **ceeb**   tuuru-na
          CL-all   rice   spill-FIN
          Intended: 'All of the rice spilled'

To express the intended meanings in (81a–b), one uses the singular definite DP along with the plural invariable quantifier:

(82) a. **Ndox**   **m-i**   **y-ëpp**   tuuru-na
          water   CL-DEF.PROX   CL.PL-all   spill-FIN
          'All of the water spilled on the table'

      b. **Ceeb**   **b-i**   **y-ëpp**   tuuru-na
          rice   CL-DEF.PROX   CL-all   spill-FIN
          'All of the rice spilled on the table'

17.4.2 The Universal Relative Clause Construction

Universal quantification is also possible with an indefinite relative clause construction built around the predicate *ne(kk)* 'exist':

(83) a. Nit   k-u   ne(kk)   lekk-na   ceeb
          person   CL-C_Rel   exist   eat-FIN   rice
          'Each/every person ate rice'

      b. Lekk-na-a   jën   w-u   ne(kk)
          eat-FIN-1SG fish   CL-C_Rel   exist
          'I ate every fish'

---

[20] See Kihm (2005) for discussion of noun class in Niger-Congo and Romance, focusing on the Atlantic language Manjaku.

c. Dem-na-a   <u>f-u</u>   ne(kk)
   go-FIN-1SG   CL-C$_{Rel}$ exist
   'I went everywhere'

The relative clause is 'indefinite' in the sense that it contains the *u*-relative marker, which is associated with relative clauses whose head nouns are interpreted as indefinite. (Perhaps a more literal translation is 'whichever (relevant) person that exists ate rice' for something like (83a).)

   Mass nouns cannot occur in the universal relative clause construction:

(84) a. *Naan-na-a   ndox   <u>m-u</u>   nekk
          drink-FIN-1SG   water   CL-C$_{Rel}$ exist

      b. *Naan-na-a   ceeb   <u>b-u</u>   nekk
          drink-FIN-1SG   rice   CL-C$_{Rel}$ exist

That the relative clause universal can occur with count nouns, but not mass nouns indicates that it is similar to the English *every*.

17.4.3 Syntactic Distribution of Universally Quantified DPs

Having presented two types of morphologically distinct universal quantifiers, in this section, we briefly discuss their syntactic distribution. Generally, universally quantified DPs can occur in any argument position. They can occur as subjects:

(85) a. **B-epp   xale** $^{??}$(b-u   nelaw)   di-na   kontaan[21]
          CL-all child   CL-C$_{Rel}$ sleep   IMPERF-FIN   happy
          'Every child (who slept) will be happy'

      b. **Xale   y-epp**   nelaw-na-ñu
          child   CL-all   read-FIN-3PL
          'Every child slept'

      c. **Xale   b-u**   nekk   nelaw-na
          child   CL-C$_{Rel}$ exist   read-FIN
          'Every child slept'

   All three types of universal occur as objects:

(86) a. Gis-na-a   **b-epp   xale** $^{??}$(b-u   nelaw)
          see-FIN-1SG   CL-all child   CL-C$_{Rel}$ sleep
          'I saw every child (who slept)'

---

[21] Recall that the prenominal CL-*epp* + N is typically modified, especially in episodic contexts.

b. Gis-na-a   **xale**   **y-epp**
    see-FIN-1SG   child   CL-all
    'I saw every child'

c. Gis-na-a   **xale**   **b-u**   **ne(kk)**
    see-FIN-1SG   child   CL-C$_{Rel}$ exist
    'I saw every child'

All three types occur as objects of prepositions:

(87) a. Wax-na-a   ak   **b-epp**   **xale**   ?(b-u   nelaw)
          speak-FIN-1SG   with   CL-all   child   CL-C$_{Rel}$ sleep
          'I spoke with every child (that slept)'

      b. Wax-na-a   ak   **xale**   **y-epp**
          speak-FIN-1SG   with   child   CL-all
          'I spoke with every child'

      c. Wax-na-a   ak   **xale**   **b-u**   **ne(kk)**
          speak-FIN-1SG   with   child   CL-C$_{Rel}$ exist
          'I spoke with every child'

To varying degrees, they can occur as possessors:

(88) a. *xaj   u   **b-epp**   **xale**   (b-u   jang   tééré   b-i)
          dog   POSS   CL-all   child   CL-C$_{Rel}$ read   book   CL-DEF.PROX
          Intended: 'every child's dog'

      b. ??xaj   u   **xale**   **y-epp**
          dog   POSS   child   CL-all
          'every child's dog'

      c. xaj   u   **xale**   **b-u**   **ne(kk)**
          dog   POSS   child   CL-C$_{Rel}$ exist
          'every child's dog'

(88a) shows that the prenominal *CL-epp* cannot occur as a possessor. The plural universal in (88b) is also marginal. Instead, the relative clause form is used, as in (88c). The data in (88a–c) highlights the fact that the three different universals are indeed syntactically distinct.

17.4.4 Universals and Distributivity

The prenominal (CL-*epp* N), post-nominal (N CL-*epp*), and relative clause (N CL-C$_{Rel}$ *nekk*) universal quantifiers pattern differently with respect to distributivity. This can be seen by how they interact with collective predicates like

dàje 'gather, meet'. As the paradigm in (89) shows, the prenominal and relative clause universals cannot be the subjects of a collective predicate like *daje* 'meet':

N CL-*epp* + Collective Predicate

(89) a. Xale   **y–ëpp**   daje-na-ñu
          child   CL-all   gather-FIN-3PL
          'All the children gathered'

N CL-C_{Rel}+ Collective Predicate

    b. *Xale   **b-u**   **ne(kk)**   daje- na-ñu
          child   CL-C_{Rel}   exist   gather-FIN-3PL

CL-*epp*N + Collective Predicate

    c. ***B-epp**   xale   daje-na
          CL-all   child   gather-FIN

An identical pattern of grammaticality is seen with the verbal affix *–andoo*, which roughly corresponds to English *together*. The affix occurs with a plural subject:

N CL-*epp* + *-andoo*

(90) a. Xale   **y–ëpp**   lekk-**andoo**-na-ñu   ceeb b-i
          child   CL-all   eat-together-FIN-3PL rice   CL-DEF.PROX
          'All children ate the rice together'

N CL-C_{Rel}+ *-andoo*

    b. *Xale   **b-u**   **nekk**   lekk-**andoo**-na   ceeb b-i
          child   CL-C_{Rel} exist   eat-together-FIN   rice   CL-DEF.PROX

CL-*epp*N + *-andoo*

    c. ***B-epp** xale   lekk-**andoo**-na   ceeb   b-i
          CL-all   child   eat-together-FIN   rice   CL-DEF.PROX

The grammaticality of (89a) and (90a) suggests that the *N CL-epp* construction corresponds to English *all*, while the *N CL-C_{Rel}* and *CL-epp N* are more akin to English *every* or *each*, which are more strongly distributive.

17.4.5 Reduplication

A third construction for expressing universal quantification is the reduplicative *NP-oo-NP*:

(91) a. **Góór-óó-góór**   ma   gis-kó
          man-oo-man   1SG   see-3SG
          'I saw every single man'

    b. Dem-na-a   **kër-óó-kër**
          go-FIN-1SG   house-oo-house
          'I went to every single house'

The *NP-oo-NP* DP focuses on distributivity. For example, (91a) emphasizes that I talked to each and every man. Fal (1999) gives examples of this type of universal, but it is not discussed elsewhere in the literature on Wolof to our knowledge.[22] Interestingly, there is a strong preference for *NP-oo-NP* DPs to surface on the left edge of the clause and be resumed by a singular clitic, as in (91a). In addition, when this type of universal occurs on the left edge of the clause, it is typically of the 'adverbial' type, as in (2h).[23]

17.4.6 Quantifier Float

Quantifier float is possible, with the exact form and position of the quantifier varying according to clause type. In a neutral *na*-clause like (92a), when the quantifier moves from its original position it has to occur with a strong third person plural pronoun, *ñoom*, as shown in (92b–c):

(92)   a.   Xale   **y-ëpp**   dem-na-ñu
             child   CL.PL-all   go-FIN- 3PL
             'All (the) children went'

       b.   Xale   y-i   *(**ñoom**)   **ñ-ëpp**   dem-na-ñu
             child   CL.PL-DEF.PROX   they   CL.PL-all   go-FIN-3PL
             'The children all went' (lit.: the children they all went)

       c.   Xale   y-i   dem-na-ñu   *(**ñoom**)   **ñ-ëpp**[24]
             child   CL.PL-DEF.PROX   go-FIN-3PL   they   CL.PL-all
             'The children went all' (lit. : the children went they all)

Note that the plural *children* is in the *yi*-class in (92a), while the floated quantifier is in the *ñi*-class in (92b–c). We showed earlier that strong pronouns trigger *ñi*-class agreement on the universal. This suggests that the floated quantifier actually agrees with the strong pronoun. When a DP contains a universal and a numeral, the numeral can be floated along with the universal:

(93)   a.   Xale   y-i   **ñoom**   **ñaar**   **ñ-ëpp**   dem-na-ñu
             child   CL.PL-DEF.PROX   they   two   CL.PL-all   leave-FIN-3PL
             'Both children left' (lit.: the children two of them all left)

       b.   Xale   y-i   dem-na-ñu   **ñoom**   **ñaar**   **ñ-ëpp**
             child   CL.PL-DEF.PROX   leave-FIN-3PL   they   two   CL.PL-all
             'Both children left'

---

[22] See Gil (1995) for much relevant discussion of reduplication as a means of expressing universal quantification.

[23] See Beghelli (1995) for discussion of left peripheral quantifiers.

[24] Intonationally, floated quantifiers that occur on the right edge of the clause are typically preceded by a (potentially very short) pause and have higher pitch than the rest of the sentence. See Rialland and Robert (2001) for discussion of intonation in Wolof.

In A'-extraction constructions like clefting, the quantifier can be floated, with or without an accompanying strong pronoun, as shown for the WH-*epp* quantifier in (94)[25]:

(94) **Ñ-an** l-a Awa wax ne **ñ-ëpp** l-a-a gis
 CL.PL-*wh* XPL-COP awa say that CL.PL-all XPL-COP-1SG see
 'Who all did Awa say that I saw?'

17.4.7 Related Universal-Type Constructions

Other quantifier constructions are formed from indefinite relative clauses, like the universal relative clause. We briefly discuss these here.

Free choice items are constructed with a noun modified by an indefinite relative clause containing the modal possibility auxiliary *mën* 'can' and the verb *doon* 'be'[26]:

(95) a. Xale b-u mu mën a doon mën-na wey
 child CL-C$_{Rel}$ 3sg can INF BE can-FIN sing
 'Any child can sing'

 b. Jàng-al **tééré b-u** mu mën-ti doon[27]
 read-IMPER book CL-C$_{Rel}$ 3sg can-? BE
 'Read any book!'

 c. Jàng-al **tééré y-ëpp** !
 read-IMPER book CL.PL-all
 'Read every book!'

The relative clause contains either the verb *mën* 'can' followed by the infinitival marker *a*, as in (95a), or *mën* is suffixed with *–ti* and the *a* is dropped (95b). The presence of the possibility modal *mën* plus the verb *doon* 'to be' suggests an analysis of the free choice effect in terms of an intentionalized interpretation

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[25] See Torrence (2010) for fuller discussion of A'-quantifier float.

[26] The verbal element *doon* is complex and appears to be composed of the imperfective marker *di* plus the past tense marker *–oon*. For the purposes of this paper, we treat it as an auxiliary-type verb.

[27] A related construction is used to form concessive conditionals, which involve either a free relative clause and verb reduplication (i) or a free relative clause and *mën-ti* (ii):

(i) **L-u ma lekk lekk**, da-ma xiif
 CL-C$_{REL}$ 1sg eat eat do-1SG hungry
 'No matter what I eat, I am hungry'

(ii) **L-u ma mën-ti lekk** da-ma xiif
 CL-C$_{REL}$ 1SG can-? eat do-1SG hungry
 'No matter what I eat, I am hungry'

'An NP-entity in some possible world compatible with the actual world in the relevant aspects.' (95a) is ambiguous between a universal and free choice reading. However, these can be distinguished in imperatives, for example, as indicated in the translations for (95b) and (95c).

Some exceptive phrases are also formed using indefinite relative clauses, marked by the presence of the *u*-relative complementizer:

(96) a. Gis-u-ma   [k-u   d-ul   Awa]
          see-NEG-1SG   CL-C_Rel   IMPERF-NEG   awa
          'I did not see anyone but Awa'

      b. *Gis-na-a   [**k-u**   **d-ul**   **Awa**]
          see-FIN-1SG   CL-C_Rel   IMPERF-NEG   awa
          Intended: 'I saw everyone but Awa'
          (i.e. 'I saw anyone who was not Awa')

In (96a), the (bracketed) object of the verb consists of a free relative clause with singular noun class agreement, *k-*, on the relative complementizer, *-u*. (Recall that the *ki*-class is the singular human noun class. This is why (96a) is interpreted as 'anyone'.) (96a) is more literally translated as, 'I did not see anyone who was not Awa'. That is, 'I saw only Awa'. In fact, the construction in (96a) is a negative polarity item, as the absence of negation in the matrix clause in (96b) leads to ungrammaticality.

Interestingly, the construction in (96a) also distinguishes the zero-marked indefinite from the overtly marked ones. This is because the overtly marked indefinites are ungrammatical:

(97) Gis-u-ma   [k-u   d-ul   ∅/***b-enn**/***a-b**   xale]
      see- NEG-1SG   CL-C_Rel   IMPERF-NEG   DET/CL-some/NDEF-CL   child
      'I did not see anyone but a child' (I.e. 'I saw only a child')

17.4.8 Modified Universals

All three types of universal quantifiers can also be modified by *daanaka* 'almost':

(98) a. **Daanaka xale (y-i)**   **y-epp**   wey-na-ñu
          almost   child CL.PL-DEF.PROX CL.PL-all   sing- FIN- 3PL
          'Almost all of the children sang'

      b. **Daanaka b-epp   xale** jàng-na tééré   b-i
          almost   CL-all   child read-FIN book   CL-DEF.PROX
          'Almost every child read the book'

      c. **Daanaka xale b-u**   nekk   jàng-na   tééré b-i
          almost   child CL-C_Rel exist   read-FIN   book CL-DEF.PROX
          'Almost every child read the book'

From the perspective of English, (98c) is somewhat unexpected given that the relative clause universal seems to otherwise pattern very similarly to English *each*.

The post-nominal *y-ëpp* that occurs with mass nouns (Section 17.4.1.2) can also be modified by *daanaka*:

(99) a. **Daanaka   ndox   m-i   y-ëpp   tuuru-na**
          almost   water   CL-DEF.PROX   CL-all   spill-FIN
          'Almost all of the water spilled on the table'

      b. **Daanaka   ceeb   b-i   y-ëpp   tuuru-na**
          almost   rice   CL-DEF.PROX   CL-all   spill-FIN
          'Almost all of the rice spilled on the table'

17.5 Value Judgment Expressions

Value judgment expressions like English *many* or *few* are expressed using relative clause constructions in Wolof. The equivalent of *many* involves the stative verb *bëri* 'be many, be much':

(100) a. **Góór   y-u**-C$_{Rel}$ **bëri**   d-u-ñu   tux
          man   CL.PL-C$_{Rel}$ be.many   IMPERF-NEG-3PL   smoke
          'Many men don't smoke'

      b. Xadi   gis-na   **góór   y-u**-C$_{Rel}$ **bëri**
          Xadi   see-FIN   man   CL.PL-C$_{Rel}$ be.many
          'Xadi saw many men'

bëri also combines with (singular) mass nouns, in which case it corresponds to *be much* or *be a lot* in English:

(101) a. Xadi   naan-na   **meew**   **m-u**-C$_{Rel}$ **bëri**
          Xadi   drink-FIN   milk   CL-C$_{Rel}$ be.much
          'Xadi drank a lot of milk'

      b. **Meew   m-u**-C$_{Rel}$ **bëri**   tuur-u-na
          milk   CL-C$_{Rel}$ be.much   spill-REFL-FIN
          'A lot of milk spilled'

The expression of *few/little* varies according to whether a mass noun or count noun is present. For count nouns, *few* involves the negation of *bëri*. Such a construction is ambiguous between a 'few' interpretation and a 'not many' interpretation. This construction is most naturally found in generic statements:

(102) Xaj   y-u-C$_{Rel}$ bëri-wul   mën   a   jàng
      dog   CL.PL-C$_{Rel}$ be.many-NEG   can   INF   read
      'Few dogs can read'
      'Not many dogs can read'

In episodic contexts, it is much more natural to use (negated) *bëri* as a matrix verb:

(103) Tééré   [y-i   ma   jàng]   **bëre-wu-ñu**
       book   CL.PL-C_Rel   1SG   read   be.many-NEG-3PL
       'I read few books'   (Lit. 'The books that I read were not many')
       'I did not read many books'

With mass noun the adjectival predicate *tuuti* 'small' (104a) is used to express 'some/little', in which case it precedes the NP (104b–c) and seems to function as a genuine modifier[28]:

(104) a. Xaj   b-i   am-na   nopp   y-u   **tuuti**
           dog   CL-DEF.PROX   have-FIN   ear   CL.PL-C_Rel   small
           'The dog has small ears'

       b. Xadi   lekk-na   **tuuti**   **ceeb**   Mass Noun
           Xadi   eat-FIN   small   rice
           'Xadi ate some/little rice'

       c. Xadi   mey-na-ma   **tuuti**   **suukër**   Mass Noun
           Xadi   give-FIN-1sg   small   sugar
           'Xadi gave me some/little sugar'

Count nouns cannot be used with the prenominal *tuuti*:

(105) *Awa   gis-na   tuuti   góór
        awa   see-FIN   small   man
        Intended: 'Awa saw some/few men'

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[28] That *tuuti* is a quantifier inside of the DP, as opposed to a modifier of the verb is supported by the fact that *tuuti* and the object can be clefted together, suggesting that they form a constituent. This is unexpected if the *tuuti* is a verbal modifier:

(i)   [Tuuti ceeb] l-a-a   lekk
       small rice XPL-COP-1SG   eat
       'I ate A LITTLE RICE '

Coordination facts also suggest that in cases like (104b–c), *tuuti* quantifies over the noun:

(ii) Lekk-na-a **tuuti ceeb** ak **tàndarma y-u**   **bëri**
       eat-FIN-1SG small rice and date   CL.PL-C_Rel be.many
       'I ate a little rice and many dates'

If *tuuti* were modifying the extent of the action of the verb in (ii), then we might expect (ii) to be contradictory or at least quite strange. This is because (ii) would mean that the extent of my eating was little, but I ate a lot of dates. Instead, it simply indicates that the quantity of rice was small and the quantity of dates was big.

The relative clause construction with a mass noun yields only the canonical adjectival reading:

(106)   #Xadi   lekk-na   **ceeb**   **b-u**   **tuuti**
       Xadi   eat-FIN   rice   CL-C$_{Rel}$ small
    *'Xadi ate some/little rice'
    'Xadi ate tiny rice'

17.6 'Most'

The proportional quantifier 'most' is expressed using the verb *ëpp* 'exceed, surpass' in a free relative clause construction:

(107)   a.   Xale   y-i   ñu-a   ëpp   góór   y-i
          child   CL.PL-DEF.PROX   3PL-COP   exceed   man   CL.PL-DEF.PROX
          'The children outnumber the men'

      b.   [**L-u**   **ëpp**   **ci**   **jigéén**   **y-i**]   dem-na-ñu
          CL-C$_{Rel}$ exceed   P   woman   CL.PL-DEF.PROX   leave-FIN-3PL
          'Most of the women left'
          (Lit. 'what exceeds among the women left')

In (107a), the transitive verb *ëpp* occurs in the subject focus construction. In (107b), the bracketed free relative clause occurs preverbally in a neutral clause. In terms of agreement, (107b) is unexpected. The relative clause has a *li*-class agreeing complementizer on the left edge, *l-u*. While the *li*-class is a singular noun class, the verb *dem* 'leave', has 3PL subject agreement, *ñu*.

Generic subjects with proportional quantifiers carry the definite article:

(108)   [L-u   ëpp   ci   góór   *(y-i)]
      CL-C$_{Rel}$ exceed   P   man   CL.PL-DEF.PROX

      d-u-ñu   tox
      IMPERF-NEG- 3PL   smoke
      'Most men don't smoke'

Cases like (108) contrast with ordinary generic statements, which take the zero-determiner and trigger singular agreement on verbs:

(109)   a.   Góór   d-u   tox
          man   IMPERF-NEG   smoke
          'Men don't smoke'

      b.   Góór   y-i   d-u-*(ñu)   tox
          man   CL.PL-DEF.PROX   IMPERF-NEG-3PL   smoke
          'The men don't/will not smoke'
          *'Men don't smoke'

The expression of 'more' also involves the predicate *ëpp*, but allows for definite and indefinite NPs. If definite, the preposition *ci* is used, as with the 'most'-interpretation in (107b) above:

(110) a. **[L-u** **ëpp** **ñëtt** **i** **jigéén]** dem-na-ñu
  CL-C$_{Rel}$ exceed three PL.AGR woman leave-FIN-3PL
  'More than three women left'

b. **[L-u** **ëpp** **ci** **ñett i** **jigéén** **y-i]**
  CL-C$_{Rel}$ exceed P three PL.AGR woman CL.PL-DEF.PROX

  dem-na-ñu
  leave-FIN-3PL
  'More than three of the women left'

17.7 'Only' DPs

There are three Wolof particles that correspond to 'only': *rekk*, *kese*, and *doŋŋ*. These particles occur on the far right edge of DP and follow modifiers and the definite article:

(111) a. xaj b-i **rekk/kese/doŋŋ**.
  dog CL-DEF.PROX only
  'only the dog'

b. xaj [b-u ñuul] **rekk/kese/doŋŋ**
  dog CL-C$_{Rel}$ black only
  'only a black dog'

If a subject occurs with *only*, it must be focused, the same as in many other West African languages (see e.g. Grubic and Zimmermann 2011). This can be seen in the contrast between (112a) and (112b). In (112a), with a neutral clause (i.e. nothing is in focus), the *only* subject is ungrammatical. In (112b) on the other hand, the subject focus clause is fine.

    Neutral Clause
(112) a. ***Ayda** **rekk /doŋŋ /kese** jàng-na teere b-i
  ayda only read-FIN book CL-DEF.PROX
  Intended: 'Only Ayda read the book'

    Subject Focus
b. **Ayda** **rekk /doŋŋ /kese** mo-o jàng tééré b-i
  ayda only 3SG-COP read book CL-DEF.PROX
  'It is only Ayda who read the book'

Only can also combine with a numerically quantified DP:

Subject Focus

(113) Juróómi ndongo rekk /doŋŋ /kese ño-o   wey
       five   student   only   3PL-COP   sing
       'Only five students read the book'

Unlike subjects, a DP object with *only* is fine in situ in a neutral clause ((114a–b) or it can be focused (114c)):

Neutral Clause

(114) a. Ayda   jàng-na   tééré   **rekk /doŋŋ /kese**
           ayda   read-FIN   book   only
           'Ayda read only a book'

Neutral Clause

      b. Ayda   jàng-na   tééré   b-i   **rekk /doŋŋ /kese**
           ayda   read-FIN   book   CL-DEF.PROX   only
           'Ayda read only the book'

Object Focus

      c. [**Tééré   rekk /doŋŋ /kese**] l-a   Ayda   jàng
           book   only   XPL-COP   ayda   read
           'It's only a book that Ayda read'

17.8 Boolean Connectives and the Exceptive Construction

Wolof expressions of Boolean combinations of DPs are more structurally complex than in English. For example, *both. . .and* is rendered as in (115), with a numeral, strong pronoun (*ñoom* '3PL'), and a universal quantifier:

(115) [Awa   ak   Ayda   ñoom   ñaar   ñ-ëpp]   wey-na-ñu
       awa   and   ayda   they   two   CL-all   sing-FIN- 3PL
       'Both Awa and Ayda sang'

The equivalent of *either. . .or* involves topicalization of the *either. . .or* DP and a partitive with the clitic *ci*:

(116) Awa   wala   Ayda,   am-na   k-u   ci   wey
       awa   or   ayda   exist-FIN   CL-C$_{Rel}$ PART   sing
       'Either Awa or Ayda sang'
       (Lit. 'Awa or Ayda, there is someone among them who sang')

The expression of *all but* involves a circumlocution:

(117) Ñ-ëpp   a   jàng   tééré   b-i   ba   mu   des   Awa
      CL-all   COP   read   book   CL-DEF.PROX   until   3SG   remain   awa
      'Everyone but Awa read the book'

(117) involves a separate adverbial clause introduced by *ba* 'until'. (117) is more literally given in English as something like, 'Everyone read the book, excepting Awa'.

17.9 Adverbial Quantifiers

Adverbial quantifiers take several forms in Wolof. For the equivalent of *once*, *twice*, etc., a numeral is used with the word *yoon* 'time, occasion'[29]:

(118) a.   Awa   dem-na   Dakar   **b-enn**   **yoon**
           awa   go-FIN   Dakar   CL-one   time
           'Awa went to Dakar one time'

      b.   Awa   dem-na   Dakar   **ñaar**   **i**   **yoon**
           awa   go-FIN   dakar   two   PL.AGR   time
           'Awa went to Dakar two times (twice)'

      c.   Awa   dem-na   Dakar   **ñeent**   **i**   **yoon**
           awa   go-FIN   dakar   four   PL.AGR   time
           'Awa went to Dakar four times'

The restructuring verb *mës* 'do once' also expresses A-quantification and its negative is used as 'never':

(119) a.   Awa   mës-na   dem   Dakar
           awa   do.once-FIN   go   dakar
           'Awa has gone to Dakar (once)'

      b.   Awa   **mës-ul**   dem   Dakar
           awa   do.once-NEG   go   dakar
           'Awa has never gone to Dakar'

---

[29] The word *yoon* is like the French *fois* 'time' in the sense of 'occasion', rather than *temps* 'time' the abstract concept.

Adverbial quantifiers like *always* can be formed using nominal adjuncts consisting of a noun like *saa* 'time, moment' modified by the universal relative clause construction:

(120) a. **Saa** [**s-u**   **ne(kk)**]   da-ma-y   lekk   gerte
           time   CL-C$_{Rel}$ exist   do-1sg-IMPERF eat   peanut
           'I always eat peanuts' (Lit. 'I eat peanuts every time')

       b. Da-ma-y   lekk gerte   **saa**   [**s-u**   **ne(kk)**]
           do-1SG-IMPERF eat   peanut   time   CL-C$_{Rel}$ exist
           'I always eat peanuts' (Lit. 'I eat peanuts every time')

DP adjuncts like *saa su nekk* 'every time' can appear preverbally or postverbally, as (120a–b) attest. Other expressions of time can be used similarly, with the expected compositional meaning:

(121) a. **Bës** [**b-u**   **nekk**]   da-ma-y   lekk   yaasa
           day   CL-C$_{Rel}$ exist   do-1SG-IMPERF eat   yaasa
           'Every day I eat yaasa'

       b. Da-ma-y   lekk yaasa **bës** [**b-u**   **nekk**]
           do-1SG-IMPERF eat   yaasa day   CL-C$_{Rel}$ exist
           'I eat yaasa every day'

The borrowed adverb *tusuur* (from French *toujours*) is also used for 'always'. However, *tusuur* typically triggers the adverbial clause type, without the imperfective marker *di*:

(122) Tusuur   ma   lekk   gerte
       always   1SG   eat   peanut
       'I always eat peanuts'

'Sometimes' involves a complex DP with *saa* 'time':

(123) a. **Y-enn**   **saa** **y-i**   di-na-a   dem Dakar
           CL.PL-some time CL.PL-DEF.PROX IMPERF-FIN-1SG go   dakar
           'Sometimes I go to Dakar'

       b. Di-na-a   dem Dakar **y-enn**   **saa** **y-i**
           IMPERF-FIN-1SG go   dakar CL.PL-some time CL.PL-DEF.PROX
           'I go to Dakar sometimes'

The DP adjunct can appear on either the left or right edge of the clause, as shown in (123a–b). The DP itself contains both the plural indefinite article *y-enn* and the plural definite article *y-i*. Thus, it is more literally 'some of the times', as in the partitive construction discussed in Section 17.3.3 (example (52)).

The proportional A-quantifier *often* is expressed using the restructuring verb *faral* followed by the imperfective auxiliary. In the negative *faral* corresponds to 'rarely,' or 'not often':

(124) a. Di-na-a   faral   di   lekk   dibi
         IMPERF-FIN-1SG   often   IMPERF   eat   dibi
         'I often eat dibi'

       b. D-u-ma   faral   di   lekk   dibi
         IMPERF-NEG-1SG   often   IMPERF   eat   dibi
         'I rarely eat dibi'
         'I do not often eat dibi'

17.10 Existential Constructions

Wolof lacks overt expletives in canonical matrix clauses. Existential constructions are formed by using the verb *am*:

(125) a. **Am**-na   ñett   i   jumaa   ca   dëkk   b-a
         exist-FIN three   PL.AGR   mosque   P   town   CL-DEF.DIST
         'There are three mosques in the town'

       b. **Am**-na   tééré   y-u   bëri   ci   bibliotek   b-i
         exist-FIN book CL.PL-C$_{Rel}$ be.many   P   library   CL-DEF.PROX
         'There are many books in the library'

       c. **Am**-na   (a-y)   xale   y-u   y   daw
         exist-FIN NDEF–CL.PL   child   CL.PL-C$_{Rel}$ IMPERF run
         'There are some children running'

       d. **Am**-na   xale   b-u   y   lekk   ceeb
         exist-FIN child CL-C$_{Rel}$ IMPERF   eat   rice
         'There is a child that is eating rice'

However, certain clause types, like subjunctives, require overt subjects. In that case, the 3sg subject marker is used:

(126) Bëgg-na-a   [$_{Subjnc}$ *(**mu**) am   a-y
      want-FIN-1SG   3SG   exist   NDEF-CL.PL

      xale   y-u   y   daw]
      child   CL.PL-C$_{Rel}$ IMPERF   run
      'I want there to be children running'

In fact, there is no single Wolof verb that corresponds to English *be*. For example, the existential verb *am* is also used in possessive *have* clauses:.

(127) a. Xadi   **am**-na   xaalis
           xadi   have-FIN   money
           'Xadi has money'

       b. Muus   **am**-na   tànk
           cat   have-FIN   leg
           'Cats have legs'

       c. **Am**-na-a   loxo
           have-FIN-1SG   hand
           'I have hands'

DPs in existential constructions must be indefinite. This can be seen in (128a–d), which show that definite DPs with *the* or *this* and strong quantifiers like *most* or *all* cannot be used in existential clauses. (128e) shows that an NDEF-CL DP is fine in an existential clause:

(128) a. *Am-na   **góór**   **g-i**   ci néég b-i   **the*
           exist-FIN   man   CL-C_Rel   P room CL-DEF.PROX

       b. *Am-na   **góór**   **b-ii**   ci néég b-i   **this*
           exist-FIN   man   CL-this   P room CL-DEF.PROX

       c. ??/*Am-na **l-u**   **ëpp**   **ci góór y-i**   ci **most*
           exist-FIN   CL-C_Rel   exceed   P man CL-DEF.PROX P

           arme   b-i?
           army   CL-DEF.PROX

       d. *Am-na   **góór**   **y- ëpp**   ci arme b-i   **all*
           exist-FIN   man   CL.PL-all   P army CL-DEF.PROX

       e. Am-na   **a-y**   **góór**   ci arme b-i   *NDEF*
           exist-FIN   NDEF-CL.PL   man   P army CL-DEF.PROX
           'There are men in the army'

While only indefinites can appear in existential clauses in Wolof, not all indefinites can do so. Specifically, neither simple zero-marked or CL-*ENN* DPs can appear in existentials[30]:

(129) a. *Am-na   ∅   **góór**   ci   arme   b-i   *∅-DET
    exist-FIN   DET   man   P   army   CL-DEF.PROX

   b. *Am-na   **y-enn**   **góór**   ci   arme   b-i   *CL-*some*
     exit-FIN   CL-some   man   P   army   CL-DEF.PROX

17.11 Scopal Interactions

In this section, we briefly turn to scopal interactions between subject and object universals and indefinites. This reveals further differences between the universal quantifiers.

When an indefinite is a subject and a universal is an object, the object cannot scope over the subject:

(130) a. **A-b/b-enn**   xale   jàng-na   **b-epp**   tééré[31]
    NDEF-CL/CL-some   child   read-FIN   CL-all   book
    'A (particular) child read every book' $\exists > \forall, *\forall > \exists$

   b. **A-b/b-enn**   xale   jàng-na   tééré   **b-u**   **ne(kk)**
     NDEF-CL/CL-some   child   read-FIN   book   CL-C$_{Rel}$ exist
     'A (particular) child read every book' $\exists > \forall, *\forall > \exists$

(130) shows that neither the prenominal nor relative clause universals can take inverse scope in object position.

In contrast, when a universal is the subject and an existentially quantified DP is the object, there are two scope patterns.

(131) a. Xale   **b-u**   **ne(kk)**   jàng-na   a-b/b-enn/*∅   tééré
    child   CL-C$_{Rel}$ exist   read-FIN   NDEF-CL/CL-some/DET   book
    'All the children read a/some book' $\forall > \exists, \exists > \forall$

---

[30] If these DPs are modified, they become grammatical in existentials:

  (i) Am-na   **góór [y-u**   **njool]** ci   arme   b-i   ∅-DET
    exist-FIN   man   CL.PL-C$_{Rel}$ tall   P   army   CL-DEF.PROX
    'There are tall men in the army'

  (ii) Am-na   **y-enn**   **góór [y-u**   **njool]** ci   arme   b-i   CL-some
     exist-FIN   CL.PL-some   man   CL.PL-C$_{Rel}$ tall   P   army   CL-DEF.PRO
     'There are some tall men in the army'

[31] Recall that zero-marked DPs cannot be subjects in episodic contexts. Thus, we cannot test them here.

b. **B-epp** xale jàng-na **a-b/b-enn/*∅**   tééré
CL-all child read-FIN NDEF-CL/CL-some/DET book
'Every child read a book'   ∀ >∃, *∃>∀

(131a) shows that when the relative clause type of universal is the subject and NDEF-CL or CL-some is the object, inverse scope is possible. Thus (131a) is compatible with a situation in which there is a single book that every child read. (131b) shows that when the subject DP has the (morphologically singular) prenominal universal, *CL-all*, an existentially quantified object cannot take wide scope over the subject. Interestingly, (131a–b) show that the zero-marked indefinite is ungrammatical in this context. We saw earlier (e.g. (32b)) that zero-marked indefinites are fine as objects in episodic contexts. Therefore, it is the presence of the universal subject in (131) that is the source of the ungrammaticality.

17.12 Conclusions and Open Issues

In this investigation of Wolof quantifiers, we have established several descriptive and analytical points along the way. At the same time, this first foray into Wolof quantifiers opens up a number of issues for further research. We have shown that the morphological differences among the indefinites and universals corresponds to distinct syntactic and semantic properties. That is, the morphological differences between the different DP types cannot be taken lightly. Instead, these differences potentially provide important clues about the DP-internal syntax, the semantics of the DP-internal morphemes, and how this is related the external distribution of DPs. Wolof is a particularly good language for such issues as it possesses a rich system of noun class and concord. While there are many studies of noun class morphology and syntax, little attention has been paid to the role of noun class in quantificational structures. As most Niger-Congo languages possess noun classes, study of quantification and its interaction with noun class, for example, promises to supply a rich new source of data for investigation of natural language semantics.

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